

**Attachment, Childhood Adversity, Emotional Problems and
Personality Disorder in Offenders With Mild Intellectual disability**

Lesley Steptoe

A thesis for the degree of Doctor of Philosophy at



2011

Full metadata for this item is available in Abertay Research Collections

<https://repository.abertay.ac.uk/jspui/>

This item is protected by original copyright.

**ATTACHMENT, CHILDHOOD ADVERSITY, EMOTIONAL PROBLEMS AND
PERSONALITY DISORDER IN OFFENDERS WITH
MILD INTELLECTUAL DISABILITY.**

LESLEY STEPTOE

A thesis submitted in partial fulfilment of the
requirements on the University of Abertay Dundee
for the degree of Doctor of Philosophy

December 2011

I certify this thesis is the true and accurate version of the thesis approved by the examiners

Signed.....

Date.....

Abstract

The aim of this research is to examine attachment in offenders with mild intellectual disability. Insecure attachment is evidenced as a developmental risk factor with regard to antisociality, in the mainstream population. However there is a dearth of evidence with regard to attachment and the development of antisociality in offenders with intellectual disability (ID). Differences in lifespan development and cognitive limitations may affect the development of attachment bonds in this group. This research explores attachment (measured retrospectively in childhood), relationships to perceived parenting, emotion and personality pathology in offenders with ID. Adaptation of an existing self report measure (Relationship Questionnaire) (RQ) resulted in the development of the 'Adapted Relationship Questionnaire' (ARQ). To test construct validity and reliability the ARQ and the RQ were administered to 60 university student participants. Participants rated each questionnaire with regard to retrospective childhood attachment, 41 additional participants filled in the ARQ only. No significant differences were found between categorical attachment ratings of attachment on the RQ and ARQ. A test of construct validity showed convergence between the 'Fearful Avoidant' and 'Preoccupied' attachment styles. Principal Components Analysis (Direct Oblimin) resulted in a three factor solution for the ARQ of 'Secure', 'Anxious Avoidant' and 'Dismissing Avoidant' attachment styles which showed Cronbach's Alpha ratings of .69, .87 and .84 respectively. A control group (n25) of participants with mild ID, who had no offending history, and a group of offenders with ID (n38) completed the ARQ. Background, forensic and childhood adversity information was gathered from file review for offenders. The Parental Bonding Inventory (PBI) was completed by offenders with mild ID and the Emotional Problem Solving (EPS) scale and Interpersonal Adjectives Scale (IAS) was completed by clinical staff involved in the support of the participant. Borderline and Antisocial Personality Disorder was assessed by consensus rating from file review, clinicians

ratings, observational ratings of staff and staff interview using the Structured Assessment of Personality (SAP). Consensus agreement was attained from three sources of the assessment sources before the particular PD trait was rated positively. Assessment of emotion in controls was carried out using the Dundee Provocation Inventory (DPI) and the Brief Symptom Inventory (BSI).

Results show no significant differences in attachment style relative to gender or comparison between offender and controls of non offenders with ID or offenders compared to mainstream student participants. No significant relationships were found between attachment style and childhood adversity. Orderly relationships were found within the 'Secure' attachment style with positively relationships to 'Optimal Parental Care' ratings of 'Self Esteem' and level of submissiveness and compliance within interpersonal styles. The insecure 'Anxious Avoidant' attachment style related positively to the low care/high protection parenting style with negative relationships to dimensional ratings of care within the parental relationship and submissiveness and compliance within ratings of interpersonal style. The insecure 'Dismissing Avoidant' attachment style in offenders with ID showed a negative relationship to optimal parenting and a positive relationship to a verbally aggressive, coercive interpersonal style and also antisocial personality disorder. Only two participants were allocated a diagnosis of Borderline personality disorder which did not facilitate quantitative statistical analysis of this group.

Within the control group 'Secure' attachment style appeared to be a protective factor to emotional difficulties, and was positively related to the perception of optimal parenting and care received in childhood but not parental protection. The insecure 'Anxious Avoidant' attachment style appeared to act as a risk factor to the development of emotional difficulties. No significant relationships were found between the 'Dismissing Avoidant' style and emotional problems.

Acknowledgements

I would like to thank Prof. Bill Lindsay and Prof. Derek Carson for the help, encouragement, support and guidance they have given me during my work on this thesis. They have shown never ending patience with my efforts to balance a busy work schedule, additional academic study and work on my PhD thesis.

I would also like to thank the staff and clients of Strathmartine Centre and Monroe House Castlebeck, without their co-operation this research would not have been possible.

A very special thanks is given to my husband Tony, whose support, love and encouragement is ongoing within my daily life, and without whom I would not have achieved what I have. A special thanks also goes to my family, Danae, Owen and Gareth, who have on many occasions put my own needs for academic study, above their own need for valued time, communication and shared experiences within their attachment to their mother.

Table of Contents

Abstract.....	2
Acknowledgements	4
Table of Contents	5
Chapter 1: Attachment Theory.....	18
1.0 Introduction.....	18
1.1.1 The Origin of Attachment Theory.....	19
1.1.2 The Dominant Psychoanalytical Approach.....	19
1.1.3 Parental Separation and the Development of Personality Pathology	20
1.1.4 Report to the World Health Organisation	21
1.1.5 Terminology and Interrelated Concepts.....	22
1.1.6 Infant Attachment: An Adaptive Behavioural Perspective.....	23
1.1.7 Infant Development: The Emergence of Attachment Behaviour	29
1.1.8 Empirical Measurement of Infant Attachment: The Strange Situation Task.....	31
1.1.9 Narrative Story Techniques.....	35
1.1.10 Picture Response Techniques	35
1.1.11 Child Attachment Interview (CAI).....	36
1.1.12 Parental Care Giving and the Development of Attachment Bonds	36
1.1.13 Infant Attachment Categories: Parent-Child Communicative Strategies.....	39
1.1.14 Disorganised/Disoriented Attachment (Hereafter also referred to as Group D).....	40
1.1.15 Validity of the Four Category Infant Attachment Model.....	42
1.1.16 Predictive Outcome of Infant Attachment Disorganisation (Group D).....	44
1.1.17 Attachment Continuity in Childhood.....	44
1.1.18 Attachment Stability and Self Fulfilment	46
1.1.19 Attachment and the Development of Overprotection and Dependency	48
1.1.20 Attachment Discontinuity	48
1.1.21 Intergenerational Transfer of Attachment Patterns.....	49
1.1.22 Attachment: the Effect of Childhood Abuse	51
1.1.23 Parental Alcohol Abuse and the Effect on Attachment Formation	53

1.1.24 Institutionalisation and Attachment Formation	54
1.1.25 Attachment as a Risk Factor in the Development of Antisocial Behaviour	55
1.1.26 Attachment as a Protective Factor in the Development of Juvenile Delinquency	57
1.1.27 Childhood Disorders: Their Effect on Parental Attachment Formation.	58
1.1.28 Attachment and Attention Deficit Hyperactivity Disorder (ADHD).....	58
1.1.29 Insecurity of Attachment in ADHD.....	59
1.1.30 Attachment and Autistic Spectrum Disorder.....	61
1.1.31 Differences in Attachment Bonds in Children Diagnosed with Autistic Spectrum Disorder	64
1.1.32 Attachment Bonds and the Child with Intellectual Disability (ID).....	65
1.1.33 Conclusion.....	66
Chapter 2: Attachment in Adulthood	69
2.0 Introduction	69
2.1.1 Attachment Continuity from Infancy to Adulthood	71
2.1.2 Adult Attachment and Perceived Parental Care Giving	75
2.1.3 Individual Differences in Attachment Strategies	77
Figure 2.1.0: Diagram of the Two Dimensional Space Defined by Attachment Anxiety and Avoidance, Showing the Quadrant Names Suggested by Griffin and Bartholomew (1994). ..	78
2.1.4 Gender Differences in Attachment	79
2.1.5 Prototypical Individual Differences within Attachment Styles.....	82
2.1.6 The Secure Attachment Style in Adulthood.....	82
2.1.7 The Preoccupied Attachment Style in Adulthood.....	83
2.1.8 The Fearful Avoidant Attachment Style in Adulthood.....	84
2.1.9 The Dismissing Avoidant Attachment Style in Adulthood.....	84
2.1.10 Attachment and Emotional Regulation	85
2.1.11 Attachment and Anger	87
2.1.12 Attachment Psychopathology and Antisociality.....	89
2.1.13 Attachment and Interpersonal Problems	90
Figure 2.1.1 Characteristics of the Interpersonal Circumplex Model	92
2.1.14 Interpersonal Problems and the Secure Attachment Style	92
2.1.15 Interpersonal Problems and the Preoccupied Attachment Style.....	93
2.1.16 Interpersonal Problems and the Fearful Avoidant Attachment Style	94

2.1.17 Interpersonal Problems and the Dismissing Avoidant Attachment Style	95
2.1.18 Attachment and Personality Disorder	97
2.1.19 Attachment and Borderline Personality Disorder (BPD).....	98
2.1.20 Attachment and Antisocial Personality Disorder (APD)	100
2.1.21 Attachment and Sexual Offending Behaviour.....	102
2.1.22 Attachment in Adults with ID	104
2.1.23 Summary	105
2.1.24 Conclusion.....	108
Chapter 3: Empirical Measurement of Attachment Style.....	110
3.0 Introduction	110
3.1.1 The Development of Empirical Measurement	111
3.1.2 The Development of Adult Attachment Prototypes (Hazan and Shaver, 1987)	112
3.1.3 Categorical Measurement.....	112
3.1.4 Categorical Versus Continuous Ratings	113
3.1.5 Dimensional Measurement.....	114
3.1.6 The Four Category Model.	115
3.1.7 Empirical Measurement of the Four Category Model.....	116
3.1.8 Response Measurement: Capturing Variance	118
3.1.9 Summative Ratings	119
3.1.10 Summative Likert Scales.....	120
3.1.11 Measurement Using Self Report Scales	120
3.1.12 Romantic Attachment	120
3.1.13 Peer Attachment.....	122
3.1.14 Flexible Measures	123
3.1.15 An Integrative Combination of Measurement.....	124
3.1.16 Measuring Attachment Retrospectively to Parents.....	125
3.1.17 Parental Representations	125
3.1.18 Attachment and the Concept of Defensive Idealisation.....	126
3.2.0 Measures of Retrospective Attachment	127
3.2.1 Retrospective Self Report Measures of Parental Attachment	128
3.2.2 Attachment History Questionnaire (AHQ) (Pottharst and Kessler, 1982).....	128
3.2.3 Mother ó Father--Peer Scale (MFP) (Epstein, 1983).....	129

3.2.4 Adult Attachment Questionnaire (AAQ) (Hazan and Shaver, 1987)	129
3.2.5 Parental Bonding Inventory (PBI): (Parker, Tupling, and Brown, 1979).....	130
3.2.6 Difficulties in the Use of Existing Self Report Measures of Attachment with People Who Have Mild Intellectual Disability.....	131
3.2.7 Difficulties in Understanding:	132
3.2.8 Measurement of Conceptual Experiences	132
3.2.9 Cognitive Load and Abstract Concepts	133
3.2.10 The Relationship Questionnaire and People with Mild Intellectual Disability (ID)	133
3.2.11 Adaptation of an Existing Measure	134
3.2.12 The Focus of Attachment Orientation.....	134
3.2.13 Categorical, Continuous or Dimensional Measurement	134
3.2.14 Internal Consistency, Reliability and Validity	135
3.2.15 Flexibility of Use	136
3.2.16 Mutual Exclusivity and Collective Relationships between Items	137
3.2.17 Positive and Negative Phrasing	137
3.2.18 Avoiding Jargon.....	137
3.2.19 Avoid the Use of Negatives to Reverse the Wording of an Item	138
3.2.20 Sources of Error in Scale Measurement.....	138
3.2.21 Conclusion.....	139
Chapter 4: The Development of a Self Report Measure for the Measurement of Attachment Orientation in People with Mild ID.....	141
4.0 Introduction	141
4.1.1 Method	144
4.1.2 Description of Participants	144
4.1.3 Measures	144
4.1.4 Procedure.....	147
4.1.5 Adaptation of the Relationship Questionnaire (RQ).....	147
4.1.6 Results	151
Table 4.1.0 The Adapted RQ (ARQ).....	152
4.1.7 Flesch Kincaid Reading Ease and Grade Scores	152
Table 4.1.1 Flesch Kincaid Reading Ease Scores for the Original RQ	152
4.1.8 Flesch Kincaid Reading Ease of the ARQ	153

Table 4.1.2 Flesch Kincaid Reading Ease Scores for the Adapted RQ (ARQ)	154
4.1.9. Flesch Kincaid Grade Scores	155
Table 4.1.3 Flesch Kincaid Grade Scores.....	156
4.1.10 Categories of Attachment.....	157
Figure 4.1.0 - Number of participants within each attachment category within the original RQ.	157
Table 4.1.4 - Concordance of Categories of Attachment Style between RQ and ARQ.....	158
4.1.11 Goodness of Fit between the RQ and ARQ Categories of Attachment.....	159
Table 4.1.5 The Goodness of Fit between RQ and ARQ Categories of Attachment Style. ...	160
4.1.12 Magnitude of the Relationship between Categorical Measurement Using the RQ and the Adapted RQ.....	160
Table 4.1.6 The Magnitude of the Relationship between Categorical Classifications Using the RQ and the Adapted Version (ARQ) (N60).....	161
4.1.13 Construct Validity within the ARQ	161
Table 4.1.7 Showing Spearman's Rho correlation within the 'Secure' attachment style section of the ARQ	162
Table 4.1.8 Spearman's Rho Correlation within the 'Fearful Avoidant' and the	164
'Preoccupied' Attachment Style Sections of the ARQ.....	164
Table 4.1.9 Showing Spearman's Rho Correlation within the 'Dismissing Avoidant' Attachment Style Section of the ARQ.....	165
4.1.14 Interim Discussion	166
4.2.0 Study 2b: The ARQ: Internal Consistency and Collinearity.....	170
4.2.1 Participants Study 2b:	171
4.2.2 Measures Study 2b.....	171
4.2.3 Procedure Study 2b.....	172
4.2.4 Results	173
4.2.5 Construct Validity.....	173
4.2.6 Internal Consistency of the ARQ.....	173
4.2.7 Reliability of the 'Secure' Attachment Section of the ARQ.....	174
Table 4.2.0 Inter Item Correlation Matrix for the 'Secure' Attachment Classification.	174
Table 4.2.1 The Item Total Statistics for the 'Secure' Attachment Style (n101).....	175
4.2.8 The Reliability of the 'Fearful Avoidant' Attachment Section.....	176

Table 4.2.2 Inter Item Correlation Matrix for the Fearful Avoidant Attachment Classification.....	176
Table 4.2.3 The Item Total Statistics for the Fearful Avoidant Attachment Style (n101)...	177
4.2.9 The Reliability of the Preoccupied Attachment Section	178
Table 4.2.4 Inter Item Correlation Matrix for the Preoccupied Attachment Style.....	178
Table 4.2.5 The Item Total Statistics for the Preoccupied Attachment Style (n101).	179
4.2.10 Reliability of the Dismissing Avoidant Attachment Style	179
Table 4.2.6 Inter Item Correlation Matrix for the Dismissing Avoidant Attachment Style. 180	
Table 4.2.7 Item Total Statistics for the Dismissing Avoidant Attachment Style (n101)....	180
Table 4.2.8 Cronbachs Alpha Values for Each Attachment Section of the ARQ within the Adaptation of the Self Report RQ Scale.....	181
4.2.11 Interim Summary	181
4.2.12 Principal Components Analysis.....	182
4.2.13 Examination of Sampling Adequacy and Factor Retention.	182
4.2.14 Kaisers Criterion (KMO)	183
4.2.15 Correlation Matrix (Appendix 5.0).....	183
4.2.16 Cattell Scree Test (Cattell, 1966).....	183
4.2.17 Monte Carlo Parallel Analysis.....	184
4.2.18 Stability of Factor Structure	184
4.2.19 Choosing a Statistical Cut Off for Factor Loading Criteria	185
4.2.20 Evaluating the Level of Variance of Each Factor Item.....	185
4.2.21 Total Variance: Analysis 1	186
Table 4.2.9 Eigenvalues and Percentage of Variance Accounted for by the Four Factor Model.	187
Table 4.2.10 Pattern and Structure Matrices with Communalities for Principal Components Analysis with Direct Oblimin Rotation: Analysis 1 Shows the Four Factor Structure with all 19 Statements Included.	188
Table 4.2.11 The Factor Correlations for the Four Factor Solution in Analysis 1.....	190
4.2.22 Principal Components - Analysis 2	190
Table 4.2.12 Eigenvalues and Percentage of Variance Accounted for by the Four Factors... 191	
Table 4.2.13 Analysis 2: Showing the Four Factor Structure with Statements S4, S5 and D1 Removed from the Analysis.....	192

4.2.23 Three Factor Solution - Analyses 3	193
Table 4.2.14 Eigenvalues and Percentage of Variance Accounted for by the Four Factors...	193
Table 4.2.15 Analysis 3: Showing the Forced 3 Factor Structure with all 19 Statements Included.....	194
Table 4.2.16 The Correlation between the Three Factors Resulting from Analysis 3.	196
4.2.24 Analyses 4: The Forced Three Factor Solution with S4, S5, P2 and D1 Removed from the Analysis.	196
Table 4.2.17 Eigenvalues and Percentage of Variance Accounted for by the Three Factors, (Fourth factor shown for information only).....	196
Table 4.2.18 Analysis 4: The Three Factor Solution Minus S4, S5, P2 and D1.....	197
Table 4.2.19 The Factor Correlations for the Forced Three Factor Solution with S4, S5, P2 and D1 Removed - Analysis 4.	198
Table 4.2.20 The Total Variance Explained by each of the Analyses.....	198
4.2.25 Factor Interpretation of the Three Factor Model.....	199
4.2.26 Internal Consistency of the Final Three Factor Solution.	199
4.2.27 Reliability of the -Anxious Avoidant Attachment Factor.....	200
Table 4.2.21 Cronbach's Alpha Analysis of Factor 1 -Anxious Avoidant.....	200
4.2.28 Reliability of the -Dismissing Avoidant Attachment Factor	201
Table 4.2.22 Cronbach's Alpha Analysis of Factor 2 -Dismissing Avoidant.....	201
4.2.29 Reliability of the -Secure Attachment Factor.....	201
Table 4.2.23 Cronbach's Alpha Analysis of Factor 3 -Secure Attachment Style.....	202
Table 4.2.24 Showing Cronbach's Alpha levels for Each Attachment Classification of the ARQ (Final version)	202
4.2.30 Interim Discussion	202
Table 4.2.25 Statements within the Secure Attachment Style in the ARQ.....	206
Table 4.2.26 Statements within the Insecure Anxious Avoidant Attachment Style in the ARQ	207
Table 4.2.27 Statements within the Insecure - Dismissing Avoidant Attachment Style in the ARQ.....	207
4.2.31 Distribution of Categorical Attachment Style	208
Figure 4.2.1 Distribution of Attachment Categories of Participants as Measured by the ARQ	208

Table 4.2.28 Gender Differences in Attachment Categories from Ratings of the ARQ	210
4.2.32 Discussion	210
Chapter 5: Defining Intellectual Disability (ID).	215
5.0 Introduction	215
5.1.1 World Health Organisation and the International Classification of Diseases ó 10 th Edition (ICD-10).....	215
Table 5.0 Classification of ‘Mental Retardation’ in ICD-10.	216
Table 5.1.1 DSM-IV-TR’s Classification of ID.....	217
5.1.2 The Mental Health (Care and Treatment) (Scotland) Act 2003	218
5.1.3 The British Psychological Society (BPS)	219
5.1.4 The American Association on Intellectual and Developmental Disabilities (AAIDD).....	219
5.1.5 Summary	220
5.1.6 The Assessment of Intellectual Functioning	220
5.1.7 Determination of Intellectual Functioning	222
5.1.8 The Adaptive Behaviour Component	223
5.1.9 Prevalence of Intellectual Disability.....	224
5.1.10 Deinstitutionalisation	225
5.1.11 Promoting Quality of Life: ‘The Same as You’.....	225
5.1.12 Normalisation and Offending Behaviour	226
5.1.13 Offenders with ID	227
5.1.14 Prevalence of Offending Within the Population of People with ID	228
5.1.15 Validity of Diagnosis	229
5.1.16 Taking Account of the Diagnostic Criteria for ID.....	230
5.1.17 Change in Social Policy	230
5.1.18 Contextual Sampling Bias	231
5.1.19 The Mentally Disordered Offender (Mental Health (Scotland) Act (2003).....	233
5.1.20 Psychopathology.....	233
5.1.21 Substance Misuse.....	234
5.1.22 Personality Disorder.....	235
5.1.23 Characteristics of Offenders with ID	236
5.1.24 Sexual and Physical Abuse.....	237
5.1.25 Sex Offenders with ID	238

5.1.26 Non Sex Offenders with ID.....	239
5.1.27 Conclusion:.....	239
Chapter 6: Characteristics of Offenders with Mild ID	242
6.0 Defining the Cohort of Offenders with Mild ID	242
6.1.1 Method	242
6.1.2 Description of Participants	243
6.1.3 Measures	243
6.1.4 Procedure.....	244
6.1.5 Assessment Process	245
6.1.6 Demographic Characteristics	245
Figure 6.1.0 - Admission Sources of Participants to Forensic Services.....	246
Figure 6.1.1 Psychiatric Contact and Institutional Care Pre 18 Years	247
Figure 6.1.2 Family History of Offending, Psychiatric Contact Pre and Post Index Behaviour and Imprisonment Post 18 Years of Age.....	248
Figure 6.1.3 - Issues of Alcohol and Substance Misuse	249
Figure 6.1.4- Childhood Adversity Issues Pre 18 Years.....	250
Figure 6.1.5 Experiences of Childhood Abuse Pre 18 Years.....	251
Figure 6.1.6 Psychiatric Diagnosis - ICD-10.....	252
Figure 6.1.7 Lifetime Criminality	253
Figure 6.1.8 Participant Index Offences	254
6.1.7 Interpretation of Results.....	255
6.1.8 Interim Discussion.....	255
6.2.0 Study 3: Attachment, Perceived Parenting and Abuse in Offenders with Mild ID.....	257
6.2.1 Normal Distribution of Attachment Styles	258
6.2.2 Attachment, Parental Separation and Institutionalisation	260
6.2.3 Retrospective Perceptions of Parenting	263
6.2.4 Poor Parenting, Abuse and Antisociality.....	266
6.2.5 Attachment, Abuse and the Development of Personality Disorder (Borderline and Antisocial).....	267
6.2.6 Method	268
6.2.7 Description of Participants.....	269

6.2.8 Offenders with Mild ID.....	269
6.2.9 Non Offenders with Mild ID (Control Group)	270
6.2.10 Measures.....	270
6.2.11 Measurement of Attachment	270
6.2.12 Parental Bonding Inventory (PBI) (Parker, Tupling, and Brown, 1979).....	271
Figure 6.2.0 Showing the Pictorial Representation of Possible Responses for the PBI.....	272
6.2.13 The Background Information Report (BIR).....	273
6.2.14 Procedure.....	273
6.2.15 Results	275
Figure 6.2.1 Shows the Number of Participants Within Each Attachment Category for Offenders (n38) and Controls (n25) with Mild ID.	275
Figure 6.2.2 Shows a Comparison Between Offenders, Controls and also Male Student Participants who had Previously Participated in Study 2.	276
Figure 6.2.3 Comparison of Distribution of Attachment Categories between Offenders with Mild ID, Controls and Student Participants in Study 2.	278
6.2.16 Attachment and Retrospective Perceptions of Parenting	279
Table 6.2.1 Flesch Kincaid Reading Ease and Grade Scores for the Parental Bonding Instrument (PBI).....	281
Table 6.2.2 The Relationship Between the Categories of Parenting Style and Dimensional Scores of 'Care' and 'Protect' on the PBI.	282
Figure 6.2.3 Numbers of Offenders with ID Within Each Category of Perceived Parental Style Experienced in Childhood.....	283
Table 6.2.4 Correlation Between Mean Scores of Dimensional Attachment Style and PBI Categorical Ratings of Affectionate Constraint, Affectionless Control, Optimal Parenting and Neglectful parenting and PBI Dimensional Ratings of 'Care' and 'Protect'(n38).	284
6.2.17 Attachment, Residential Status and Abuse	285
Figure 6.2.5 Demographic Data for Offenders with ID of participants who were placed in care.	285
Figure 6.2.6 Demographic Data for Experiences of Abuse within the Cohort of Offenders with ID (n38).....	286
6.2.18 Attachment style, Residential Status and Abuse	287
Table 6.2.4 Residential Status and the Variable 'Any Experience of Abuse'.....	287
6.2.19 Perceived Parenting and Abuse	288

6.2.20 Discussion	289
6.3 Study 4: Attachment, Anger and Psychological Symptoms in Offenders and Non Offender Controls with Intellectual Disability.	295
6.3.1 Method	298
6.3.2 Participants	298
6.3.3 Measures	299
6.3.4 Ethical Approval.....	301
6.3.5 Procedure.....	301
6.3.6 Results	303
Table 6.3 Percentage of Individuals Falling into Each Attachment Style Category.....	303
Table 6.3.1: Shows the Relationship between Mean Scores on Scales of Emotional Problems Scale (EPS) and Mean Scores for each Attachment Style for Offenders with Mild ID.....	304
Table 6.3.2: Shows the Relationship Between Mean Scores on Factors of the Dundee Provocation Inventory (DPI) and Mean Scores for each of the Attachment Categories in the Control group.	305
Table 6.3.3 Correlations between Mean Scores on Factors of the Brief Symptom Inventory (BSI) and Mean Scores for each of the Attachment Styles in the Control Group.	306
6.3.6 Summary	307
6.3.7 Discussion	307
6.4 Study 5: Attachment Style: The Relationship with Interpersonal Style and Personality Disorder.	311
Figure 6.4 Characteristics of the Interpersonal Circumplex Model, Fitting the IAS Octant Structure.....	312
6.4.1 Method	315
6.4.2 Participants	315
6.4.3 Measures	316
6.4.4 Procedure.....	318
Table 6.4: Relationships between the Categories and also the Mean Dimensional Scores for the ARQ and the DOM and LOV dimensions on the IAS.....	321
Table 6.4.1. Relationships between the Attachment Categories and also the Mean Attachment Style Scores for the ARQ and the Eight Quadrant Scores on the IAS.	322
Table 6.4.2: Relationships between the Categories and Mean Attachment Scores for the ARQ and the Two Personality Disorder Categories of Borderline and Antisocial.	324

Table 6.4.3. Association between Categories of Attachment Style and Antisocial	325
Personality Disorder.	325
Table 6.4.4: Parental Bonding Instrument (PBI) and Relationships with the IAS and Personality Disorder.	326
6.4.7 Discussion	326
Chapter 7: Conclusions	333
7.0 Summary of Introductory Chapters	333
7.1.1 Characteristics of the Sample of Offenders with Mild ID	334
7.1.2 Offenders with ID and Childhood Adversity	337
7.1.3 Attachment and Rehabilitative Intervention for Sexual Offending	337
7.1.4 Summary of the Adaptation of the Relationship Questionnaire (RQ)	338
7.1.5 Adapting the RQ: Findings re Internal Consistency and Construct Validity	339
7.1.6 The ARQ: A Three or Four Factor Structure?	341
7.1.7 The Best Fitting Model of Attachment: Adult or Childhood?	342
7.1.8 Gender Differences in Attachment Classification	344
7.1.9 The Final Version of the ARQ	347
7.1.10 Attachment in Offenders with ID	348
7.1.11 Attachment and Childhood Adversity	350
7.1.12 Attachment and Perceived Parenting in Offenders with ID.	351
7.1.13 Attachment and Emotion in Offenders and Non Offender Controls with ID.	353
7.1.14 Attachment, Interpersonal Style and Personality Disorder in Offenders with ID	356
7.1.15 Interpersonal Style and -Secureø Attachment.	359
7.1.16 Interpersonal Style and -Insecureø Attachment ó -Dismissing Avoidantø Attachment Style	360
7.1.17 Interpersonal Style and -Insecureø Attachment ó -Anxious Avoidantø Attachment Style	361
7.1.18 Attachment and Differences in Lifespan Development for People with ID	363
7.1.19 Attachment and Personality Disorder (PD)	365
7.1.20 Overall Conclusion	366
7.1.21 Noted Issues in this Research	370
7.1.22: Recommendations for Future Research	371
REFERENCES	374

Appendix 1: Participant Information Sheet Study 2a.....	443
Appendix 2: Participant Consent Form Study 2a.....	445
Appendix 3: Participant Instructions to Complete Self Report Attachment Questionnaires, Study 2a.....	446
Appendix 4: The Relationship Questionnaire (RQ) (Bartholomew and Horowitz, (1991).....	447
Appendix 5: The Adapted Relationship Questionnaire (ARQ) Version 1.....	448
Appendix 6: Scoring sheet to attain the mean score of the Summative Rating Scale used in the ARQ version 1.....	449
Appendix 7: Participant Information Sheet Study 2b.....	450
Appendix 8: Participant Consent Form Study 2b.....	452
Appendix 9: Participant Instructions to complete the Adapted Relationship Questionnaire (ARQ) (Version 1) Study 2b.....	453
Appendix 10: Spearman's Rho Correlation Matrix of the 19 individual ARQ statements: Testing convergent and discriminant validity.....	454
Appendix 11: Scree Plot for each Principal Component Analysis of the ARQ.....	455
Appendix 12: Monte Carlo Parallel Analysis for Each Principal Components Analysis.....	457
Appendix 13: Adapted Relationship Questionnaire (ARQ): Final Version.....	458
Appendix 14: Pictorial representations of scoring system for ARQ.....	459
Appendix 15: The Revised Scoring Sheet for the Final Version of the Adapted.....	460
Appendix 16: Participant Information Sheet for Offenders with Mild Intellectual Disability ...	461
Appendix 17: Participant Consent Form for Offenders with Mild Intellectual Disability.....	464
Appendix 18: Participant Information Sheet for Staff Carers and Key Workers of Offenders with Mild Intellectual Disability.....	465
Appendix 19: Participant Information Sheet for Clinical Staff Participating in Completion of the EPS, IAS and Assessment of Personality Disorder.....	469
Appendix 20: Participant Consent Form for Clinical Staff Participating in Completion of the EPS, IAS and Assessment of Personality Disorder.....	474
Appendix 21: Participant Information Sheet: Control Group.....	475
Appendix 22: Participant Information Sheet for Staff Support Carers and Key Workers for Control Group.....	478
Appendix 23: Participant Consent Form (Control Group).....	482
Appendix 24: The ARQ (Final Version).....	483

Chapter 1: Attachment Theory

1.0 Introduction

This thesis will examine attachment in adult offenders with mild intellectual disability (ID). To date there is a dearth of research with regard to attachment orientation within people with ID. Whilst carrying out this literature review only one study was found which attempted to allude to attachment orientation within this cohort, however no evidence was found of any empirical psychometric measurement tools or interview schedules for the reliable measurement of attachment orientation in people with ID. This thesis firstly sets out to formulate a psychometrically robust measure of attachment. This will be achieved through the adaptation and psychometric testing of an existing measure (the Relationship Questionnaire) (RQ) Bartholomew and Horowitz (1991). On achieving reliability within the adapted self report RQ this thesis will then proceed to measure attachment orientation in offenders with mild ID and explore relationships between attachment style, childhood adversity, emotional issues, interpersonal style and Borderline and Antisocial Personality Disorder. Firstly an outline of the development of attachment theory along with current research evidence in the field of attachment from childhood through to adulthood will provide an understanding of the relevant concepts identified with regard to attachment orientation.

This chapter will give an overarching outline of Attachment. It will outline the development of attachment in childhood and the adaptive evolutionary perspective relative to attachment organisation. It will proceed to discuss the first steps to empirical measurement of attachment in

childhood through direct observational studies and their findings, which resulted in representational categories of attachment.

1.1.1 The Origin of Attachment Theory

The origins of Attachment Theory are based within the years preceding and following the Second World War. John Bowlby (1907 ó 1990) a British psychiatrist, and the leading figure in the development of attachment theory began his observations at that time from concern firstly with juvenile delinquency and later with young children who had been separated from their parents during wartime evacuation.

In 1928 Bowlby volunteered to work at a school for maladjusted children. His experiences with two children in particular, set the stage for his theory development. One child was an isolated, remote and affectionless teenager who had been expelled from his previous school for theft and had no stable mother figure. The second child was a boy of seven or eight years of age, who was particularly anxious and who repeatedly followed Bowlby around wherever he went and was well known as Bowlby's shadow (Bretherton, 1992).

1.1.2 The Dominant Psychoanalytical Approach

The Psychoanalytic framework popular at that time, fixed the child's emotional problems within fantasies, developing from internal conflict between aggressive and libidinal drives, rather than events occurring in the life experiences of the child (Bowlby, 1982). Convinced that children needed a close and continuous relationship with a primary caregiver to flourish emotionally, Bowlby viewed Psychoanalytic theory as less than adequate in its explanation of the attachment

behaviour of children whom he observed, and was indeed contrary to his developed belief that the emotional disturbance of the child was due to actual family experiences.

1.1.3 Parental Separation and the Development of Personality Pathology

Influential to the development of Bowlby's theory of attachment was a study carried out in 1948 by James Robertson. This study was a systematic observational investigation into the impact of maternal separation in early childhood on the developmental personality pathology of children. Robertson's study (Robertson and Bowlby, 1952) involved two and three year old children who were separated from their mothers for varying periods of time, i.e. weeks or months. The children were cared for during this separation in settings such as hospitals or residential nursery. Whilst in these institutional settings they had no stable mother substitute. The intensity of distress and sadness that Robertson witnessed from these children whilst they were away from home, and the level and extent of the disturbance present after they returned home, profoundly impressed Robertson. From these observations he concluded that the loss of a mother figure was a dominant variable relative to childhood distress at separation. At that time the results of this study received varying responses. For example Bowlby (1982) outlines that:

“Some individuals challenged the validity of the results, others recognised the childhood responses were evident but suggested they were attributable to many other areas than simply loss of a mother-figure and yet others conceded that loss was a relevant variable but held that to mitigate its effects was not too difficult and that loss was therefore of less consequence for pathology than we suppose.” (Bowlby, 1982. p xiii)

Bowlby was convinced that the observations and findings of his colleague were valid. This work with Robertson led to the identification of a staged response to separation and a link between maternal separation and personality development.

“the children’s responses of protest, despair, and detachment which occur, when a child of age over six months is separated from its mother and placed in the company of strangers, are due mainly to ‘loss of maternal care at this highly dependent, highly vulnerable stage of development’”. (Bowlby, 1982 p xiii)

Bowlby further concluded that:

“The observable behaviour of a child both in the presence and in particular the absence of the mother could contribute greatly to the understanding of personality development”. (Bowlby, 1982. P3)

These observations of childhood responses did not fit the contemporary psychoanalytic theories of the time. Bowlby realised the answer to his theoretical questions possibly lay within ethology and Darwin’s theory of evolution.

1.1.4 Report to the World Health Organisation

In 1950 Bowlby was commissioned by the World Health Organisation to produce a report regarding the mental health of homeless children. This facilitated the introduction of his views to many other professionals, who were in agreement that an essential factor to the mental health of an infant and young child is the experience of a warm, intimate, and continuous relationship with his/her mother (or permanent mother-substitute) (Bowlby, 1982). However, the report highlighted the retrospective effects of maternal deprivation and measures of intervention and treatment but it did not, and at that point in time could not, provide the theory of the processes underpinning these attachment difficulties. Neither did it explain the means by which differing events falling under the heading of maternal deprivation produced differing forms of psychiatric problems in adolescence and adulthood.

Although at first controversial Bowlby's report did much to alter services and attitudes with relevance to childcare. For example, children were encouraged to visit mothers hospitalised during subsequent experiences of childbirth. Parents were also encouraged to stay with children through open visiting or indeed overnight stay whilst the child was hospitalised. The formulation and elaboration of his theory of attachment was subsequently elucidated in his trilogy on *Attachment and Loss* (Bowlby, 1982, 1973, 1980).

1.1.5 Terminology and Interrelated Concepts

What is helpful at this early stage is to first differentiate between three interrelated concepts within attachment theory – attachment, attachment behaviour and the attachment behavioural system. These three concepts represent the psychodynamic, behavioural, and cognitive components of attachment respectively.

Attachment: refers to the state of an individual's attachments. These can be qualitatively divided into secure and insecure attachment. The connotation of feeling attached is to feel safe and secure. In contrast, an insecurely attached person may have a mixture of feelings towards their attachment figure, e.g. intense love and dependency, fear of emotional or physical hurt, irritability, and vigilance (Ainsworth, Blehar, Waters, and Wall, 1978).

Attachment Behaviour: is triggered by separation or threatened separation from the attachment figure and is assuaged by the reinstatement of proximity to the individual to whom they are attached (Holmes, 1993). The goal of attachment behaviour is to attain or retain proximity to the primary caregiver who is usually perceived as stronger or wiser (Bowlby, 1973; Holmes, 1993)

Attachment Behavioural System: is an internalised working model of the world in which the inter-relationship between the self and significant others is encoded utilising a particular pattern of attachment shown by the individual. For example, the ambivalently attached individual may have a working model of others as desirable and strong but unreachable and of themselves as unworthy of support and love (Weiss, 1982). The presence of these three features defines an attachment relationship (Weiss 1982).

1.1.6 Infant Attachment: An Adaptive Behavioural Perspective

Attachment theory serves as a normative theory of how the inborn 'attachment system' functions in all humans and also as a theory of individual differences of the attachment strategies that are adopted in response to different social and life experiences (Hazen and Shaver, 1994). Understanding the human brain/mind within an evolutionary perspective can facilitate the understanding of human nature within an adaptive format (Buss, 1999). Buss proposes that for a behaviour to have evolved through adaptation there should exist the answers to four key questions: 1) *Why*, is the human mind designed in the way that it is, i.e. what causal processes have been at work to fashion the human mind into its current form, 2) *How*, the human mind is organised, 3) *What are the functions*, of the component parts and their structural links, 4) *How*, does input from the current social environment interact with the human mind to produce observable behaviour (Buss, 1999) Therefore an evolutionary psychological perspective must ask the questions 1) *Why* do human beings have an attachment behavioural system; 2) *How* is it organised in the human mind; 3) *What are the functions* of attachment behaviour and 4) *How does input from the social environment interact* with the attachment behavioural system to produce observable behaviour. In short, if the attachment system relates to evolutionary

adaptation, how does the attachment system proposed by Bowlby relate to these four questions in order to be viewed as an evolutionary adaptive behaviour.

1. Why Do Human Beings Have an Attachment System?

Attachment behaviour offers the infants a survival advantage, protecting them from danger by keeping them close to the primary caregiver (usually the mother) (Bowlby, 1973; Holmes, 1993; Feeney and Noller, 1996; Main, 1996). Of all mammals, the human baby requires the longest period of nurturance and protection. Instinctual attachment behaviours (clinging, following, sucking, smiling, gazing, touching) emerge within this context of prolonged helplessness and dependency and tend to elicit protective responses from adult caregivers and therefore provide a connection between the infant and caregiver. Virtually all infants become attached, basing the selection of attachment figures on social interactions and signals. These signals and interactions may not necessarily be sensitive and caring in order for attachment bonds to form as infants will also form attachments to insensitive and maltreating parents (Main, 1996). Thus, although the developing child has a propensity to form attachments, the nature of those attachments and their dynamics will depend on the parental environment to which the child is exposed (Holmes, 1993). Therefore the purpose and function of attachment is to keep the baby close to the caregiver for safety and protection; to allow the child to explore and learn within a safe context ("secure base"); and to develop a loving and reciprocal relationship which can be passed on through generations.

2. Is Attachment Organised in the Human Mind? The Biological Component: Several Interlocking Systems

Bowlby does not cite any particular biological structure within the brain as the site of the attachment behavioural system, rather he suggests that attachment behaviour forms an organised behavioural system involving a number of interlocking behavioural systems, including exploration, care giving, and sexual mating, all of which he suggests are designed to ensure survival and procreation. Furthermore Bowlby (1973) describes these interlocking behavioural systems as 'homeostatic control systems' that maintain a relatively stable state between the individual and his/her own environment, for example to establish or maintain contact with an attachment figure, the goal of the system being to attain 'felt security' (Bowlby, 1973; Feeney and Noller, 1996; Main, 1996). To further understand the biology of attachment, it is necessary to consider the function and chemistry of the brain. The brain is composed of three parts each of which evolved at a different time and for a different purpose. For example the brain stem, was the first to evolve and regulates basic life functions (digestion, breathing, reproduction, metabolism), and is responsible for primitive sexual, territorial and survival instincts. The second part of the brain to develop was the Limbic System. This system provides the ability to experience emotions, and is involved in the functions of long term memory, behaviour and olfaction. This part of the brain is the seat of all relationship bonds and controls attachment behaviour. The Neocortex is the third and final part of the brain to evolve, and controls thinking, reasoning, creativity, and symbolic language. It enables us to observe our own emotions and (hopefully) have choices about our response (<http://library.adoption.com/articles/attachment-biology-evolution-and-environment.html>).

A large amount of our social behaviour is controlled by the "old brain" (the first two parts to evolve), not by our higher intellect. The old brain governs maternal instinct, attachment

behaviour, self-preservation, and stress-related responses (Levy, 2011). Therefore when there exists a sense of threat or danger a part of the Limbic System (amygdala) triggers the release of stress hormones. In turn, Norepinephrine increases the brain's overall reactivity alerting the senses; Dopamine mobilizes the body for action ("fight or flight"), increasing heart rate and blood pressure, and focuses attention on the source of the fear. How does this relate to children and attachment? Children with attachment disorder have often been victims of abuse, neglect and multiple separations or disruptions. Their trauma, fear, anxiety and painful emotions are lodged in the primitive portion of their brains ("old brain"). This is why traditional cognitive and behavioural therapy is not usually effective with these children (Levy, 2011). Conventional therapeutic approaches such as Cognitive Behavioural Therapy (CBT) are directed towards the Neocortex section of the brain, and this intellectual approach does not provide access to these children in ways that are necessary for healing and positive change. Approaches that promote attachment behaviours have been found to be more effective, for example the holding/nurturing approach, stimulates the part of the brain responsible for attachment (Brisch, 1999).

The Cognitive Component: The Internal Working Model

Bowlby highlights that infants form cognitive internal working models of their relationship with their mother and key others. This internal working model is formulated by basics such as the child's confidence (or lack of it), that the attachment figure will be available and/or reliable when needed, the child's expectation of affection or rejection, and the child's sense of assurance that the mother is really a safe base for exploration. Bee (1998) asserts that the internal working model begins formation in the child's first year of life and becomes more complex and fixed through the first four to five years. Bee further suggests that by five years of age, most children have clear internal models of the mother (or primary caregiver), a self-model and also a model of

relationships built from interactional experiences between themselves and the mother figure. Once formed these models are thought to shape and explain experiences and affect memory and attention. For example we pay attention to and remember experiences that fit our particular model and ignore, miss or forget experiences that don't match (Bee 1998).

3. *What are the Functions of Attachment Behaviour? The Adaptive Function of the Attachment System*

According to Bowlby (1973), proximity seeking (including protest at separation), secure base, and safe haven are the three defining features, and the three functions, of an attachment relationship. A variety of attachment behaviours, for example, smiling, crying, and visual following are thought to serve a single purpose of maintaining proximity to the primary caregiver (Main, 1996). Feeney and Noller (1996) delineate the function of the attachment system as sustaining a balance between exploratory behaviour and proximity seeking behaviour, taking into account the accessibility of the attachment figure and the dangers present in the physical and social environment at time of exploration. For example, Feeney and Noller (1996) suggest that infants perceive separation from their attachment figure as a threat to their well-being and through this will try to remain within the protective range of the attachment figure. Infants reduce the protective range to the attachment figure in strange or threatening situations.

Evolution has as its core the survival of the fittest through natural selection. In order to survive the infant must attain nourishment to survive and grow and gain protection from predators. One question which has to be raised is, do infants become attached to mother or primary caregiver, as a source of nourishment, as a source of protection, or both? Previous research within animal studies provides evidence to help answer this question.

Bowlby was a very keen naturalist and was impressed by the reports of Lorenz (1952) when studying the responses in some species of birds. For example newly hatched goslings followed their mother (or mother substitute), and exhibited behavioural scripts of what was classed as 'anxiety' (cheeping, searching) when separated from her, despite the fact that she did not provide them with food. This evidence would suggest that bonding is independent from, and in fact dissociated from, the provision of food for survival. Further evidence is provided by the studies carried out by Harlow (1958) where he describes the rearing of infant rhesus monkeys separated from their mothers at birth, and reared with the help of wire surrogate mothers. In one study the infant rhesus monkeys were presented with a 'wire mother' to which a feeding bottle was attached and a second mother was presented without a feeding bottle but which had a covering of a soft terry nappy material. The infant monkeys showed a clear preference for the 'soft terry' mother, spending up to eighteen hours a day clinging to her (as they would with their real mothers), even though they were fed exclusively by the lactating wire mother. Thus through observations of animal behaviour such as Goslings (Lorenz, 1952) and Rhesus monkeys (Harlow, 1958) it can be concluded that these animals show attachment bonding without the provision of nourishment by the mother figure. The further conclusion can therefore be drawn that attachment behaviour is not predominantly related to the provision of nourishment by the mother or primary caregiver and could be suggested to relate to 'felt security'

It was these strong parallels between human attachment behaviour and similar behaviour shown by non-human species that led Bowlby to hypothesise that attachment behaviour is rooted in evolutionary theory as an adaptive behaviour which has evolved through a process of natural selection.

4. *How Does the Social Environment Interact with Attachment Behaviour Systems?*

Attachment and Interaction with the Social Environment

The evidence suggests that attachment behaviour shows an identifiable relationship to felt security (Ainsworth et al., 1978; Main 1990). Taking account of the strong parallels between human and non human behaviour an assertion can be made that the attachment figure serves as a secure base from which the infant feels safe to explore and master the environment. In situations of no apparent threat the infant is more likely to engage in exploratory behaviour. In contrast, proximity seeking behaviour towards the attachment figure is more likely to be activated when the infant perceives a threat in the immediate environment (Main, 1996).

Additionally when infants feel secure they are more likely to be sociable and less reserved and to engage in more play and exploration. On the other hand, when infants feel insecure and lack confidence in the caregiver, they are more likely to respond with fear and anxiety or with defensiveness, leading behaviours such as crying and clinging, whereas responding with defensiveness leads to avoidance of close contact with the attachment figure (Main, 1996; Ainsworth, Blehar, Waters and Wall, 1978).

1.1.7 Infant Development: The Emergence of Attachment Behaviour

Bowlby outlines three phases involved in the development of the infant attachment system. He suggests that the newborn baby begins life with a set of innate behaviour patterns that orient him/her towards others and that signal his/her needs. Ainsworth, et al. (1978) describes these early behaviours as proximity promoting behaviours ó they bring people physically closer. This proximity promoting behaviour is thought to have three stages of development.

Phase 1-of development can be considered within the time frame of new born to 3 months (Holmes, 1993). Holmes suggests that newborn babies cannot differentiate one human being from another (Holmes 1993). The new born infant has a behavioural repertoire including crying, making eye contact, clinging, cuddling, and responsiveness to care giving efforts by being soothed. Ainsworth describes these behaviours as 'simply emitted, rather than being directed towards any specific person' (1989, p710). Within this phase of development Bee (1998) suggests there is little evidence of attachment. Bee does however suggest that it is within this phase that the roots of the attachment relationship are emerging. For example, within this phase, the baby is building a set of expectancies and schemas in relation to the responsiveness of others to its needs, and also emerging is the ability to discriminate between mother and father (Bee, 1998).

Phase 2- can be considered to start around the age of 3 months (Bee, 1998). At this stage the baby has become more discriminating as to who evokes the attachment behaviours. For example, the baby may smile more to the people who regularly take care of him/her and may not smile readily to a stranger (Bee, 1998). However despite this selective behaviour, both Bowlby and Ainsworth have argued that the infant does not as yet, have a full blown attachment system. At this stage the child is thought to favour a number of individuals with his/her 'proximity promoting' behaviours but no one person has become the focus of attachment and the provider of a 'safe base' (Bee, 1998). Additionally, children in this phase of development show no specific anxiety at separation from their parent, and no fear of strangers. (Bee, 1998)

Phase 3 within the development of attachment is thought to occur between the age range of 6 - 24 months (Bowlby, 1982). Bowlby suggests that the infant forms a genuine attachment at about

6 months of age. He suggests this is in line with the infants increased independence in mobility at this age as it is now able to move around the world more independently by shuffling or crawling. This increased mobility allows the infant to move away or toward the caregiver, as well as enticing the caregiver to come to him/her. The infants' attachment behaviours now change from mainly 'come here' or 'proximity promoting' behaviours to what Ainsworth (1989) terms 'proximity seeking' or 'go there' behaviours. Bee (1998) highlights the child of this age can also be noted as using the attachment figure as a safe base from which to explore the world around him/her – one of the key signs that an attachment relationship exists. Infants within this phase typically show both fear of strangers and separation protest from the attachment figure (Ainsworth, 1989). It is apparent that from the age of 6 months onwards the mother-infant interaction will determine the quality of the attachment formed. Bee (1998) highlights that from the age of 7 to 8 months infants prefer *either* mother or father to a stranger when feeling threatened. This attachment behaviour is consistent except when the infant feels under stress or is frightened. Especially between the ages of 8 to 24 months the infant typically turns to the mother rather than the father (Lamb, 1981).

1.1.8 Empirical Measurement of Infant Attachment: The Strange Situation Task

Bowlby's theory was influential but lacked empirical investigation and formulation of a testable hypothesis to underpin the theoretical basis of attachment. Ainsworth, et al. (1978) carried out the first detailed studies of individual differences through the gathering of longitudinal data during home visits to clients. These home visits provided the opportunity for naturalistic observations of mother - infant interactions (Ainsworth et. al., 1978; Bretherton, 1992; Main, 1996). To empirically test the findings from these observational studies Ainsworth et al. (1978) developed the experimental paradigm known as the 'Strange Situation'

The 'Strange Situation' (Ainsworth et al. 1978) consists of a series of eight different episodes and tends to be conducted in a laboratory setting, typically used when the child is twelve to eighteen months of age:

The eight episodes are as follows: The child is first with the mother, then with the mother and a stranger, alone with the stranger, completely alone for a few minutes, reunited with the mother, left alone again, and then reunited first with the stranger, and then the mother. Ainsworth suggested that children's reactions to this situation – in particular to the reunited phase – could be classified into three types of attachment organisation (Ainsworth, et al., 1978). These authors describe the attachment patterns elicited by the 'Strange Situation' episodes as:

1. *Avoidant, (Group A)* – Does not cry on separation, attending to toys or environment throughout procedure. Actively avoids and ignores parent on reunion, moving away, turning away, or leaning away when picked up. Unemotional; expressions of anger are absent.
2. *Secure (Group B)* – Shows signs of missing parent on first separation and cries during second separation. Greets parent actively; for example creeping to parent at once, seeking to be held. After briefly maintaining contact with the parent, settles, and returns to play.
3. *Anxious/ambivalent (Group C)* – Preoccupied with parent throughout procedure, may seem actively angry, alternately seeking and resisting parent, or may be passive. Fails to return to settle or return to exploration on reunion and continues to focus on parent and cry.

(Note: these groupings will be referred to throughout his thesis.)

The responses in the 'Strange Situation' task were first noted within a year long home observational study of 26 infant-mother dyads. (Ainsworth, et al., 1978) Infants who showed signs of missing mother during her absence, welcomed her actively on her return, and then returned to play, were found to have treated the mother as a 'secure base' for exploration in the home and would be classified within the secure attachment category or pattern. These children had shown little anger toward the mother on reuniting and showed little anxiety regarding minor separations. This secure response pattern appeared in the majority of infants and Ainsworth et al. (1978) found this secure attachment pattern to be associated with interactional patterns such as the mother's tender, careful holding, with contingent pacing of face to face interactions, and with sensitivity to infant signals in the first year of life, (Ainsworth et al., 1978). By contrast, Ainsworth et al. (1978) found a few infants were preoccupied with mother throughout the 'Strange Situation' procedure, and showed behaviour which suggested they were experiencing anger or indeed passivity. These infants failed to settle and return to play on reunion with their mother. These infants were identified as insecure-resistant or insecure-ambivalent in so far as they appeared anxious in their home setting. Ainsworth et al. (1978) suggested these infants experienced very different interactional patterns with their mothers when compared to the infants within the 'secure' attachment pattern. For example their mothers were not rejecting, but they were described by Ainsworth et al. (1978) as inept in holding the infants, as being non-contingent in their face-to-face interaction, and were responsively and behaviourally unpredictable (Ainsworth et. al. 1978).

The three patterns of attachment delineated by Ainsworth et al. (1978) of 'secure', 'avoidant' and also 'anxious/ambivalent' are suggested as reflecting the infants expectation regarding the primary caregivers response to attachment needs. From the differences noted in interactional behaviour and behavioural response between mother-infant dyads within the 'Strange Situation'

observational measurement it was concluded that each infant was developing an internal working model of 'self' and 'other' formed from their interactions within relationships with their primary caregiver. This formulation of an internal working model includes representations of the primary caregiver and the self within attachment relations and further contributes to the development of a more generalised model of expectations of self and others within interpersonal relationships (Madigan, Ladd and Goldberg, 2003).

The Strange Situation has also received varied critique. Firstly it is not designed for children older than 18 months of age and various other measures are being developed to facilitate reliable measurement of attachment in older toddlers, children, and teens. Modified procedures based on the Strange Situation have been developed for older preschool children (see Belsky et al., 1994; Greenberg et al., 1990) but it is much more dubious whether the same approach can be used in middle childhood. Additionally the Strange Situation task is based on only 20 minutes of childhood observable behaviour. This small snapshot in time can be scarcely expected to tap all the relevant qualities and complexities of a child's attachment relationships. Q-sort procedures based on much longer naturalistic observations in the home, and interviews with the mothers have developed in order to extend the data base (Vaughn and Waters, 1990). A further constraint is that the coding procedure results in discrete categories rather than continuously distributed dimensions. As with the literature on adult attachment discrete categories may not best represent the concepts that are inherent in attachment security. A more dimensional measurement approach may better account for individual variation of attachment security.

Three different techniques are used to determine their state of mind with respect to attachment. The first is the Story Stem in which children are asked to complete and describe stories having

been given the 'stem' or beginning. The second method asks children to respond to pictures. The third involves asking children actual questions about their attachment relationships.

1.1.9 Narrative Story Techniques

This method makes use of dolls and also narrative to act out a story. The dolls represent family members. The interviewer enacts the beginning of the story and then hands the dolls over for the child to complete it with varying degrees of prompting and encouragement. These techniques are designed to access the child's internal working models of their attachment relationships. There are a variety of story stem techniques which may be used to measure attachment in children between the ages of 3 and 8 years. These include the MacArthur Story Stem Battery (MSSB) and the Attachment Story Completion Test, developed in 1990 for children between the age of 3 to 8 years; the Story Stem Assessment Profile (SSAP) developed in 1990 for children aged 4 to 8; the Attachment Doll Play Assessment developed in 1995 for children age 4.5-11; the Manchester Child Attachment Story Task (MCAST) developed in 2000 for children aged 4.5 - 8.5 (Greenberg, Cicchetti, and Cummings, 1990).

1.1.10 Picture Response Techniques

Like the stem stories, these pictorial techniques are designed to access the child's internal working models of attachment relationships. The child is shown attachment related pictures and asked to respond to the story they perceive. Methods of measurement include the Separation Anxiety Test (SAT) developed in 1972 for children aged between 11 and 17. Revised versions have been produced for 4 - 7 year olds.

1.1.11 Child Attachment Interview (CAI)

Based on the Adult Attachment Interview this is a semi-structured interview designed by Target et al. (2003) for children aged 7 to 11. The interview is adapted for children by focusing on representations of relationships with parents and attachment related events. Scores are based on both verbal and non-verbal communication (Shmueli-Goetz, Target, Fonagy, and Datta, 2008)

1.1.12 Parental Care Giving and the Development of Attachment Bonds

The findings within the initial empirical investigation of attachment behaviour within the 'Strange Situation' led Ainsworth et al. (1978) to relate parental responsiveness and communication to infant attachment behaviour. For example from their observational studies they found 'securely' attached infants to have parents who were sensitive to the needs of the child and who responded in a warm affectionate and consistent manner. In contrast infants with an 'anxious/ambivalent' attachment style had experienced inconsistent responding of caregivers, resulting in the infant attention seeking, being impulsive, tense, passive, and helpless. The child who was found to have an 'avoidant' attachment style was found to experience a caregiver that is typically detached, lacking in emotional expression and unresponsive to the child's needs.

A number of authors suggest that the early mother-infant vocal interaction contributes to the child's cognitive development as well as the child's emotional development. (Ainsworth, 1969, Bowlby, 1973; Brazelton, Koslowski, and Main, 1974; Bruner, 1977; Freedle and Lewis, 1977; Scaffer, Collins and Parsons, 1977; Trevarthen, 1977; Tronick, 1982; Roe, Drivas, Karagellis, Roe, 1985) and development of effective communication skills (Kobak and Duemmler, 1994). Indeed Harley (2001) notes that those children who are quickest to learn language are those who

receive most acknowledgement and encouragement for their utterances within mother-infant interactions using child directed speech, (previously termed 'Motherese'). With the development of language children acquire the ability to make their internal states and attachment needs known to primary caregivers.

Bowlby (1969, 1973) also links internal working models of attachment to parent-child communication by suggesting that internal working models of 'self' and 'caregiver' are formed as a result of the actual communication patterns between the individual and the attachment figure. The sensitivity of the primary caregiver to the requests for attention, comfort or encouragement from the child is critical in the development of internal working models (Bretherton, 1988). Sensitivity in this case is defined in terms of the parent's ability to take the infant's perspective, to notice the infant's goals, and respond empathically to those goals (Ainsworth, Bell, and Stayton, 1974).

An observational study of interaction between mother and child, carried out by Escher-Graeb and Grossman, (1983) highlighted that the greater sensitivity of mothers of secure infants was shown in two separate ways. Firstly these mothers were less likely to ignore signals from their infants, and secondly they were more likely to watch quietly whilst their infants played happily, to respect the infant's autonomy, and to join in if their child needed help. Similarly Matas, Arend and Sroufe (1978) found two-year-old 'secure' children engaged in a problem solving task, looked for help only when they needed it; their mothers respected their autonomy; but provided help when requested by the infant. In contrast, children whose mothers are insensitive to their signals, continually receive implicit messages about the inadequacy of their communication; for example that the child cannot be understood or that their communications

are unimportant (Bretherton, 1988). Bretherton emphasises that insensitive responses are not necessarily mean or nasty, although they may be rejecting by implication.

With regard to resolving differences between parent and child and maintaining attachment relationships, of significant importance is the art of conversation. These conversations are viewed as the problem solving pathway within parent-child attachment relationships (Kobak and Duemmler, 1994). According to Kobak and Duemmler, (1994) conversation between children and parents that increase the understanding of differences and which lead to co-operation may become critical to attachment security in childhood and adolescence. These open communications may enable the participants to gain important new information about one another, and allow the sharing of information and reflection of goals and feelings. In families, open communication of attachment goals, which results in expected co-operative responses, results in the formulation of internal working models with a positive view of self and others and assists the future development of positive communication skills. Kobak and Duemmler (1994), also suggest that conversations provide the opportunity to update inadequate or out of date internal working models.

Due to institutionalisation significant others may not have been parental but may have been care staff with whom the individual grew up within the institution. However the balance of attachment in these relationships is very different from that of the normal family. By default there is an imbalance of control, staff availability due to shift patterns and controlled attachment within the realms of a working therapeutic relationship. Conversations may be limited in quality and time spent due to low staff to high patient numbers within the hospital ward setting. The effect of these issues on the development of attachment in people with ID is yet to be explored.

1.1.13 Infant Attachment Categories: Parent-Child Communicative Strategies

The sensitivity and responsivity of parent child communicative strategies is thought to be an underpinning factor of the formation of attachment bonds. Bretherton (1988) provides description of the characteristics of interactions between parents and children within their preschool years relative to the different attachment categories as defined by the Strange Situation (Ainsworth et al., 1978).

For example

- *Secure children and their parents* (equivalent to Group B) ó are able to communicate with ease and coherence about attachment issues, and to accept each other's faults.
- *Avoidant children and their parents* (equivalent to Group A) ó Children within this attachment category are found to defend against closeness by restricting the flow of ideas about attachment relationships. For example, they seem aloof and nonempathic in their interactions with one another. Bretherton (1988) describes Avoidant children as having a tendency to idealise both themselves and their parents despite having difficulty in providing concrete examples of this 'ideal' behaviour.
- *Anxious/Ambivalent children and their parents* (equivalent Group C) ó according to Bretherton (1988) these children tend to show ambivalent feelings towards their mothers during reunion. They also show preoccupation with attachment issues in adulthood, particularly when there is conflict.

There have been many studies carried out examining the predictive outcome of infant attachment styles on later childhood and adolescence. There exists a large body of evidence, which indicates that attachment patterns assessed in infancy predict various aspects of social functioning, emotional functioning and self-concept in a range of settings in later childhood. (Waters, Wippman, and Sroufe, 1979; Bowlby, 1980, 1982; Elicker, Englund and Sroufe, 1992; Bartholomew, Kwong, and Hart, 2001). For example observations in peer school settings revealed that children who feel secure as infants with their mother, exhibit greater social and exploratory competence and ego resilience than do insecure children (Carlson and Sroufe, 1995). Additionally secure infants were found to be more competent with their peers (Lieberman, 1977), more self confident (Erickson, Sroufe and Egeland, 1985), more competent problem solvers (Arend, Gove and Sroufe, 1979) and less vulnerable to behaviour problems (Lyons-Ruth, Alpern, and Repacholi, 1993) than children who were insecurely attached.

Long-term studies of attachment patterns, which have included both mothers and fathers, suggest that infant-parent attachment is predominantly a relationship specific construct as opposed to purely a characteristic of the child per se (Steele, Steele and Fonagy, 1996). With specific reference to the differences of attachment outcome in maternal and paternal attachment independently, longitudinal studies suggest that it is in the early and ongoing mother-child relationship that children acquire their understanding of complex feelings, including the ability to acknowledge distress in others and the capacity to generate a flexible coping strategy (Steele, Steele, Croft and Fonagy, 1999).

1.1.14 Disorganised/Disoriented Attachment (Hereafter also referred to as Group D)

Research carried out by Main (1996) outlines one of the difficulties found in classifying infant attachment patterns using the 'Strange Situation' paradigm Main (1996) found a number of

maltreated infants were found to be unclassifiable within the 'Strange Situation' attachment categories. A re-examination of 200 unclassifiable 'Strange Situation' videotapes carried out by Main and Solomon (1990) found that the vast majority of these infants exhibited a diverse collection of anomalous or conflicting behaviours in the parent's presence, such as appearing dazed, confused or apprehensive or displaying disorganised or disoriented behaviours. For example, some infants were found to freeze with a trance like expression, to have their hands in the air, to rise up and then fall prone at their parent's entrance, or cling onto the parent while leaning away from them. Further contradictory behaviour patterns were shown simultaneously; e.g. moving toward mother while keeping gaze averted. The difficulty in categorisation of these children within the three-category model developed by Ainsworth et al. (1978) led Main and Solomon, (1986, 1990) to formulate a fourth additional category of infant attachment entitled the 'Disorganised/Disoriented' category or pattern

The theoretical parenting pattern underpinning the Disorganised/Disoriented attachment style is very much in contrast to the consistent nature of the parenting pattern within the secure attachment style. The parenting style experienced by a maltreated infant may be insensitive and anxiety provoking but not necessarily directly frightening. This is identified as leading to the development of a particularly inflexible but yet organised attentional behavioural strategy for dealing with moderately stressful situations (Main, 1996). Consistent with other attachment behaviour, the disorganised/disoriented infant predictably seeks out the parent at times of perceived threat or alarm. Parental behaviour that is insensitive to or directly alarms the infant at that point, places him/her in a behavioural paradox by activating similar impulses to approach the parent as a safe haven and equally to run from the parent as a source of alarm (Main, 1996). Additionally when parental behaviour is frightening in itself the infant may suffer a collapse of behavioural strategy, as the infant is then placed in a situation where it can neither approach (the

secure and anxious/ambivalent strategies) nor shift its attention (the avoidant strategy) or run away (Main, 1995).

1.1.15 Validity of the Four Category Infant Attachment Model

O'Connor, Sigman, and Brill (1987) sought to test the validity of the four category infant attachment model (consisting of Groups A, B, C, and D) in comparison to the three-category model (consisting of Groups A, B, and C) developed by Ainsworth et al., (1978). O'Connor et al. (1987) evaluated the attachment styles of first born infants (N = 46) aged 12 months whose 30 year old mothers consumed alcohol prior to, during and following pregnancy. According to the Ainsworth et al (1978) three category system 30 (65%) of the sample infants were rated 'secure' (Group B); 11 (24%), insecure-avoidant (Group A); and 5 (11%), insecure-ambivalent (Group C). O'Connor et al. (1987) highlight that these percentages were not significantly different from the proportions of 70%, 20% and 10% (respectively) that have been described for other white middle class population.

The use of the three-category system resulted in 16 (35%) of the sample being classified as insecure. When the four category model of Main and Solomon (1986) was applied 22 (48%) of the infants were classified as secure (Group B); 6 (13%), insecure-avoidant (Group A); 2 (4%), insecure-ambivalent/resistant (Group C); and 16 (35%), insecure-disorganised/disoriented (Group D). The 35% of the sample making up the classification of insecure-disorganised/disoriented (Group D) are made up from Ainsworth's classifications of 'secure' (Group B) 17%; insecure-avoidant (Group A) 11%; and insecure-ambivalent/resistant (Group C) 7%. Thus the insecure-disorganised/disoriented (Group D) attachment style within this study is made up of 18% of infants previously classified as insecurely attached and 17% of

infants classified as securely attached on the Ainsworth classification system. O'Connor et al. (1987) suggest that the Group D category included a number of infants previously classified as secure using the three category system delineated by Ainsworth et al., (1978), based on the presence of some positive attachment behaviours in combination with disorganised/disoriented behaviour. The use of the four-category system resulted in just over half the sample 52% of infants being classified as insecurely attached in comparison to 35% of infants when the three category model is applied. The additional Group D category therefore facilitated increased classification of infants into the insecure attachment styles compared to the three category model and therefore facilitating more finite and definitive measurement. Within a meta-analytic study of Strange Situation infant attachment classifications van IJzendoorn, Goldberg, Kroonenberg and Frankel, (1992) found the following four way coding distribution: avoidant (Group A) 23%, secure (Group B) 54%, Ambivalent (Group C) 8%, and disorganised (Group D) 15%. Within this meta-analytic study 46% of infants were found to insecurely attached. Of interest within these studies is that the inclusion of the Group D category raises the percentage classification of infants into the insecure attachment categories to almost an equal split of insecure and secure attachment classification whereas the three category model appears to account of less variance suggesting approximately one third of participants fall within the insecure categories (35%).

Attachment also shows a relationship to the development of problematic behaviour and anti-sociality out-with the primary caregiver - child dyad. Attachment disorganisation (Group D) has provided a vitally important extension to attachment theory in so far as it may be relevant to childhood bullying and victimisation.

1.1.16 Predictive Outcome of Infant Attachment Disorganisation (Group D)

The Disorganised attachment category (Group D) of infant-caregiver attachment is identified as a collapse in behavioural and attentional strategies often resulting from a caregiver prone to unpredictable and/or frightening behaviour (Hesse and Main, 2000; Lyons-Ruth and Jacobvitz, 1999). The frightened infant is prone to develop into a highly controlling school age child, in either a punitive/aggressive or compulsively compliant and care giving manner (Solomon and George, 1999). Infant attachment disorganisation has been shown to lead to severe problems in social relations during the school years (Jacobvitz and Hazen, 1999) and deficits in cognitive skills (Moss, Rousseau, Parent, St Laurent and Saintong, 1998). The most outstanding of the long-term correlates of infant attachment disorganisation are dissociative and behavioural problems in late adolescence, as indicated by self-report and teacher ratings (Carlson, 1998).

Developmental psychologists extended the measures of attachment style to encompass later childhood (Main, Caplan and Cassidy, 1985) and to the study of adults' representations of their childhood experiences with parents (Fonagy, Steele and Steele, 1991; Main et al, 1985).

1.1.17 Attachment Continuity in Childhood

Bowlby suggests the principle of continuity is an important feature of attachment theory, which suggests that the way attachment behaviour becomes organised in childhood as a strategy for relating to others, is carried forward, and strongly influences subsequent behaviour later in life, by which point Bowlby suggests attachment patterns would be expected to be relatively resistant to change (Bowlby, 1980). According to Bowlby (1980) continuity of attachment style is due primarily to the persistence of mental models of the self and others, which are central

components of personality. Feeney and Noller (1996) suggest that mental models, known generally in the literature as 'internal working models', tend to be stable because they develop and operate in the framework of a reasonably stable family context. Additionally they suggest that ways of thinking associated with interpersonal relationships, is incorporated in the internal working models and becomes habituated and automatic over time and within developmental experiences.

Early studies examining the continuity of attachment primarily focussed on infant attachment in the second year of life. These studies examined the stability of the attachment classifications in the 'Strange Situation' task, over time periods which ranged from 1 to 12 months. The observational assessment of the 'Strange Situation' is reliable for use only with children ranging in age from 9 to 24 months and thus provided limitations to the research on continuity in its earlier stages. The ability to assess attachment classifications in older children was not developed until the mid-1980s (Main and Cassidy, 1988).

In the first systematic study of early continuity of infant attachment classifications, Waters (1978) carried out observations of children's attachment responses to separation and reunion from the mother in the 'Strange Situation' at both 12 and 18 months of age. Findings suggest that 96% of (n50) children were independently placed in the same classification within both assessment periods. Waters (1978) also highlighted a difficulty with this study in so far as the level of stability may have been as a factor of the preselection of children from stable homes over a six month period within the research and thus stability of attachment style would be expected in these circumstances.

Overall several additional studies (Scharfe, 2003) examining the stability of 'Strange Situation' classifications during the second year of life found considerable variation (45% and 90%) within infants who exhibited the same pattern of attachment to their mother across periods ranging from 1 to 12 months. In a meta-analysis of these studies, Fraley (2002) found a correlation of .32 ($n=896$), suggesting a moderate level of stability of attachment patterns across the second year of life. Thus attachment does not appear to be a particularly stable concept over time. Rather it would appear to be a complex entity, which is flexible and subject to shift and change in attachment orientation. What does appear to be stable is that a large proportion of children fall within the secure attachment category.

As procedures for assessing attachment patterns in older children developed, researchers began to examine whether infant attachment patterns remained stable after 3, 4, or 6 years (Scharfe, 2003). In a meta analysis of five of these studies Fraley (2002) found a moderate effect size with a mean correlation of .35 ($n=161$) for studies examining attachment patterns from one and four years, and a mean correlation of .67 ($n=131$) in studies examining stability of attachment patterns over six years. The findings of Main, Kaplan and Cassidy (1985) suggests that attachment security at 12 months, as assessed in the 'Strange Situation' predicts a number of aspects of attachment organisation at six years of age, including reunion behaviour, discourse fluency within the child parent dyad, and emotional responses to pictured separations.

1.1.18 Attachment Stability and Self Fulfilment

The self-fulfilment of internal working models may also provide reinforcement of attachment patterns. For example, a child approaching newly formed friends with a defensive manner may increase the possibility of rejection, which in turn, reinforces insecurity (Douglas and Atwell,

1988). Additionally Sroufe (1988) and Sroufe and Fleeson, (1986) further suggest that, in forming new relationships, children will look to recreate the rules and patterns of interaction that they learned in the context of early relationships, even if close relationships were abusive or harmful. Furthermore Feeney and Noller (1996) assert that internal working models come to operate largely outside of consciousness and awareness, a factor which makes them more resistant to change. Despite this resistance to change, attachment theorists recognise that attachment behaviour and internal working models cannot be regarded as fixed in infancy and unchanging throughout life. Bowlby (1980) raises several important points relevant to the issue of change in attachment patterns. Firstly, Bowlby suggests that attachment patterns vary in stability depending on the degree of satisfaction each person derives from the attachment pattern. Secondly, he acknowledges that attachment patterns (even those that show early signs of stability) may be changed by subsequent events that alter the behaviour of either of the individuals within the relationship. Finally, he suggests that internal working models have the ability to change, and when the lack of fit between actual social interactions and the corresponding internal working models become so large that the internal working models are no longer effective, the individual will begin the process of change to provide a goodness of fit between the internal working model and the reality of their interpersonal situation. The aim of this thesis is to examine patterns of attachment in offenders with mild intellectual disability (ID). There is a dearth of literature examining attachment within people with ID. Given that attachment orientation shows only moderate stability and patterns of attachment may vary or change dependent on subsequent events which may alter behaviour and reciprocity of either party within the attachment relationship it is important to establish whether attachment in offenders with ID is similar to that of the mainstream population. If internal working models have the ability to change then this may inform clinical intervention to facilitate more effective therapeutic intervention within rehabilitation of offenders with ID.

1.1.19 Attachment and the Development of Overprotection and Dependency

One further important factor within the parent-child relationship is that of age appropriate moves toward separation. The timing of such moves are also inherent to the protective function of an emotionally secure bond (Grossman and Grossman, 1991), otherwise there is a risk of overprotection and dependency. In turn overprotection and dependency within the attachment relationship has been found to relate to the development of mental health issues and in particular anxiety disorders (Chambers, Power and Durham, 2004)

1.1.20 Attachment Discontinuity

Some flexibility is apparent in attachment bonding (Farrington and Coid, 2003). Through the child's development of competencies within the preschool age, and the adaptation of the mother's behaviour to support and improve these competencies, changes in attachment categories may occur (Crittenden, 1992; Fagot and Pears, 1996). A growing number of longitudinal studies on the stability of attachment patterns over time are complemented by investigations into the correlates of change in attachment patterns and internal working models.

One of the major causes of changes in attachment patterns during childhood is a mother's experience of stress and distress that draws psychological resources away from care giving and interferes with the delivery of sensitive and responsive care. Even in studies assessing the stability of 'Strange Situation' classifications between 12 and 18 months of age (Egeland and Farber, 1984; Egeland and Sroufe, 1981; Vaughn, Egeland, Sroufe and Watters, 1979) children who moved from secure to insecure classifications during the six month study period were more

likely to have mothers who reported stressful life events during that period of time. These studies also reported that children became more secure if their mothers reported a reduction in stressful life events, and an increase in marital and parental satisfaction during the study period (Egeland and Farber, 1984). Additionally when examining attachment stability at 14, 24 and 58 months of age, Bar-Haim, Sutton, Fox and Marvin (2000) found that mothers of children who became less secure over time, reported more negative life events and fewer positive life events during the study period, than did mothers of children who remained secure over time. Additionally a change of attachment pattern from insecure to secure attachment is frequently associated with the availability of an additional caregiver (Egeland and Sroufe, 1981; Vaughn, Egeland, Sroufe and Watters, 1979). Thus it could be argued that temporal stability of attachment is high only when there is stability of family and care-taking circumstances (Lamb, Thompson, Gardner, Charnov, and Estes, 1985). This assertion is consistent with Bowlby's (1980) views on continuity and change in attachment behaviour. It has also been suggested by a number of authors that, internal working models are most likely to be revised within the context of other relationships, in so far as the formation of new relationships offers the opportunity to modify internal working models based on previous negative experiences (Burmehster and Furman, 1986; Ricks, 1985; Sroufe and Fleeson, 1986). Thus continuity in infant attachment patterns would appear to be mediated by the continuity in the quality of primary attachment relationships (Lamb, Thompson, Gardner, Charnov and Estes, 1985).

1.1.21 Intergenerational Transfer of Attachment Patterns

In contrast to research examining continuity of attachment within the individual, there is a body of research which focuses on intergenerational continuity, by assessing the concordance of attachment patterns across generations (Bartholomew, Kwong and Hart, 2001). Much of this

work has compared parental attachment representations through interview based assessment with the parent using the Adult Attachment Interview (AAI) (George, Kaplan and Main, 1996) and infant attachment with the same parent as assessed in the Strange Situation (Ainsworth et al., 1978).

For example, Fonagy, Steele and Steele (1991) assessed attachment in mothers expecting their first child and, in a follow up assessed the attachment of their 12 month old infant in the Strange Situation. They reported 75% concordance between maternal attachment security and subsequent infant security, with infant security and also anxious avoidance showing predictability from maternal AAI ratings. In a meta analysis of studies comparing adult attachment classifications based on the AAI and infant classifications based on the Strange Situation, van IJzendoorn (1995) found strong associations between autonomous parents and secure infants ($r=.47$), Dismissing parents and Avoidant infants ($r = .45$), and Preoccupied parents and Ambivalent infants ($r=.42$). Parental responsiveness appears to serve a mediating role as a combined effect size of $r=.34$ was found for the association between security of attachment organisation and sensitive responsiveness.

When examining the intergenerational transfer of abuse, Haapasalo and Aaltonen (1999) examined 25 mothers whose child had been under the supervision of the child protection services (CPS) with 25 mothers who had no such contact with the CPS. Comparison was made between the two groups in terms of mothers self reported childhood abuse, abuse of their own child, and punitiveness. There were no significant differences between the groups in self-reported childhood physical abuse, but the CPS mothers had experienced more childhood psychological abuse, especially rejection, accusations, terrorising and corrupting. The groups did not differ in the self-reported physical or psychological abuse inflicted on mother's own child. Hierarchical

regression analyses found significant results in so far as the mother's childhood abuse experiences did predict their perpetration of abuse towards their own child. Additionally punitiveness was best predicted by maternal childhood psychological abuse, thus suggesting that maternal parental style, which is all important to the formation of attachment patterns, may be predicated on mothers own childhood experiences.

1.1.22 Attachment: the Effect of Childhood Abuse

Examining the effects of childhood abuse on attachment patterns, Carlson, Cicchetti, Barnett and Braunwald (1989) reanalysed the attachment relationships in a sample of mother-infant dyads ($n = 43$) including 22 dyads from families receiving protective services for issues of child abuse or neglect (or both) and 21 mother-infant dyads from comparison families with no protective service involvement. Within the sample population receiving protective services two infants (9%) included in the study had been physically abused, (in each case by someone other than the mother) 13 infants (59%) had experienced neglect by their mothers, and 6 infants (27%) had been emotionally mistreated by their mother. Four of the infants (18%) had experienced both neglect and maltreatment. Seven children (32%) from the protective service group had no specific abuse indicated however these children were considered at risk for maltreatment because of prior work abuse or neglect of older siblings. Findings revealed boys were less likely to be securely attached to their mothers (14%) than girls (50%). In addition, maltreated children were less likely to be securely attached (14%) than non-maltreated children (53%). Moreover there was a significant Gender X maltreatment interaction. Non-maltreated girls were more likely to be secure than maltreated girls (82% and 18%, respectively, but the Gender X Maltreatment interaction was not as pronounced for maltreated boys compared with comparison boys rated as secure (9% and 20% respectively).

Additionally, when examining disorganisation/disorientation (Group D) of attachment, findings revealed that boys were more likely to be Group D than girls (67% and 36%, respectively) and that maltreated infants were more likely to be Group D than comparison infants (82% and 19% respectively). The Gender X Maltreatment interaction for Group D compared with non Group D was not significant. To further investigate the Gender differences Carlson et al (1989) hypothesised that the absence of a spouse in the home was a factor that may have a differential impact on children's attachment security, depending on the gender of the child. Specifically, they hypothesised the absence of a male partner in the home was likely to be a greater risk factor for boy infants than for girl infants. Their findings revealed a significant Gender x Spouse interaction effect for the Group D compared with non Group D analysis. Boys were much more likely to be classified as Group D attachment style if the spouse was absent from the home than girls, (86% and 29%, respectively). These findings were in the opposite direction for girls. Girls were more likely to be Group D attachment style if the spouse was present in the home than boys (39% and 25% respectively). The findings of this study highlight the negative effects of infant maltreatment on attachment security and attachment style for both male and female infants. The findings suggest a relationship between maltreatment in infancy and the likelihood of infants being rated as Group D disorganised/disorientated insecure category of attachment style.

Carlson et al (1989) put forward several reasons for the high preponderance of Group D attachments amongst maltreated infants. It is well documented that the lives of maltreated infants and infants being reared in homes where parents previously have maltreated older siblings are characterised by a variety of inconsistent care. (Cicchetti and Rizley, 1981; Egeland and Sroufe, 1981a, 1981b). Carlson et al highlight that 18% of the sample had been reported by their social worker to have experienced multiple types of maltreatment from their mothers, and the mothers

of the children in the sample were reported to have carried out additional forms of maltreatment upon older siblings in these families. However Cicchetti and Rizley (1981) outline that maltreatment patterns are not necessarily long standing parental traits but patterns of behaviour that can change from child to child or under different life circumstances. However Carlson et al., (1989) suggest that infants under the care of protection services may have experienced types and degrees of maltreatment unknown to the service providers.

1.1.23 Parental Alcohol Abuse and the Effect on Attachment Formation

The development of a secure attachment relationship with a caring adult results in healthy socialóemotional development during infancy. Research conducted with motheróinfant dyads suggests that secure infants tend to resolve subsequent developmental issues more adaptively compared to insecurely attached infants (Ainsworth et al, 1978). In contrast, infants who are insecurely attached are more likely to have difficulties negotiating developmental issues in adolescence and into adulthood, including development of independence and ego resilience, social competence, and emotional health (Easterbrooks, Biesecker, and Lyons-Ruth, 2000; Shaw, Owens, Vondra, Keenan, and Winslow, 1996; Urban, Carlson, Egeland, and Sroufe, 1991). The theoretical relationship between parentóinfant interactions and attachment security has been well validated (De Wolff and van Ijzendoorn, 1997; van Ijzendoorn and De Wolff, 1997).

It is not only maltreatment within the realms of physical, sexual, and emotional abuse, which may impact on infant attachment. When examining infant attachment in relation to the quantity of alcohol consumption of mothers where alcohol consumption of mothers was categorised as ñabstinent-light (< or equal to 0.10 average oz of absolute alcohol per day), light-moderate (0.11-0.99 oz/day), and moderate-heavy (> or equal to 1.0 oz/day) groups, and comparing the

proportion of secure ó insecure infants in each group using a chi square test significant differences were found for children with mothers with categorised with different levels of alcohol intake. The percentages of insecure infants ranged from 22% for the mothers categorised as abstinent-light group, 48% of mothers categorised as light-moderate and 83% for the mothers categorised in the moderate-heavy group. Therefore, there would appear to be an association between maternal alcohol consumption and the development of insecure attachment in infants.

Brennan, Shaver, and Tobey (1991) examined adolescent children of alcoholic parents and found they scored high on both avoidant and anxious-ambivalent scales of Hazan and Shaver's (1987) measure of attachment, suggesting that at least some fearful adolescents are grown-up versions of the 'disorganized, disoriented' children identified by Crittenden (1988) and by Main and Solomon (1990). Examining their attachment style using Bartholomew's model, the same adolescent participants fell predominantly into the Fearful-avoidant category (Brennan, Shaver, and Tobey, 1991).

1.1.24 Institutionalisation and Attachment Formation

The institutionalisation of young children is a disruptive influence to the formation of infant attachment bonds. Within an institutional setting such as children's homes or hospitals the replacement of a mother substitute as primary caregiver may not be possible. Disturbances of attachment have been central to the literature on the impact of institutionalisation over the past 50 years (Zeannah, Smyke, Koga and Carlson, 2005). Children raised in institutions have been found to have a significantly increased risk of social and behavioural problems (Zeannah, 2000). When investigating the attachment patterns of infants in a typical large-scale Romanian institutional care setting, described by the authors as a socially deprived caring environment,

comparison was made to infants living in a smaller unit within the same institution where the adult to child ratio was much larger, and infants who lived at home and who had never been institutionalised. Findings revealed that infants within the large-scale institution setting had more attachment disorders and other behavioural problems than children in the other two groups. (Smyke, DuMitrescu and Zeanah, 2002). Additionally, Zeanah (2000) highlights that children adopted from institutions are at a dramatically increased risk of disturbances of attachment, although the majority of such children do not demonstrate problems.

People with ID are a heterogeneous population, a number of whom spent childhood within the institutional setting. The deinstitutionalisation movement of the 1960s and 70s within the United Kingdom, facilitated a transition to life in the community for many individuals. However there is a dearth of research examining attachment patterns in this population. Thus what effect such institutionalisation may have had on this population is poorly explored.

1.1.25 Attachment as a Risk Factor in the Development of Antisocial Behaviour

Early identification of troublesome behaviour in the general population recognises poor parenting as having a relationship with adult offending (e.g. Farrington, 1995; Stouthamer-Loeber, Loeber, Wei, Farrington, and Wikström, 2002). Blackburn (2003) suggests it is the absence of parental affection and also parental rejection which appear to strongly predict juvenile delinquency alongside the development of an insecure attachment style. In addition both neglected and abused children more frequently have insecure attachments to parents than comparable controls (Schneider-Rosen and Cicchetti, 1984). The parenting practices associated with insecure attachment, especially physical and emotional abuse, may be modelling antisocial behaviours for children (Bartholomew, Kwong and Hart, 2001, Farrington and Coid, 2003).

Developmental psychopathology emphasises the lack of felt security in childhood as an important risk factor to the development of mental health and emotional difficulties later in life (Ainsworth, 1991; Bowlby, 1982). While having insecure attachment bonds is not a disorder in itself, it may increase the likelihood of development of childhood disorders (Farrington and Coid, 2003). Particularly in high risk samples, insecure attachment is a predictor of externalising and other problem behaviour (Fagot and Pears, 1996; Greenberg, Speltz, and DeKlyen, (1993). Within a neurological framework Kraemer (1997) suggests maternal deprivation in early childhood may disrupt basics aspects of brain development and neuronal functioning that are relevant for the regulation of aggressive behaviour.

In a longitudinal prospective study entitled "The Cambridge Study in Delinquent Development" Farrington, (1995, 2002) examined 411 South London males from age 8 to age 46 years. At age 32 a measure of anti social personality was devised based on the following twelve items, convicted in the last five years, self reported offender, involved in fights, drug taker, heavy drinker, poor relationship with parents, poor relationship with wife/cohabite, divorced/child living elsewhere, frequent unemployment, anti establishment attitude, tattooed, and impulsive (Farrington, 1991). The scale showed good reliability (0.71). Important family interaction factors including inconsistent, harsh or abusive parenting, cold or rejecting parental attitude, poor parental supervision or monitoring, low parental involvement with the child, separation/divorce and parental conflict (Farrington 2002; Smith and Stern, 1997). The most severe and enduring 25% of participants were found to rate positively on four or more of these adverse features (Farrington, 1991).

In addition, research examining attachment style within relationships and criminality has revealed particular relevance to insecure attachment orientation and sexual offending in

mainstream populations (Barbaree, Marshall and Hudson, 1993; Marshall, 1993; Ward, Hudson and Marshall, 1996; Hudson and Ward, 1997; Smallbone and Dadds, 1998; Craissati, McClurg and Browne, 2002; McCormack, Hudson and Ward, 2002; Burk and Burkhart, 2003; Starzyk and Marshall, 2003, Parent, Guay and Knight, 2011). In contrast, in their meta analytic study comparing male adolescent sex offenders (n=3,855) with male adolescent non sex offenders (n=13,393) on general delinquency risk factors (antisocial tendencies) Seto and Lalumiere (2010) suggested the largest group difference was obtained for atypical sexual interests, followed by sexual abuse history, criminal history, antisocial associations and substance abuse. Contrary to previous studies, they did not find poor parent child attachment to be a significant factor within group differences. Therefore, while the evidence on the relationship between general criminality and attachment problems in childhood is fairly strong, the corresponding relationship with sexual offending may be less so.

1.1.26 Attachment as a Protective Factor in the Development of Juvenile Delinquency

A good relationship with parents has been found to promote non delinquency and suppress serious delinquency in youngsters (Stouthamer-Loeber et al., 1993). For example, mother-child involvement and daily stimulation by mother was found to reduce hyperactivity and conduct disorders in elementary school children from deprived family backgrounds (Kolvin et al., 1988, 1990). Having a good relationship with their mother enabled children to cope with divorce following a period of extreme conflict between parents (Neighbors, Forehand, and McVicar, 1993). Attachment to a competent caregiver is also found to relate to experiences of emotional security even within stressful contexts (Cummings and Davies, 1996). Positive functions of attachment do not appear to be restricted to parents (Loesel, 1994; Rutter, 1985, Werner and Smith, 1982). To some degree they may also be exercised by grandparents, an older sibling,

educators, teachers, members of church groups, or other persons outside the family (Farrington and Coid, 2003). Such positive relationships are thought to give young people not simply emotional support but also the feeling of being important to the other person (Freedman, 1993; Werner and Smith, 1992).

1.1.27 Childhood Disorders: Their Effect on Parental Attachment Formation.

The importance of communication to the parent-child interaction process leading to the formation of attachment bonds is evident (Clements, 1987; Leibowitz, Ramos-Marcuse and Arsenio, 2002; Dykas, Ehrlich and Cassisy, 2011; Dykas and Cassidy, 2011). Of concern for the formulation of healthy attachment bonds are the difficulties posed by the wide range of childhood disorders, which emanate in specific communicative difficulties, impacting upon both expression and comprehension by affecting the syntactic, semantic and pragmatic elements in the communication system (Clements, 1987). Within the confines of this chapter, it is not possible to address the impact of a number of childhood disorders on communication and the formation of healthy infant attachment patterns however two disorders of childhood namely, Attention Deficit Hyperactivity Disorder (ADHD) and Autistic Spectrum Disorder (Autism) will be examined with regard to symptomatology and subsequent effects on parent-child attachment. The comorbidity of intellectual disability within each of these disorders will also be highlighted.

1.1.28 Attachment and Attention Deficit Hyperactivity Disorder (ADHD)

Attention Deficit Hyperactivity Disorder encompasses core behavioural symptoms of inattention, impulsiveness, and hyperactivity. These behavioural symptoms are known to cause significant impairment in family and peer relationships and the ability to succeed at school during childhood

with an increased risk for social isolation (Tannock, 1998). Prevalence figures range from 1.7%-17.8% dependent on diagnostic criteria. However McArdle, O'Brien, and Kolvin. (1995) suggest 2 ó 5% may be a realistic figure in school populations. In children diagnosed with ADHD, oppositional defiant disorder (ODD) or conduct disorder (CD) is present in 25-50% of cases; 25% have co-existent anxiety disorder; 20% have mood disorder; and 20% have specific developmental disorders, including specific learning difficulties, language-based difficulties and motor co-ordination difficulties (Jensen, Martin, and Cantwell, 1997; Pliszka, Carlson, Swanson, 1999). ID is also prevalent in about 20% of people with a diagnosis of ADHD (Hinshaw, 1992; Jensen, Martin, and Cantwell, 1997; Russo and Beidel, 1994). Behavioural difficulties such as Conduct Disorder are of particular relevance to the likely development of persistent antisocial behaviour in adolescence and adulthood and association with wider interpersonal and social role impairments (Hill, 2003). Additionally young children with conduct disorder are also suspected of having verbal and executive function deficits. (Toupin, D'ery, Pauzé, Mercier, and Fortin, (2000).

1.1.29 Insecurity of Attachment in ADHD

It is now well established that secure infant attachment is a protective factor against mental health difficulties later in life (Ainsworth, 1991; Bowlby, 1982, Bartholomew, Kwong and Hart, 2001; Blackburn, 2003). Conversely insecure attachment can therefore be a risk factor to difficulties of mental health. Diagnosis of ADHD shows co-morbidity with a number of mental health, executive function and behavioural difficulties. The observable symptoms of ADHD in some cases diminish in adolescence with a further reduction in adulthood. Rates of persistence of ADHD into adulthood vary between 11%, 18% and 68% (Barkley, 1998) however negative parent-child interaction, maternal depression and marital discord (Barkley, Fischer, Edelbrock,

Smallish, 1991) family disadvantage and family history of disorder (Fergusson, Horwood, Lynskey, 1993; Biederman, Faraone, Milberger, Curtis, Chen, Marris, 1996) are found to be predictors of persistence of ADHD and co-morbid CD. Interestingly many of these predictors are also recognised as leading to the development of attachment insecurity (Hamilton, 2000; Lewis, Feiring and Rosenthal, 2000).

Although not refuting that ADHD exists as a disorder, Erdman (1998) suggests that contained within the misdiagnosis and over diagnosis of ADHD, are children who, if viewed within the context of parent-child attachment patterns, could be deemed to have behaviours and mental health problems, which are found to relate to the development of attachment disorder. A number of longitudinal studies have found links between insecure attachment and conduct disorders in preschool or school age children (Greenberg, Cichetti, and Cummings, 1990; Greenberg, DeKlyen, Endriga and Speltz, 1997, 1991; Greenberg and Speltz, 1988). Greenberg interpreted these problem behaviours as a strategy for eliciting caregiving. Reactive Attachment Disorder, Attention Deficit Disorders and Conduct Disorder are similar in their symptoms and are often difficult to differentiate, resulting in possible misdiagnosis. Understanding the differences and seeking out a correct diagnosis is essential to proper treatment and management of the child's behaviours. Similarities between both disorders include age of onset, impulsivity, hyperactivity, low self esteem, oppositional behaviour, emotional dysregulation, sleep disturbances and poor motivation (Levy and Orlans, 1998). Emotion regulation is highly related to attachment security in young children and could play a part in the development of early attention processes. Moreover, difficult temperament is associated with higher risk for ADHD on the one hand, and can disturb the process of attachment on the other (Levy and Orlans, 1998). However positive parenting practices - including maternal sensitivity, - is a main factor involved in the development of attachment, and has shown to be associated with better outcomes in ADHD

children, especially with less oppositional/conduct disorders (Franc, Maury and Purper-Ouakil, 2009).

Given the recognition of the similarities between symptoms of Reactive Attachment Disorder Erdman (1998) suggests focus should shift from ADHD as a difficulty within the child per se to the investigation of ADHD within parent-child interaction. Studies of attachment have evidenced difficulties of attachment and parent-child interaction in this group. Barkley (1998) carried out an investigative study of attachment in boys (n19) aged 5 ó 10 years and who were also diagnosed with ADHD in comparison to a control group sample (n19). Children's attachment bonds were assessed on three representational measures of internal working models of attachment, the Separation Anxiety Test; the Self Interview, and a Family Drawing rated with an attachment based scoring system. Poorer scores on all three measures were found in the group of children diagnosed with ADHD. The nature of attachment insecurity in the ADHD group was one of heightened emotional expression characterised by strong, out of control affective mood and was consistent with an anxious-ambivalent or disorganised attachment style. Additionally Toupin et al. (2000) carried out a study controlling for ADHD symptoms and examining the interaction between cognitive deficits, and familial factors in 57 children diagnosed with Conduct Disorder and 35 controls aged 7 to 12 years. A punitive parental style in combination with executive function and number of ADHD symptoms was found to correctly classify 90% of the Conduct Disorder group.

1.1.30 Attachment and Autistic Spectrum Disorder

In the early years of identification of the cluster of symptoms now known as autistic spectrum disorder, symptoms were thought to mimic those of children suffering from emotional abuse

and/or parental neglect (Kanner, 1943, 1968). Indeed in the early years ‘refrigerated parenting’ was thought to be a causal factor in the development of autism. The modern consensus is that autism has a strong genetic basis, although the genetics of autism are complex and are not well understood (Abrahams, and Geschwind, 2008). Although recent studies have indicated that maternal warmth, praise, and quality of relationship are associated with reductions of behavior problems in adolescents and adults with autism, and that maternal criticisms are associated with maladaptive behaviors and symptoms, these ideas are distinct from the refrigerator mother hypothesis (Smith, Greenberg, Seltzer, and Hong, 2008). The interactional style of the autistic person is clearly different and less socially driven than that of mainstream children. Additionally the child with Autistic Spectrum Disorder may have difficulty in the interpretation of emotion by default through diagnostic symptomatology. Thus how might the symptoms of autistic spectrum disorder affect the development of healthy attachment patterns of children carrying this diagnosis?

Two diagnostic systems namely *The International Classification of Diseases*, 10th Edn. (ICD-10) (World Health Organisation, 1992) and the *Diagnostic and Statistical Manual of Mental Disorders* 4th edn (DSM IV) (American Psychiatric Association, 1994) are now widely used to diagnose autistic spectrum disorder, their definitions being conceptually convergent (Herbert, 2000). ICD-10 lists autism under the heading of Pervasive Developmental Disorders where the criteria for the diagnosis of autism are: impaired or abnormal development which must be present before three years of age, manifesting the full triad of impairments identified by Wing and Gould, (1979) consisting of *impairment of social relationships; impairment of communication; and impairment of imagination*. DSM IV criteria also stipulate that the disorder should have onset before three years of age and should be inclusive of delayed or abnormal functioning in at least one of: *social interaction; language for social communication; symbolic*

or imaginative play. These impairments are of particular relevance to the crucial parent-child communication and social interaction which can lead to the formation of infant attachment and the early development of childhood internal working models of self and others (Kobak and Duemmler, 1994; Harley, 2001).

The specific language and communication difficulties found in children diagnosed with autism affect those who have higher attainment on standard IQ tests but are more common in those with intellectual disability, (Herbert, 2000). Herbert suggests that the majority of autistic children have an intellectual disability as measured by standard intelligence tests. The prevalence of ID in children with a diagnosis of autism, tested in the preschool years found 74% had IQs below 52, and when subsequently retested six years later the majority of this group of children still scored within the range of intellectual disability (Herbert, 2000), but more recent studies encompassing all autistic spectrum disorders including Asperger syndrome and pervasive developmental disorder \acute{o} not otherwise specified, suggest that the prevalence of intellectual disability in autism spectrum conditions may be considerably lower (Hoekstra, Happe, Baron-Cohen, and Ronald 2009). Comparison of children scoring in the extreme 5% on measures of autistic traits, IQ and academic achievement found that although the risk of showing poor performance on tests of IQ and academic achievement was significantly increased in children with extreme autistic traits, results suggest that the association between extreme autistic traits and intellectual disability was only modest. Bryson, Bradley, Thompson and Wainright (2008) found 28% of individuals with intellectual disability to have a diagnosis of Autism. Autism rates did not differ significantly across severe ID (32%) and mild ID (24%). Males predominated but less so for severe ID. Socioeconomic status did not distinguish between groups with and without autism. This reduction in prevalence most likely reflects the changes in diagnostic criteria for autism that have subsequently occurred (Bryson et al., 2008).

1.1.31 Differences in Attachment Bonds in Children Diagnosed with Autistic Spectrum Disorder

Reports of autistic children indicate differences in the sorts of attachment behaviour, which are characteristic of mainstream children (Clements, 2000). They do respond to others' emotions and they are able to form affectionate attachments (Capps, Sigman and Mundy, 1994) but they do not show an eagerness to share or have joint attention and in fact appear to show preference for their own company. Consistent with diagnostic criteria they do not tend to engage in pretend play or imitate others except in a ritualistic, echolalic manner. Autistic children tend not to maintain a physical closeness to their parents and often fail to seek bodily contact to gain comfort and security (Rutter, 1983). Thus it could be argued that the interactional bases on which attachments are formed is particular constrained by the features prevalent within the barriers to social communication prevalent within autistic spectrum disorder. If we consider the measurement of attachment within the observational paradigm the 'Strange Situation' (Ainsworth et al., 1978) where the child's interactional response to the return of the primary caregiver is used as an observational measurement of attachment, the child with autistic spectrum disorder may not even acknowledge their parents return after an absence let alone show any sign of greeting due to difficulties in the development of social communication. Although as Clements (2000) suggests, the child with autism will enjoy a game of rough and tumble perhaps for the more sensory aspects of such play. Empirical research suggests that there exists a relationship between early communicative functioning and later social development (Bailey, Philips and Rutter, 1996). To date, there exists no definitive explanation as to whether the attachment bond for autistic children differs due to the symptomatology of autistic disorder per se, due to intellectual disability, or due to difficulties in parent-child communication, in many cases the assumption could be made that there is an interaction of all of these factors (Clements, 2000). Additionally within 28% of

children with a diagnosis of autistic spectrum disorder (Bryson, Bradley, Thompson and Wainright, 2008) and also in 20% of children with a diagnosis of ADHD (Hinshaw, 1992; Jensen, Martin, and Cantwell, 1997; Russo and Beidel, 1994) there exists a co-morbid diagnosis of ID. Banks (2005) suggests that the sensory, communicative and physical disabilities, which may accompany the presence of ID affect the quality and reciprocity of communication and physical contact with the primary care-giver - usually the mother resulting in:

- Fragility of emotional attachment
- Delayed development of self and object constancy
- Impairment of symbol formation and of separation-individuation of self

1.1.32 Attachment Bonds and the Child with Intellectual Disability (ID)

Figures compiled by the British Institute of Learning Disability (BILD) from a number of epidemiological studies suggest that the prevalence of people diagnosed with mild ID is thought to be approx 6 people per 1000 whereas the prevalence of people with severe ID is thought to be 3-4 per 1000. (British Institute of Learning Disability, (BILD)). A number of those identified, with ID may have, sensory, communicative and physical disabilities (Banks, 2005) with 28% having symptoms of autistic tendencies (Bryson et al., 2008; Clements, 2000).

Of interest to the concept of attachment patterns within this population is the finding that particular types of language interaction can affect the development of social understanding and internal controls (Hay, 1994; Dunn, 1996). Clements (2000) purports that there is every reason to believe that children identified as intellectually disabled may receive a quite restricted verbal input (Clements, 2000). Given the importance of mother-child interaction to the development of

language and communication, (see Kobak and Duemmler, 1994; Harley, 2001) cognitive skills and emotional development (Ainsworth, 1969, Bowlby, 1969, 1973; Brazelton, Koslowski, and Main, 1974; Bruner, 1977; Freedle and Lewis, 1977; Schaffer, Collins and Parsons, 1977; Trevarthen, 1977; Tronick, 1982; Roe, Drivas, Karagellis, Roe, 1985 Bretherton, 1988; Moss, Rousseau, Parent, St Laurent, Saintong, 1998), the effect of inherent difficulties in the mother-child interactive process through difficulties associated with a diagnosis of ID may impede the healthy development of internal working models for this group of children with resultant psychosocial difficulties in adulthood.

1.1.33 Conclusion

Attachment patterns in childhood appear to have an adaptive function and form from the basis of mother-child interactional processes. Empirical measurement using behavioural observational methods such as the 'Strange Situation' have identified three attachment patterns in childhood, namely 'Secure', 'Avoidant' and 'Anxious/ambivalent'. However childhood abuse affected the goodness of fit of the three category model. Additional research further identified the disorganised/disoriented attachment pattern which showed a goodness of fit to the behavioural presentation of children experiencing psychosocial difficulties, inclusive of abuse and neglect.

Secure attachment in childhood provides the child with an internal working model of self and others within interpersonal relationships, which from an attachment perspective, reflects confidence to explore, good self esteem and social competence within interpersonal relationships. Insecure attachment patterns appear to relate to poor parental sensitivity and responsiveness and along with poor parenting in general. Both insecure attachment style and poor parenting are identified as risk factors for the development of antisocial behaviour and juvenile

delinquency. Internal working models of self and others formed through attachment representations in childhood show moderate stability and continuity from 12 months, to 6 years of age. Discontinuity from secure to insecure attachment patterns relates to maternal distress and a lessening of mother-child interactional quality through family distress. Family distress may also affect the availability of the attachment figure to the child at times of need. Thus although there is evidence of continuity there also appears to be an ability to alter mental representations according to temporal shift in attachment figure responsiveness, sensitivity and availability.

In contrast to the continuity of attachment, intergenerational transfer of attachment style shows 75% concordance between mother and child attachment patterns. Additionally strong lawful associations are found between 'autonomous' parents and 'secure' infants, 'dismissing' parents and 'avoidant' infants and 'preoccupied' parents and 'ambivalent' infants. Parental responsiveness appears to serve a mediating role between security of attachment organisation and sensitive responsiveness. With regard to social competence, within secure attachment patterns children are more likely to be sociable and less reserved and to engage in more play and exploration. On the other hand, when infants feel insecure and lack confidence in the caregiver, they are more likely to respond with less pro-social responses such as fear and anxiety, or with defensiveness, leading to behaviours such as crying and clinging.

Additionally childhood disorders such as ADHD have been found to have a negative effect on the mother-child interaction, and this issue is reflected in the formation of attachment patterns. There are also similarities of some symptomatology between ADHD and Reactive Attachment Disorder which has led to suggestion that ADHD should be explored from a perspective of quality of parent child interactional processes, with positive parenting practices - including maternal sensitivity, shown to be associated with better outcomes in ADHD children.

Little is known as to the affect of difficulties of social information processing within Autistic Spectrum Disorder or indeed intellectual disability per se, on attachment pattern formation. This thesis is a study of attachment in offenders with ID. Some of this cohort will have experienced institutionalisation in childhood. Whilst no participants have a diagnosis of Autistic Spectrum Disorder many individuals with ID are noted in file review as having autistic tendencies, which may not be in a sufficient quantity to meet diagnostic criteria but which, never the less, may impact on the quality of mother/primary caregiver social interactions in childhood. The resultant quality of parent/primary caregiver social interactions may in turn affect the development of attachment bonds in childhood.

Chapter 2: Attachment in Adulthood

2.0 Introduction

The role of early experience in later development is of theoretical and clinical interest. Importantly it defines the relationship between developmental psychology to the social, personality and clinical psychology of adulthood (Waters, Hamilton and Weinfield, 2000). Additionally within psychological therapy, the opportunity to experience a working relationship incorporating secure attachment has been found to enhance psychological and physical well being and also the capacity to make and maintain lasting affectional bonds with others (Sable, 2007). It is only over the past decade that it has been possible to study early attachment representations and their stability and continuity over time, with much of this research examining relationships between infant attachment classifications using the Strange Situation and adult attachment classifications using the Adult Attachment Interview (AAI).

The main principle of attachment theory is that attachment patterns and the associated patterns of adaptation, are established within the context of the family of origin, and continue to be important throughout the lifespan (Ainsworth, 1982, 1989; Bartholomew and Horowitz, 1991; Bartholomew, Kwong, and Hart, 2001; Bowlby, 1977, 1980). Bowlby maintained that how an individual's attachment behaviour becomes organised within his personality determines the pattern of affectional bonds he makes during his life (Bowlby, 1980, P.41). Equally as important with regard to adult attachment, he suggests that the development of an adult attachment orientation, though established within early parent-infant interactions, should not be conceptualised as fixed (Bowlby, 1973) but rather should be considered as malleable. Bowlby suggests that reappraisal of attachment strategies are linked to experience of close relationships

within a pathway of life events. In addition, Bowlby suggests that internal working models with regard to self and others within interpersonal relationships may lead to a cyclical model in so far as the pathway chosen throughout life may be influenced by the internal working models of attachment related constructs formed from parent-child interactions (Bowlby, 1973; 1980).

A considerable body of evidence exists regarding the continuity and also the discontinuity of attachment related behaviours (Crittenden, 1992; Douglas and Atwell, 1988; Fagot and Pears, 1996; Fraley, 2002; Main et al., 1985; Sroufe, 1988; Sroufe and Fleeson, 1986; Waters, 1978). There is evidence to suggest, that the identical attachment dynamics observed between caregivers and young children also typify adult romantic relationships (Hazan and Shaver, 1987). In general research on adult romantic attachment has also acknowledged malleability within attachment style continuity when utilising a prototypical measurement approach (van IJzendoorn, 1996). Mikulincer and Shaver, (2007) suggest that:

“....attachment patterns at a given point in life are a complex product of a working model prototype formed during infancy, revisions in attachment representations due to changing social circumstances and other factors throughout development, and current attachment-relevant experiences that result in further updating of attachment representations.” (p135)

A number of researchers examining individual differences in adult attachment, suggest that long-term sexual or romantic partners typically serve as primary attachment figures for one another (Hazan and Zeiffman, 1994; Trinke and Bartholomew, 1997). As suggested by Main (1996), attachment behaviour in adults is less readily activated and presents as a more cognitive concept, operating within the formulated internal representation of ‘self’ and ‘others’. Main suggests that adults build a quantitatively larger number of attachments with a wider variety of people and show an ability to increase or decrease the importance of specific attachments. For example, the individual that experiences a divorce and then subsequently moves forward within interpersonal

relationships to form within time, a new attachment to a different partner. However the processes permitting adults to change attachment figures are little understood, (Main, 1996).

2.1.1 Attachment Continuity from Infancy to Adulthood

Research has shown that attachment relevant experiences may lead to changes in attachment patterns over time. However, Mikulincer and Shaver (2007) suggest that in adulthood attachment patterns are inclined to be well formed personality structures that remain relatively stable over time and across different relationships. Simultaneously, they suggest, adaptive accommodation and updating of working models in response to new attachment relevant information and experiences continue throughout adulthood. If this did not occur adults would not have the ability to make accurate appraisals of self change and changing life circumstances, (Mikulincer and Shaver, 2007).

A large number of studies have evaluated the stability of adult attachment patterns. These studies used either interview methods, or self report questionnaires, and computed either stability coefficients of continuous attachment scores, or concordance rates of categorical attachment classifications. Most studies have examined attachment stability over relatively short periods of time (1 week to 1 year) however a small number of studies have collected data over a 2, 4, or 6 year period with one longitudinal study collecting data over a 27 year period, (Klohn and Bera, 1998).

There are a large number of studies exploring adult attachment stability and a comprehensive review of this topic is out-with the scope of this thesis, a general overview of relevant studies suggests a differential moderate to high stability of adult attachment patterns over periods ranging

from 1 week to 27 years (Benoit and Parker, 1994; Crowell, Treboux and Waters, 2000; Davilla and Cobb, 2003; Klohnen and Bera, 1998; Pierce and Lydon, 2001; Pistole, 1989). Test, re-test correlations range between .47 and .70, with an average coefficient of .56, (Mikulincer and Shaver, 2007). Mikulincer and Shaver also highlight the stability patterns of concordance rates for categorical classifications with test; re-test concordances ranging from 44% to 90%. They suggest on average around 70% of the participants received the same attachment classification, or chose the same attachment category, at differing time points. These findings are consistent with Bowlby's (1973) suggestion that adult attachment patterns remain consistent over time. However the test, re-test correlation of .56 does demonstrate shifts in attachment patterns and suggests that adult attachment patterns are sensitive to changing life circumstances and may be subject to reappraisal and adaptation. Baldwin and Fehr (1995) suggest that around 30% of adults experience statistically significant changes in their attachment patterns over relatively short periods of time (less than one year).

Using the AAI, attachment researchers have been able to examine attachment in infancy from Strange Situation classifications with a reassessment of attachment 18 to 20 years later; this has led to findings of continuity of attachment patterns from infancy to adulthood. Interestingly, the findings differ across studies. Significant associations were found within some studies (e.g. Hamilton, 2000; Iwancic and Sneddon, 2001; Waters, Merrick, Treboux, Crowell and Albersheim, 2000) between the Strange Situation and AAI classifications. In their study of middle-class mothers Waters, Merrick, Treboux, Crowell and Albersheim, (2000) found early attachment security with mother was significantly related to AAI attachment security 20 years later. Their findings suggest that 64% of participants were assigned to corresponding classifications in infancy and early adulthood, with 72% receiving the same classification if the secure/insecure dichotomy was used. However 38% of participants changed classification from

infancy to early adulthood. Waters et al. (2000) suggest that reliability and validity issues of measures accounted for a portion of the observed change, but acknowledged that experiences beyond infancy also played a part. To further investigate this issue they counted the number of attachment relevant negative life events mentioned in each participant's AAI transcript, and related these to whether the participant retained or changed attachment classification across time to young adulthood. Their findings suggest that where mothers reported no stressful life events, attachment stability across the three groups of attachment classification was 72%. For the dichotomous classification (secure vs insecure) stability was 78%. In 67% of participants, stressful life events experienced by the mother were significantly related to the likelihood of a secure infant becoming insecure in early adulthood, whilst a shift of only 15% of participants from secure to insecure attachment was noted if mother reported no stressful life events). Interestingly, stressful life events were not significantly related to classification changes in insecure infants. Within the group whose mothers reported one or more stressful life events 22% became secure as young adults in comparison to 33.3% if mother reported none ($p < .59$).

Hamilton (2000) found similar results when comparing infant attachment classifications from the Strange Situation and Adolescent Attachment Interview classifications. Stability of secure/insecure dichotomies was 77% with infant attachment classification being a significant predictor of adolescent attachment classification. Negative life events such as divorce or separation of parents, and/or parental substance abuse, were significantly related to change in attachment classification. Adolescents with insecure attachment styles were more likely to experience acrimonious divorce of parents at an earlier age which in turn was likely to lead to a collection of negative life events. However negative life events in adolescents with secure classifications were more likely to be isolated events.

The importance of the social environment is clearly a factor related to the formation of attachment quality and may play a critical role in attachment representation (Lewis, Feiring and Rosenthal, 2000). In a longitudinal study these authors examined continuity of attachment measured at one year of age in comparison to the same participants classifications at aged 18 years. They included the impact of parental divorce as a negative life stressor. Their findings suggest that securely attached one year olds of divorced families show significantly more insecure attachment at 18 years (89%) than securely attached one year olds of intact families (35%). Examining infants who were classified as insecurely attached at one year, those from families who divorced were more likely to be insecurely attached at age 18 years (60%, 3/5 participants) whereas insecure one year olds whose families did not divorce were less likely to be insecurely than securely attached at 18 years of age (32% 6/19 participants). These results did not reach significance but did show an orderly trend although caution should be applied to the interpretation of results due to low numbers of participants.

Within the study carried out by Lewis, Feiring and Rosenthal, (2000) there exists a lack of further detail as to the intensity (level of acrimony) or frequency of negative life events experienced by the participant. Hamilton (2000) suggests that negative life events in adolescents classified as secure tended to be isolated events. It is difficult to ascertain the participants who may have experienced negative life events in isolation within this study. Hamilton (2000) suggests that level of acrimony within the divorce appears to have an effect on stability of attachment classification. Whilst it is appreciated that level of acrimony may be difficult to quantify, there is no reference to the presence of acrimony in the divorce, measured as a negative life event, in this study. Clearly it is not solely divorce per se as a single negative life event, but the intensity and additive affect of such life events which would appear to affect the continuity of attachment classifications from childhood to adolescence. As Mikulincer and Shaver (2007)

highlight, some people construe divorce as a painful loss, whereas others view it as a relief, if not a cause for celebration (p143).

2.1.2 Adult Attachment and Perceived Parental Care Giving

Most studies of early attachment patterns have focussed on maternal sensitivity and responsiveness during mother-infant interactions. A few studies have provided longitudinal data giving initial evidence of the very long term effects of parental caregiving during infancy and childhood on later adult attachment. For example Beckwith, Cohen and Hamilton (1999) assessed maternal sensitivity (attentiveness, responsiveness, and supportiveness) during mother-child interactions when the children were 1, 8, and 24 months of age. They then assessed the same participants attachment to their mothers (using the AAI) when they were 18 years old. Higher levels of maternal sensitivity and responsiveness during early childhood were associated with less avoidant and more secure AAI attachment classifications in late adolescence.

In a longitudinal study known as the Bielfield Project, Grossman, Grossman and Kindler (2005) followed forty nine participants from birth to age 22 years, and assessed both the mothers and fathers sensitive responsiveness on several occasions during infancy and childhood. They then administered the AAI to the participants when they were aged 22 years. Childhood experiences with mother and father during infancy and childhood predicted attachment patterns 20 years later. A secure attachment pattern at 22 years was associated with the father's sensitivity during the first three years of life, mainly when the mother also showed high levels of sensitivity and responsiveness, and also supportive experiences with either the mother or the father during childhood (between ages 6 to 10 years). Grossman et al. (2005) concluded that both mother's and father's sensitivity and supportiveness (each in its own right and also taken together) during

infancy and childhood are important predictors of adult attachment classification. Much of this work has been carried out using the AAI.

Outwith interview measures and using self report measurement, some initial empirical assessment of retrospective parental bonding using self report scales has also been carried out (Parker, Tupling and Brown, 1979). Based on a review of the literature available at that time they used the parental qualities identified by Rutter (1972) associated with normal development. The main characteristic of interest for adequate mothering was identified as, a loving relationship leading to an unbroken attachment to one specific person in the family, who provides adequate stimulation, (Rutter, 1972). At that time Ainsworth et al., (1975) identified four dimensions of maternal behaviour which were reflected in the balance of attachment and exploratory behaviour in infants. These dimensions were labelled as: sensitivity-insensitivity, acceptance-rejection, cooperation-interference, and accessibility-ignoring. The development of the Parental Bonding Instrument (PBI) resulted in a self report measure reflecting two dimensions, the first a dimension of 'care' (i.e. warmth and understanding) and the second a dimension of 'control' or 'overprotection' (i.e. over-protectiveness or intrusiveness) with low care and /or high control thought to be detrimental to normal development. Normative data based on 298 respondents suggests that the two dimensions are not independent and that 'over protection' is associated with 'lack of care'. Mothers were experienced as more caring and more overprotective than fathers. The gender of the child did not influence a parent's capacity to 'care' or to be 'over protective'. No association was found between the age of the participant and parental 'care' and 'over protection'. A positive association between age of participant and parental 'care' and 'over protection' would have suggested either a change in the report of parental attitudes over time or that the further removed respondents are in time from childhood the more their responses may be influenced by social desirability, or autobiographical or false memory. No clear association was

found between higher social class and parental ‘care’ or ‘over protection’. As well as scores on the two dimensions, Parker et al. (1979) also assigned parental styles based on the interactions of care and control, i.e. high care/high over protection (affectionate constraint); high care/low protection (optimal parenting); low care/high over protection (affectionate control) and low care/low overprotection (neglectful parenting signifying absent or weak bonding).

The two dimensions of the PBI have been found to relate to measures on anxiety/depression and delinquency (Chambers, Power and Durham, 2004; Pedersen, 1994). With affectionate constraint (low care/high overprotection) from either parent being over represented in patients with a continuing diagnosis of anxiety at long term follow up, (Chambers, Power and Durham, 2004). Thus the measure would appear to show validity in relating the quality of parental bonding measured retrospectively and the effect of poor parenting experiences on the development of mental health issues relative to emotional regulation later in life. Whilst attachment classifications were not measured within the study carried out by Chambers, Power and Durham, (2004) it could be argued that the continuing diagnosis of anxiety may relate also to anxiety one of two underpinning dimensions (anxiety and avoidance) underpinning insecure attachment orientation which may develop through negative parenting experiences in childhood.

2.1.3 Individual Differences in Attachment Strategies

It is important to pay attention to individual differences in attachment style. Such differences may be attributed to a variety of issues. For example, experiences of consistent, responsive caretaking in childhood are hypothesised to facilitate the development of both an internalised sense of self worth and a trust that others will generally be available and supportive (Bowlby, 1973). In contrast, inconsistencies or poor care-giving can result in insecurities linked to poor

self appraisal and low self esteem, (Mikulincer and Shaver, 2007). Attachment orientation is considered to have an adaptive function within close interpersonal relationships but what impact might insecurities of attachment have on adult functioning within close relationships. Alongside these issues there are effects of gender and cultural normalisation. This chapter will proceed to outline the gender related individual differences of attachment style in adulthood and will then proceed to examine the effect of individual differences in attachment style relative to interpersonal relatedness. This discussion will be framed within the concept of Bartholomew's two dimensional, four category model of adult attachment (Figure 2.1.0) which relates most closely to the concept of attachment representations as put forward within Bowlby's theory of internal working models of attachment representations.

Figure 2.1.0: Diagram of the Two Dimensional Space Defined by Attachment Anxiety and Avoidance, Showing the Quadrant Names Suggested by Griffin and Bartholomew (1994).

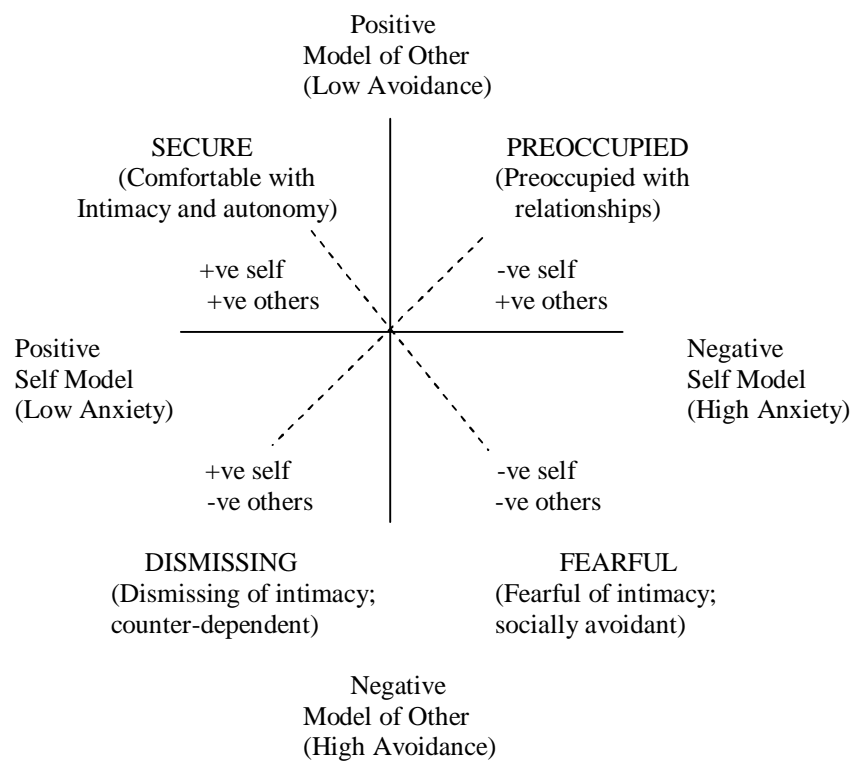


Figure 2.1.0 is a pictorial representation of Bartholomew's "model of self" and "model of other" within two dimensional space, relative to the dimensions of attachment anxiety and attachment avoidance. It can be noted that the "secure" and "dismissing" prototypes are both characterised by low attachment anxiety whilst the "preoccupied" and "fearful" prototypes are at the opposing end of the continuum of anxiety being characterised as having high anxiety. With regard to the "avoidant" dimension, the prototypes of "Secure" and "Preoccupied" are each noted to lie at the "low avoidance" end of the continuum whilst the prototypes of "dismissing" and "fearful" are characterised at the high avoidance end of the continuum. Bartholomew's "model of self" (positive vs. negative) and "model of other" (positive vs negative) has also been depicted in Figure 2.1.0. The "positive self" is portrayed by "secure" and "dismissing" attachment prototypes whilst the "negative self" is represented by the "preoccupied" and "fearful" prototypes. The positive others model illustrates the "secure" and "preoccupied" attachment prototypes whilst the "negative others" is characterised as would be expected by the two avoidant attachment prototypes of "dismissing" and "fearful".

2.1.4 Gender Differences in Attachment

In the first empirical studies of adult attachment, Hazan and Shaver (1987) reported that gender was unrelated to the "secure", "avoidant" and "anxious/ambivalent" attachment styles. This finding has been replicated by other researchers using the three category model (Brennan, Shaver and Tobey, 1991; Feeney and Noller, 1990; Feeney, Noller and Patty, 1993) with findings revealing no gender differences in the prevalence of the major attachment styles (Feeney and Noller, 1996).

However categorical measurement of attachment style using Bartholomew's four prototype model (Griffin and Bartholomew, 1994) has yielded strong gender differences within the two avoidant categories, with males being much more likely than females to endorse the dismissing style and less likely than females to endorse the fearful style (Brennan et al. 1991). Gender differences within continuous measurement of the four attachment styles are partially supportive of these findings in so far as males obtain higher mean ratings of dismissing attachment, whereas females obtain higher mean ratings of preoccupied attachment (Bartholomew and Horowitz, 1991; Scharfe and Bartholomew, 1994). These gender differences are evident within interview ratings, self reports and partner reports with regard to the four category model. From these findings Mikulincer and Shaver (2007) suggest that the four category model shows more sensitivity than the three category model in identifying gender differences in attachment patterns.

The wide variety of multiple-item attachment scales makes it difficult to establish converging findings. Weak support for female's greater anxiety was found by Collins and Read (1990) consistent with Bartholomew's (Bartholomew and Horowitz, 1991; Scharfe and Bartholomew, 1994) results for preoccupied attachment. Studies of multi-item scales (Feeney, 1994; Feeney, Noller and Callan, 1994) do suggest that females are more comfortable with intimacy. For example, wives report greater comfort with closeness than husbands (Feeney, 1994; Feeney, Noller and Callan, 1994), together with a greater willingness to rely on their partners (Kobak and Hazan, 1991). Similarly, female high school students report less discomfort with closeness than males and greater confidence in self and others (Feeney, Noller and Hanrahan, 1994). This may be explained in terms of socialisation patterns, with females being encouraged to be more nurturing and relationship oriented (Feeney and Noller, 1996).

The importance of men's comfort with intimacy is supported by the findings of Simpson (1990), which suggests that men's relationship evaluations were linked with self reports of all three attachment styles, however the most consistent effects were for secure and avoidant attachment. Each of these styles assesses comfort or conversely discomfort with intimacy. Similarly, Kirkpatrick and Davis (1994) suggest that men describing themselves as avoidant in attachment provided relatively negative reports of their relationships.

Evidence of the importance of women's anxiety within relationships is equally important. Women's anxiety (measured in various ways) has been linked with negative reports of the quality of dating and marital relationships as provided by both self and partner (Feeney, 1994; Feeney, Noller and Callan, 1994; Kirkpatrick and Davis, 1994; Simpson, 1990). However the relationship between gender, attachment and relationship satisfaction is complex (Feeney, Noller and Callan, 1994) and may be linked to stereotypical gender normalisation (Feeney, 1996). Attachment confirming behaviour out-with the stereotypical gender - role would appear to have a mediating effect on attachment security (Feeney, 1994). Feeney found that the pervasive negative effect of the husbands anxiety may have reflected a violation of sex role stereotypes, (wives anxiety being stereotype confirming), which is detrimental only when partners fail to provide high levels of comfort and support.

These findings would suggest that Griffin and Bartholomew's two facet avoidant dimension underpinning attachment orientation within their four category model may be influenced by an interaction between gender and comfort with closeness whilst no such influence has been found within the measurement of the three category model. The reliability of the four category model will be explored in a later chapter however it is worthy of note that both the three and four category models of attachment are underpinned by the two dimensions of attachment anxiety and

attachment avoidance and it is these dimensions that are of interest clinically. Of interest to this thesis is the clinical application of attachment orientation within offenders with mild ID and to effective intervention within that group. The issue is more appertaining to the affect of insecure attachment on the individual and what part that might play in relation to the development of antisocial tendencies or mental health difficulties whether male or female. That is not to say that all individuals with insecure attachment orientation are attachment disordered but that those who experience disordered attachment with its affect on mental health and emotional well being will fall within the dimension of 'Insecure' attachment.

2.1.5 Prototypical Individual Differences within Attachment Styles

Prototypical descriptions are allocated to each of the four separate attachment styles in the RQ. These descriptions are evident of the underlying internal working models which are proposed to have been formed through situations of interpersonal relatedness, particularly in childhood. These attachment styles, as outlined in the section on continuity would appear to be malleable dependent on experience of negative life events and these descriptive categories form a prototype rather than an exact interpersonal presentation.

2.1.6 The Secure Attachment Style in Adulthood

Securely attached individuals are characterised by an internal working model of positive self/positive others and low anxiety/low avoidance, (Griffin and Bartholomew 1994b). These individuals are shown to be more confident in social situations, to be more self assertive, and to view others as warm, accepting, trustworthy and dependable (Collins and Read 1990). In addition, individuals within the 'secure' attachment style attain high levels of intimacy in

interpersonal relationships without losing a sense of self (Bartholomew and Horowitz, 1991). They are able to use others as a source of support when needed and they are likely to form intimate relationships in which both partners act as a safe haven and secure base for one another. Bartholomew, Kwong and Hart (2001) explain that securely attached individuals expect their attachment figures to be supportive, facilitating inner security and behavioural competence. Secure attachment is also associated with satisfying intimate relationships and a high level of personal adjustment (Bartholomew, Kwong and Hart, 2001).

2.1.7 The Preoccupied Attachment Style in Adulthood

The second attachment style in the four-category model is the $\text{Preoccupied}\emptyset$ style, which corresponds to the $\text{anxious/ambivalent}\emptyset$ attachment style within the tripartite model (Ainsworth, et. al., 1978). The $\text{preoccupied}\emptyset$ attachment style is characterised by a negative self/positive others internal working model, with high anxiety and low avoidance, (Griffin and Bartholomew 1994). Experiences of inconsistent and insensitive caregiving are thought to contribute to preoccupied attachment. This kind of parenting may lead children to the conclusion that they are to blame for a lack of love from the caregiver (Bartholomew, Kwong and Hart, 2001). Individuals within the $\text{preoccupied}\emptyset$ attachment style feel low in self worth in conjunction with positive evaluation of other people, leading them to seek approval of valued others; they are also low in social self-confidence and assertiveness. As past attachment figures are likely to have responded inconsistently to them at times of distress, preoccupied individuals have learned to express their needs actively and relentlessly in order to maximise their chances of success in gaining support. The result is an overly dependent style in which personal validation is sought through gaining others acceptance and approval.

2.1.8 The Fearful Avoidant Attachment Style in Adulthood

The fearful avoidant attachment style is characterised by a negative self/negative others internal working model, with high anxiety and high avoidance (Griffin and Bartholomew 1994). Fearful individuals have concluded that they themselves are unlovable and that others are uncaring and also unavailable (Bartholomew, Kwong and Hart, 2001). They may wish for acceptance from others however they appear hypersensitive to social approval ó they avoid intimacy due to a fear or expectation of rejection which further contributes to their difficulties in obtaining adequate support.

2.1.9 The Dismissing Avoidant Attachment Style in Adulthood

The individual with a dismissing avoidant attachment style is characterised by a positive self/negative others view and low anxiety/high avoidance (Griffin and Bartholomew 1994). Dismissing individuals have managed to maintain a positive self image and to minimise anxiety by distancing themselves from attachment figures and playing down, devaluing or denying the impact of negative attachment experiences, (Bartholomew, Kwong and Hart, 2001). Self reliance and a self image as independent are important. When dismissing individuals experience distress they prefer to deal with that distress on their own rather than seek others support, with their compulsive self reliance and emotional control alongside their downplaying of the importance of intimate relationships they become relatively invulnerable to potential rejection by close others, (Fraley, Davis and Shaver, 1998). Collins (1996) suggests that individuals within this attachment pattern have high self worth and assertiveness, are sceptical of the value of intimate relationships, and are not interpersonally oriented suggesting that these adults have largely

negative views of human nature and that overall they thought others were not trustworthy or dependable.

2.1.10 Attachment and Emotional Regulation

Bowlby was interested in the causes and consequences of emotions aroused by attachment (e.g. love, joy), separation (anxiety, anger) and loss (grief, sadness, despair) (Bowlby, 1969/1982). His theory was an attempt to explain how secure attachments can serve to help an individual survive temporary bouts of negative emotion and reestablish hope, optimism, and composure. It reflects on how different forms of insecurity of attachment orientation can interfere with emotional regulation, social adjustment, and mental health. In the model of emotions put forward by Shaver, Schwartz, Kirson, and Connor (1987), emotions can be considered to be biologically functional, organised systems of evaluative thoughts and action tendencies which are supported by physiological changes, and are generated by the appraisal of internal and external events in relation to goals, and concerns. The emotions that arise in conjunction with cognitive appraisals may be experienced and also expressed through eclectic changes in thought patterns, available memories, action tendencies, behaviours, and subjective feelings (Oatley and Jenkins, 1996).

Secure attachment has generally been associated with positive affect (Consedine and Magai, 2003, Mikulincer and Florian, 1998). Mikulincer and Shaver (2007) highlight that when a secure individual encounters internal or external stimuli or events that might provoke undesirable or negative emotional experiences they can engage in problem solving, planning, and cognitive reappraisal, place the negative event in perspective, and utilise support from people with additional resources or perspectives for solving the problem or reducing the stressful effects. The secure person is also more likely to have developed self calming skills with both implicit and

explicit emotion regulation strategies learned from security providing attachment figures. Thus they can focus attention on constructive alternatives rather than ruminating or catastrophising (Ciechanowski, Sullivan, Jensen, Romano and Summers, 2003). Based on their findings from research with the AAI, Kobak and Sceery (1988) suggest securely attached individuals are more cheerful than either ambivalent or avoidant individuals. These skills develop from repeated interactions with attachment figures who are/were both sensitive and responsive to bids for protection and support.

Insecure attachment is generally associated with negative affect (Consedine and Magai, 2003). For example dismissing avoidant attachment has been associated with an emotion regulatory style characterised by affect minimisation (Cassidy, 1994) and a propensity to route negative emotion from consciousness (Cassidy, 1994; Hazan and Shaver, 1987; Magai, Hunziker, Mesiais and Culver, 2000). Young adults who are dismissing avoidant are rated as more hostile and defensive (Kobak and Sceery, 1988; Mikulincer, 1998; Mikulincer, Florian and Weller, 1993) and scores on avoidance are positively correlated with disgust and contempt in males and females, as well as being negatively correlated with joy and interest in males (Magai, Distal and Liker, 1995). Dismissing avoidant attachment has also been associated with low levels of anxiety (Bartholomew and Horowitz, 1991). From these findings it has been suggested that the dismissing avoidant attachment style is one which utilises a 'minimising' style of emotion regulation pattern associated with the avoidance of emotions connoting weakness, such as fear and anxiety (Cassidy, 1994; Consedine and Magai, 2003; Mikulincer and Shaver, 2007).

Individuals who have an ambivalent attachment style tend to have what Cassidy (1994) calls a 'maximising' style of emotion regulation that is they are hypervigilant to cues of rejection and/or distress (Kobak, Cole, Ferenz-Gillies, and Fleming, 1993; Mikulincer, 1998). Ambivalence has

been associated with greater anxiety, as rated by peers (Kobak and Sceery, 1998). Ambivalence has also found to relate to reports of greater shame and lack of self confidence (Bartholomew and Horowitz, 1991; Magai et al. 1995) as well as higher levels of sadness, and self reported anxiety (Magai et al., 1995). The tendency of ambivalently attached individuals to display heightened emotion has been conceptualised as a functional, compensatory strategy to gain or maintain attention from others (Main and Solomon, 1986).

2.1.11 Attachment and Anger

When examining attachment security, functional expressions of anger are typical of secure individuals. For example, Mikulincer (1998) found that when confronted with anger eliciting events, secure people held optimistic expectations about their partner's subsequent behaviour, and made well differentiated, reality attuned appraisals of their partner's intentions. Secure individual's accounts of anger-eliciting events were characterised by the constructive goals of repairing the relationship, engaging in adaptive problem solving, and experiencing positive affect following the temporary period of discord. Barrett and Holmes (2001) found that greater security in the individual's relationship with parents or partners is related to more constructive, pro social and less aggressive responses to hypothetical anger eliciting situations.

Individuals within an avoidant attachment style may tend to evade negative emotions which in turn may cause them to suppress anger, the anger being expressed in more unconscious or unintended ways, or take the form of otherwise unexplained hostility or hatred for a partner (Mikulincer and Shaver, 2007). In support of this theory Mikulincer (1998) found that avoidant individuals did not report intense anger in response to another's negative behaviour, but nevertheless displayed intense physiological arousal. They also reported using 'distancing'

strategies to cope with anger eliciting events and attributed hostility to partners even when there were clear indications (provided by the experimenter) of partners' non-hostile intent. Hudson and Ward (1997) also reported an association between avoidance and self-reports of anger suppression in a sample of men incarcerated for violent acts and whose violence suggested that they were actually quite angry.

Attachment anxiety is associated with anger, aggression, and hostility (Calamari and Pini, 2003; Dutton, Saunders, Starzomski, and Bartholomew, 1994; Magai, Hunziker, Mesiais, and Culver, 2000; Mikulincer, 1998; Zimmerman, 2004). Anxious attachment may serve to intensify negative emotional experiences and rumination on threats and slights which in turn may fuel intense and prolonged bouts of anger (Mikulincer and Shaver, 2007). Their fear of separation and need for others' affection may hold their resentment and anger in check, and redirect it toward themselves. As a result the anger of anxious individuals can include a complex mixture of resentment, hostility, self-criticism, fear, sadness, and depression (Mikulincer, 1998). Simpson, Rholes and Philips, (1996) found that attachment anxiety is associated with displaying more anger and hostility while discussing an unresolved problem with a dating partner. Rholes, Simpson and Orina, (1999) found no association between attachment anxiety and anger toward a male dating partner while women were waiting to take part in an anxiety-provoking task. However after they were advised that they would not have to undertake the anxiety-provoking task their attachment anxiety was associated with anger towards their partners. This was mainly true of women who had sought more support from their partners during the waiting period. The authors suggest that anxious women's need for reassurance counteracted, or encouraged suppression of anger expression during support seeking behaviour but their anger surfaced when support was no longer required.

2.1.12 Attachment Psychopathology and Antisociality

Attachment theory was formulated through Bowlby's (1969, 1982) quest as a child psychiatrist, to understand the aetiology of juvenile delinquency in general and from his contact with particular juveniles who had experienced what he termed 'maternal deprivation'. Maternal deprivation defined as, loss of the mother, separation from the mother, inadequate mothering, poor or inconsistent care from foster parents, or professionals in institutional settings (Mikulincer and Shaver, 2007). The evidence base which has developed over the past four decades has found that the foundation for mental health is built from repeated experiences with loving, caring, and sensitive attachment figures. In contrast, attachment insecurities, negative models of self and others, and both intra and interpersonal regulatory deficits based in experiences with unavailable, rejecting, or neglectful attachment figures, place the individual experiencing these issues at risk for psychological disorders (Barone, 2003; Ball and Links, 2009; Ciechanowski, et al., 2003; Choi-Kain, Fitzmaurice, Zanarini, Laverdiere and Gunderson, 2009; Cole, Llera, Pemberton, 2009; Critchfield, Levy, Clarkin and Kernberg, 2008; Sakado, Kuwabara, Sato, Uehara, Sakado and Someya, 2000; Wei, Mallinckrodt, Russell and Abraham, 2004). Longitudinal studies on the development of antisocial behaviour also highlights a number of factors some of which are previously identified as relevant to the development of insecure attachment bonds in childhood (Farrington and Coid, 2003). For example major risk factors at birth identified as relating to adverse adult outcome include: chronic poverty at birth, uneducated mother, perinatal complications and also parental psychopathology. Major stressors identified during childhood/adolescence are: separation from parents in the first year of birth, parental illness/mental illness, family discord, Father absent/divorce, foster home, change of residence/school. Each of these factors could infer family instability and whilst it is not to say

that the presence of one of these factors alone may relate to the development of antisociality there may exist an additive effect of multiple factors (Farrington and Coid, 2003).

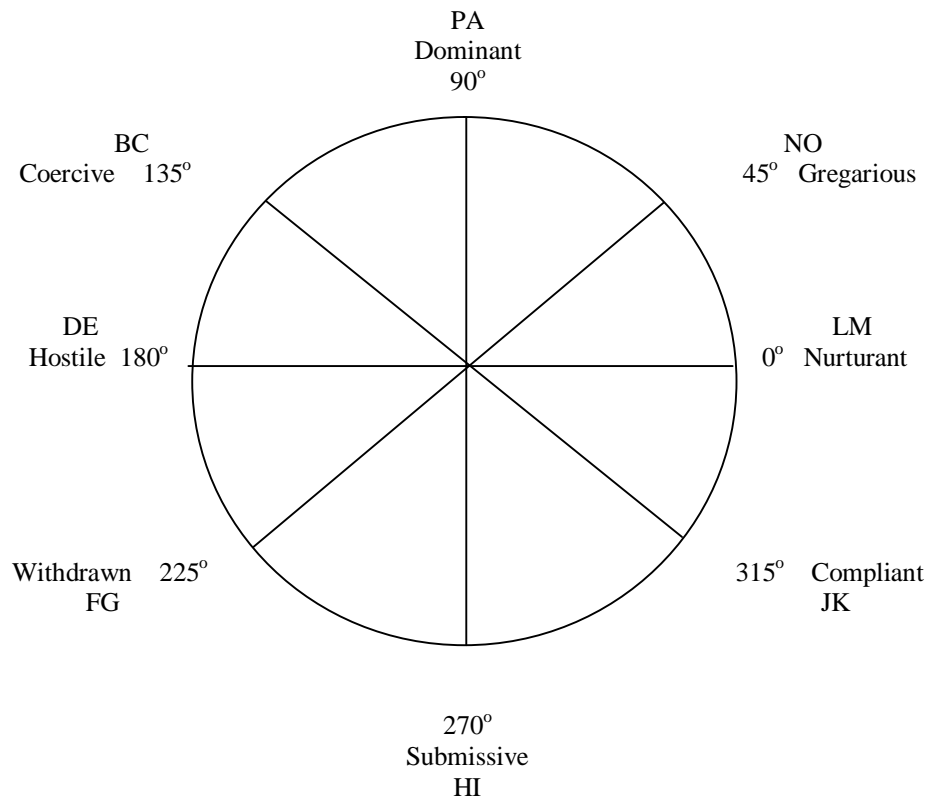
2.1.13 Attachment and Interpersonal Problems

Individual differences in attachment style in both children and adults are attributed to systematic differences in underlying models of self and others (Collins and Read, 1994). Internal working models of attachment are thought to reflect memories and beliefs that develop from the individual's early experiences of care giving, and are carried forward into new relationships, where they are noted as playing an active role in further guiding perceptions and behaviour, (Sroufe, 1986; Feeney and Noller, 1996). Therefore attachment in adulthood can be conceptualised in terms of developed internal representations or models that guide interpersonal behaviour, (Hazan and Shaver, 1987). Furthermore, dependent on the internal representational model of 'self' and 'others', the attachment style of the individual may affect the individual differences in the way people regulate relationships with others, inner distress and social information processing, (Bowlby, 1988b; Collins and Read, 1994; Man and Hamid, 1998).

The development of interpersonal problems has also been found to relate to attachment style. For example, Bartholomew and Horowitz (1991) found the quality of family attachment contributes to the prediction of warmth and dominance dimensions underlying interpersonal problems. The two groups with a negative model of self, the 'preoccupied' and the 'fearful avoidant' attachment groups, expressed higher mean levels of interpersonal distress arising from personal insecurity. Each pattern of attachment was found to be characterised by a distinct pattern of emotional regulation and interpersonal behaviour (Bartholomew and Horowitz, 1991). Research on adult attachment has been focussed almost exclusively on the correlates of individual differences in attachment. Findings have highlighted relationships between attachment patterns and a number

of inter-relationship factors e.g. jealousy, relationship satisfaction, support seeking, parental drinking, self-disclosure, religiosity, violence, juvenile delinquency and sexual offending behaviour, (Friedemann and Adshead, 2004; Hazen and Shaver, 1993; Farrington and Coid, 2003).

Interpersonal style and interpersonal problems can be measured within the two dimensional concepts delineated in the interpersonal circumplex. The interpersonal circle or interpersonal circumplex is a model for conceptualizing, organizing, and assessing interpersonal behavior, traits, and motives (Wiggins, 2003). The interpersonal circle is defined by two orthogonal axes: a vertical axis (of dominance, or control) and a horizontal axis (of solidarity, friendliness, warmth or love). In recent years, it has become conventional to identify the vertical and horizontal axes with the broad constructs of agency and communion (Horowitz, 2004).

Figure 2.1.1 Characteristics of the Interpersonal Circumplex Model

2.1.14 Interpersonal Problems and the Secure Attachment Style

The securely attached group reported fewer interpersonal problems than the other three groups (Bartholomew and Horowitz, 1991). Being well adjusted within the interpersonal domain, secure individuals show relatively low levels of interpersonal difficulties (Bartholomew, Kwong and Hart, 2001). According to partner report with regard to interpersonal problems, the secure individuals' profile shows elevation on the warm side of the interpersonal space with no subscale scores within the extreme range suggesting flexibility of appropriate responding to specific interpersonal problems (Bartholomew, Kwong and Hart, 2001).

2.1.15 Interpersonal Problems and the Preoccupied Attachment Style

Preoccupied individuals tend to believe that as individuals, they have little control over their lives, and view others as complex and difficult to understand (Collins, 1996). Typically sexually preoccupied, they attempt to meet their strong need for security and affection through sexual interactions (Hazan and Shaver, 1987). Compared with secure individuals, Collins (1996) found individuals with a preoccupied attachment style explained events in a more negative way, reported more emotional distress and behaviours likely to lead to conflict.

Preoccupied individuals show high general levels of distress and anxiety (Bartholomew and Horowitz, 1991; Kobak and Sceery, 1998; Mikulincer and Orbach, 1995) and intense negative reactions to external stress, (Mikulincer, Florian and Weller, 1993). They do not expect consistent responsiveness and have unrealistically high demands for supportiveness from close others which are unlikely to be met, which in turn results in the preoccupied individual often questioning the availability of the attachment figure (Bartholomew, Kwong and Hart, 2001). They often express their need for support in a demanding, histrionic or manipulative way; they may over rely on potential supporters, and are indiscriminant in self-disclosure and help seeking behaviours (Bartholomew and Horowitz, 1991; Mikulincer and Nachson, 1991). These forms of support seeking generally serve to alienate potential support providers, leading to further anxiety and frustration and in turn further demands (Bartholomew, Kwong and Hart, 2001).

Within their active attempts to have their attachment needs met, preoccupied individuals demonstrate an intrusive and demanding interpersonal style. They show exaggerated attachment behaviours, including both emotional displays (especially anger and anxiety) and behavioural displays (at times even resorting to violence) (Bartholomew, Henderson and Dutton, 2001). In

terms of the interpersonal circumplex, preoccupied individuals tend to show elevations in the quadrant characterised by dominance and warmth. They have a particular problem with being overly expressive (Bartholomew, Kwong and Hart, 2001). At the extreme, preoccupied individuals would be expected to exhibit personality characteristics consistent with histrionic and borderline tendencies towards personality disorder (Bartholomew, Kwong and Hart, 2001).

2.1.16 Interpersonal Problems and the Fearful Avoidant Attachment Style

Fearful individuals report high levels of subjective distress (Bartholomew and Horowitz, 1991) and also a poor quality of intimate relationships (Scharfe and Bartholomew, 1995). Bartholomew, Kwong and Hart, (2001) suggest that individuals who are considered to have a fearful attachment style do not expect responsiveness from others which gives rise to fear and anxiety. However opposite to the preoccupied individual who will actively seek support, the fearful individual will inhibit expressing anxiety preferring to deal with their anxiety by maintaining a comfortable distance within their close relationships. This may avoid the anticipated rejection expected from the attachment figure whilst gaining some indirect support by not alienating the attachment figure. In extreme cases, fearful individuals may manage their fear of rejection by avoiding close relationships altogether. The fearful avoidant attached individuals showed a positive association with difficulties relative to introversion, sub assertiveness and the tendency to be exploited and negative correlations with problems related to being overly nurturing, expressive, autocratic and competitive (Bartholomew and Horowitz, 1991).

The anxiety that close relationships may potentially cause may lead to a variety of defensive social behaviours, including emotional with-holding and withdrawal, retention and non sharing

of knowledge, a reluctance to disclose information about the self (feelings, whereabouts, other relationships, personal pursuits and activities) and a lack of emotional empathy when other people behave in a distressed manner (Howe, Brandon, Hinnings and Schofield, 1999).

Within an interpersonal circumplex perspective fearful individuals tend to be characterised by passivity and difficulty in making their needs known in relationships. They tend to occupy the lower quadrants of the interpersonal circumplex especially on interpersonal problems related to introversion and sub assertiveness. At an extreme Bartholomew, Kwong and Hart, (2001) suggest that the fearful avoidant attached individual has much in common with the avoidant and dependent personality disorders.

2.1.17 Interpersonal Problems and the Dismissing Avoidant Attachment Style

Bartholomew and Horowitz (1991) suggest these adults place a great deal of value on remaining independent and invulnerable to negative feelings and are viewed by others as emotionally aloof and cold. They suggest individuals who fall within this attachment typology blame others for their lack of intimacy and are characterised by a profound empathy deficit. Situations that may be expected to arouse feelings of distress result in individuals with dismissing attachment styles inhibiting their attachment system, the overall style being one of disengagement (Howe et al., 1999). Individuals within this attachment style see neither themselves nor the other person as emotionally available at times of upset or conflict. Dismissing individuals either minimise the need to feel upset or try to divert attention from the state of being distressed, partly as a result of the way in which they would try to deal with emotional arousal within themselves and partly in an attempt to control and subdue the appearance of distress in others (Simpson, Rholes, and Philips, 1996). The 'Dismissing-avoidant' attached groups were found to show excessive coldness. It would appear that the individuals with 'Dismissing avoidant' style downplay the

importance of others whom they have experienced as rejecting and are thereby able to maintain high self-esteem (Bartholomew and Horowitz, 1991).

Dismissing attachment appears to be a generally successful form of adaptation: though it is related to low relationship satisfaction (Bartholomew, 1997; Scharfe and Bartholomew, 1995), it is also associated with high self esteem and low levels of subjective distress and depression (Bartholomew and Horowitz, 1991).

Dismissing individuals have learned to defensively deactivate the attachment system, reducing their tendency to experience the anxiety that typically follows an unmet attachment need. Dismissing individuals downplay the importance of potential stressors, defensively avoiding acknowledgement of distress that could activate the attachment system, (Bartholomew, 1990; Mikulincer and Orbach, 1995). This defensive emotional stance is complimented by an avoidant behavioural stance within which they maintain distance in close relationships. Interpersonal problems associated with dismissing attachment are centred on the cold side of the interpersonal circle. Note that their problems tend to be associated with distance and alienation from close others, not necessarily active hostility towards close others, (Bartholomew, Kwong and Hart, 2001).

2.1.18 Attachment and Personality Disorder

When viewed from a developmental psychopathology or pathways perspective, attachment theory offers a new framework in which to conceptualise personality pathology. Within this framework personality disorder may be viewed as a deviation away from normal development (Bartholomew, Kwong and Hart, 2001). These authors suggest that approaching personality disorders from an attachment perspective focuses attention on the interpersonal contexts in which personality disorders develop and are maintained. West and Keller (1994) suggest that a maladaptive interpersonal style is a key tenet to most personality disorders. Extreme attachment insecurity may relate to the development of personality disorder in two ways. Insecure attachment indicates a relatively fixed response to stressful interpersonal situations. This response is generally unhelpful in mediating stress and anxiety and in attaining positive interpersonal relationships and emotional well being. In contrast secure attachment is associated with a more flexible approach within interpersonal relationships with flexibility in responding to stress: secure individuals can both expect to rely on others within close relationships at times of stress and have the internal resources to modulate negative affect (Bartholomew, 1997).

As previously discussed, it is common for attachment patterns to be discussed as categorical concepts; this classification system loses much of the underlying variance between individuals who fall within the one category. Capturing the underlying complexity and variation of attachment requires a more dimensional approach to measurement. Dimensional models permit differentiation among individuals with the same attachment style on the basis of extremity or severity. Dimensional measurement takes into account that many individuals do not have pure and simple attachment patterns and that the boundaries between attachment patterns are not always distinct or rigid (Bartholomew, Kwong and Hart, 2001). Similarly categorical

measurement of personality disorder has been developed to facilitate communication and treatment decisions in clinical settings. The fourth edition of the Diagnostic and Statistical manual (DSM-IV; American Psychiatric Association, 1994) describes ten specific personality disorders. Each personality disorder is described by a set of symptoms or traits, with considerable overlap between categories. This excessive co-morbidity has led many to call for a more dimensional approach to personality disorder measurement. Notwithstanding these issues this thesis is particularly interested in the development of Borderline and Anti Social Personality Disorders and will therefore focus on these two personality disorders to the exclusion of others. Of all the various personality disorders Borderline Personality Disorder has received the most attention from attachment theorists (Bartholomew, Kwong and Hart, 2001). Bartholomew et al. (2001) suggest this is unsurprising given the defining features of this disorder as a pattern of unstable and intense interpersonal relationships and frantic efforts to avoid real or imagined abandonment. They suggest the affective instability characteristic of the individual indicating a failure to regulate attachment anxiety, with proneness to anger and recurrent suicidal threats and gestures reflect the desperation underlying the individual's attempts to have their attachment needs met (Bartholomew et al. 2001). Most commonly theorists have proposed a link between dismissing attachment and externalising disorders such as Antisocial Personality Disorder (Rosenstein and Horowitz, 1996).

2.1.19 Attachment and Borderline Personality Disorder (BPD)

Borderline personality disorder has received considerable attention from attachment theorists and researchers. Two key features of borderline personality pathology are a pattern of unstable and intense interpersonal relationships and frantic efforts to avoid real or imagined abandonment. The affective instability component shows a failure to regulate attachment anxiety appropriately,

with proneness to extreme anger and recurrent suicidal threats and gestures reflective of the desperation underlying the borderline personality disordered individual's attempts to have their attachment needs met. For example, Barone (2003) assessed the internal working models of 40 diagnosed borderline personality disorder (BPD) participants and 40 non clinical participants using the Adult Attachment Interview (AAI). Results showed a specific distribution of attachment patterns in the clinical sample: free/autonomous represented only 7%, dismissing classifications reached 20%, entangled/preoccupied 23%, and unresolved with traumatic experiences 50%. The findings showed support for the hypothesis that some developmental relational experiences seem to constitute pivotal risk factors underlying BPD.

The findings of Choi-Kain, et al. (2009) further lend support to a relationship between attachment style and the development of BPD. These authors compared diagnosed BPD individuals, with depressed and non borderline comparison groups on attachment ratings and their relationship to interpersonal disturbance. Bartholomew's Relationship Questionnaire (RQ) was used as a self report attachment style measure. BPD participants reported higher scores on both preoccupied and fearful attachment styles than both the depressed and non BPD comparison groups. A mixed model of preoccupied and fearful attachment was more prevalent in the BPD group and was associated with between three and twenty times greater risk for diagnosis of BPD. A combination of preoccupied and fearful self reported attachment styles was more specific to BPD than either style alone or attachment insecurity in general. Scores on preoccupied and fearful attachment styles were correlated with interpersonal disturbance in the BPD participants. A number of authors have found that both preoccupied and fearful attachment (based on self report measure) was associated with BPD and overall that fearful showed the highest levels of personality pathology (Brennan and Shaver, 1998; Dutton, Saunders, Starzomski, and Bartholomew, 1994). When assessing attachment in a sample of patients with BPD and using a number of different

self report measures, Sack, Sperling, Fagan and Foelsh (1996) found elevations on three insecure attachment styles defined in terms of dependency and anger (avoidant, hostile, and ambivalent) on avoidant attachment (fearful) based on Hazan and Shavers three category measure, and on continuous measures of various aspects of insecure attachment, including fear of loss, compulsive care seeking, and angry withdrawal. These authors suggest that attachment anxiety is a defining feature of BPD. They also suggest that individuals experiencing symptoms of BPD may show high approach behaviours (e.g. seeking care, or clinginess) and avoidant behaviours (angry withdrawal, devaluation of relationship partners) (Sack et al. 1996).

2.1.20 Attachment and Antisocial Personality Disorder (APD)

To find a relationship between attachment and APD may not be surprising. Childhood insecurity and parental maltreatment may affect the development of appropriate socialisation strategies, heightening the child's risk or susceptibility to more negative social influences outside the family (Bartholomew, Kwong and Hart, 2001). Researchers have proposed a link between dismissing attachment and externalising disorders such as APD. For example Rosenstein, and Horowitz (1996) found a strong link between conduct disorder and antisocial disorder in a group of psychiatrically hospitalised adolescents. In contrast, other studies have failed to confirm such a specific relationship. When examining attachment organisation (based on the AAI) and criminal behaviour in a sample of young adults Allen, Hauser and Borman-Spurrell (1996) found criminal behaviour to be associated with a lack of resolution of trauma and dismissing attachment orientation, though participants in the cannot classify category showed the highest rates of criminal behaviour. In contrast van IJzendoorn and Bakermans-Kranenburg (1996) did not find any predictable associations between AAI classifications and personality disorders in a group of mentally disturbed criminal offenders. This group showed the full range of insecure attachment

patterns (inclusive of unresolved and cannot classify categories), with the dismissing individuals least likely to be diagnosed with a personality disorder.

The heterogeneity of attachment orientation associated with APD found by Hart, Dutton and Newlove, (1993) when examining a sample of men in treatment for domestic violence found that the majority of men were diagnosed with both antisocial and also one or more personality disorders. Other than lack of security, there was little consistency in the attachment patterns observed. From their findings the authors suggest that there are multiple pathways to the development of APD. The small group of men whose personality appeared limited to antisocial characteristics (sadistic) were most likely to be predominantly dismissing. At interview, this subgroup was noted, to varying degrees, as lacking empathy with others and likely to objectify others. Each of these can be considered characteristics that would make it less unacceptable to be hurtful to others. They were also noted as distrustful, tending to make negative attributions of others' intentions and behaviours, thereby fuelling their own hostility through cognitive interpretation. These links may be relevant however it does not explain why the vast majority of individuals who have a dismissing attachment style are not antisocial. Therefore other factors must also be taken into account such as genetic predisposition and socialisation issues which may be necessary for placing these men on a pathway toward antisocial tendencies. Many antisocial men also exhibit high levels of attachment anxiety which may drive their antisocial behaviour in so far as they may have developed a hypersensitivity to rejection accompanied by an active aggressive style of behaviour from poor socialisation and parental responsiveness in childhood (Bartholomew, Kwong and Hart, 2001). A relationship would appear to exist between dismissing attachment style and the development of Antisocial Personality Disorder however as not every individual with a dismissing attachment style develops this personality disorder it may be assumed that a developmental pathway encompassing a variety of factors must exist which

leads to the development of a dismissing attachment style and also the more extreme interpersonal characteristics attributed to Antisocial personality Disorder.

2.1.21 Attachment and Sexual Offending Behaviour

When writing about juvenile sex offenders Ryan (1999) reports that when physical violence, sexual abuse and parental neglect are included as maltreatment factors "almost the whole population of juvenile sex offenders can be seen to have experienced some form of maltreatment" (p134). Pithers, Gray, Busconi and Houchens (1998) suggest that an important link to the development of adolescent offending in general may in part, be due to the insecure and damaged attachment that develops between children and parents as a result of neglect and maltreatment. Consistently the research literature cites childhood sexual, physical and emotional abuse and family dysfunction as developmental risk factors for offending behaviour later in life (Bailey, 2000; Lee, Jackson, Pattison and Ward, 2002).

Theories of intimacy deficits have been muted as a contributory factor to sexual offending behaviour in adult males (Marshall, 1989). Marshall noted that adult intimacy is a function of the attachment bond between two individuals and involves three relationship states: closeness and interdependence of partners, mutual self disclosure, and warmth and affection for one another (Perlman and Fehr, 1987). Marshall observed that the development of intimacy is shaped by parental influences and early attachment relationships. Consistent with the attachment literature Marshall and colleagues suggest that poor quality of parent-child attachments may lead to low self confidence, poor social skills, little understanding of relationship issues and a lack of empathy (Garlick, Marshall and Thornton, 1996). Such social competence problems provide difficulty in initiating relationships with appropriate others, therefore individuals are effectively

isolated and withdrawn (Ward, Polaschek and Beech, 2006). Marshall and colleagues suggest that such difficulties in social competence may lead individuals to engage in sexual fantasies that incorporate issues of power and control around sex and which may become more deviant over time. The ability to take and accept the perspective of another person as relevant to a situation is labelled 'theory of mind' or 'mindblindness' (Baron-Cohen, 1997). Although a lack of 'theory of mind' is often related to the diagnosis of Autistic Spectrum Disorder, a few individuals with ID may show difficulty in perspective taking to varying degrees and therefore some could be considered as lacking to a degree in 'theory of mind', a factor which may also affect the individual's ability to empathise with others.

Empirical support for Marshall's theory has come from research on offenders' early experiences and studies that have investigated their current relationships. Poor childhood attachment has been noted widely in sexual offenders' histories (Becker, 1998; Browne and Herbert, 1997; Marshall, Serran and Cortoni, 2000). In a review of the literature Crassati, McClurg and Browne, (2002) found that family backgrounds of sex offenders are typified by neglect, violence and disruption, with parents of adolescent sex offenders found to be rejecting, abusive or emotionally detached towards their children (Awad, Saunders and Levene, 1984). Support for these findings was provided by Craissati, McClurg, and Browne (2002) who concluded that an affectionless control style of parenting was reported as being highly prevalent in the parents of sex offenders. Whilst insecure attachment style could not be considered as the only contributory factor to sexual offending behaviour it can be considered as a developmental risk factor whilst secure attachment could be considered as a protective factor (Rich, 2006).

When determining the criminogenic needs of sexual offenders, deviant sexual arousal, intimacy deficits and loneliness, and problems with emotional regulation (Hanson and Harris, 2000) are

relevant issues. Identification of non criminogenic need which may also be of clinical interest in the treatment of sexual offending behaviour reveals factors such as low self esteem, depression or unresolved grief (Andrews and Bonta, 1998). The relationship between attachment, the development of psychopathology or offending behaviour leads to a complex set of inter related issues, however, the identification of attachment insecurity to psychopathology and the development of offending behaviour is of pertinent interest to this thesis.

2.1.22 Attachment in Adults with ID

There is a dearth of literature regarding attachment within populations with ID. It could be suggested that this is an omission given the increased prevalence of mental health and emotional disorders and the institutionalisation of this population. Whether there exists a relationship between attachment orientation and offending behaviour in offenders with ID is still to be explored. Thus the relevance of attachment orientation to mental health issues and the development of offending behaviour in this population is as yet unknown.

There have been some attempts to allude to the issues of parental relationships and attachment as a trigger for challenging behaviour in people with ID. For example when evaluating the underlying triggers to challenging behaviour in a group of forty three school leavers with severe LD, Cleg and Sheard (2002) evaluated whether individuals had an over investment in one or a few relationships which resulted in jealousy. Their findings suggest that 34% of students with severe ID were found to over-invest in one or a few relationships which become a source of jealousy, jealousies were found to be relationship specific, and proximity to the caregiver was important. Students without such problems were significantly less likely to show challenging behaviours. This evaluation was carried out from the answers of parents/carers to one question

within a survey form of twenty-four questions asking about behaviour over the previous three months. Care should be taken when making such evaluation from a single entity and it may be a rather broad assertion to suggest that the answers to this one question can be spuriously extrapolated as a relationship between challenging behaviour and attachment separation protest. However this study does highlight the possible relevance of an attachment perspective to evaluate observed behaviour in people with ID. Due to the dearth of literature investigating attachment in people with ID there remains a specific need for the development of measures of attachment and parental bonding which can be utilised with this population. Such measures should encapsulate self report, interview and observational methods which can be used with individuals with lower levels of intellectual functioning.

2.1.23 Summary

In summary, there is evidence for both continuity and discontinuity of attachment patterns from childhood through adolescence and into adulthood. Discontinuity would appear to relate to the experience of a constellation of negative life events rather than an isolated incident and more often involves a change of attachment pattern from secure to insecure attachment orientation.

Within the three category model of attachment no gender differences were evident, however the four category model with the additional 'dismissing' attachment style may be more sensitive. Gender differences have been found when using the four category model within the avoidant category of attachment orientation. Insecurely attached males tend to be more dismissing than fearful in attachment styles. Gender differences within continuous measurement of the four attachment styles are partially supportive of these findings in so far as males obtain higher mean ratings of dismissing attachment, whereas females obtain higher mean ratings of preoccupied attachment.

Perceived parenting is also relative to attachment orientation with the perception of low levels of care and high levels of protection as measured by the Parental Bonding Instrument (PBI) (Parker, Tupling and Brown (1979) being related to continuing anxiety at long term follow up of treatment. Within interview based assessment of attachment a retrospective measure of perceived parenting is taken as part of the assessment model. This is not the case in self report measurement which is in the authors opinion an omission. Retrospective perceived parenting should also be a part of holistic assessment self report measure of attachment in adulthood to provide a comparison measure for the determination of reliability.

Appropriate and adaptive emotional regulation is affected by insecurity of attachment style. Anxious attached individuals are noted as experiencing hypervigilance with respect to slights, and threats and have a tendency to intensify their negative reactions to perceived threat. In contrast within avoidant attachment individuals tend to downplay threats and vulnerabilities, deny negative emotions, and suppress or repress negative memories. Secure attachment style in adulthood would appear to relate to social competence and self confidence with a flexible approach to solving interpersonal problems. Insecure attachment styles in adulthood incorporate a number of more incompetent social strategies within interpersonal relationships although it has to be noted that the dismissing attachment style appears to be adaptive in function in so far as it acts as a protective strategy to the experience of distress and attachment system activation. Equally it is a maladaptive strategy within close relationships as it is conceptualised by a deactivation of attachment systems which at an extreme may result in the avoidance of close relationships completely. The preoccupied attachment strategy is the most demanding of the attachment prototypes and will often make such high unrealistic demands for support which cannot be met, resulting in a reinforcement of expectations of the inconsistency of the

responsiveness of the attachment figure. In general individuals with an avoidant attachment style are characterised by emotional detachment, lack of empathy, hostile anti social behaviour and are prone to explaining events in a more negative way (Collins, 1996). Childhood experiences of sex offenders are typified by issues of rejection and maltreatment with affectionless control being the typical parenting style. Intimacy deficits may have developed within insecure or disorganised attachment styles which are based within internal working models developed from parent-child interactions in the early years. Social competencies may be lacking for the formation of appropriate relationship bonds which in turn may lead to loneliness and issues of low self esteem. Attachment style per se cannot explain sexual offending behaviour in its entirety, but may be considered a developmental risk factor.

There is a dearth of literature regarding attachment in people with ID. Cleg and Sheard (2002) allude to the measurement of attachment in people with ID, through the response of parents to one question within a battery, and also observations of challenging behaviour. It could be argued that the relationship between challenging behaviour and attachment separation is a spurious one. The functions of challenging behaviour may be many, and other reasons for such behaviour would need to be ruled out before any cause and effect relationship could be suggested with regard to the challenging behaviour and attachment issues. There is a particular lack of utilising empirical measurement of attachment in people with intellectual disability.

2.1.24 Conclusion

There is a considerable body of evidence regarding attachment patterns in adulthood and their manifestation within cognitive, affective and behavioural presentations when experiencing subjective distress. Attachment is not an all or nothing concept, and individual profiles may vary considerably within an attachment category. Continuous measurement of attachment prototypes may capture the variance within and between categories. Equally attachment is a complex association of cognitive, affective and behavioural mechanisms within the attachment system. Secure attachment emanates in social competence and a self assured individual, whilst insecure attachment orientations clearly lead to maladaptive emotional regulation strategies, and poor coping strategies based on less than optimal expectations of responsivity and supportiveness from primary attachment figures. Contextually measures have focussed on differing attachment relationships and have measured both reciprocal relationships in romantic relationships and singular egocentric relationships in retrospective childhood attachment. Overall this would appear to be a measurement of a single construct however reciprocity and individuals working as active attachment figures for one another within romantic relationships may introduce additional dynamics into attachment measurement. Furthermore affect regulation within reciprocal romantic relationships may differ from that experienced within the balance of power in parent-child relationships. For example in childhood qualitatively good parental responsivity and supportiveness is reasonably stable unless there is an impact of additive significant negative life events. However romantic attachment may differ from parental attachment in so far as this attachment relationship may be subject to change according to life events or in the case of either attachment figure through relationship breakdown. Whilst romantic attachment may reach stability with the best fitting partner, it is certainly more likely that romantic relationships will come and go more often than parental ones.

The theory of intimacy deficit has been found relevant to the relationship between insecure attachment style and sexual offending behaviour, with affectionless control being the typical parenting style. These issues affect the development of social competence found within the secure attachment orientation which in turn provides difficulties in adult romantic and sexual relationships. This thesis will explore attachment orientation and also perceived parenting in offenders with ID. Perceived parenting will be evaluated through empirical measurement using the Parental Bonding Instrument (PBI) which will allow exploration of the typical parenting style inclusive of the category of 'affectionless control' in offenders with ID and provide a comparative reliability measurement to that of attachment orientation. It would be hypothesised that perceived parenting style will vary as a function of attachment security/insecurity.

Chapter 3: Empirical Measurement of Attachment Style

3.0 Introduction

There is considerable diversity in the measurement of adult attachment. In contrast to the underpinning of Bowlby's attachment theory with the formation of mental representations in the form of 'internal working models' or schemas, which become applicable within close relationships, adult attachment has within the early years of measurement (Hazan and Shaver, 1987), generally been construed as a categorical concept, i.e. individuals have been placed into a category of attachment style. This has placed difficulties on accuracy of measurement as it has not allowed for individual differences or variation of those who fall within a category. Additionally, self report scales have tended to use likert scale measurement. This chapter will identify the difficulties of using Likert scale measurement and will describe an alternative form of measurement which may also assist in reducing measurement error. Due to the difficulties of categorical ratings, some researchers further developed self report scales to attempt to capture more dimensional aspects of adult attachment. This has resulted in identification of two different dimensions being identified as underpinning attachment in adulthood, however it has also resulted in dispute between researchers as to which dimension is most applicable. This chapter will discuss the issues of measurement diversity. It will outline the development of measurement in adult attachment and discuss the issues of forms of measurement e.g. categorical or continuous scores and also prototypes or dimensional. It will provide examples of self report scales and interview based assessment and will discuss the target groups of measurement such as romantic attachment, peer attachment and retrospective parental attachment. Current attachment measures and target measurement groups with regard to utility of measurement with people with mild intellectual disability will be evaluated.

3.1.1 The Development of Empirical Measurement

Empirical measurement of individual differences in attachment commenced with Ainsworth's (1967) book, compiled from her observations on infant-mother dyads in Uganda. Her studies consisted of behavioural observations of 28 infant-mother dyads within their own homes. Until this time Bowlby's work on attachment had resulted in theory, however as identified before this needed to be empirically tested. On her return to Baltimore Ainsworth continued her research and from this developed the first empirical measurement of attachment known as the 'Strange Situation' (Ainsworth, Blehar, Waters and Wall, 1978) assessment of infant attachment. This empirical measurement has been explained in detail in chapter 2 and therefore will not be detailed here except to say that classification of infant's attachment style using the Strange Situation task suggested three infant attachment categories which could be arranged in two dimensional space. The two dimensional space being Avoidance (self-reliance, emotional suppression, and discomfort with closeness and dependency) and Anxiety (crying, failing to explore confidently in the absence of the mother, and angry protest directed at the mother during reunions after what the infant most likely experienced as abandonment),

In 1987, Hazan and Shaver were one of the first researchers to investigate adult attachment patterns through the development of self-report measures. These authors argued that romantic love is an adult form of attachment similar to infant attachment to parents. They therefore commenced their study of adult attachment utilising the three category typological measure found in Ainsworth's studies and attempted to apply this model to 'romantic attachment' in adulthood.

3.1.2 The Development of Adult Attachment Prototypes (Hazan and Shaver, 1987)

Based on an extrapolation of the three infant attachment patterns found in studies conducted by Ainsworth et al., (1978), Hazan and Shaver (1987, 1990) developed brief, multisentence descriptions of each of the three proposed attachment types ó avoidant, secure and anxious. Respondents were asked to recall their history of romantic relationships, and say which of the three descriptions best captured how they generally experienced and acted in romantic relationships. In their initial studies Hazan and Shaver (1987, 1990) found that people self reported romantic attachment patterns related to a number of theoretically relevant variables, including beliefs about love and relationships, recollections of early experiences with parents, and experiences in work contexts.

3.1.3 Categorical Measurement

Many subsequent researchers adopted Hazan and Shavers categorical, forced choice measure because of its brevity, face validity, and ease of administration (Mikulincer and Shaver, 2007). Nevertheless, some authors recognised the limitations of reliance on categorical measurement (e.g. Collins and Read, 1990; Levy and Davis, 1998; Mikulincer, Florian and Tolmacz, 1990; Simpson, 1990). For example, Baldwin and Fehr (1995) found the test re-test stability of the categorical measures was only 70% (equivalent to a Pearsons r of .40) and did not decrease as a function of the test re-test interval. A number of authors have since concluded that the instability in adult attachment patterns is due to measurement error resulting from classification into categories rather than a change in true attachment security over time (Fraley and Waller, 1998; Scharfe and Bartholomew, 1994).

Additionally, Bowlby's writings (Bowlby, 1973-1982) have alluded to individuals attachment as a complex patterns of social interaction, emotional regulation, and cognitive processing that develop within the course of childhood close relationships which are self perpetuating in adulthood (Bartholomew et al., 2001). It is argued that empirical measurement of the concept of attachment concentrating on categorical or typological classifications cannot fully capture the more complex individual differences and variations of individual attachment formation and experience alluded to by Bowlby. (Brennan, Clark and Shaver, 1998).

3.1.4 Categorical Versus Continuous Ratings

Much of the literature describes a categorical approach to the measurement of adult attachment; however Fraley and Waller (1998) suggest that a dimensional approach examining attachment *-anxiety* and attachment *-avoidance* (or comfort with closeness) may be sufficient when describing individual differences in adult attachment. These authors have questioned the meaningfulness of the categorical approach, showing that, at least one self report measure of attachment (the Relationship Questionnaire), referred to as the RQ in this thesis, suggests that variations in adult attachment can be accounted for by a latent dimensional model.

Capturing variance and diversity within attachment styles is important within empirical measurement. Fraley and Waller (1998) first addressed this issue in their taxometric research and suggested that many difficulties arise when categorical models are used to assess what may be considered dimensional phenomena. Their analyses suggest that many published and theory confirming findings based on self report attachment measures would have been stronger if dimensional rather than categorical measurement had been used.

To address these issues, attachment researchers further developed scales which could be used as continuous rating scales. For example, Levy and Davis (1988) asked participants to rate Hazan and Shavers scale (as developed in 1987) as to how well each attachment pattern described their general experience of romantic relationships. Test re-test reliability estimates for the three choices were around .60 over intervals ranging from 1 to 8 weeks (Baldwin and Fehr, 1995; Feeney and Noller, 1996). Subsequently, other researchers decomposed Hazan and Shavers (1987) three prototype descriptions to form separate items that could be individually rated on Likert scales (e.g. Bartholomew and Horowitz 1991, Collins and Read, 1990; Feeney and Noller, 1990; Mikulincer et al., 1990; Simpson, 1990).

3.1.5 Dimensional Measurement

Research progressed and scales were developed to make use of continuous ratings of individual attachment patterns rather than simply categorical measurement. To further develop empirical measurement Bartholomew continued to look at the dimensions elucidated by previous research and from this proposed that the anxiety dimension be conceptualised as a 'model of self' (positive vs. negative) and the avoidance dimension be conceptualised as a 'model of others' (positive vs. negative). She also suggested that combinations of the two dimensions can be viewed as defining four rather than three attachment patterns in two dimensional space. Thus Bartholomew (1990) and Bartholomew and Horowitz (1991) formulated a four-category model (Please see Figure 2.1.0)

Brennan and Shaver (1998) further investigated the underlying dimensions of self report scales of attachment by conducting a large-sample factor-analytic study in which all known self-report measures were included in a single analysis. These authors found twelve specific-construct factors which, when factored, formed what they described as two more global factors which

were the familiar dimensions of 'anxiety' and 'avoidance'. These two dimensions are conceptually similar to those reported by Ainsworth et al. (1978) in her infant studies.

3.1.6 The Four Category Model. (Bartholomew and Horowitz, 1991; Griffin and Bartholomew, 1994).

Bartholomew and Horowitz (1991) further divided the third category of the tripartite model, 'avoidant' attachment, into two distinct and separate categories known as 'Fearful avoidant' and 'Dismissing avoidant' adult attachment styles. Both are characterised by high avoidance of others, however the 'Fearful' category delineates an adult with high anxiety in opposition to the 'Dismissive' category, which delineates an adult with low anxiety.

Conceptualised by a person's abstract image of the 'self' and 'others' as positive or negative (Bartholomew and Horowitz, 1991; Griffin and Bartholomew, 1994), the four-category model is evidential of the underpinning of the construct of adult attachment by a two-dimensional 'self/other' framework (Griffin and Bartholomew, 1994; Shaver and Hazen, 1993). The positivity of the 'self' image indicates the degree to which individuals have internalised their own self worth and therefore expect a positive response from others. Griffin and Bartholomew (1994) highlight the self-model as associated with the degree of anxiety and dependency experienced in close relationships. The 'positivity of the other' model is associated with the degree that others are expected to be supportive and available and is associated with the tendency to seek out or avoid closeness in relationships. Overall the four category model accounts for the dimensions of 'anxiety' and 'avoidance' consistently identified as underpinning factors to attachment orientation. This model adds to the research through its additional dimensional focus

of a model of self and a model of others which sits more comfortably in line with Bowlby's theory of internal working models relative to attachment orientation.

3.1.7 Empirical Measurement of the Four Category Model

This conceptual measurement was considered as more in line with Bowlby's original theory of attachment, (Bartholomew, 1990; Bartholomew and Horowitz, 1991; Griffin and Bartholomew, 1994). Based on Hazan and Shavers (1987) scale, the Relationship Questionnaire (RQ) was designed to obtain *continuous* ratings of each of the four attachment patterns delineated with Bartholomew's model (see Figure 1). The RQ purported to measure adult attachment as internal working models based on (model of self, model of others; anxiety, avoidance) in two dimensional space. The scale is a single item measure made up of four short paragraphs, each describing a prototypical attachment pattern as it applies in close adult peer relationships. Participants are asked to rate their degree of correspondence to each prototype on a 7-point Likert scale. Using continuous ratings, an individual might rate him or herself something like: Secure 6, Fearful 2, Preoccupied 1, and Dismissing 4. These ratings (or "scores") provide a *profile* of an individual's attachment feelings and behaviour. However, if necessary, the RQ can also be used to categorise participants into their best fitting attachment pattern although this is not the recommended use of the RQ measurement (Griffin and Bartholomew, 1994). Fraley and Waller (1998) have further examined continuous versus dimensional results using the RQ and discuss the issue of conceptual measurement in some detail. These authors conclude that it is better to use the two dimensional ratings of a model of self and a model of others available from the scale rather than the continuous rating measurement.

Despite the development of Bartholomew's dimensional model there remains controversy amongst researchers as to which dimensions best encapsulate adult attachment style. For example, whilst Bartholomew (Bartholomew, 1990; Bartholomew and Horowitz, 1991) conceptualised the dimensions in terms of belief (internal working models) that people hold about themselves and close others alongside dimensions of attachment anxiety and avoidance, Hazan and Shaver (1987) conceptualised the dimensions in terms of self reports of attachment system functioning in close relationships which concentrates on the dimensions of anxiety and avoidance and the resultant attachment behavioural responses.

According to Hazan and Shaver's (1987) model, self report measures of attachment dimensions assess the tendency to hyperactivate and/or deactivate the attachment system when the availability (either physical or symbolic) of a supportive attachment figure is in question. Mikulincer and Shaver (2007) suggest that people, who score high on attachment anxiety, tend to increase their sense of vulnerability, their expressions of need, or their anger at unresponsive relationship partners. These authors also suggest that people who score high on the attachment avoidance dimension tend to decrease their sense of vulnerability, suppress any tendency to express need, and make an effort to go it alone. Main and Solomon, (1990) suggest that people who score high on both dimensions may waiver between the two strategies, continue to feel vulnerable while withdrawing behaviourally, or become disorganised and disoriented.

Brennan, Shaver, and Tobey (1991) conducted a comparison between Bartholomew's (1990) four-category typology of adult attachment styles and Hazan and Shaver's (1987) three-category typology on three substantive issues. Results suggest that the same two dimensions underlie both typologies, and the Bartholomew and Hazan and Shaver measures showed good association of results. Additionally there were no gender differences on Hazan and Shaver's measure, in line

with previous studies, but there were gender differences on Bartholomew's measure, especially in the two avoidant categories. More males than females were dismissing avoidant while more females than males were fearful avoidant.

3.1.8 Response Measurement: Capturing Variance

One further critique of empirical measurement of attachment constructs is the use of ranking response sets using Likert scale measurement. Likert scales are widely used in the social sciences to gather data relative to attitudes, emotions, opinions or personalities and the majority of the self report scales measuring attachment orientation use a Likert measurement scale. McIver and Carmines (1981) describe the Likert scale as:

“A set of items, composed of approximately an equal number of favourable and unfavourable statements concerning the attitude object, is given to a group of subjects. They are asked to respond to each statement in terms of their own degree of agreement or disagreement. Typically, they are instructed to select one of five responses: strongly agree, agree, undecided, disagree, or strongly disagree. The specific responses to the items are combined so that individuals with the most favourable attitudes will have the highest scores while individuals with the least favourable (or unfavourable) attitudes will have the lowest scores”. (pp. 22-23)

A number of authors highlight the difficulties of using Likert scale measurement and discuss a preference for the use of multi item summated measures to measure psychological constructs rather than scales using single item Likert scale responses (Nunnally and Bernstein, 1994; McIver and Carmines, 1981; Spector, 1992). Within these discussions these authors identify the following issues: Firstly, individual items have substantial random measurement error, i.e. are unreliable. Nunnally and Bernstein (1994) report that, “Measurement error averages out when individual scores are summed to obtain a total score” (p. 67). Secondly, they lack precision. Nunnally and Bernstein (1994) highlight that an individual item can only categorise people into a

relatively small number of groups and cannot discriminate among the finer degrees of an attribute. Thirdly, individual items lack scope. McIver and Carmines (1981) suggest that it is unlikely that a single item (or paragraph) can fully represent a complex theoretical concept or any specific attribute. These authors also suggest that a fundamental problem with single item measures is that they tend to be less valid, less accurate, and less reliable than their multi-item summated equivalents.

3.1.9 Summative Ratings

Using summative ratings, a number of items can be used collectively to measure one construct. Alternatively a number of items can collectively measure a dimension of a construct and a collection of dimensions will measure the full construct. Spector (1992) identified four characteristics that make a scale a summated rating scale: firstly, a scale must contain multiple items. The use of 'summated' in the name implies that multiple items will be combined or summed. Secondly, each individual item must measure something that has an underlying, quantitative measurement continuum. In other words, it measures a property of something that can vary quantitatively rather than qualitatively. An attitude, for example, can vary from being very favourable to being very unfavourable. Thirdly, each item has no correct answer, which makes the summated rating scale different from a multiple-choice test. Thus summated rating scales cannot be used to test for knowledge or ability. Fourthly, each item in a scale is a statement, and respondents are asked to give rating about each statement. This involves asking participants to indicate which of several response choices best reflects their response to the item.

3.1.10 Summative Likert Scales

McIver and Carmines, (1981) suggest it is possible to combine Likert scale measurement and summative ratings into one uniform measurement. However these authors report five rules regarding the use of this procedure. Firstly scales must contain multiple items. Secondly, each individual item must measure something that has an underlying, quantitative measurement continuum. Thirdly, there can be no right/wrong answers as opposed to multiple-choice questions. Fourthly, items must be statements to which the respondent assigns a rating. Fifthly scales cannot be used to measure knowledge or ability, rather they should be used to measure familiarity of a concept.

3.1.11 Measurement Using Self Report Scales

Hazan and Shaver (1987) first looked to romantic relationships as a source of attachment orientation in adulthood. Subsequent research has mainly focussed on either 'romantic' or and/or 'peer' attachment, although some work has also been carried out examining retrospective attachment style to parents. There are a number of self report attachment measures; it is out-with the scope of this study to provide evaluation for each measure however a sample has been outlined to provide insight into the scales, their development and their psychometric properties.

3.1.12 Romantic Attachment

The following self report questionnaires are acknowledged as a measure of adult romantic attachment.

Adult Attachment Questionnaire (AAQ). (Simpson, 1990; Simpson, Rholes and Philips, 1996).

This measure consists of three descriptions of attitudes towards romantic attachments. The descriptions (without the titles) are presented to the respondent and they are asked to select the one that they consider to be most typical of themselves. Participants are asked to rate on a seven point Likert scale the extent to which each item is descriptive of the way they feel in romantic relationships in general (not with a specific partner). Factor analyses confirmed that the AAQ items load on two independent factors, attachment anxiety and attachment avoidance. (e.g. Brennan, Clark, and Shaver, 1998; Simpson, 1990). Simpson et al., (1996) calculated alpha reliability separately for males and females and obtained values of .70 and .74 for avoidance and .72 and .76 for attachment anxiety.

Adult Attachment Scale (AAS) (Collins and Read, 1990)

The AAS was based on a decomposition of Hazan and Shavers (1987, 1990) prototypical descriptions to create separate items. These researchers also added additional items concerning (1) beliefs about whether a partner (viewed as an attachment figure) is available and responsive when needed and (2) how the individual reacts to separations from their partner. This resulted in an 18 item adult Attachment Scale (AAS). Collins (1996) later revised the 18 items to increase the internal consistency of its subscales. Participants are asked to rate on a five point Likert scale the extent to which each item is characteristic of them. Factor analyses revealed a three factor solution which they labelled (discomfort with closeness, discomfort with depending on others, and anxious concern about being abandoned or unloved). The original version of the AAS yielded adequate alpha coefficients ranging from .69 - .75. the revision made by Collins (1996) improved the internal consistency of the scale. The revised AAS yielded alpha coefficients ranging from .78 - .85.

3.1.13 Peer Attachment

The following self report questionnaires are acknowledged as measures of attachment to peers.

Attachment Style Questionnaire (ASQ) (Feeney, Noller and Hanrahan, 1994)

After noting the deficiencies in Hazan and Shavers (1987) questionnaire the researchers attempted to build a new measure from revisiting Bowlby's and Ainsworth's writings. They also placed less emphasis on romantic connotations within the wording of their items. This made the ASQ more suitable for adolescents who had not had much experience in romantic relationships (Mikulincer and Shaver, 2007). From an initial pool of 65 items a final scale was developed through the use of structural analysis, which consisted of 40 items. Factor analysis revealed five factors, lack of confidence (in self and others); discomfort with closeness; need for approval and confirmation by others; preoccupation with relationships; and viewing relationships as secondary (to various achievements in other domains, such as school or career). Feeney et al. (1994) reported alpha coefficients for the five scales ranging from .76 - .84 in a large sample of undergraduates. Mikulincer and Shaver, (2007) suggest that the factors of 'discomfort with closeness' and 'viewing relationships as secondary' identified within this scale, are related conceptually to the dimension of avoidant attachment. The authors also suggest that 'preoccupation with relationships' and 'need for approval and confirmation by others' are conceptually related to the dimension of anxious attachment.

3.1.14 Flexible Measures

The Relationship Questionnaire (RQ) (Bartholomew and Horowitz, 1991)

Bartholomew and Horowitz advise that the RQ can either be worded in terms of general orientations to close relationships, orientations to romantic relationships, or orientations to a specific relationship (or some combination of the above). The authors also allude to the versatility of this scale, in that it can be reworded in the third person and used to rate 'others' attachment patterns. Although the RQ can be used categorically the authors recommend using a continuous approach, using prototypes or dimensions. The inter-rater reliability estimates for the RQ classifications show kappas of around .35 (which according to Landis and Koch (1977) indicates a 'fair level of agreement) and ratings of test retest r s around .50. This is in line with Hazan and Shaver's three category classifications (Scharfe and Bartholomew, 1994). When examining the association between attachment and personality traits, the self-model dimension of the RQ was highly correlated with neuroticism, and moderately with extroversion, openness to experience, and agreeableness; the other-model dimension correlated with extroversion and openness (Griffin and Bartholomew, 1994). These authors suggest that the RQ added significantly (above the Big Five personality trait scales) to the prediction of assertion of autonomy and emotional reliance on others. With regard to psychopathology Alexander (1993) found the distribution of classifications in female victims of incestuous sexual abuse was significantly different from a normative sample, with 58% describing themselves as 'fearful' and 13% as 'secure'. Findings also suggest that post-traumatic symptoms of depression, distress and intrusive thoughts were related to abuse characteristics (predominantly age of onset), but not attachment status. Psychological numbing/denial were associated with attachment status (secure subjects scored lowest). Personality disorders assessed were associated with attachment status, but not abuse characteristics (Crowell and Treboux, 1995). A fearful attachment style was more

common in men referred for treatment after assaulting their wives than a comparison group, and this style (and to a lesser extent, the preoccupied style) was related to wives' reports of verbal abuse, and self-reports of borderline personality organization, anger, jealousy, and trauma symptoms (Dutton, Saunders, Starzomski, and Bartholomew, 1994).

3.1.15 An Integrative Combination of Measurement

The Relationship Scales Questionnaire (RSQ) (Griffin and Bartholomew, 1994a)

Still depicting the four category model within two dimensional space Griffin and Bartholomew (1994a) developed the Relationship Scales Questionnaire (RSQ). The RSQ contains 30 short statements drawn from Hazan and Shaver's (1987) attachment measure, Bartholomew and Horowitz's (1991) Relationship Questionnaire, and Collins and Read's (1990) Adult Attachment Scale. On a 5-point scale, participants rate the extent to which each statement best describes their characteristic style in close relationships. Five statements contribute to the secure and dismissing attachment patterns and four statements contribute to the fearful and preoccupied attachment patterns. Scores for each attachment pattern are derived by taking the mean of the four or five items representing each attachment prototype. Consistent with the RQ the ratings on this scale can also be used to place a person in two dimensional space within which the patterns reside (model of self and model of others alongside anxiety and avoidance). Due to its length the RSQ is more reliable than the RQ, however the internal consistency coefficients are still low for the four prototype scales (Mikulincer and Shaver 2007).

3.1.16 Measuring Attachment Retrospectively to Parents

There has been some research using self report questionnaires into the retrospective measurement of attachment to parents. Mikulincer and Shaver (2007) suggest that retrospective measures may be subject to inaccuracy perhaps due to biases and inaccuracy in recall of information or of simply forgetting. However the authors acknowledge that it may be worthwhile assessing either major attachment related experiences in childhood, such as being abandoned, or current adult mental health representations of attachment experiences in childhood.

3.1.17 Parental Representations

Hazan and Shaver (1987) provided preliminary evidence concerning attachment style differences in the way adults remember and cognitively represent parents' attitudes and behaviours toward them during childhood. They analysed data from 620 people who responded to a survey in the *Rocky Mountain News* (a newspaper in Denver, Colorado) and from a college student sample of 108 students. Findings suggest that secure participants described their mothers and fathers as more respectful, responsive, caring, accepting, and undemanding and reported warmer relationships between their parents than did anxiously attached participants. The findings also alluded to the concept of avoidant defensiveness. Whereas avoidant participants in the newspaper sample described their mothers and fathers in more negative terms than did secure participants, avoidant college participants provided more positive descriptions of their parents. Hazan and Shaver interpreted this difference as indicating that avoidant college students tend to idealise their parents as a way of evading distressing memories, but that maturity, perspective and distance from parents allows older adults to acknowledge unfavourable aspects of their childhood relationships with parents. Indeed Hazan and Shaver found that the link between

avoidance and negative parental representations was stronger among older than among younger adults in their community (newspaper) sample. Since these findings, a number of studies have examined the relationship between attachment style and perceived parenting using self report measures.

Mikulincer and Shaver (2007) have carried out an extensive analysis of the findings of retrospective parental attachment. Their findings suggest that there is a consistent rating of secure attachment to parents or the endorsement of a secure style of attachment with close relationships as consistently associated with more positive representations of parents as caring, loving and accepting. They also report that with regard to insecure attachment, the ratings suggest no clear difference between anxious and avoidant attachment styles with more than two thirds of the studies examined yielding significant associations between higher anxiety or avoidance scores and more negative descriptions of parents. In contrast to these results, none of the studies evaluated by Mikulincer and Shaver (2007) allowed for the concept of defensive idealisation.

3.1.18 Attachment and the Concept of Defensive Idealisation

In their factor analytic study Brennan and Shaver (1998) found that avoidant people found their mothers and fathers as less accepting, yet at the same time defensively idealised them (e.g. saying that 'mother/father had no single fault that I can think of'). Hesse (1999) defined 'idealisation' as the discrepancy between the positivity of the traits a participant generates to describe his/her parents during the participants childhood and the positivity of remembered experiences that were meant to illustrate or justify the choice of those traits.

To further investigate the issue of defensive idealisation and the effect on retrospective reporting of parental representations, Shaver and Mikulincer (2004) asked participants to provide five traits or qualities that described their relationships with their mothers during childhood and to recall memories of experiences that exemplified those traits or qualities. Subsequently the authors asked judges to rate the positivity of the adjectives and memories independently. Shaver and Mikulincer (2004) found that attachment anxiety, but not avoidance was associated with the generation of less positive adjectives describing the childhood relationship with the mother, but both anxiety and avoidance ratings were associated with retrieval of less positive memories of this relationship. As a result, the higher the avoidance scores, the larger the discrepancy between adjective and narrative descriptions of the mother, a pattern that Hesse (1999) described as indicating avoidant adults' defensive idealisation of their childhood relationship with their mother.

3.2.0 Measures of Retrospective Attachment

Retrospective measurement of attachment style to a parent (mother) may provide a method of assessment given the lack of opportunity (when compared to the mainstream population) that the proposed cohort of offenders with ID experience relative to 'romantic' or 'peer' relationships which is the focus of many adult attachment self report scales. To evaluate the possibility of using such measures this section will provide examples of existing self report scales which measure attachment style retrospectively. Attachment research has moved forward significantly since the development of these scales. For example the dimensional four category model examining mental representations of self and other within attachment relationships has not been examined in line with retrospective measurement of parental attachment.

3.2.1 Retrospective Self Report Measures of Parental Attachment

Scales measuring the concept of retrospective attachment to parents are not as plentiful as those measuring romantic and/or peer attachment.

3.2.2 Attachment History Questionnaire (AHQ) (Pottharst and Kessler, 1982)

Developed and copyrighted by Pottharst and Kessler in 1982 and described by Pottharst (1990b) the AHQ assesses family history (including losses, parental divorce, and separation from parents), patterns of family interactions, parental discipline techniques, and friendship and social support history. Fifty-one of the items are answered on a 7 point response scale, in addition to which there are several open ended questions and checklists. Factor analysis conducted on the 51 scaled items resulted in the emergence of four factors: secure base (e.g. trusted parents, amount of love from mother), parental discipline (e.g. not allowed to leave, parents threatened to call police), threats of separation (parents threatened to leave, parents threatened to call the police) and peer affectional support (dependability of friends, having been supported by friends). Several studies highlighted in a book edited by Pottharst (1990a) *Explorations in Adult Attachment*, consistently showed that AHQ insecurity is related to negative outcomes (e.g. being the mother in a family where the father and daughter have an incestuous relationship, abusing ones children, becoming a prostitute, and having severe emotional problems following the death of a spouse).

3.2.3 Mother – Father--Peer Scale (MFP) (Epstein, 1983)

A number of researchers (Epstein, 1983; Ricks, 1985) have used an unpublished scale, the Mother-Father-Peer scale (MFP; Epstein, 1983) to assess adolescents and adults recollections of their childhood relationships with parents. The MFP includes three scales: Acceptance-Rejection (by mother, father and peers), Independence-Over protection (by mother, father and peers), and Defensive Idealisation (of mother and father). Sample items on the MFP include "when I was a child my mother could always be depended on when I really needed her help and trust" (mother acceptance), "When I was a child my mother often said she wished I had never been born" (mother rejection), and "My mother was close to a perfect parent" (defensive idealisation). According to Ricks (1985) Epstein's findings suggest that mother acceptance in childhood (as reported by adults) is more highly correlated with sense of worthiness in adulthood than with any other personality variables assessed including ego strength, neuroticism and introversion. Using the MFP scale Ricks (1985) found that mothers of secure infants (in the Strange Situation) had more positive recollections of childhood relationships with their mothers, fathers and peers than did mothers of insecure infants.

3.2.4 Adult Attachment Questionnaire (AAQ) (Hazan and Shaver, 1987)

In 1987 Hazan and Shaver developed a simple measure to assess adults' recollections of their childhood experiences with parents. They asked, "During your childhood, were you and your mother ever separated for what seemed like a long time? (If yes, for how long? What was the reason for the separation? How old were you at the time?). "Did she ever threaten to leave you or send you away? (If yes, how often?). The same questions were asked about the father. Also for each parent respondents were asked to check which of the following adjectives, if any, described

his or her attitudes, feelings or behaviour towards you: loving, demanding, caring, sympathetic, overprotective, affectionate, strict, unresponsive, disinterested, critical, respectful, understanding, rejecting, abusive, attentive, intrusive, accepting. Participants were also asked which of the following adjectives, if any, described their parents relationship: affectionate, happy, argumentative, distant, troubled, comfortable, violent, unhappy, strained, caring, supportive, good-humoured. Discriminant analysis of the adjectives revealed three prototypical attachment patterns (secure, anxious and avoidant). The best discriminators between secure and insecure attachment patterns (with correlations between adjective selection and the function) were a relationship between the parents that was affectionate (.44), caring (.32), and not happy (-.34); a mother who was respectful toward her child (.43), confident (.35), accepting (.33), responsible (.31) and not intrusive (-.42), and not demanding (-.40),; and a father who was caring (.41), loving (.40), humorous (.40), and affectionate (.30). These results fit well with attachment theory and were replicated by Feeney and Noller (1990).

3.2.5 Parental Bonding Inventory (PBI): (Parker, Tupling, and Brown, 1979)

The earliest self report measure of perceived parenting was the Parental Bonding Inventory developed in 1979 by Parker, Tupling and Brown. Parker, Tupling, and Brown, (1979) developed a simple self report questionnaire known as the Parental Bonding Instrument (PBI). The PBI is a retrospective measure of perceived parenting style as experienced pre 16 years of age. It has as its core two scales termed 'care' and 'overprotection' often described as level of 'control'. There are twenty-five item questions, twelve appertaining to 'care' items and thirteen appertaining to 'overprotection' items. It is completed by adults over sixteen years of age. Respondents complete

the measure for how they remember their parents during their first sixteen years and make a judgement of how like me each item is e.g. Very like, Moderately like, Moderately unlike, Very unlike. There are separate but identical forms for rating childhood experiences with mother and father.

The long term test retest stability of the PBI has been assessed over periods of 30, 60 and 90 months. Lizardi and Klein (2005). Additionally the authors explored whether changes in level of depressed mood of 45 outpatients with episodic major depressive disorder may affect the recollections of parental bonding when compared to 97 outpatients with primary early onset dysthymic disorder. The PBI was scored using each of the two factor PBI and three factor MOPS solution. Intraclass correlations showed stability for the two factor model and ranged from .64 to .88, with a median of .77. Findings suggest that intraclass correlations were generally higher between adjacent assessments however the decrease over increasingly longer intervals was quite small. In addition, reports of parental bonding were relatively stable despite significant changes in the level of depressed mood. Interestingly the negativity of thought processes characteristic for depressive states do not appear to bias self report of parenting experiences in childhood.

Considering the results from the MFP scale, the AHQ scale, Hazan and Shavers adjective checklist, and the PBI it could be suggested that there is a clear relationship between self report measures of childhood experiences and adult attachment insecurities.

3.2.6 Difficulties in the Use of Existing Self Report Measures of Attachment with People Who Have Mild Intellectual Disability.

To utilise existing measures of adult attachment with people who have an intellectual disability, even within the mild range, poses several difficulties which will now be discussed in detail.

3.2.7 Difficulties in Understanding:

The currently available self report assessment tools used to measure adult attachment style in the mainstream population are linguistically complex and thus may provide difficulties in understanding. Additionally, they use a number of items in each scale which may result in error of responding due to issues of limited sustained attention and concentration. They require considerable reliance on memory and subjective report of emotional experiences in childhood. Thus a limited cognitive ability, especially around the use of language, would likely result in unreliable data if mainstream questionnaires were used with this population (Clements, 2000; Badcock, 2004).

3.2.8 Measurement of Conceptual Experiences

The focus of measurement of adult attachment in the mainstream literature is within the concept of romantic attachment. People with intellectual disability have fewer opportunities to have romantic relationships, thus this may be a factor that few have experienced. This provides an obvious limitation to the measurement of adult attachment in people with mild intellectual disability. Those scales which measure retrospective adult attachment to parents require experiential recall of relationships with mother, father and peers. Again this is a conceptual experience that many people with intellectual disability may not have had. Many individuals in this cohort may have contact with one parent but few will have had childhood experiences which encompass contact with both parents.

3.2.9 Cognitive Load and Abstract Concepts

Some of the available self report measures may also have a need for the respondent to be able to hold a large amount of verbal information in memory, manipulate this information cognitively, recall experiential information and then provide information and make decisions about abstract concepts regarding emotional experiences from childhood. Each of these aspects could be considered cognitively demanding and may provide difficulty of responding for individuals with mild intellectual disabilities.

3.2.10 The Relationship Questionnaire and People with Mild Intellectual Disability (ID)

Within a population of adults with mild ID opportunities for romantic relationships and indeed the formation of friendships, appear to differ from the mainstream population. From the researcher's clinical experience, opportunities may arise for such relationships, they merely happen less often. Opportunities tend to be affected by level of independence (travelling and attending social events), social skills, level of staff support required in relation to issues of capacity and vulnerability to others (sexual and financial). If such relationships are formed they tend to differ from mainstream relationships in their social content, perhaps due to difficulties in adaptive behaviour and in particular social skills and communication for this group of people (clinical experience of the researcher). Differences in lifespan development may also play a part. For example, although opportunities for independent living and employment exist, the individual may need support to participate. Furthermore, other difficulties such as emotional and mental health problems may arise in adulthood. A number of authors (Bartholomew, Kwong and Hart, 2001, Bee, 1998, Bowlby, 1982, Mikulincer and Shaver, 2007) emphasise the effects on adult mental health and personality development of insecure attachment orientation in the early years

of development. The consistency and responsiveness of the primary caregiver are the factors highlighted as important for secure attachment orientation.

3.2.11 Adaptation of an Existing Measure

None of the scales and measures outlined in this chapter have been deemed appropriate for the needs of an individual with mild intellectual disability. Thus it was concluded that adaptation of a currently available measure was necessary if attachment style in people with mild intellectual disability was to be examined.

3.2.12 The Focus of Attachment Orientation

Measurement of retrospective attachment style to a parent would be the best fitting measurement given the differences in lifespan development and opportunity within interpersonal relationships for this population. Bowlby (1973-1982) suggested that attachment to a primary caregiver (not necessarily a parent) was the important factor in his studies of children evacuated during WWII. Within this research it is proposed to measure retrospective attachment to mother however if the individual respondent has not lived with mother during childhood development, a measure of attachment to the identified primary caregiver rather than mother per se will be measured.

3.2.13 Categorical, Continuous or Dimensional Measurement

As discussed previously in this chapter, a number of authors suggest that dimensional measurement is a more appropriate measure than either categorical or continuous ratings. As discussed previously there is some disparity regarding dimensions of choice however the

Bartholomew four category model does offer a two dimensional perspective (e.g. model of self and others alongside model of anxiety and avoidance). This narrows the choice of scales to the RQ and the RSQ (Bartholomew and Horowitz, 1991; Griffin and Bartholomew, 1994).

3.2.14 Internal Consistency, Reliability and Validity

In a study which explored the construct validity of the French version of the Relationship Scales Questionnaire (RSQ) (Griffin and Bartholomew, 1994), Guédénay, Fermanian and Bifulco (2010) found a three-factor solution explaining 48% of the total variance. The three factors were: factor 1 "Avoidance", with seven items explaining 21% of the total variance; factor 2, "Anxiety in the relationships" (five items) explaining 14% of total variance and factor 3, "Security" (five items) explaining 11% of the total variance. Cronbach's coefficient was low for the prototypical scales ("secure" = 0.41; "fearful" = 0.54; "preoccupied" = 0.22, and moderate for "dismissive" (0.64). The authors adapted the scale in line with the three factor solution and found that Cronbach's alpha coefficients were raised to moderate levels (0.66 for F1, 0.69 for F2 and 0.60 for F3). The authors report the Intraclass Coefficients (ICC) were modest for the four prototypical scales (ICC<0.70) and were good for the scales designed from the factor analysis (F1: ICC=0.80; F2: ICC=0.85 and F3: ICC=0.78).

However Keeling, Rose and Beech (2007) adapted the RSQ (Griffin and Bartholomew, 1994) for use with offenders who have lower levels of intellectual functioning and/or literacy deficits. Each scale was adapted in an effort to simplify content and language and to improve readability. Their findings suggested that one subscale of the RSQ had fair reliability and validity, while the remaining subscales had varied psychometric properties which were less than optimal. Their study employed 16 sex offenders with special needs and 53 sex offenders without special needs.

They calculated Cohen's alpha on the four subscales of the RSQ and found that only the avoidant & fearful subscale achieved an acceptable level of internal consistency. The other subscales (secure, preoccupied and avoidant -- dismissive) all had an alpha below 0.3 which suggests extremely low internal consistency. These findings would suggest that to date adaptation has been unable to facilitate the formation of a reliable scale for use with people with ID, further adaptation of the scale may be required if it is to reach an acceptable level of reliability for use with this population.

3.2.15 Flexibility of Use

Bartholomew and Horowitz (1991) allude to the flexibility of the RQ scale in so far as it can be worded in terms of general orientations to close relationships, orientations to romantic relationships, or orientations to a specific relationship (or some combination of the above). The authors also report that it can be reworded in the third person and used to rate others' attachment patterns. Thus it could be expected that the RQ could be reworded to focus on retrospective maternal (or primary caregiver) attachment orientation.

The RQ in its current format would provide a significant difficulty to respondents with mild intellectual disability due to the limitations and difficulties associated with this population highlighted previously in this chapter. However examination of the scale suggests that each prototypical paragraph consists of a number of statements which, with minimal linguistic change, could be broken down into separate statements thereby reducing cognitive load and aiding linguistic understanding. Any linguistic change could be checked for reading ease using Flesch Kincaid scores (Kincaid, Fishburne, Rogers, and Chissom (1975).

Additionally, the RQ is rated using a seven point Likert scale which, as previously discussed, is again problematic for individuals with ID. The introduction of a summative rating scale, with a reduction in choice of response from seven choices within the existing likert scale to four on a summative rating scale, may also improve the empirical measurement of the scale. Whilst it is planned to adapt an existing scale rather than develop a new scale there are recommendations regarding scale development in general which should be taken into account (Madjidi, 2011).

These include:

3.2.16 Mutual Exclusivity and Collective Relationships between Items

The aim within scale development is to attain mutually exclusive and collectively exhaustive items which measure the construct in question.

3.2.17 Positive and Negative Phrasing

When developing a scale it is the norm to use positively and negatively phrased questions. This practice may also be used with people with intellectual disability however care should be taken not to provide abstract negative statements which may be difficult to understand or provide confusion.

3.2.18 Avoiding Jargon

Jargon may be confusing and may lead to misunderstanding of the statement or question. It is necessary in the development of a measurement scale for use with people with intellectual disability to avoid colloquialism, expressions and jargon due to the difficulty of understanding that such terms may provide.

3.2.19 Avoid the Use of Negatives to Reverse the Wording of an Item

Reversing the wording addresses issues of acquiescence and social desirability. However Madjidi, (2011) notes that the phrasing can be misleading e.g. I am satisfied with my work - I am not satisfied with my work. This author suggests it is much better to avoid the reversal by using more concrete terms of emotion such as 'I hate my work'. It is essential that statements or questions are brief, focused, and clear and make use of simple, unbiased statements or questions.

3.2.20 Sources of Error in Scale Measurement

There are a number of areas where error may be a factor in questionnaire measurement Madjidi, (2011). For example individuals may respond in a 'socially desirable' manner giving what they perceive as politically correct answers with regard to a given situation. Additionally individuals may respond within a 'response set' for example giving all 'yes' or all 'no' answers. It is well recognised that individuals with intellectual disability may have a higher probability of 'acquiescence' i.e. telling the person what they want to hear in order to please, or to finish the task at hand perhaps due to lack of understanding, boredom or other difficulty (Clements, 2000). The issue of 'response order' is another source of error. An individual may come across the answer they feel fits for them, prior to reading the full choice of answers. People with intellectual disability generally have a difficulty in working memory capacity therefore if the respondent was given a large amount of verbal information at the one time, they may show a 'response order' within the limitations of what can be remembered rather than making a true choice from all the information available to them. One further factor which should be given consideration is the primacy and recency effect. If individuals are responding to a large amount of information by

giving one response regarding choice (i.e. what item best fits how you feel and then several statements are read out) individuals may respond to either the first item remembered or the last item read out rather than holding the information in memory and making a true choice. Thus there are a number of factors to consider within the adaptation of the RQ measure.

3.2.21 Conclusion

There are a number of self report measurements of attachment style. Many are based on the original model developed by Hazan and Shaver in 1987. Generally attachment has been considered a typology theory and has utilised categorical measurement at the expense of variance. The focus of attachment measurement in adulthood has been on romantic or peer attachment, however, a few studies have focussed on retrospective parental attachment. Given the differences in lifespan development for people with mild intellectual disability this latter focus of measurement is deemed more appropriate. Additionally many self report measures have utilised Likert scale measurement rather than summative scales which also provide difficulty in accounting for variance, particularly within individual differences within categories. Continuous ratings and dimensional measurement have been utilised, however the recommendations of previous research is to focus on more dimensional measurement as a true reflection of attachment style. There are however inconsistencies regarding which dimensions should be measured i.e. whether attachment anxiety and attachment avoidance or, more in line with Bowlby's concept of internal working models, as portrayed in Bartholomew's model of self and model of others.

Available self report scales require adaptation for use with people with intellectual disability. Given the difficulties with the adaptation of the RSQ found by Keeling, Rose and Beech (2007),

it was felt appropriate to adapt an alternative attachment questionnaire in the present study. What is relevant is that it will be necessary to adapt a self report questionnaire for use in the proposed study rather than an interview measure. The Relationship Questionnaire (Bartholomew and Horowitz, 1991) was chosen for adaptation due to its flexibility of use and the availability of dimensional measurement in the two dimensions of 'attachment anxiety' and 'attachment avoidance' alongside mental representations of 'model of self' and 'model of others' which also show good face validity to Bowlby's internal working model of attachment.

Chapter 4: The Development of a Self Report Measure for the Measurement of Attachment Orientation in People with Mild ID.

4.0 Introduction

Developmental psychopathology places an emphasis on the lack of secure attachment bonds as a developmental risk factor (Ainsworth, 1991; Bowlby, 1982). For example having a good relationship with parents has been found to predict non delinquency in young people (Stouthamer-Loeber, Loeber, Farrington, Zhang, van Kammen, and Maguin, 2002). Mother-child involvement alongside daily stimulation by the mother, was found to reduce hyperactivity and conduct disorders in elementary school children from deprived family backgrounds (Kolvin, Miller, Fleeting and Kolvin, 1988; Kolvin, Charles, Nicholson, Fleeting and Fundudis, 1990). According to Osborn, (1990) having emotionally attentive, supportive, and interested parents tends to be a major factor in young children from deprived lower social classes acquiring social competence.

When examining childhood adversity Schneider-Rosen and Cicchetti, (1984) found that children who have experienced abuse or neglect are more frequently insecurely attached to parents when compared to controls who have experienced no abuse. With regard to sexual offending in particular a number of authors have found a relationship between experiences of abuse and juvenile sexual offending (e.g. Bailey, 2000; Weinrott, 1996). With regard to understanding adult sexual offending Coombes (2003) suggests that the model conceptualising adult sexual offending suggested by Ward, Hudson and McCormack (1997), may be applicable to sex offenders and may be helpful with regard to treatment approaches. Attachment has been found to a relevant factor within

intervention for sexual offending behaviour. For example the evidence based model put forward by Ward, Hudson and McCormack (1997), utilises the concept of the four category model of attachment style developed by Bartholomew and Horowitz (1991) within the intervention process. Using this model of attachment, Ward Hudson and McCormack (1997) found that the relationship between attachment style and problems such as fear of intimacy, affective deregulation, and negative attitudes towards women, seemed to be more fundamental than offender type. Coombes (2003) suggests that the framework of attachment and intimacy could be used to approach the loneliness experienced by young people who sexually abuse and by utilising Bartholomew's four category model, allow professionals some awareness of 'self' and 'other' concepts held by offenders. To look to attachment to explain sexual offending per se would be overly simplistic. However to conceptualise sexual offending and other forms of offending behaviour, inclusive of internal working models of 'self' and 'other' developed from early experiences, may be helpful for understanding factors such as the dynamic risk factor of low self esteem accompanied by maladaptive interpersonal problem solving behaviour both of which may have developed through difficulties in attachment experiences.

This thesis plans to explore attachment and offending behaviour in offenders with mild intellectual disability and therefore is consistent with Ward, Hudson and McCormack's recommendations to utilise the Bartholomew and Horowitz's model in this research.

Two questionnaires have been developed in relation to the two dimensional four category model of attachment suggested by Bartholomew and Horowitz, the Relationship Scales Questionnaire (RSQ) and the Relationship Questionnaire (RQ). The RSQ was developed

from a combination of Hazan and Shaver's (1987) attachment measure, Bartholomew and Horowitz's (1991) 'Relationship Questionnaire' and Collins and Read's (1990) 'Adult Attachment Scale' and consists of thirty items which are rated on a five point likert scale. The RSQ was designed as a continuous measure of attachment orientation and is not designed to easily provide a categorical measurement of attachment style. Keeling, Rose and Beech (2007) have already attempted to adapt the RSQ (Griffin and Bartholomew, 1994) for use with offenders with lower levels of intellectual functioning and/or literacy deficits. Each scale was adapted in an effort to simplify the content and language and to improve readability. Findings suggested that one subscale of the RSQ had fair reliability and validity, while the remaining subscales had varied psychometric properties which were less than optimal. Given the poor reliability of the previously adapted RSQ (Keeling, Rose and Beech, 2007), as indicated previously, the decision was taken to adapt the RQ in this thesis, for use with people with intellectual disability. The RQ shows good face validity, however shows low internal consistency in its current form (Mikulincer and Shaver, 2007). It has to be anticipated that adaptation of the RQ will alter the psychometric properties of the scale. Therefore study 2a is aimed at adapting the RQ into a more simplistic measurement of attachment and evaluating the reliability of the adapted measure in comparison to the original RQ. The overarching aim of the adaptation of the RQ is to develop a questionnaire measurement of attachment style for use with people with mild ID which would be filled in within an assessment session with an interviewer.

4.1.1 Method

4.1.2 Description of Participants

Sixty second year undergraduate Psychology students at the University of Abertay, Dundee were selected by convenience sample to carry out the first part of this study comparing the adapted and original measures. The gender breakdown of the sample was forty seven female participants and thirteen male participants.

4.1.3 Measures

Relationship Questionnaire (RQ) (Bartholomew and Horowitz, 1991) (Appendix 1)

Permission to adapt the Relationship Questionnaire was requested and granted from Dr Kim Bartholomew. Permission for this study was obtained from the University of Abertay Ethics Committee.

The RQ comprises of four single paragraphs to which the respondent is initially asked to provide a single categorical rating of which of the four paragraphs most closely relates to their perceived attachment style. Subsequently, participants are asked to provide a ranked score, from a seven point likert scale, for each individual paragraph. The individual score reflects the extent that each descriptive paragraph as a whole matches the participant's perception of their attachment. The overall combined scores provide a dimensional prototypical score leading to an attachment profile for the respondent. For example a respondent might rate him or herself something like: Secure 6, Fearful 2, Preoccupied 1,

Dismissing 4. These ratings (or "scores") provide a *profile* of an individual's attachment, feelings and behaviour.

The four paragraphs each delineating an attachment style are as follows:

Style A (Secure). It is easy for me to become emotionally close to others. I am comfortable depending on them and having them depend on me. I don't worry about being alone or having others not accept me.

Style B (Fearful Avoidant). I am uncomfortable getting close to others. I want emotionally close relationships, but I find it difficult to trust others completely, or to depend on them. I worry that I will be hurt if I allow myself to become too close to others.

Style C (Preoccupied). I want to be completely emotionally intimate with others, but I often find that others are reluctant to get as close as I would like. I am uncomfortable being without close relationships, but I sometimes worry that others don't value me as much as I value them.

Style D (Dismissing Avoidant). I am comfortable without close emotional relationships. It is very important to me to feel independent and self-sufficient, and I prefer not to depend on others or have others depend on me.

Bartholomew and Horowitz (1991) suggest the RQ can be worded in terms of general orientations to close relationships, orientations to romantic relationships, or orientations to a specific relationship (or some combination of relationships previously mentioned). They also suggest the RQ can be worded in the third person and used to rate others' attachment patterns, for example, close same sex friends and romantic partners rating themselves and their friend or partner.

The RQ was designed to obtain *continuous* ratings of each of the four attachment patterns. However, Bartholomew and Horowitz suggest that if required, the RQ can also be used to categorise participants into their best fitting attachment pattern. This is achieved by rating the highest of the four attachment prototype ratings and classifying the participants accordingly. This categorical rating approach causes a problem when two or more attachment prototypes are rated equally highly. To address this difficulty it is suggested that respondents choose a single best fitting attachment pattern from those rated equally. If this is not possible, Bartholomew advises that the researcher can either delete the participant(s) from the data set, or use a method of randomly selecting one of the two equally rated prototypes as the attachment category. In the unlikely event that there is a 3-way tie for the highest categorical rating, Bartholomew advises that there is no option but to delete that participant's data.

4.1.4 Procedure

4.1.5 Adaptation of the Relationship Questionnaire (RQ)

Each of the four separate paragraphs (A, B, C, and D) in the RQ, were broken down into their constituent statements. This resulted in five statements for paragraph A, (Secure) five statements for paragraph B, (Fearful avoidant) four statements for paragraph C, (Preoccupied) and five statements for paragraph D, (Dismissing avoidant). The researcher's clinical experience has shown that romantic relationships are less available to offenders with intellectual disability; it was therefore decided to adapt the RQ into a measure of retrospective maternal attachment or in the absence of mother, the primary caregiver in childhood. Each statement was orientated to this end and Flesch Kincaid Reading Ease and Grade scores (Flesch, 1948; Kincaid, Fishburne, Rogers, and Chissom, (1975) were obtained to assess linguistic complexity and further alteration of linguistic content was performed where required.

Participant responses on the original RQ involves selecting a best fitting number on a seven point likert scale for each individual descriptive paragraph delineating an attachment style.

“Now please rate each of the relationship styles above to indicate how well or poorly each description corresponds to your general relationship style”. (Bartholomew and Horowitz; 1991)

Style A

1	2	3	4	5	6	7
Disagree Strongly			Neutral/ Mixed			Agree Strongly

Style B

1	2	3	4	5	6	7
Disagree Strongly			Neutral/ Mixed			Agree Strongly

Style C

1	2	3	4	5	6	7
Disagree Strongly			Neutral/ Mixed			Agree Strongly

Style D

1	2	3	4	5	6	7
Disagree Strongly			Neutral/ Mixed			Agree Strongly

To make a judgement of where on the seven point scale one might score it is necessary to conduct quite a complex decision making process with minimal guidance. This larger level of choice may be difficult for people with mild intellectual disability and therefore the choice was reduced to four categories which were labelled as to how much like the individual the categorical choice was. For example:

Not at all like me = 0; A bit like me = 1; Quite like me = 2; Very like me = 3

When scoring the results a numerical rating was allocated to each statement. Numerical ratings for each section were added and divided by the number of statements in the section, giving a mean score, thus transforming the previous likert scale measurement into a summative rating scale and giving an overall mean score for each attachment style. The highest mean score rating was taken as the predominant categorical attachment style. If the mean score for two attachment insecure categories was equal a random choice was made regarding allocation of attachment category. If the mean score was found to be equal between the secure and an insecure pattern of attachment an 'unresolved' category was allocated. Participants with an 'unresolved' classification of attachment were deemed to have an attachment difficulty and would then be allocated into the insecure attachment style in this case.

Study 2a was administered over three sessions each of which occurred one week apart.

Week 1:

In week one, a verbal introduction to the study was given to potential student participants, followed by distribution of the information sheets (Appendix 1) outlining the study. The information sheet recounted the topic of the study and the use of self-report measures of maternal attachment. Participants were informed they did not need to take part in the study and that if they did agree to take part they may withdraw at any time. The researcher's e-mail address and work phone number was made available to each potential student participant as a form of contact should they wish more information on the study. For those that consented it was also used as a contact point should they wish to withdraw from the study at a later date.

The University student counselling service was approached, to ensure a source of counselling in the unlikely event of participant distress. The questionnaires do not contain any overtly distressing material however the researcher is aware that the topic of attachment in general may have the potential to lead to participant distress in some cases and students were made aware of the support available and were provided with contact details of the University of Abertay, Dundee Student Counselling Service.

Week 2

In the second week, the same potential student participants were approached and the information sheet was again read out. Participants were then asked if they would wish to participate in the study. Consenting participants were asked to sign the consent forms (Appendix 2) which were collected and retained by the researcher. Consenting participants were then split into two groups.

Each group was then given a copy of the instructions on filling in the Questionnaire (Appendix 3). Counterbalancing was applied with Group 1 being given a copy of the Adapted Relationship Questionnaire (ARQ) whilst Group 2 was given a copy of the Relationship Questionnaire (RQ) (Bartholomew and Horowitz, 1991). Both groups were asked to fill in the questionnaires as per the written instructions supplied (Appendix 3). In order to facilitate subsequent matching of the RQ and ARQ presented over two sessions, participants were asked to put the last three digits of their phone number on the questionnaire.

Week 3

Seven days after the second session, the same participants were asked to fill in the alternative questionnaire to that filled in on the first session i.e. Group 1 completed the original RQ and Group 2 completed the ARQ again using the appropriate instructions from the participant instruction leaflet (Appendix 3). Participants were again asked to put the last three digits of their phone number on the questionnaire filled in to aid matching of the two questionnaires

4.1.6 Results

The results of the adaptation to the RQ are shown in Table 5.0. Each paragraph from the original RQ was broken down into its constituent statements. The existing linguistic complexity of each statement was examined by the researcher through the use of Flesch Kincaid Scoring and simplification of linguistic content of each statement was carried out where required through consultation with supervisors and further testing of the Flesch Kincaid scores to ascertain whether the adaptation of the linguistic content had increased reading ease.

Table 4.1.0 The Adapted RQ (ARQ)

Question Number	Statement
	Secure (Style A)
S1.	It is easy for me to feel close to my mum
S2.	I am ok depending on my mum
S3.	I am ok if my mum depends on me
S4.	I do not worry about being alone
S5.	I do not worry that others do not like me
	Fearful avoidant (Style B)
F1.	I am not ok feeling close to my mum
F2.	I want to feel close to my mum
F3.	I find it difficult to totally trust my mum
F4.	I find it hard to depend on my mum
F5.	I worry that I will be hurt if I get too close to my mum
	Preoccupied (Style C)
P1.	I want to feel totally close to my mum
P2.	My mum often does not want to feel close to me
P3.	I am not ok if not having a close relationship with my mum
P4.	I sometimes worry that I am worth less to my mum than she is to me.
	Dismissing avoidant (Style D)
D1.	I am ok not feeling close to my mum
D2.	It is very important to me to feel I can look after myself on my own without mum
D3.	It is very important to me to feel I can do things for myself without mums support
D4.	I prefer not depending on my mum
D5.	I prefer my mum not to depend on me

4.1.7 Flesch Kincaid Reading Ease and Grade Scores

Reading ease scores between the original RQ and the adapted version were compared to ascertain whether adaptation had facilitated easier reading and understanding.

Table 4.1.1 Flesch Kincaid Reading Ease Scores for the Original RQ

RQ attachment style	Flesch Reading Ease	Flesch Kincaid Grade	Age equivalent
Style A Secure	50	9	14-15
Style B Fearful avoidant	39	11	16-17
Style C Preoccupied	26	15	18-23
Style D Dismissing avoidant	34	13	18-23

Within the Flesch Kincaid readability index, the higher the score the easier the document is to read, with scores of 90 being obtained for comics and scores of 10 being obtained for legalese documents. The mid range of these scores suggests that a score of 40 ó 60 could be considered average for readability. When examining the reading ease scores of the original RQ the highest score attained is 50 with the range falling between 26 and 50. This would suggest that the standard paragraphs in the original RQ may be more complex and difficult to read and understand for the person with mild intellectual disability.

The Flesch Kincaid Grade score is equivalent to the US school grades with age equivalents shown relevant to that grade. It can be noted that the grade level required to both read and understand the text is between 9 and 15 (14 ó 23 age equivalent). Two of the insecure attachment categories fall within a reading grade level of 13-15 which shows a recommended age equivalent of 18 ó 23 years. The Flesch Kincaid Index assessment supports the linguistic adaptation of the existing measure for use with people with mild intellectual disability.

4.1.8 Flesch Kincaid Reading Ease of the ARQ

The reading ease scores of the ARQ were calculated to ascertain if the adaptation had made the scale easier to read and understand. Reading ease scores were calculated for each statement and also the mean reading ease score for each section was calculated.

Table 4.1.2 Flesch Kincaid Reading Ease Scores for the Adapted RQ (ARQ)

Statement	Flesch Reading Ease score
S1. Its easy for me to feel close to my mum	95
S2. I am ok depending on my mum	79
S3. I am ok if my mum depends on me	94
S4. I do not worry about being alone	55*
S5. I do not worry that others do not like me	80
Section mean	80.6
F1. I am not ok feeling close to my mum	85
F2. I want to feel close to my mum	93
F3. I find it difficult to totally trust my mum	66**
F4. I find it hard to depend on my mum	94
F5. I worry that I will be hurt if I get too close to my mum	84
Section mean	84.4
P1. I want to feel totally close to my mum	76
P2. My mum often doesn't want to feel close to me	96
P3. I am not ok if not having a close relationship with my mum	66**
P4. I sometimes worry that I am worth less to my mum than she is to me	74
Section mean	78
D1. I am comfortable not feeling close to my mum	85
D2. It is very important to me to feel I can look after myself on my own without mum	75
D3. It is very important to me to feel I can do things for myself without mums support	74
D4. I prefer not depending on my mum	67**
D5. I prefer my mum not to depend on me	87
Section mean	70.4

Overall adaptation of the RQ has resulted in an improvement within the readability scores. Three statements, one each in the fearful, preoccupied and dismissing sections of the adapted RQ, show a reading ease score of under 70, suggesting these statements are slightly easier than the standard level. One reading ease scores fall below 60*, which suggests that this particular variable could be considered within the average readability range. Additionally as the questionnaire is not being used as a self report further explanation may be provided if this question poses any difficulty to individuals with mild intellectual disability. All other statements show a reading ease score above that of the standard level of 60 expected for average documents. When an average reading ease

score is computed for each section overall sections are above the average reading ease with the Dismissing section being closest to standard for main documents (70.4) and the Fearful section showing the greatest ease of reading overall (84.4). Overall the reading ease of the questionnaire has been improved.

4.1.9. Flesch Kincaid Grade Scores

The Flesch Kincaid Reading Index also rates text on an American grade education system and advocates that documents with an average level of reading ease and linguistic understanding should attempt to attain a Flesch Kincaid Grade score of between 7 and 8. D'Alessandro, Kingsley and Johnson-West, (2001) also state that materials such as that found on the World Wide Web, should be written at an eighth grade level. A Flesch-Kincaid Grade score of 8 would mean that individuals as young as those in the eighth grade (aged 13-14 years) of school would understand the text in that document. Overall the highest Flesch Kincaid Grade score of 8 would suggest that an individual performing at an age equivalent level of 13-14 would understand the text in the document.

Table 4.1.3 Flesch Kincaid Grade Scores

Statement	Flesch Reading Grade	Age equivalent
S1. Its easy for me to feel close to my mum	3	8-9
S2. I am ok depending on my mum	4	9-10
S3. I am ok if my mum depends on me	2	7-8
S4. I do not worry about being alone	7	12-13
S5. I do not worry that others do not like me	5	10-11
Section mean	4.2	9-10
F1. I am not ok feeling close to my mum	4	9-10
F2. I want to feel close to my mum	2	7-8
F3. I find it difficult to totally trust my mum	6	11-12
F4. I find it hard to depend on my mum	2	7-8
F5. I worry that I'd be hurt if I get too close to my mum	5	10-11
Section mean	3.8	9-10
P1. I want to feel totally close to my mum	5	10-11
P2. My mum often doesn't want to feel close to me	3	8-9
P3. I am not ok if not having a close relationship with my mum	8	13-14
P4. I sometimes worry that I am worth less to my mum than she is to me	7	12-13
Section mean	5.75	10-11
D1. I am comfortable not feeling close to my mum	4	9-10
D2. It is very important to me to feel I can look after myself on my own without mum	7	12-13
D3. It is very important to me to feel I can do things for myself without mums support	7	12-13
D4. I prefer not depending on my mum	6	11-12
D5. I prefer my mum not to depend on me	4	9-10
Section mean	5.6	10-11

The original RQ showed a range of grade score from 9 to 15. The ARQ shows a range of grade scores between 2 and 8. Age equivalents ratings have also improved with the original RQ showing a range of 14 to 23 years and the ARQ showing a range of 7 to 13 years, with section mean ratings suggesting age equivalents between 9 and 11. The adaptation of the Relationship Questionnaire (RQ) has therefore reduced the age at which it would be expected to understand each individual statement. The ARQ may therefore be suggested to have a more functional ease of reading and understanding when compared to ease of reading and understanding purported by Flesch Kincaid scores for the original RQ.

4.1.10 Categories of Attachment

The number of participants within each category was derived for each of the original RQ and the adapted version.

Figure 4.1.0 - Number of participants within each attachment category within the original RQ.

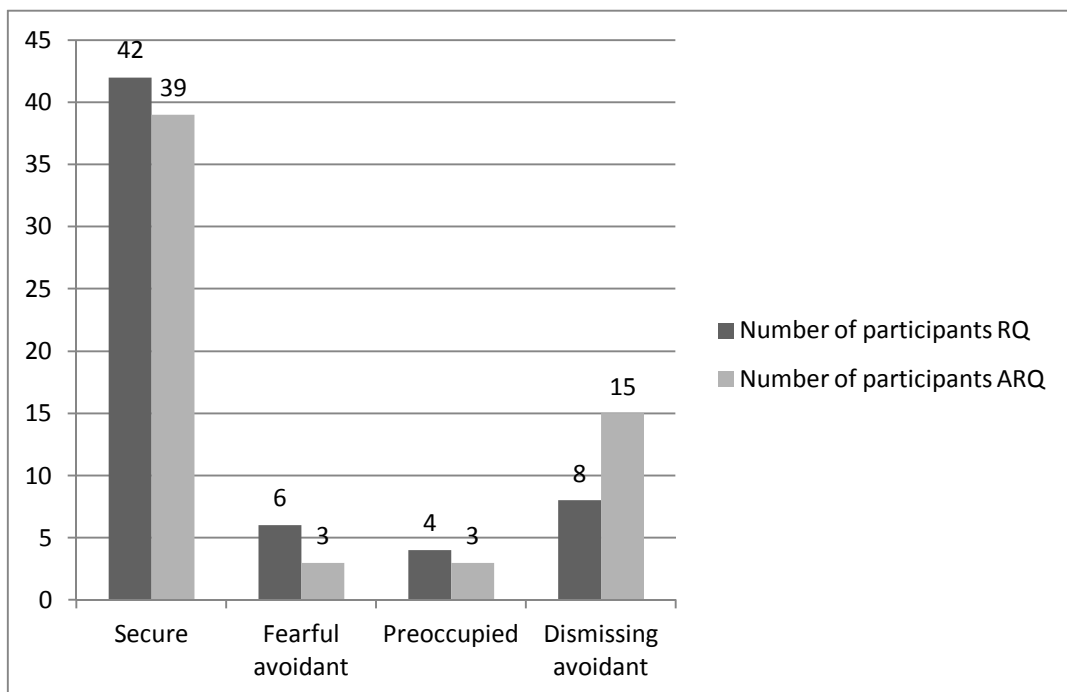


Figure 4.1.0 demonstrates that the distribution of participants to attachment styles was similar for the two versions of the questionnaire. Secure attachment was by far the modal attachment style with 42 (70%) and 39 (65%) respondents categorised by the RQ and the ARQ respectively. The next most familiar style was Dismissing avoidant with 8 (13%) as measured by the RQ and 15 (25%) by the ARQ. Fewer people were recorded as Fearful

avoidant (6 (10%) - RQ and 3 (5%) - ARQ) or preoccupied (4 (7%) - RQ and 3 (5%) - ARQ).

Focussing on the number of participants in each category provides a snapshot of the two versions of the questionnaire but does not separate out how many individuals were allocated the same attachment style when comparing the two versions of the questionnaires. In Table 5.3 the data notes the proportion of people with the same measured categorical attachment style in both the RQ and the ARQ and the proportion of participants who changed attachment category when completing the ARQ.

Table 4.1.4 - Concordance of Categories of Attachment Style between RQ and ARQ

Category of Attachment Style	Number in the Same Category RQ and ARQ	Number in Different category RQ and ARQ	Total number of participants in category
Secure	36	6	42
Fearful avoidant	2	2	4
Preoccupied	2	4	6
Dismissing avoidant	5	3	8
Total	45	15	60

From table 4.1.4 ratings of attachment category using both the RQ and the ARQ shows a 75% concordance between attachment categories chosen from the RQ and ARQ rated one week apart. Overall 25% of participants chose a different attachment category when rating the RQ and ARQ one week apart.

4.1.11 Goodness of Fit between the RQ and ARQ Categories of Attachment

There was a shift of attachment category by a few participants between testing with the RQ and the ARQ. To further ascertain the goodness of fit between categorical ratings on the RQ and ARQ the McNemar statistical test was performed. Ordinarily when comparing nominal non parametric data the Chi Square test statistic would be utilised. One caveat relevant to the use of the Chi Square test is the requirement of a between participants design in the study. This study used a within participants design and as such the Chi Square does not fit the data. However the McNemar version of Chi Square is recommended for use when there exists a within participants design or where a 'before' and 'after' test is required for nominal data where participants act as their own control group. It is applied to 2×2 contingency tables with a dichotomous trait, with matched pairs of subjects, to determine whether the row and column marginal frequencies are equal ("marginal homogeneity"). This therefore fits the data in this study. The results suggest that despite some participant shift between categories of attachment when tested by the original RQ and the adapted RQ, there were no significant differences when comparing ratings of categorical attachment style. It should be noted that within the insecure categories of Fearful avoidant, Preoccupied and also Dismissing avoidant, participant numbers were small which may have affected the reliability of test outcome.

Table 4.1.5 The Goodness of Fit between RQ and ARQ Categories of Attachment Style.

Category of Attachment Style	McNemar Test Statistic
Secure	.508
Fearful avoidant	.375
Preoccupied	1.00
Dismissing avoidant	.092

*Denotes significance at the 0.5 level

As shown in Table 4.1.5 there were no significant differences between attachment categories within comparison of RQ and ARQ categorical ratings. However it must be noted that only a small number of participants fall into each insecure attachment style and therefore this may have provided a confound within the results.

4.1.12 Magnitude of the Relationship between Categorical Measurement Using the RQ and the Adapted RQ

Given the lack of statistical significance in the McNemar test between attachment categories attachment (see Table 4.1.5), the magnitude of the relationship between each category of attachment style was also explored using the non parametric Spearman's Rho correlation analysis.

Table 4.1.6 The Magnitude of the Relationship between Categorical Classifications Using the RQ and the Adapted Version (ARQ) (N60).

Category of attachment	Spearman's Rho
Secure	.663**
Fearful avoidant	.433*
Preoccupied	.552**
Dismissing avoidant	.340*

*significant at the 0.1 level

**significant and the .001 level

When outlining the magnitude of effect size Cohen (1988) suggests that a correlation of 0.5 is large, 0.3 is moderate and 0.1 is small. Thus using Cohen's criteria, the strength of the relationship between results on the RQ and ARQ could be considered to be large with regard to the Secure and Preoccupied attachment styles with the Fearful avoidant attachment style approaching a large effect size. The Dismissing avoidant attachment style shows a moderate effect size.

4.1.13 Construct Validity within the ARQ

To test the construct validity of the ARQ correlation analysis (Spearman's rho) (n60) was conducted inclusive of all statement ratings. The correlation analysis was examined with regard to both convergent and discriminant validity. Setting alpha at .05 means that even if the null hypothesis is true and there is no correlation between any of the variables that 1 in 20 tests are likely to return type I errors (Gigerenzer, and Hoffrage (1995). Given the number of variables in the correlational analysis the alpha level was reduced to the 1% level to reduce the probability of Type 1 errors. Drawing once again on Cohen's statements about effect sizes it was decided that a correlation of 0.3 or above (medium

effect size) at the 1% significance level would be considered within convergent and discriminant reliability.

Table 4.1.7 Showing Spearman’s Rho correlation within the ‘Secure’ attachment style section of the ARQ

‘Secure’ Attachment statement	S1	S2	S3	S4	S5
S1. Its easy for me to feel close to my mum	1.0				
S2. I am ok depending on my mum	.584** .000	1.0			
S3. I am ok if my mum depends on me	.572** .000	.664** .000	1.0		
S4. I do not worry about being alone	.216 .097	.330* .010	.410** .001	1.0	
S5. I do not worry that others do not like me	.049 .709	.075 .567	.121 .368	.344** .007	1.0

*significant at the 0.1 level

**significant and the .001 level

(Please see Appendix 10 for full Spearman’s Rho correlation analysis)

There is evidence of some convergence within variables in the section of the ARQ measuring ‘Secure’ attachment style. However S5 ‘I do not worry that others do not like me’ shows a relationship only to S4 ‘I do not worry about being alone’ with a medium effect size, and shows no relationship to any other statements within this section. Thus if all statements in this section were measuring ‘Secure’ attachment style it would be expected that all statements should relate positively and significantly with one another. This is not the case. For example statement S1, ‘Its easy for me to feel close to my mum’ also shows a positive correlation to statements measuring insecure attachment styles e.g. F2, ‘I want to feel close to my mum’ and P1 ‘I want to feel totally close to my mum’. Given the underlying meaning of these separate statements this relationship could be

expected. However the compilation of the original RQ places these statements within the insecure categories of attachment style. Similarly other statements within the 'Secure' attachment section show positive correlation to statements within the 'Fearful Avoidant' and 'Preoccupied' attachment classifications of the original RQ (Please see Appendix 10) suggesting convergence between sections measuring both 'Secure' and 'Insecure' attachment styles. Given the literature regarding the differences of 'Secure' and 'Insecure' attachment style highlighted in previous chapters, it would be expected that these two categories should be separate and distinct rather than converging within a correlation matrix.

Correlations between statements in the 'Fearful avoidant' and the 'Preoccupied' attachment sections suggests convergence within these two sections of the ARQ measure with poor discrimination between attachment styles (Please see table 5.7.8) For example the statement F2 'I want to feel close to my mum' shows no convergence with other statements within the Fearful avoidant section, however does show convergence with the statements P1 'I want to feel totally close to my mum' and P3 'I am not ok if not having a close relationship with my mum' in the Preoccupied attachment section.

Table 4.1.8 Spearman's Rho Correlation within the 'Fearful Avoidant' and the 'Preoccupied' Attachment Style Sections of the ARQ

	F1	F2	F3	F4	F5	P1	P2	P3	P4
F1. I am not ok feeling close to my mum	1.0								
F2. I want to feel close to my mum	-.195 .136	1.0							
F3. I find it difficult to totally trust my mum	.616** .000	-.161 .220	1.0						
F4. I find it hard to depend on my mum	.596** .000	-.095 .468	.578** .000	1.0					
F5. I worry that I'd be hurt if I get too close to my mum	.639** .000	-.056 .670	.678** .000	.567** .000	1.0				
P1. I want to feel totally close to my mum	.301 .019	.678** .000	-.156 .234	-.133 .309	-.138 .292	1.0			
P2. My mum often doesn't want to feel close to me	.417** .001	-.224 .086	.492** .000	.495** .000	.457** .000	-.191 .144	1.0		
P3. I am not ok if not having a close relationship with my mum	-.076 .564	.440** .000	-.056 .672	-.066 .617	-.012 .926	.602** .000	-.137 .297	1.0	
P4. I sometimes worry that I am worth less to my mum than she is to me	.390** .002	.010 .937	.520** .000	.378** .003	.688** .000	-.064 .626	.449** .000	.015 .910	1.0

*significant at the 0.1 level

**significant and the .001 level

(Please see Appendix 10 for full Spearman's Rho correlation analysis)

Indeed all statements within the section purporting to measure 'Fearful avoidant' attachment style show positive correlation with a medium or large effect size to statements within the section purporting to measure 'Preoccupied' attachment style.

Discriminant validity tests whether concepts or measurements that are supposed to be unrelated are, in fact, unrelated (Campbell and Fiske, 1959) that is that concept are not highly correlated with other concepts designed to measure theoretically different concepts. Although there is no standard value for discriminant validity, a result less than

.85 tells us that discriminant validity likely exists between the two scales. A result greater than .85, however, tells us that the two constructs overlap greatly and they are likely measuring the same thing. Therefore, we cannot claim discriminant validity between them. With regard to discriminant validity correlation values are below .85 which, according to Campbell and Fiske, 1959 suggests there is discrimination between statements in these groups. However given the fact that underpinning these statements is a concept of anxiety and fearful avoidance the correlation between statements showing convergence of these concepts is of concern if these two concepts are suggested as separate and distinct.

Table 4.1.9 Showing Spearman's Rho Correlation within the 'Dismissing Avoidant' Attachment Style Section of the ARQ

'Dismissing avoidant' Attachment statement	D1	D2	D3	D4	D5
D1. I am comfortable not feeling close to my mum	1.0				
D2. It is very important to me to feel I can look after myself on my own without mum	.287 .026	1.0			
D3. It is very important to me to feel I can do things for myself without mums support	.293 .023	.773** .000	1.0		
D4. I prefer not depending on my mum	.281 .030	.680** .000	.771** .000	1.0	
D5. I prefer my mum not to depend on me	.214 .101	.355** .005	.490** .000	.415** .001	1.0

*significant at the 0.1 level

**significant and the .001 level (Please see Appendix 10 for full correlation analysis)

All statements in this section show convergence apart from D1, I am comfortable feeling close to my mum, which showed a positive correlation (.392) to statement F1, (I am not ok feeling close to my mum) in the Fearful avoidant attachment section.

The Dismissing attachment section statements show a number of low or negative correlations to other section statement within the measure suggesting this section does have discriminant ability with regard to attachment categorical classifications. However the poor performance of statement D1 would suggest that statistically the section measuring 'Dismissing avoidant' attachment within the scale may be the subject of further improvement

4.1.14 Interim Discussion

Attachment classifications using the RQ and the ARQ show 75% concordance between the two questionnaires administered one week apart. Previous research using Hazan and Shavers (1987) attachment style questionnaire suggest there may be some shift in attachment category dependent on life events even within the period of a week (Pistole, 1989) and some of the shift in attachment category may be in line with previous findings. However issues of convergence within sections purporting to measure specific and different attachment styles is a cause for concern with regard to reliability of the adapted measure. The discriminant quality of separate attachment sections measuring 'Insecure' attachment styles is present within the adapted measure. However the 'Secure' section also shows convergence to statements included in the measurement sections of 'Insecure' attachment classifications which should not be present if these concepts are separate and distinct. Therefore in its present form, and given the issues of convergent and discriminant validity the ARQ may lack internal consistency in its current format.

The distribution trend found with regard to attachment categories shows a U shaped distribution when comparison is made between the RQ and ARQ attachment

classifications. No significant differences were found between questionnaires with regard to categorical attachment classification; however the small number of participants in the -Fearful avoidantø and -Preoccupiedø categories limits the reliability of these findings.

The ARQ shows a higher number of respondents falling within the -Dismissing avoidantø attachment category than respondents rating the original RQ. Previous investigation into percentage distribution of adult attachment style using the RQ has provided percentage distribution of attachment categories; however comparisons are limited due to the focus on type of attachment relationship as many of these studies have used the RQ as a measure of romantic attachment whilst the present study has used the RQ and ARQ as a retrospective measure of childhood attachment. For example using the RQ to measure romantic attachment style, Stein, Dawn Koontz, Fonagy, Allen, Fultz, Brethour, Allen, and Evans (2002) found percentage distribution of categorical attachment styles as follows: Secure ó 51%, Preoccupied ó 8%, Dismissing avoidant ó 13% and Fearful avoidant ó 28% (Stein et al. 2002). Partner or spouse was the primary attachment figure for 79.2% of the participants. However the attachment dynamics within romantic relationships may differ to the attachment dynamics of retrospective parent-child relationships in so far as romantic relationships may change in line with a change of romantic partner. For example Kirkpatrick and Hazan (1994) found that over a period of four years, secure people tended to become less secure after the breakup of a romantic relationship, whereas insecure people tended to become more secure after initiating a romantic relationship. These changes can also occur over shorter time periods (Davila and Sargent, 2003). Parent-child relationships may vary in quality, however stability of that quality of relationship tends to be more likely (Please see chapter 2). There is a difference between parental attachment and romantic attachment in that within romantic

relationships there may be more of an equality of relationship and therefore attachment. With the assumption of independence in adulthood and within adult romantic relationships there may be more of an equality within the romantic attachment relationship e.g. an individual can choose to change the attachment figure with a change of relationship. Whilst a child may also choose with whom to form a secure attachment bond there is the concept of vulnerability and need for support which would suggest inequality of individuals within the relationship. Indeed the attachment relationship with a child could be expected to function in its ideal format (Secure attachment) as the provision of a positive nurturing and social developmental attachment experience.

This study focussed on retrospective childhood attachment to mother or a primary caregiver. A more practical comparison may be the percentage distribution of attachment classifications in childhood. The four factor adult attachment model limits direct comparison to the three factor model of childhood attachment however some initial comparison may prove useful. Ainsworth et al. (1978) determined the distribution of attachment styles in children. Findings suggest that the majority of children fall within the 'secure' attachment category (65%). With regard to insecure attachment a higher percentage of children fall within the avoidant (24%) than the anxious style (11%) (Preoccupied in Bartholomew's model), (Ainsworth et al. 1978). O'Connor et al. (1987) highlight that these percentages were not significantly different from the proportions of 70%, 20% and 10% (respectively) that have been described for white middle class populations.

When rating the original RQ with regard to retrospective childhood attachment percentage distributions of attachment classifications were: Secure - 70%, Dismissing

avoidant ó 13%, Fearful avoidant ó 10%, and Preoccupied (anxious) ó 7%. Rating the ARQ percentage distribution of attachment classification measuring retrospective childhood attachment was: Secure - 65%, Dismissing avoidant ó 25%, Fearful avoidant ó 5%, Preoccupied (anxious) ó 5%.

The overall trend of attachment classification appears orderly in so far as the majority of participants fall within the secure attachment classification with a considerably smaller number within the anxious (Preoccupied) classification. The Avoidant classification provides difficulty of direct comparison suffice to say that there are more participants who fall within the avoidant classifications overall than the preoccupied (anxious) classification and less than the secure classification. The distribution shows a U-shaped curve within the classification system used by Ainsworth et al. (1978) and in the present study using both the RQ and the ARQ.

Given the issues of construct validity highlighted within the convergent and discriminant analysis the reliability of the ARQ was explored through Principal Component analysis in Study 2b. Authors vary in their suggested ratio of participants to variables to be analysed and have issued advisory criteria for the use of any factor analysis. For example some researchers suggest at least 100 - 200 participants are necessary to provide adequate data for the use of factor analysis. Generally two recommendations are advised (Brace, Kemp and Snelgar, 2003) firstly there should be more participants than variables (Kline; 1994) and secondly there should be more participants than extracted factors. Kline (1994) suggests a minimum ratio of 20:1 whilst other researchers recommend a 10:1 (Nunally, 1978) and 5:1 (Gorsuch, 1983, Tabachnick and Fidell, 2007) participant to variable ratio.

To date study 2a has employed 60 participants which falls short of that recommended for Principal Components analysis therefore a second additional study of participants (Study 2b) who completed only the ARQ was carried out to obtain more data in line with the requirements for statistical testing using Principal components analysis.

4.2.0 Study 2b: The ARQ: Internal Consistency and Collinearity.

Due to the convergence of variables within the fearful avoidant and preoccupied attachment styles in particular, within study 2a, when investigation of the internal consistency of the adapted questionnaire was initially evaluated through Spearman's Rho correlation analysis. Thus Study 2b aimed to evaluate the internal consistency of the current ARQ through conducting a factor analytic evaluation to determine the factor structure of the results obtained from using the ARQ. Factor structure is important for two reasons, firstly to compare the results of the ARQ with that of Bartholomew's four factor model of mental representations of 'self' and 'other' developed through the measurement of attachment within romantic relationships. Secondly, within this thesis, attachment style is being measured in adulthood with a focus of measuring maternal attachment style retrospectively in childhood; this may alter the resultant structure of attachment classification from Bartholomew's four category model found within the measurement of romantic attachment using the RQ. Therefore a comparison to the attachment styles in childhood developed by Ainsworth et al. (1978) (Secure, Anxious/ambivalent, Fearful avoidant) may also be beneficial.

To enable the statistical evaluation of the factor structure of the ARQ responses, additional consenting participants were employed to increase the number of participants

in line with that recommended to carry out a factor analytic study (Brace, Kemp and Snelgar, 2003, Kiline, 1994).

4.2.1 Participants Study 2b:

An additional forty one participants were employed for study 2b all of whom were second year Psychology students attending the University of Abertay, Dundee. The gender breakdown within this study was twenty five female participants and sixteen male participants.

4.2.2 Measures Study 2b

The Adapted Relationship Questionnaire (ARQ) was used in Study 2b to measure retrospective maternal attachment style in childhood of each participant. The ARQ consists of nineteen statements which are the linguistically simplified statements from each individual paragraph of the original RQ (Bartholomew and Horowitz, 1991). Statements are organised into attachment category sections relative to each paragraph of origin e.g. five statements appertaining to the 'Secure' category of attachment, five statements in the section representing 'Fearful avoidant' attachment, four statements representing the 'Preoccupied' attachment category and five statements representing the 'Dismissing avoidant' attachment category. The ARQ is scored using a summative rating scale with four choices for each statement as to how like the respondent each statement is e.g. Not at all like me = 0, A bit like me = 1, Quite like me = 2, Very like me = 3. Numerical ratings for each statement are summed and a mean score attained for each attachment section e.g. secure, fearful avoidant, preoccupied, dismissing avoidant. The highest mean score is the

categorical attachment classification. The highest mean score rating was taken as the predominant categorical attachment style. If the mean score for two attachment insecure categories was equal a random choice was made regarding allocation of attachment category. If the mean score was found to be equal between the secure and an insecure pattern of attachment an 'unresolved' category was allocated. Participants with an 'unresolved' classification of attachment were deemed to have an attachment difficulty and would then be allocated into the insecure attachment style in this case.

4.2.3 Procedure Study 2b

First Contact Week 1

A verbal introduction to the study was given to potential student participants, and followed by distribution of the information sheets (Appendix 7) outlining the study.

Second Contact: Week 2

Consenting participants were asked to sign the consent forms (Appendix 8) which were then collected and retained by the researcher. Consenting participants were then handed the ARQ and asked to complete this in line with the written instructions supplied (Appendix 9). Participants were asked to put the last three digits of their phone number on the completed questionnaire, in order to identify their data at a later stage should they wish to withdraw from participation.

4.2.4 Results

4.2.5 Construct Validity

Spearman's correlation analysis showed consistency with the results of study 2a in so far as there was some convergence of items in the 'Secure' and 'Insecure' attachment sections. For example 'Secure' attachment style showed convergence with the 'Dismissing' attachment section, The 'Preoccupied' and 'Fearful Avoidant' sections showed convergence overall with significant intercorrelations between items within differing attachment sections. It would be expected that the classification of 'Secure' attachment style should be a separate and distinct concept to the 'Insecure' attachment classifications.

4.2.6 Internal Consistency of the ARQ

Further analysis was carried out to investigate the internal consistency of the adapted questionnaire. Cronbach's Alpha coefficients range in value from 0 to 1 and are used to describe the reliability of factors extracted from scored responses on the questionnaires or scales (i.e., rating scale: 1 = poor, 5 = excellent). The closer Cronbach's alpha coefficient is to 1.0 the greater the internal consistency of the items in the scale and the more reliable the scale is. Nunnally (1978) and Bruce, Kemp and Snelgar (2006) indicate 0.7 to be an acceptable reliability coefficient, but lower thresholds are sometimes used in the literature. Gliem and Gliem (2003) suggest that the size of alpha is determined by both the number of items in the scale and the mean inter-item correlations. George and Mallery (2003) provide the following rules of thumb: alpha value of $\alpha > .9$ Excellent, $>$

.8 ó Good, > .7 ó Acceptable, > .6 ó Questionable, > .5 ó Poor, and < .5 ó Unacceptableö (p. 231).

Cronbach's alpha was used to ascertain the internal consistency of each multi item section of the ARQ. Item-total statistics are shown for each category in Table 6.0

4.2.7 Reliability of the 'Secure' Attachment Section of the ARQ

To investigate the reliability of the 'Secure' attachment section inter item correlation matrix was examined. Pallant (2007) suggests that items which show a low value (e.g. less than .3) indicate that the item is measuring something different from the scale as a whole. If the overall Cronbach's Alpha level is too low (e.g. less than .7) and there are no incorrectly scored items there may be a need to remove items with low inter item correlations (Pallant, 2007).

Table 4.2.0 Inter Item Correlation Matrix for the 'Secure' Attachment Classification.

Statement no	S1	S2	S3	S4	S5
S1. Its easy for me to feel close to my mum	1.000	.601	.552	.134	.056
S2. I am ok depending on my mum	.601	1.000	.626	.215	.158
S3. I am ok if my mum depends on me	.552	.626	1.000	.293	.147
S4. I do not worry about being alone	.134	.215	.293	1.000	.431
S5. I do not worry that others do not like me	.056	.158	.147	.431	1.000

*significant at the 0.1 level

**significant and the .001 level

Inter item correlations for the secure attachment style showed a large effect size through S1, S2 and S3, S4 showed a large effect size to S5, S4 and S5 were poorly correlated to

S1, S2 and S3. The mean inter item correlation for the secure attachment classification was .32 with a minimum of .05 and a maximum of .62. The range was .57. Statement S5 shows a low value and consideration was given to deleting this item from the scale however table 6.1 shows the Cronbachs Alpha level is raised only slightly by such action therefore it was decided to leave this variable within the scale.

Table 4.2.1 The Item Total Statistics for the ‘Secure’ Attachment Style (n101).

Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item Total Correlation	Cronbach's Alpha if Item Deleted
S1. It's easy for me to feel close to my mum	6.68	6.679	.487	.644
S2. I am ok depending on my mum	7.03	5.649	.581	.596
S3. I am ok if my mum depends on me	6.91	6.082	.606	.593
S4. I do not worry about being alone	7.50	6.612	.371	.692
S5. I do not worry that others do not like me	7.63	7.354	.277	.722

*significant at the 0.1 level

**significant and the .001 level

Cronbachs Alpha for the ARQ -Secure attachment style section with this sample of 101 respondents was 0.702 and therefore is considered to have an acceptable level of reliability.

4.2.8 The Reliability of the 'Fearful Avoidant' Attachment Section

Of particular interest is the reliability of the Fearful avoidant and the Preoccupied attachment sections of the ARQ. The results of inter item correlations within the Fearful Avoidant section of the scale shown in Table 4.2.2 provide further evidence of difficulties within this section of the scale.

Table 4.2.2 Inter Item Correlation Matrix for the 'Fearful Avoidant' Attachment Classification.

Statement no	F1	F2	F3	F4	F5
F1. I am not ok feeling close to my mum	1.000	-.232	.590	.540	.562
F2. I want to feel close to my mum	-.232	1.000	-.176	-.173	-.188
F3. I find it difficult to completely trust my mum	.590	-.176	1.000	.616	.672
F4. I find it hard to depend on my mum	.540	-.173	.616	1.000	.720
F5. I worry that I'd be hurt if I get too close to my mum	.562	-.188	.672	.720	1.000

There is clear evidence of negative correlations in this section of the scale which would not be expected of items which were converging to measure a similar construct. Indeed F2 appears to show a negative correlation to all other variables in the section which may indicate a need for reverse scoring of this item. The mean inter item correlation was .29 with a minimum of -.23 and a maximum of .72. The inter item correlation range for the fearful avoidant attachment classification was .95.

Table 4.2.3 The Item Total Statistics for the ‘Fearful Avoidant’ Attachment Style (n101).

Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item Total Correlation	Cronbach's Alpha if Item Deleted
F1. I am not ok feeling close to my mum	3.07	3.68	.515	.457
F2. I want to feel close to my mum	1.38	5.45	-.225	.853
F3. I find it difficult to completely trust my mum	2.94	2.85	.607	.355
F4. I find it hard to depend on my mum	2.98	3.18	.614	.377
F5. I worry that I’ll be hurt if I get too close to my mum	3.22	3.67	.672	.412

Cronbachs Alpha for the ARQ Fearful Avoidant attachment style section with this sample of 101 respondents was 0.589 and therefore is considered to fall within the questionable range of reliability.

The corrected item total correlation also shows a negative value for F2 and suggests a need to reverse score this item. The item total statistics suggest that if F2 was deleted the Cronbachs alpha level would considerably improve however further exploration of the scale as a whole, using principal components analysis is required to establish whether the overall attachment classifications concur with Bartholomew’s four factor model. Therefore no items were deleted at this stage.

4.2.9 The Reliability of the ‘Preoccupied’ Attachment Section

The convergence between the Fearful Avoidant and the Preoccupied attachment style would be expected to affect the reliability within each classification. The reliability for the Preoccupied attachment classification was found to sub optimal.

Table 4.2.4 Inter Item Correlation Matrix for the ‘Preoccupied’ Attachment Style.

Attachment Statement	P1	P2	P3	P4
P1. I want to feel totally close to my mum	1.000	-.165	.390	-.016
P2. My mum often does not want to feel close to me	-.165	1.000	.002	.411
P3. I sometimes worry that I am worth less to my mum than she is to me	.390	.002	1.000	.092
P4. I am not ok if not having a close relationship with my mum.	-.016	.411	.092	1.000

*significant at the 0.1 level

**significant and the .001 level

Within the inter item correlation matrix there is a negative correlation between P1 and P2 and also P1 and P4. This would suggest low convergence of the variable P1 with P2 and also P4. The mean inter item correlation was .12, the minimum and maximum inter item correlations were -.16 and .41 respectively. The range of inter item correlations was .57.

Table 4.2.5 The Item Total Statistics for the ‘Preoccupied’ Attachment Style (n101).

Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Cronbach's Alpha if Item Deleted
P1. I want to feel totally close to my mum	1.99	2.79	.280
P2. My mum often does not want to feel close to me	3.69	3.73	.402
P3. I sometimes worry that I am worth less to my mum than she is to me	3.71	3.42	.290
P4. I am not ok if not having a close relationship with my mum.	2.46	1.99	.103

From the reliability analysis the preoccupied attachment style has a Cronbach's Alpha of .354 which therefore could be considered to have an unacceptable level of reliability. The removal of statement P2 improves the level of reliability however the section still fails to attain an acceptable level of reliability if this statement is removed.

4.2.10 Reliability of the ‘Dismissing Avoidant’ Attachment Style

The Dismissing Avoidant attachment classification showed discriminant validity when the correlation matrix was examined.

Table 4.2.6 Inter Item Correlation Matrix for the ‘Dismissing Avoidant’ Attachment Style.

Statement no	D1	D2	D3	D4	D5
D1	1.000	.264	.262	.282	.276
D2	.264	1.000	.821	.651	.371
D3	.262	.821	1.000	.718	.440
D4	.282	.651	.718	1.000	.412
D5	.276	.371	.440	.412	1.000

*significant at the 0.1 level

**significant and the .001 level

The Dismissing Avoidant attachment classification shows D1 to have a low level of correlation to the other variables within this attachment classification suggesting poor convergence for this item to other items within this attachment classification. The inter item correlation mean was .45 with a minimum and maximum inter item correlation of .26 and .82 respectively. The range of inter item correlation was .56.

Table 4.2.7 Item Total Statistics for the ‘Dismissing Avoidant’ Attachment Style (n101).

Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Cronbach's Alpha if Item Deleted
D1 I am ok not feeling close to my mum	6.21	8.16	.840
D2 It is important to me to feel I can look after myself on my own without mum	5.15	6.98	.722
D3 It is important to me to feel I can do things for myself without mums support	5.19	6.71	.703
D4 I prefer not depending on my mum	5.47	6.75	.725
D5 I prefer my mum not to depend on me	6.11	7.77	.792

From the reliability analysis the Dismissing Avoidant attachment style has a Cronbach's Alpha of .799 and therefore could be considered to have an acceptable reliability level. The Alpha level would be improved (to .840) if item D1 was deleted however as stated previously no items were deleted at this stage to allow for principal components analysis to be carried out on the scale as a whole to establish factor structure.

Table 4.2.8 Cronbachs Alpha Values for Each Attachment Section of the ARQ within the Adaptation of the Self Report RQ Scale

Attachment category	Cronbachs Alpha
Secure	.702
Fearful Avoidant	.589
Preoccupied	.354
Dismissing Avoidant	.799

It can be noted that both the 'Fearful Avoidant' and the 'Preoccupied' classifications are sub optimal in their reliability.

4.2.11 Interim Summary

Thus overall attachment classifications of 'Secure' attachment, and 'Dismissing avoidant' attachment, show an acceptable level of reliability. However the 'Preoccupied' and 'Fearful avoidant' attachment classifications showed poor and unacceptable levels of internal consistency respectively. Internal consistency of the separate attachment style sections within the ARQ are considered sub optimal at this stage and led to exploration of the factor structure of the scale using Principal Component's analysis.

4.2.12 Principal Components Analysis

To explore the factor structure within the scale, a principal components analysis was performed. This statistical technique was applied to the full range of statements (19) in the ARQ. Considering the advisory criteria regarding the participant to variable ratio in order to meet the requirements of factor analysis the number of participants (n101) to variables (19) meets the advisory requirement put forward by both Kline (1994) and (Gorsuch, 1983, Tabchnick and Fidell, 2007) (please see interim discussion study 2a)

Considering Factor Rotation, Pallant (2007) suggests there are two main approaches to factor rotation, resulting in either orthogonal (uncorrelated) or oblique (correlated) solutions. Orthogonal rotations often result in solutions that are easier to interpret however they may also require an assumption that the underlying constructs are independent of one another whereas oblique rotation allows for the assumption of correlation between factors (Tabachnik and Fiddell, 2007). Examination of the Spearman's correlation analysis for the adapted RQ showed evidence of convergence between variables, in particular between the fearful avoidant and preoccupied attachment classifications. With this convergence of variables in mind, it was decided to use an oblique rotation (Direct Oblimin) to carry out the Principal Components analysis.

4.2.13 Examination of Sampling Adequacy and Factor Retention.

Pallant (2007) suggests four criteria which should be examined to determine both sampling adequacy for factor analysis using a Principal Components method, and also to determine the number of factors to be retained. These were Kaisers criterion, examination

of the correlation matrix to determine the strength of relationships between variables, the Scree test (Cattell, 1966) and also Monte Carlo Parallel Analysis (Watkins, 2000).

4.2.14 Kaisers Criterion (KMO)

Kaisers criterion is one of the most commonly used techniques. Using this rule, only factors with an eigenvalue of 1.0 or more are retained for further evaluation. Kaiser's criterion has also received criticism suggesting that it is a method which may retain too many factors in some situations (Pallant, 2007). A Kaiser-Meyer-Olkin value of 0.6 or above is recommended for determination of factorability of the data and values above this level would suggest the data are suitable for Principal Components Analysis (Pallant, 2007). Pallant also suggests that Bartlett's Test of Sphericity should be taken into account and should reach significance at the 0.05 level or smaller.

4.2.15 Correlation Matrix (Appendix 5.0)

It is recommended that the correlation matrix should be examined for evidence of inter correlations greater than 0.3 (Tabachnick and Fidell, 2007). If few correlations are found at this level a subsequent factor analysis may not be appropriate (Pallant, 2007).

4.2.16 Cattell Scree Test (Cattell, 1966)

Due to the limitations of the Kaiser criterion test, Cattell's Scree test was also used to determine the requisite number of factors to be retained. This test plots each of the

eigenvalues of the factors and inspecting the plot to determine at what point the shape of the curve changes to horizontal will guide the number of factors to be retained.

4.2.17 Monte Carlo Parallel Analysis

The fourth determination of the number of factors to retain was Monte Carlo Parallel Analysis (Watkins, 2000). Parallel Analysis (PA) has consistently proven to be accurate in determining the threshold for significant components when decomposing a correlation matrix into its component structure. In this procedure, eigenvalues from a data set prior to rotation are compared with those from a matrix of random values of the same dimensionality. For example Monte Carlo Parallel Analysis generates 100 random sets of data which are the same size as the actual data file through the information entered e.g. 19 variables, 101 participants over 100 replications (Pallant, 2007). Systematic comparison e.g. eigenvalue 1 random MCPA dataset to eigenvalue 1 actual dataset, is made. If the eigenvalue from the actual dataset is larger than the eigenvalue from the criterion dataset from the MCPA dataset, the factor is retained; if it is less then it is rejected (Pallant, 2007).

4.2.18 Stability of Factor Structure

Guadagnoli and Velicer (1988) suggest that the most relevant issue in determining the stability of factor structure is both the sample size and magnitude of factor loadings. They argue that if a factor has four or more loadings greater than 0.6 then it is reliable irrespective of sample size. Additionally they suggest that factors with a few low loadings should not be interpreted unless the sample size is 300 participants or greater.

However factor loadings of 0.6 are regarded as high, compared to moderately high if they are above 0.30 (Kline, 1994). Kline (1994) suggests that setting a cut-off at too high a level can be misleading and unrealistic. Similarly he argued that it can be unreliable to consider very low factor loadings (e.g. 0.19) as salient (Kline, 1994) as they account for very little of the variance. Consideration has to be given to the sample size and number of variables in relation to selection of the cut-off criteria. A lenient cut-off criteria may be set when the sample size is large, e.g. $\times 1000$ (Comrey and Lee, 1992) and there are a number of variables in the analysis (Cattell, 1978).

4.2.19 Choosing a Statistical Cut Off for Factor Loading Criteria

Researchers tend to vary the cut-off criteria they use. For example, Abel, Gore, Holland, Camp, Becker and Rathner (1989) used 0.30 for criterion when determining whether or not a particular item loaded substantially well, in comparison to Duncan, Kennedy and Patrick (1995) who used a cut-off of 0.40. Considering the sample size and number of variables in this study it was felt appropriate to select 0.50 or higher as the cut-off criteria, as it is neither too strict nor too lenient. Additionally, this level of cut off implies that factor loadings correlate highly with the variable and a reasonable amount of the variables variance is explained by the factor.

4.2.20 Evaluating the Level of Variance of Each Factor Item

Within the Direct Oblimin rotation the level of variance explained by each item can be examined through evaluation of item levels within the 'Communalities' report in the data output from factor Analyses. MacCallum, Widaman, Zhang and Hong (1999) suggest

that as communalities reduce in size, the need for greater sample size increases in importance. They suggest that communalities above 0.6 are adequate in sample sizes of less than 100 participants. Communalities in the 0.5 range are adequate with a participant number of 100 to 200, providing there are relatively few factors with a small number of variables in each. Furthermore when the analysis reveals items with low communalities e.g. well below 0.5, a sample size of 500 or more may be required to attain factor reliability.

4.2.21 Total Variance: Analysis 1

The Correlation matrix revealed a number of significant correlations of 0.3 or above thus it was considered appropriate to proceed with a Principal Components analysis to further explore the factor structure of the adapted scale. Also within the correlation matrix, interdependency rather than independency of attachment styles can be noted through the correlation of variables across attachment styles within the ARQ. The Kaiyser-Meyer-Oklin value was .805 exceeding the recommended value of .6 (Kaiser, 1970, 1974) and Bartlett's Test of Sphericity (Bartlett, 1954) reached statistical significance, supporting the factorability of the correlation matrix. Using Kaisers criterion only the first four factors recorded an eigenvalue above 1.0 (5.88, 2.32, 2.10, 1.63). These four factors explain a total of 62.80 per cent of the variance. Cattell's Scree plot also suggested four factors were relevant with an eigenvalue >1. Within the Scree plot Factor 1 clearly captures more of the variance (30.93%) than factors 2, (12.22%); 3, (11.04%) or 4 (8.60%). Given the four factors exist prior to the curve change to a horizontal presentation within Cattell's Scree Plot (Appendix 11), it would be acceptable to explore a four factor solution. Comparison of the actual eigenvalues generated with the criterion eigenvalues from the

Parallel Analysis supports the decision from the Kaiser criterion and the Scree plot that four factors should be retained. Overall, the outcome of the evaluation of the Correlation matrix, the KMO test, Bartlett's Test of Sphericity and the Monte Carlo Parallel analysis (Appendix 12), suggest that data are suitable for factor analysis.

Table 4.2.9 Eigenvalues and Percentage of Variance Accounted for by the Four Factor Model.

	Eigenvalue	% of variance	Cumulative % of variance
Factor 1	5.88	30.93	30.93
Factor 2	2.32	12.23	43.16
Factor 3	2.10	11.04	54.20
Factor 4	1.63	8.60	62.81

Table 4.2.9 represents the eigenvalues for the four components from the adapted RQ and the percentage of variance accounted for by each factor. The four factors together account for 62.81% of the variance with factor 1 accounting for the greatest percentage of variance (30.93%).

Table 4.2.10 Pattern and Structure Matrices with Communalities for Principal Components Analysis with Direct Oblimin Rotation: Analysis 1 Shows the Four Factor Structure with all 19 Statements Included.

	Statements	Pattern coefficients				Structure coefficients				Comm
		Factor 1	Factor 2	Factor 3	Factor 4	Factor 1	Factor 2	Factor 3	Factor 4	
S1	It's easy for me to feel close to my mum	-.602	.153	.543	.014	-.672	-.103	.639	.056	.736
S2	I am ok depending on my mum	-.569	-.106	.389	.211	-.691	-.329	.523	.254	.685
S3	I am ok if my mum depends on me	-.209	-.041	.557	.388	-.361	-.199	.608	.405	.580
S4	I do not worry about being alone	-.001	-.128	.092	.796	-.111	-.154	.117	.798	.665
S5	I do not worry that others do not like me	-.101	.053	-.050	.749	-.130	.025	-.037	.756	.583
F1	I am not ok feeling close to my mum	.716	.031	-.170	.089	.753	.253	-.321	.037	.605
F2	I want to feel close to my mum	-.089	.068	.734	-.168	-.209	-.081	.740	-	.584
F3	I find it difficult to totally trust my mum	.842	-.006	.046	.081	.836	.214	-.125	-	.708
F4	I find it hard to depend on my mum	.739	.142	-.032	-.122	.792	.348	-.208	-	.663
F5	I worry that I'll be hurt if I get too close to my mum	.808	.072	.033	-.081	.827	.285	-.145	-	.696
P1	I want to feel totally close to my mum	-.068	-.054	.821	-.001	-.250	-.214	.844	.007	.722
P2	My mum often doesn't want to feel close to me	.628	.040	-.044	.316	.625	.212	-.177	.270	.493
P3	I am not ok if not having a close relationship with my mum	.220	-.044	.630	.065	.076	-.095	.593	.052	.398
P4	I sometimes worry that I am worth less to my mum than she is to me	.741	.021	.305	-.091	.691	.168	.150	-	.574
D1	I am ok not feeling close to my mum	.145	.305	-.345	.357*	.271	.399	-	.342	.430
D2	It is important to me to feel I can look after myself on my own without mum	.109	.870	.193	.015	.303	.865	.021	-	.789
D3	It's important to me to feel I can do things for myself without mums support	.074	.910	.120	-.029	.297	.909	-.052	-	.845
D4	I prefer not depending on my mum	.032	.829	-.055	.080	.260	.845	-.204	.067	.725
D5	I prefer my mum not to depend on me	-.116	.653	-.138	-.095	.094	.647	-.228	-	.452

*Denotes item does not reach 0.5 cut-off criteria.

Examination of the full matrix factor loadings for the 19 variables in the adapted RQ and using a loading score of 0.50 or higher as the cut off for variable inclusion, the analysis indicated the presence of four factors which could be explained in terms of Preoccupied attachment (Factor 1); Fearful avoidant attachment (Factor 2); Secure attachment, (Factor 3), and Dismissing avoidant attachment (Factor 4). Variables loading on each factor are represented in bold in Table 4.2.10.

Further examination of factor loadings would suggest that one item in the scale (D1, I am ok not feeling close to my mum) failed to load at the 0.5 cut-off criteria. Additionally factor 4 has a loading of only two variables (S4, I do not worry about being alone and S5, I do not worry that others do not like me). Guadagnoli and Velicer (1988) suggest factors with a few loadings should not be interpreted unless the sample size is 300. The sample size here is n101, and thus these issues may provide some question over the suitability of the four factor model despite the pre determinant statistical tests suggesting this is the optimal solution.

Examination of the Communalities report shows 11 variables loading above the 0.6 level with a further 4 variables loading between 0.57 and 0.58. P2, My mum often doesn't want to feel close to me, D1, I am ok not feeling close to my mum, and D5, I prefer my mum not to depend on me, load at the 0.4 level with P3, I am not ok if not having a close relationship with my mum loading at the 0.3 level suggesting these variables account for a lesser amount of the variance in the model.

Table 4.2.11 The Factor Correlations for the Four Factor Solution in Analysis 1.

Factor	1	2	3	4
1	1.000	.269	-.203	-.072
2	.269	1.000	-.173	-.013
3	-.203	-.173	1.000	.003
4	-.072	-.013	.003	1.000

The factor correlation matrix provides information as to whether the factors may be unrelated and assists in the determination as to whether both Orthogonal and Oblique factor rotations should be examined. Pallant (2007) suggests that in the case of low factor correlation values similar results would be obtained using Orthogonal or Oblique rotations and suggests that a correlation of above 0.3 is required to find discrepancies of results between the two rotational approaches.

The component correlations are all under 0.3 suggesting there is no requirement to perform both oblique and orthogonal rotations. However it was felt appropriate to further explore a reanalysis of the data excluding the identified problematic variables.

4.2.22 Principal Components - Analysis 2

Given the issues identified within analysis 1, the data were further analysed minus the variables that failed to load onto the factors i.e. S4, S5 and D1. The 0.5 cut-off loading criteria were applied. Examination of the correlation matrix again revealed the presence of a number coefficients of 0.3 and above. The Kaiyser-Meyer-Oklin value was .831 exceeding the recommended value of .6 (Kaiser, 1970, 1974) and Bartlett's Test of Sphericity (Bartlett, 1954) reached statistical significance, supporting the factorability of the correlation matrix.

Table 4.2.12 Eigenvalues and Percentage of Variance Accounted for by the Four Factors.

	Eigenvalue	% of variance	Cumulative % of variance
Factor 1	5.65	35.30	35.30
Factor 2	2.32	14.50	49.80
Factor 3	1.98	12.39	62.19
Factor 4	1.03	6.41	68.60

Cattell's Scree test suggested four factors having an eigenvalue > 1 (Appendix 11, Analysis 2) with the fourth factor only just reaching this level (eigenvalue of 1.03). However in contrast the Monte Carlo Parallel Analysis selection of random data for 101 participants and sixteen variables (statements) (Appendix 11, Analysis 2) suggests a three factor model best fits the data, suggesting the fourth factor should reach an eigenvalue of $\times 1.3440$ (Appendix 12)

Reanalysis resulted in a further four factor model.(Table 4.2.12) Whilst this model explained 68.60% of the variance it shows only three variables loading on factor 3 and only two variables loading on Factor 4 suggesting that these factors may be less reliable in interpretation given the number of participants in the study (Guadagnoli and Velicer, 1988). Tabachnik and Fidell (2007) recommend that when researchers are adopting an exploratory approach such as the one carried out in this study; it is beneficial to experiment with different numbers of factors to find a satisfactory solution.

Table 4.2.13 Analysis 2: Showing the Four Factor Structure with Statements S4, S5 and D1 Removed from the Analysis.

	Statements	Pattern coefficients				Structure coefficients				Comm
		Factor 1	Factor 2	Factor 3	Factor 4	Factor 1	Factor 2	Factor 3	Factor 4	
S1	It's easy for me to feel close to my mum	-.567	.198	.348	.335	-.661	.010	.527	.524	.736
S2	I am ok depending on my mum	-.530	-.039	.171	.461	-.675	-.238	.382	.637	.725
S3	I am ok if my mum depends on me	-.133	.123	.078	.872	-.324	-.062	.328	.902	.847
F1	I am not ok feeling close to my mum	.710	.025	-.140	-.047	.750	.189	-.272	-.255	.587
F2	I want to feel close to my mum	-.118	.003	.851	-.112	-.233	-.017	.841	.140	.727
F3	I find it difficult to totally trust my mum	.857	-.003	.043	.016	.846	.177	-.096	-.173	.718
F4	I find it hard to depend on my mum	.720	.113	.056	-.200	.781	.302	-.119	-.374	.665
F5	I worry that I'll be hurt if I get too close to my mum	.820	.084	.010	.003	.835	.259	-.127	-.201	.704
P1	I want to feel totally close to my mum	-.063	-.047	.753	.239	-.254	-.117	.827	.461	.754
P2	My mum often doesn't want to feel close to me	.596	.065	-.076	.043	.613	.187	-.165	-.129	.385
P3	I am not ok if not having a close relationship with my mum	.168	-.070	.702	.036	.044	-.040	.666	.122	.473
P4	I sometimes worry that I am worth less to my mum than she is to me	.770	.039	.236	.144	.706	.174	.144	.019	.587
D2	It's important to me to feel I can look after myself on my own without mum	.149	.884	.000	.130	.308	.893	-.006	-.063	.827
D3	It's important to me to feel I can do things for myself without mums support	.095	.894	.011	-.031	.292	.920	-.029	-.210	.857
D4	I prefer not depending on my mum	.049	.832	-.185	.000	.258	.846	-.209	-.209	.755
D5	I prefer my mum not to depend on me	-.169	.512	.133	-.579	.054	.577	-.001	-.596	.631

*The highest loadings are shown in bold type.

The data were then explored using an enforced three factor solution within the principal components analysis.

4.2.23 Three Factor Solution - Analysis 3

All 19 variables were included in this analysis to explore the goodness of fit of the data to a three factor solution. Consistent with previous analyses a Direct Oblimin rotation was used.

Table 4.2.14 Eigenvalues and Percentage of Variance Accounted for by the Four Factors.

	Eigenvalue	% of variance	Cumulative % of variance
Factor 1	5.88	30.93	30.93
Factor 2	2.32	12.22	43.16
Factor 3	2.10	11.04	54.20
Factor 4	1.63	8.60	62.80

Cattell's Scree Plot (Appendix 11, Analysis 3) and the Monte Carlo Parallel Analysis (Appendix 12, Analysis 3) still suggested a four factor solution however previous analysis discounted this solution as sub optimal based on the advisory criteria of Guadagnoli and Velicer (1988) who suggest that factors with few loadings should not be interpreted.

Table 4.2.15 Analysis 3: Showing the Forced 3 Factor Structure with all 19 Statements Included

	Statements	Pattern coefficients			Structure coefficients			Comm
		Factor 1	Factor 2	Factor 3	Factor 1	Factor 2	Factor 3	
S1	It's easy for me to feel close to my mum	-.566	.125	.585	-.639	-.112	.653	.730
S2	I am ok depending on my mum	-.611	-.103	.402	-.698	-.309	.525	.669
S3	I am ok if my mum depends on me	-.325	.018	.532	-.409	-.160	.583	.440
S4	I do not worry about being alone	-.271*	-.002	.010	-.273*	-.058	.056	.075
S5	I do not worry that others do not like me	-.345*	.160	-.117	-.294*	.117	-.093	.131
F1	I am not ok feeling close to my mum	.650	.090	-.224	.705	.267	-.351	.561
F2	I want to feel close to my mum	-.020	.053	.761	-.136	-.114	.753	.569
F3	I find it difficult to totally trust my mum	.827	.041	.001	.835	.204	-.145	.699
F4	I find it hard to depend on my mum	.747	.172	-.063	.792	.333	-.224	.663
F5	I worry that I'll be hurt if I get too close to my mum	.798	.115	-.008	.822	.275	-.165	.689
P1	I want to feel totally close to my mum	-.059	-.039	.826	-.203	-.227	.844	.718
P2	My mum often doesn't want to feel close to me	.492*	.130	-.113	.536	.251	-.223	.322
P3	I am not ok if not having a close relationship with my mum	.192	-.004	.610	.090	-.097	.579	.371
P4	I sometimes worry that I am worth less to my mum than she is to me	.738	.065	.269	.706	.153	.132	.566
D1	I am ok not feeling close to my mum	.024	.359	-.382*	.159	.446	-.462*	.340
D2	It's important to me to feel I can look after myself without mum	.128	.877	.211	.267	.858	.002	.787
D3	It's important to me to feel I can do things for myself without mums support	.111	.906	.146	.266	.897	-.066	.833
D4	I prefer not depending on my mum	.030	.835	-.040	.201	.850	-.224	.725
D5	I prefer my mum not to depend on me	-.059	.622	-.102	.081	.632	-.226	.412

*Denotes an item under the 0.5 value consider as a cut-off value

The Pattern matrix was examined for factor structure and showed clearly three attachment classifications of Preoccupied attachment style (Factor 1), Dismissing Avoidant attachment style (Factor 2) and Secure attachment style (Factor 3). Four variables did not load at 0.5 or above (D1, 'I am ok not feeling close to my mum', S4, 'I do not worry about being alone', S5, 'I do not worry that others do not like me', and P2, 'My mum often doesn't want to feel close to me'). The Communalities Matrix was examined to evaluate the variance explained by each item in the analysis. There were two items (S4, 'I do not worry about being alone' at .075 and S5, 'I do not worry that others do not like me' at .131) which showed low values loading at less than the recommended 0.3 level (Pallant, 2007). Pallant (2007) also suggests that if refinement or improvement of a scale is required then variables with low values within the Communalities should be removed. Removing items with low Communalities values tend to increase the total variance explained (Pallant, 2007). As this study is interested in scale development and improvement it was decided to remove these two items (S4 and S5) from the scale due to their low value and as a consequence, improve the total variance explained. Additionally, the statements P2 ('My mum often doesn't want to feel close to me') and D1 ('I am ok not feeling close to my mum') failed to load on the factor solution at the 0.5 level of cut-off criteria selected. Both P2 and D1 also showed lower levels of loading on the Communalities scale (.322 and .340 respectively) suggesting they account for lower levels of variance. It was therefore decided to remove P2 and D1 and conduct a further principal components analysis.

Table 4.2.16 The Correlation between the Three Factors Resulting from Analysis 3.

Factor	1	2	3
1	1.000	.198	-.166
2	.198	1.000	-.214
3	-.166	-.214	1.000

Inter correlations between factors show correlations are less than 0.3 suggesting there is no need to explore both orthogonal and oblique factor rotation in this model.

4.2.24 Analyses 4: The Forced Three Factor Solution with S4, S5, P2 and D1 Removed from the Analysis.

Inspection of the correlation matrix revealed the presence of many coefficients of .3 and above. The Kaiyser-Meyer-Oklin value was .814 exceeding the recommended value of .6 (Kaiser, 1970, 1974) and Bartlett's Test of Sphericity (Bartlett, 1954) of .814 reached statistical significance, supporting the factorability of the correlation matrix.

Table 4.2.17 Eigenvalues and Percentage of Variance Accounted for by the Three Factors, (Fourth factor shown for information only)

	Eigenvalue	% of variance	Cumulative % of variance
Factor 1	5.37	35.80	35.80
Factor 2	2.32	15.46	51.26
Factor 3	1.95	13.00	64.26
Factor 4	1.02	6.81	71.07

Principal Components Analysis revealed three factors with eigenvalues of 5.370 (Factor 1), 2.319 (Factor 2) and 1.950 (Factor 3). A fourth factor showed an eigenvalue greater

than 1 (1.021) however examination of the Monte Carlo Parallel Analysis (Appendix 12, Analysis 4) did not support retention of this factor with a value of $\times 1.3067$. Factors 1, 2, and 3 explained 35.8%, 15.5% and 13.0% of the variance respectively. All items loaded on each of the three factors at a level above the 0.5 cut-off criteria.

Table 4.2.18 Analysis 4: The Three Factor Solution Minus S4, S5, P2 and D1.

Item No	Pattern coefficients			Structure coefficients			Communalities
	Factor 1	Factor 2	Factor 3	Factor 1	Factor 2	Factor 3	
It's easy for me to feel close to my mum	-.588	.145	.548	-.657	-.082	.642	.726
I am ok depending on my mum	-.582	-.121	.423	-.696	-.329	.553	.678
I am ok if my mum depends on me	-.269	-.038	.573	-.390	-.187	.630	.473
I am not ok feeling close to my mum	.695	.029	-.170	.736	.232	-.310	.571
I want to feel close to my mum	-.036	.041	.740	-.169	-.071	.742	.552
I find it difficult to totally trust my mum	.866	-.014	.036	.856	.203	-.131	.733
I find it hard to depend on my mum	.764	.144	-.055	.811	.348	-.224	.682
I worry that I'd be hurt if I get too close to my mum	.830	.074	.010	.848	.286	-.162	.724
I want to feel totally close to my mum	-.049	-.077	.834	-.231	-.206	.855	.740
I am not ok if not having a close relationship with my mum	.220	-.049	.626	.085	-.081	.590	.392
I sometimes worry that I am worth less to my mum than she is to me	.749	.014	.288	.696	.166	.140	.564
It's important to me to feel I can look after myself on my own without mum	.110	.868	.169	.300	.873	.026	.795
It's important to me to feel I can do things for myself without mum's support	.076	.911	.090	.292	.918	-.052	.854
I prefer not depending on my mum	.009	.840	-.084	.241	.854	-.203	.736
I prefer my mum not to depend on me	-.083	.633	-.137	.106	.630	-.209	.419

Examination of factor loadings would suggest that Factor 1 contains 7 items loading between 0.6 and 0.86 two of which are negative loadings (-0.588, -0.582). Factor 2 shows

good reliability of factor structure with factor loadings of 4 items from level 0.6 to 0.9. Factor 3 shows 3 item loadings of 0.5 to 0.8.

Table 4.2.19 The Factor Correlations for the Forced Three Factor Solution with S4, S5, P2 and D1 Removed - Analysis 4.

Factor	1	2	3
1	1.000	.257	-.195
2	.257	1.000	-.140
3	-.195	-.140	1.000

With values under the 0.3 level the three factor solution is acceptable. An acceptable low correlation (.257) is evident between factors measuring attachment insecurity (Factor 1 and 2) with a negative correlation between the secure (Factor 3) attachment classifications and insecure attachment classifications.

Table 4.2.20 The Total Variance Explained by each of the Analyses.

	Total Variance % Explained
Analysis 1 - 4 factor solution	62.81
Analysis 2 - 4 factor solution S4, S5 and D1 removed	68.60
Analysis 3 ó 3 factor solution	54.20
Analysis 4 ó 3 factor solution S4, S5, D1 and P2 removed	64.26

The total variance explained by the final three factor model is 64.26%. Whilst this model explains a greater level of variance than Analysis 1 and 3 it explains less of the variance than Analysis 2. However given that only two variables loaded on one factor in analysis 2, rendering the factor as less reliable, Analysis 4 could be argued to be the best fitting model for the data.

4.2.25 Factor Interpretation of the Three Factor Model

Examination of the variable content within each factor would suggest that the resultant analysis is consistent with attachment orientation in childhood of 'secure', 'anxious' and 'avoidant' attachment styles found by Ainsworth et al., (1978). Factor 1 could best be described as an anxious/avoidant attachment category. It portrays an individual who has a mental representation described in Bartholomew's terms as having a 'low self image' and 'low others image'. Factor 2 portrays a more confident, independent and self-sufficient attachment style which has a mental representation in Bartholomew's terms of 'high self image' and 'low others image' and is a good match for the Dismissing attachment style represented in Bartholomew's four factor model. Examination of the statements in Factor 3 suggests comfort with emotional closeness and a desire to have an emotional closeness with the attachment figure. It also shows a comfort with elicited need for dependency from the attachment figure and can be considered to portray attachment security. Therefore Factor 3 will thus be entitled 'Secure attachment'.

4.2.26 Internal Consistency of the Final Three Factor Solution.

It is important to examine the reliability of the three factor scale of the ARQ to determine whether the items that make up the factor are measuring the same underlying construct.

There were two items in Factor 1 (Anxious Avoidant) which were negatively loaded within the factor suggesting they should be scored in reverse order within the scale.

These two items (S1, 'It is easy for me to feel close to my mum' and S2, 'I am ok depending on my mum') were recoded into different variables in order that they should be scored negatively in line with the representation of this section in the scale. Whilst

reverse scored items can be important to address issues of response bias within the use of the measure, the inclusion of reverse scored items within the reliability analysis will have the effect of reducing the covariance between the items and thus will reduce the Cronbach's alpha level of the section of the scale (Field, 2009). To overcome this issue Field (2009) recommends that for reliability analysis all reverse scored items are subject to a further reversal of scoring and thus rather than being negatively scored the items should have positive scoring. This reversal of negatively scored statements was carried out for the reliability analysis in this study.

4.2.27 Reliability of the 'Anxious Avoidant' Attachment Factor

Cronbach's alpha test statistic for the 7 items in Factor 1 is 0.875 showing a good level of reliability.

Table 4.2.21 Cronbach's Alpha Analysis of Factor 1 'Anxious Avoidant'

Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Cronbach's Alpha if Item Deleted
I find it difficult to totally trust my mum	2.99	11.370	.846
I worry that I'll be hurt if I get too close to my mum	3.27	13.10	.852
I find it hard to depend on my mum	3.03	12.02	.847
I sometimes worry that I am worth less to my mum than she is to me	3.21	13.45	.875
I am not ok feeling close to my mum	3.12	12.89	.857
It is easy for me to feel close to my mum *	2.70	12.05	.860
It ok to depend on my mum *	2.36	10.95	.862

*Items which are normally reverse scored.

4.2.28 Reliability of the ‘Dismissing Avoidant’ Attachment Factor

Cronbach’s Alpha test statistic for the 4 items in Factor 2 is 0.840, and shows a good level of reliability.

Table 4.2.22 Cronbach’s Alpha Analysis of Factor 2 ‘Dismissing Avoidant’

Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Cronbach's Alpha if Item Deleted
It is important for me to feel I can do things for myself without mums support	4.37	4.47	.733
It is important to me to feel I can look after myself on my own without mum	4.33	4.74	.767
I prefer not depending on my mum	4.64	4.57	.780
I prefer my mum not to depend on me	5.29	5.57	.889

4.2.29 Reliability of the ‘Secure’ Attachment Factor

Cronbach’s Alpha test statistic for the 4 items in Factor 3 is .694. using the George and Mallery (2003) criteria and as this factor rating is near to the .7 level considered to be an acceptable level within their criteria, this factor has been interpreted as having an acceptable level of reliability.

Table 4.2.23 Cronbach's Alpha Analysis of Factor 3 'Secure' Attachment Style.

Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Cronbach's Alpha if Item Deleted
I want to feel totally close to my mum	5.54	6.46	.539
I want to feel close to my mum	5.49	7.18	.604
I am not ok if not having a close relationship with my mum	8.19	6.87	.667
I am ok if my mum depends on me	7.65	8.16	.674

Given the level of internal consistency shown by the final three factor solution, the ARQ was reformulated in line with the outcome of analysis 4 showing a three factor solution to the data (Appendix 13).

Table 4.2.24 Showing Cronbachs Alpha levels for Each Attachment Classification of the ARQ (Final version)

Attachment section	Cronbach's Alpha
Secure	.694
Anxious avoidant	.875
Dismissing avoidant	.840

4.2.30 Interim Discussion

Hazan and Shaver (1987) developed the first short self report measure to assess adult equivalents of the three infant attachment patterns identified by Ainsworth et al. (1978). Within the development of their questionnaire 'Secure' adults were characterised by their ease of trusting in getting close to others, 'ambivalent' (or 'preoccupied') adults by anxiety and over dependency in close relationships, and 'avoidant' adults by distrust of others and avoidance of closeness in relationships. Subsequent self report measures such

as the RQ tended to be adaptations of the original Hazan and Shaver (1987) questionnaire with additions aimed at furthering the field of measurement in self report of attachment orientation. Bartholomew has suggested a four factor model of attachment orientation based on attachment anxiety and attachment avoidance. Whilst this analysis supports the underpinning of attachment in terms of attachment anxiety and attachment avoidance there are subtle differences in the insecure attachment classifications.

Within this chapter the adapted measure (ARQ) was evaluated in terms of factor structure and internal consistency. The resultant factor analysis shows a three factor solution to be the strongest solution. It can be interpreted as representative of both 'Secure' and 'Insecure' attachment classifications. What is apparent within the linguistics used within self report questionnaires in general is that attachment is defined by both emotional comfort with closeness, spanning from congruence to incongruence in the form of a continuum of anxiety, and behavioural avoidance relative to the level of congruence/incongruence which exists relevant to attachment to a significant other. Linguistically, trust or mistrust within the attachment relationship may be a pivotal factor relative to the level of anxiety and activation of avoidance strategies which occur within the behavioural attachment system (Tepp, 2007). It is suggested that avoidance should be considered to also work on a continuum of 'approach behaviour' at the lowest end and complete 'avoidance behaviour' at the highest end of the continuum of behavioural activation.

Thus while Bartholomew's model accounts for attachment within a framework explanatory of two continuums of attachment anxiety and behavioural avoidance it fails to account for the interaction of trust/mistrust within the two frameworks. Within parental

relationships, trust is bound into issues of protection and safety whether emotionally or behaviourally. Mistrust in such relationships through the experience of inconsistent parenting or abuse can lead to disorganisation of the attachment system both emotionally (level of anxiety) and behaviourally (approach or avoidance) (Main and Solomon, 1996). From an evolutionary perspective, it could be suggested that in childhood there is a dependency on parents for survival which is less prevalent in adulthood. It could be argued that in childhood a dismissing attachment style may be counterproductive to having needs met within a dependency framework and thereby considered to be maladaptive in relation to an evolutionary perspective (Bartholomew, Kwong and Hart, 2001). However in adulthood, where the individual has a greater self sufficiency and independence, it could be suggested that a Dismissing Avoidant attachment style to parental attachment may develop as an adaptive strategy in line with self protection e.g. from abuse or emotional distress.

In line with previous studies, the ARQ shows both a level of anxiety and a level of avoidance within the insecure attachment categories. The four factor structure shown in Bartholomew's model was not supported by the factor analysis as a reliable solution to fit the data. When examining the internal consistency of the full 19 item adaptation, within a four factor model, the internal consistency of the Secure and Dismissing Avoidant subsections showed an acceptable level of reliability. However the Fearful Avoidant and Preoccupied subsections showed a poor level of reliability suggesting the scale showed poor internal consistency. Additional analysis resulted in a three factor solution consisting of secure and insecure attachment classifications, with insecure attachment being predominantly represented by an Anxious/avoidant and a Dismissing Avoidant attachment style which all showed good levels of internal consistency.

The Anxious/avoidant attachment classification (Factor 1) is characterised linguistically by having difficulty trusting the attachment figure (I find it difficult to totally trust my mum), and a need for emotional self protection within the attachment relationship (I worry that I'll be hurt if I get too close to my mum). This attachment style is also characterised by a need for acceptance from the attachment figure regarding dependency (I find it hard to depend on my mum), and acknowledges possible devaluation from the attachment figure (I sometimes worry that I am worth less to my mum than she is to me). Overall the attachment classification acknowledges that the relationship with the primary attachment figure (mum) is not a positive experience (I am not ok feeling close to my mum).

The Dismissing Avoidant attachment classification (Factor 2) is more independent and self sufficient in its linguistic representation and suggests an intolerance of dependency from the attachment figure. Bartholomew's four factor model suggests this attachment classification is representative of a +ve self and -ve others mental representation. This attachment classification may also be influenced by the individual's confidence within independence from the attachment figure. Confidence in one's abilities tends to be associated with those who have a Secure attachment style and in part the Dismissing attachment style is similar in this respect, however what sets it apart from the Secure attachment style is the intolerance of dependency elicited from the attachment figure (I prefer my mum not to depend on me) which suggests a -ve view of attachment figure dependency, in contrast to the +ve view of the attachment figure dependency portrayed in the Secure attachment style (I am ok if my mum depends on me).

The Secure attachment classification (Factor 3 Table 4.2.25) shows a comfort in, and a wish to have emotional closeness to the attachment figure. There is an acknowledgement of a negative impact on the individual were that relationship to be unavailable and a comfort with dependency elicited from the attachment figure. In terms of mental representations, Bartholomew's model suggest that this would reflect a +ve view of self and +ve of others within the individuals internal working model and is recognised as adaptive in relation to adaptive functioning within interpersonal relationships.

Table 4.2.25 Statements within the Secure Attachment Style in the ARQ

	Secure Attachment Style
1	I want to feel totally close to my mum/primary caregiver
2	I want to feel close to my mum/primary caregiver
3	I am not ok if not having a close relationship with my mum/primary caregiver
4	I am ok if my mum/primary caregiver depends on me

The two insecure attachment styles (Table 4.2.26 & 4.2.27) are reflective of avoidant behaviour. The insecure 'Anxious Avoidant' attachment style appears underpinned by a certain amount of anxiety and lack of trust regarding the attachment relationship with the primary caregiver. There is a difficulty in self worth which may link to a negative view of the self and a lack of trust within dependency on the attachment figure in the relationship. Consistent with Bartholomew's anxious attachment style this would be represent a schema of negative view of self and a negative view of others.

Table 4.2.26 Statements within the Insecure Anxious Avoidant Attachment Style in the ARQ

	Anxious Avoidant Attachment Style
1.	I find it difficult to totally trust my mum/primary caregiver
2.	I worry that I'll be hurt if I get too close to my mum/primary caregiver
3.	I find it hard to depend on my mum/primary caregiver
4.	I sometimes worry that I am worth less to my mum/primary caregiver than she is to me
5.	I am not ok feeling close to my mum/primary caregiver
6.	I am ok depending on my mum/primary caregiver (reverse score)
7.	It is easy for me to feel close to my mum/primary caregiver (reverse score)

The second insecure style is representative of a Dismissing Avoidant attachment style (Table 4.2.27). This represents self sufficiency and a dislike of dependency within the attachment relationship. This attachment style may represent a positive view of the self with regard to self sufficiency and a negative view of others in relation to a need for dependency. Again this is consistent with the underlying schema of self and others portrayed in the Dismissing attachment style portrayed in Bartholomew's model.

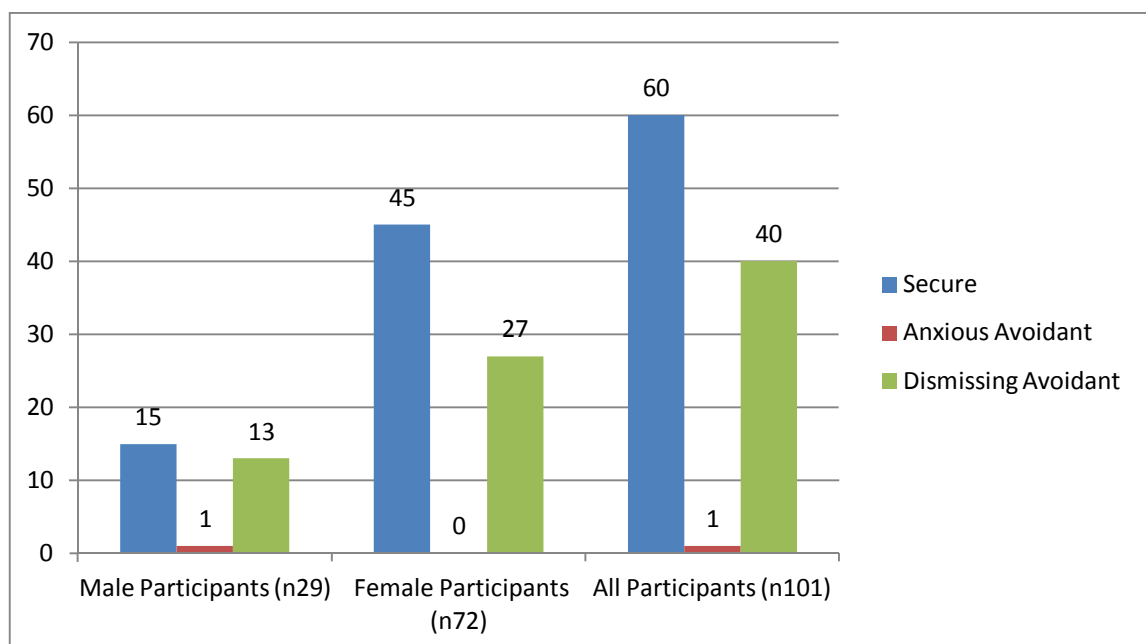
Table 4.2.27 Statements within the Insecure - Dismissing Avoidant Attachment Style in the ARQ

	Dismissing Avoidant Attachment Style
1.	It is important to me to feel I can do things for myself without mums/primary caregivers support
2.	It is important to me to feel I can look after myself on my own without mum/primary caregiver
3.	I prefer not depending on my mum/primary caregiver
4.	I prefer my mum/primary caregiver not to depend on me

Therefore, consistent with other self report measures, the findings here suggest the ARQ can reliably provide measurement of both Secure and Insecure attachment style. The measure shows consistency with other self report and interview measures in that the insecure attachment styles appear to be underpinned by the dimensions of attachment anxiety and attachment avoidance. The results also indicate that the attachment dimensions of self and other are also underpinning the attachment categories.

4.2.31 Distribution of Categorical Attachment Style

Figure 4.2.1 Distribution of Attachment Categories of Participants as Measured by the ARQ



It can be noted that the distribution of categorical attachment style within male participants shows only 1 participant (3%) with an Anxious Avoidant attachment style. Male participants were almost equally distributed between the Secure and Dismissing

Avoidant attachment categories with 15 (52%) participants falling into the Secure attachment category and 13 (45%) participants falling into the Dismissing Avoidant attachment category. With regard to female participants 45 (62.5%) fall within the Secure attachment category whilst 27 (37.5%) fall into the Dismissing Avoidant attachment category. There were no female participants in the Anxious Avoidant attachment category. The categorical attachment style of all participants together shows that of the 101 participants in the cohort 60 fall within the Secure attachment category 40 fall within the Dismissing Avoidant attachment category with only 1 participant falling within the Anxious Avoidant attachment category. Overall a slightly greater percentage of females than males (62.5% - 52% respectively) fall within the Secure attachment category and a slightly less percentage of females than males (37.5% - 45%) fall into the Dismissing Avoidant attachment category. Of all participants, there is a very small percentage of participants (1%) who fall within the Anxious Avoidant attachment category. There is a clear trend in the data in so far as more female than male participants tend to fall within the Secure attachment category and less female than male participants fall within the Dismissing Avoidant attachment category. Thus a Chi Square test statistic was performed to test for significant differences in gender ratings of categorical attachment style.

Table 4.2.28 Gender Differences in Attachment Categories from Ratings of the ARQ

	χ^2	df	Sig
Secure	.995	1	.318
Anxious Avoidant	2.508	1	.113
Dismissing Avoidant	.464	1	.496

Table 4.2.28 shows the results of the Chi Square test conducted to ascertain if the differences in categorical attachment style between genders was significant. The results suggest that no significant differences are present when examining the effect of gender on attachment categorical representation using the ARQ in this participant sample.

4.2.32 Discussion

Categorical representations of attachment within the ARQ support a three category model depicting both 'Secure' and 'Insecure' attachment categories. The insecure categories also appear to be underpinned by attachment anxiety and attachment avoidance whilst the 'Secure' category appears to show a comfort with closeness and shows consistency with the view of an individual who has a positive view of 'self' and a positive view of 'others' within attachment relationships. These findings are consistent in principal with the model suggested by Bartholomew & Horowitz (1991). Some inconsistencies arise within the classifications of insecure attachment. Bartholomew's model suggest three separate and distinct categories 'Preoccupied' underpinned by attachment anxiety and a 'love' view of self with a +ve view of others; 'Fearful Avoidant' with a 'love' view of self and a -ve view of others and 'Dismissing Avoidant' with a +ve view of self and a 'love' view of others. The results of the ARQ suggest that there is both a category underpinned by anxiety about close relationships (Anxious Avoidant) and a category which is dismissive of close

relationships (Dismissing Avoidant). It could be suggested that within the ARQ the Anxious Avoidant category is reflecting an individual who perceives a óve view of self with a +ve view of others whilst the Dismissing Avoidant category portrays a more +ve view of self and a óve view of others with regard to attachment relationships. If this were to be considered the case then participants within this study would appear to have a predominantly +ve view of themselves within attachment relationships. Although no significant gender differences were found there is a tendency for female participants to rate slightly higher within the ÷Secureø attachment category. It is difficult to ascertain without further studies the reason for this, however it could be argued that societal perceptions with regard to the female is that of the nurturer whilst the male is perceived as the protector of the family and is required to be the more aggressive of the two genders. It could be argued this may have led to female children being parented slightly differently and perhaps within a closer more nurturing attachment relationship.

The Dismissing Avoidant style is not representative of anxiety but rather of a more self confident person within the attachment relationship who has accepted that interdependency within the attachment relationship not an option. There is a discomfort with closeness in this respect. It could be argued that the positive self image within this attachment relationship negates the emotional anxiety and that the avoidance within this style may relate to protection of the self from the discomfort felt regarding dependency within the attachment relationship.

Interestingly the three factor solution shows some congruence with the model put forward by Ainsworth et al. (1978) which portrays three attachment styles ÷Secureø ÷Anxious Ambivalentø and ÷Fearful Avoidantø accounting for both attachment anxiety

and avoidance within the insecure attachment patterns. The development of self report measures was underpinned by these classifications (Hazan and Shaver, 1987) and subsequent self report measures being adaptations of Hazan and Shaver's original questionnaire, it is unsurprising when asked to respond regarding childhood attachment that the three category model re emerges. Of interest are the convergence of the anxious avoidant style (anxious/ambivalent or preoccupied) and the fearful avoidant attachment classification and the emergence of the dismissing avoidant style within the retrospective childhood classification of attachment style. One possible reason for this is that in adulthood, due to a reduced dependency on parents and a resultant increase in independence from parents it may be an adaptive attachment strategy which forms within a self protect mechanism relative to abuse. A further possible reason is simply that of achievement of independence in adulthood however it could be argued that those with a secure attachment style are not necessarily dependent on parents rather they are comfortable and confident in their own abilities but at the same time are comfortable to respond to dependency needs of the attachment figure. This is not the case within the Dismissing attachment style.

When considering the clinical relevance of the measurement of attachment style with the ARQ it could be suggested that those falling within the 'Secure' category are of little interest clinically. It is well documented (Bartholomew and Horowitz, 1991; Bartholomew Kwong and Hart, 2001; Hazan and Shaver, 1987 Ainsworth et al. 1978) that 'Secure' attachment is a protective factor for the development of mental health difficulties later in life. Thus clinically it is the category of 'Insecure' attachment in general that may be of interest to clinicians as this provides relevance to risk of development of mental health issues in adulthood. Considerable efforts have been made

by previous research to delineate attachment classifications into quite detailed categories however it could be suggested that it is level of anxiety and avoidance of attachment that is of particular interest to clinicians. Interpersonal problems which manifest from the individual difficulties manifesting from attachment anxiety and attachment avoidance alongside the perceptions of 'self' and 'other' held with regard to attachment relationships may be a more informative approach to inform clinical intervention. For example a module with regard to 'attachment orientation' may be a helpful inclusion within the provision of 'Social Problem Solving' psychological group therapy. Additionally the client presenting with high anxiety relevant to attachment may also rate as having an anxiety disorder in nosological diagnostic systems. The treatment for an Anxiety disorder differs from that which would be put in place for an Anxious Attachment Disorder (Brisch, 2004) and thus it is important in such cases that attachment issues should be explored. The category of attachment is only of interest in so far as it provides a label which may be reflective of an underlying clinical issue but it may be the intensity of the attachment anxiety or attachment avoidance that is relevant to clinical decision making and subsequent format of therapeutic intervention. Thus from a clinical perspective it may be more helpful to view attachment as 'Secure' or 'Insecure' and subsequently explore the level of intensity and impact to the client of attachment anxiety or attachment avoidance rather than depiction of a best fitting category. One further issue of allocation of categorical labels is the lack of acknowledgement of variance within categories. Thus it is not so much about Jane, Jim, John, Jean having and insecure attachment style but rather how does having an insecure attachment style affect Jane, Jim, John or Jean. Perhaps too much emphasis is being placed on defining attachment classifications rather than acceptance that there exists both 'Secure' and 'Insecure'

attachment styles and it is how the Insecure attachment style affects the quality of relationships for each individual that is of interest.

Principal Component analysis has developed the ARQ into a robust measure of retrospective childhood attachment. The claim is not to say that all issues with this the self report form of measurement of attachment style highlighted in earlier chapters have been dealt with, and several issues must be noted. Firstly, retrospective measurement of attachment in childhood may be subject to memory bias and interpretation. Secondly, in adulthood there is less perceived dependency on parents within attachment orientation and this may have led to less anxiety with a greater perception of self sufficiency. Thirdly, given the self report method of data collection it was not possible to eliminate defensive idealisation of attachment should it occur in the data, whilst it could be suggested that this would be expected to be at a low level, it is still possible that there may be some present within the current dataset which would in turn, reduce levels of attachment anxiety where they may otherwise exist.

As previously stated the aim of this thesis is to develop a self report measure of attachment orientation for use with offenders with mild ID. Given that this cohort are a forensic population it may assist at this point to elucidate the reader as to the diagnostic criteria for intellectual disability, what is meant by mild ID and also to look at previous research carried out within the field of forensic populations with ID. Differences in lifespan development will also be highlighted relevant to the formation of maternal attachment bonds or attachment bonds with a primary caregiver.

Chapter 5: Defining Intellectual Disability (ID).

5.0 Introduction

Over the years there have been many stereotypical descriptions of the person with intellectual disability (ID) including somewhat derogatory and value laden labels such as ‘simpleton’ or ‘moral defective’. Kearns (2001) suggests that ID is a colloquial and political term rather than a diagnostic entity. However clinical classification systems put forward by various agencies have developed diagnostic criteria that provide further definition to the term ‘ID’. For example, classification systems such as the International Classification of Diseases-10 (ICD-10) developed by the World Health Organisation, the Diagnostics and Statistical Manual IV-TR (DSM-IV-TR), the Mental Health (Care and Treatment) (Scotland) Act, 2003, the British Psychological Society (BPS) and the American Association on Intellectual and Developmental Disabilities (AAIDD) provide criteria for this diagnostic entity.

5.1.1 World Health Organisation and the International Classification of Diseases – 10th Edition (ICD-10)

In 1992 the World Health Organisation published the tenth revision of the International Classification of Diseases (ICD-10) which defines intellectual disability (mental retardation) as, *‘a condition of arrested or incomplete development of the mind, which is especially characterised by impairment of skills manifested during the development period, skills which contribute to the overall level of intelligence, i.e. cognitive, language, motor and social abilities’*. ICD-10 suggests that an individual’s overall level of intelligence should be assessed by a ‘skilled diagnostician’ after administering and scoring a standardised intelligence test to the individual

concerned. Alongside this test, ICD-10 suggests that assessment of the individual's level of social adaptation should be carried out using a reliable and valid assessment of adaptive behaviour. As the individual's level of IQ lowers adaptive behaviour deficits may become more evident. Classifications of ID fall into mild, moderate, severe and profound levels as shown in Table 1.0

Table 5.0 Classification of 'Mental Retardation' in ICD-10.

Classification	IQ points
Mild mental retardation	50 ó 69
Moderate mental retardation	35 ó 49
Severe mental retardation	20 ó 34
Profound mental retardation	< 20

Diagnostic and Statistical Manual-Fourth Edition-Text Revised (DSM-IV-TR)

Within DSM-IV-TR, intellectual disability is defined as *'significantly sub average general intellectual functioning accompanied by significant deficits or impairments in adaptive functioning, with onset before the age of 18'*. According to DSM-IV-TR, an individual who scores below 70 IQ points on a standardised scale would be classified as having significantly sub-average general intellectual functioning. Consistent with ICD-10, DSM-IV-TR recommends that IQ alone should not be used to diagnose ID and assessment of adaptive functioning should also be carried out. For example, clinicians are advised to evaluate an individual's effectiveness in meeting the standards expected of his/her age group by his/her cultural normative group in areas such as social skills and responsibility, communication, daily living skills, personal independence and self sufficiency. DSM-IV-TR is more flexible in its criteria of classification than ICD-10, as

it states that if an individual scores below 70 on an IQ scale, but shows adaptive behaviour in line with acceptable standards for their age and cultural norm group, they should not be diagnosed with ID. DSM-IV-TR also recognises the factor of 'borderline intellectual functioning' which ICD-10 does not. (See table 1.1.1).

Table 5.1.1 DSM-IV-TR's Classification of ID.

Classification	IQ
Borderline intellectual functioning	Approx 70 ó 84
Mild ID	50-55 to approx. 70
Moderate ID	35-40 to 50-55
Severe ID	20-25 to 35-40
Profound ID	Below 20 or 25

DSM-IV-TR and indeed ICD-10, from which it was formulated, are not without their critics. Underpinning classification systems of diagnostic entities is an underlying structure that assumes discrete categories of medical disorders that can be separated from each other by patterns of symptoms. It has long been argued this classification system makes unjustified categorical distinctions between disorders, and uses arbitrary cut-offs between normal and abnormal and does not account for variance within classifications (Spitzer and Wakefield, 1999; Krueger, Watson and Barlow, 2005; Bentall, 2006). For example borderline intellectual functioning may provide an arbitrary cut off point for the positive diagnosis of ID, but care should be taken not to assume significant differences in presentation and ability between the individual with a Full Scale Intelligent Quotient (FSIQ) of 69 who falls within the category of 'mild ID' in comparison

to an individual with an FSIQ of 70 who fall within the category of 'Borderline Intellectual Functioning'. A number of authors argue that rather than a categorical approach, a fully dimensional, spectrum or complaint-oriented approach would better encapsulate diagnostic entities (Spitzer and Wakefield, 1999; Krueger, Watson and Barlow, 2005; Bentall, 2006). Whilst a complaint oriented approach would better fit a psychological framework, services to this client group are currently delivered through the NHS which uses as its framework diagnostic sets of criteria to enhance the identification of clusters of symptoms defined by diagnostic classification systems. Many of these have arbitrary cut off criteria for the existence of diseases and whilst intellectual disability is considered a mental disorder and not a disease it is diagnosed rather than determined through psychological formulation and is thus subject to the arbitrary cut off within diagnostic classification systems.

5.1.2 The Mental Health (Care and Treatment) (Scotland) Act 2003

The classification of intellectual disability under the Mental Health (Care and Treatment) (Scotland) Act (2003) refers to a person who has, or appears to have, a mental disorder. Section 328 of the 2003 Act, provides that "mental disorder" means any mental illness, personality disorder, or ID however caused or manifested. Similarly to the previous Mental Health (Scotland) Act (1983), the definition of ID under the rubric of 'mental disorder' remains a two tier classification system (e.g. mental impairment or severe mental impairment). Mental impairment is defined as: *'a state of arrested or incomplete development of mind which includes significant impairment of intellectual and social functioning'*. Neither the 2003 nor the 1983 Acts establish exactly what is meant by 'mental impairment'. Nor do these Acts give any objective guidance to determine differences between levels of impairment such as 'significant' and 'severe' mental impairment. Additionally, it is also unclear as to what level of impairment of

social functioning or adaptive behaviour is required to support a diagnosis of 'significant' or 'severe' mental impairment.

5.1.3 The British Psychological Society (BPS)

In an attempt to offer clarification to the Mental Health (Scotland) (1983) and subsequently the Mental Health (Scotland) Act, 2003 criteria, the British Psychological Society (BPS) offered additional explanation for the 'significant' and 'severe' mental impairment categories that had been put forward. It was suggested that an individual with an IQ between 55 and 69 would be considered as having a 'mental impairment', whereas an individual with an IQ of 54 or less would be classified as having a 'severe mental impairment' (Alves, Williams, Stephen, and Prosser, 1991). Aligning adaptive behaviour to these classifications, the BPS also suggested that individuals requiring 'occasional' assistance with personal care, including keeping warm, would be considered to have a 'significant' mental impairment of social functioning whereas an individual who requires 'repeated and consistent' assistance on completing these tasks would be classified as having a 'severe' mental impairment.

5.1.4 The American Association on Intellectual and Developmental Disabilities (AAIDD)

The American Association on Intellectual and Developmental Disabilities (AAIDD) also offers criteria for the diagnosis of ID. This states that three criteria must be met in order for an individual to receive a diagnosis. Firstly, the individual must have 'significant impairment' of intellectual functioning. Secondly, they must have limitations in two or more of the following adaptive living skills: communication, self care, home living, social skills, community use, self

direction, health and safety, functional academics, leisure and work. Finally the onset of the ID must be apparent pre 18 years of age.

5.1.5 Summary

While there is broad agreement that IQ levels around two standard deviations below the mean, adaptive behaviour deficits and onset in childhood, meets the criteria for diagnosis of ID, there is no single definition which is universally accepted within either clinical or academic fields. The general lack of consistency with diagnostic criteria, has led clinicians and researchers to class individuals with an IQ falling between 55 and 75 IQ points as having a mild ID (e.g. Charman and Clare, 1992).

This thesis will adopt the criteria from DSM-IV-TR with regard to classification of mild ID. There are two main reasons underpinning this choice. Firstly DSM-IV-TR, is the criteria that provides the most clearly delineated criteria for the diagnosis of ID taking account standard error on intelligence testing. Secondly, this thesis plans to add additional data to a previous study in which data were gathered by the author (Dangerous and Severe Personality Disorder (DSPD) study) which used the DSM-IV-TR criteria as a definition of ID. This maintains consistency of definition of intellectual functioning and classification of ID within study inclusion criteria.

5.1.6 The Assessment of Intellectual Functioning

There exist varied theories of intelligence from those which suggest multiple forms of intelligence (Gardener, 1999), to those which examine global intellectual ability through both Crystallised and Fluid intelligence (Cattell, 1963). For example Gardner (1999) suggests several abilities should be examined to determine intelligence, such as: spatial (spatial

judgement), linguistic (ability with words either spoken), logical-mathematical (ability with numbers, logical thinking and critical reasoning), bodily-kinaesthetic (sense of timing and a clear sense of the goal appertaining to physical actions) musical (sensitivity to sound, tones and music), interpersonal (ability to understand others, sensitivity to others), intrapersonal (ability for introspection and self reflection) and also naturalistic ability (nurturing and relating to natural surroundings and environment). Cattell (1999) outlines general intelligence within concepts of fluid and crystallized intelligence. Fluid intelligence or fluid reasoning, is acknowledged as the ability to analyze novel problems, identify patterns and relationships underpinning these problems and the use of logical ability to problem solve. Fluid reasoning includes both inductive and deductive reasoning and is thought necessary for all logical problem solving, especially scientific, mathematical and technical problem solving. Crystallized intelligence is the ability to use skills, knowledge, and experience based on lifetime or intellectual achievement, as demonstrated largely through extent of an individual's vocabulary and also general knowledge. Crystallized intelligence is thought to improve somewhat with age, based on the assertion that life experiences tend to expand an individual's knowledge base. Most tests of intellectual functioning attempt to measure both Fluid reasoning and crystallized intelligence, for example, the Wechsler Adult Intelligence Scale (WAIS) measures fluid intelligence on the performance scale and crystallized intelligence on the verbal scale. The overall IQ score is based on a combination of these two scales.

Historically the first English language test of intellectual functioning was known as the Terman-Binet (1916) test. This test was adapted from an assessment tool used to measure the potential of an individual to achieve. Initially developed by Binet in France, and subsequently translated by Terman, it was first employed as a means to measure intellectual capacity based on language. The assessment included tests of vocabulary, numerical reasoning, memory, motor speed and analysis skills. The Terman-Binet assessment was later surpassed by the Wechsler Adult

Intelligence Scales (WAIS) which are to the present day, the most widely standardised and validated tests, both nationally and internationally, as a measure of global intelligence. Wechsler published the original WAIS (Form I) in 1955 which was a revision of the Wechsler-Bellevue Intelligence Scale. In the 1930s the Wechsler-Bellevue tests were considered to be groundbreaking due to the inclusion of non-verbal items (known as performance scales) as well as verbal items for all test-takers (Kaufman and Lichtenberger, 2006).

5.1.7 Determination of Intellectual Functioning

The mean score on the Wechsler IQ test is 100, with a standard deviation of 15 IQ points. Consistent with diagnostic classification systems, intellectual disability is generally considered to be present when an individual scores two standard deviations below the test mean i.e. less than 70 IQ points. Until recently, scoring of the standard intelligence test revealed a verbal IQ (VIQ), a performance IQ (PIQ) which when added together would give a standardised full scale IQ (FSIQ) relevant to the individual's normative and age referenced comparison group. The most recent update of the Wechsler Adult Intelligence Scale (WAIS IV^{uk}) (2010), provides more focus on four indices of intellectual functioning rather than the production of VIQ and PIQ per se. These indices assess the individual's competency in verbal comprehension, perceptual organisation, working memory and processing speed. The WAIS IV^{uk} also formulates a FSIQ based on a general battery of tests. Once a FSIQ is attained the diagnostician can then refer to the DSM-IV-TR criterion which subdivides ID (mental retardation) into four precise categories based on IQ scores. At the time of assessment for diagnosis of ID, factors which may contribute to low IQ score other than cognitive ability should be eliminated. For example active symptoms of mental illness which may affect motivation, attention or concentration such as depression, anxiety, schizophrenia or prior alcohol or drug use which may have contributed to cognitive

decline in adulthood. It is therefore important for the tester to rule out these factors prior to concluding the results of the assessment process. All participants within this study have a diagnosis of mild intellectual disability. Determination of intellectual ability is generally carried out when the individual client is referred to the service. As these referrals have occurred over time participants level of intellectual functioning has been tested using the WAISS III^{uk} in the majority of cases with a few participants having been assessed using the WAIS IV^{uk}. All participants attained IQ scores within the mild intellectual disability range when tested on Wechsler tests.

5.1.8 The Adaptive Behaviour Component

According to the DSM-IV-TR diagnostic criterion of ID a person's adaptive functioning should also be taken into consideration. Adaptive behaviour refers to the typical performance of individuals without disabilities in meeting environmental expectations. It is recognised that adaptive behaviour changes according to a person's age, cultural expectations, and environmental demands. Thus adaptive behaviour may be summarily defined as the effectiveness, or extent, to which an individual meets the standards of personal independence and social responsibility, expected of his/her age and within comparison to his/her social group.

Diagnosis of ID also requires the presence of deficits in at least two aspects of adaptive behaviour. These may relate to personal independency, self sufficiency and social functioning and may reflect difficulties in communication, social skills, personal care etc. There are many reliable and standardised scales with which to measure the adaptive functioning of an individual e.g. the Vineland Adaptive Behaviour Scales (VABS) and the Adaptive Behaviour Residential and Community (ABS-RC2). Assessment is rated by an individual who knows the client well

and who can answer reliably with regard to rating the variety of adaptive behaviours on the scale. Questions may include rating items such as the client's ability to perform a variety of personal care tasks without support, ability to manage money, ability to use a phone etc. Once ratings of behaviour are completed scores are compared to a standardised sample of ratings of others who have a diagnosis of ID spreading across the classifications of level of impairment within a similar age range.

Both interview and observational measurement are important in this regard. For example, deskilling may occur within institutionalisation and lack of opportunity to learn or utilise their skills. Care in the community is supportive of each individual's development of skills relating to positive adaptive functioning and therefore adaptive behaviour may be at a higher level for those clients living in the community when compared to those who have resided in a hospital setting for a number of years. Thus formal assessments must be taken in context of personal circumstances such as where the person is living, age, gender and religion.

5.1.9 Prevalence of Intellectual Disability

The information services division of NHS Scotland in 2008 compiled data on the prevalence of ID in Scotland (Statistics Release, 2008). Around one hundred and twenty thousand people in Scotland are thought to have ID. Twenty people in every one thousand are thought to have a mild or moderate ID. The theoretical prevalence of ID in the community within the UK is 2.5% (Wechsler, 1999) however it should also be recognised that these statistics are compiled from individuals who have come into contact with services for people with intellectual disability. Such prevalence rates may not be an exactitude of the current population of people with intellectual disability as there may be individuals who due to family support or other supportive mechanisms may not have come into contact with services.

5.1.10 Deinstitutionalisation

In the 1940s, 50s and 60s as many as 25,200 of the present population of people with ID were institutionalised as children, traditionally in large scale hospitals throughout the UK. In 1976 there were over 51,000 long stay beds in the NHS for people with ID (Emerson, 2004). Within the UK, the implementation of deinstitutionalisation policies meant the cessation of large scale institutionalised care with the implementation of care in the community for this client group (Emerson, 2004). The Scottish Community Care Statistics (2001) report that the decrease in occupied hospital beds within services for people with intellectual disability had fallen to under a quarter of that in 1980 with a resultant increase in residential care homes. Deinstitutionalisation process for ID services has occurred in different stages worldwide. For example, the process commenced in the 1980s in the UK, however by 2007 Taiwan had only commenced the closure of institutional settings for people with ID (Beadle-Brown, Mansell and Kozma, 2007).

5.1.11 Promoting Quality of Life: ‘The Same as You’

Important Government revision of policy initiatives in Scotland were driven by deinstitutionalisation and the need to define life in the community for people with ID. This review began by examining social and healthcare services for this group of people (March 2000, The Same as You). Particular attention was paid to relationships with education, housing, employment and quality of life. Quality of life for people with ID included particular reference to social inclusion, equality and fairness, and the opportunity to improve them-selves. These initiatives were based within continuous learning, with particular emphasis on care at home and

inter agency working (Steptoe, Lindsay, Forrest, and Power, 2006). The ‘Same as You’ report states that people with ID should be able to lead a typically normal life. In particular:

“to be included, better understood and supported by the communities in which they live; have information about their needs and the services available, so that they can take part, more fully, in decisions about them; be at the centre of decision making and have more control over their care; have the same opportunities as others to get a job, develop as individuals, spend time with family and friends, enjoy life and get the extra support they need to do this, and; be able to use local services wherever possible and special services if they need them”. (The Same as You, 2000 p. iv)

Research investigating deinstitutionalisation continues to highlight that outcomes such as quality of life and prevention of challenging behaviour are better in the community than in institutional care (Beadle-Brown et al., 2007). However Beadle-Brown et al., (2007) also highlight that moving people out of hospital into community settings does not bring about an automatic improvement in quality of life in terms of choice and inclusion, as well as self-identity and access to effective health care and treatment. Once in the community it was not necessarily the case that social contacts or social inclusion would increase. Abbot and McConkey (2006) conducted focus groups with 68 people with intellectual disabilities who lived in supported living or shared group homes in Northern Ireland. They explored the barriers to social inclusion and the solutions as perceived by the people themselves. There were 4 main sets of barriers identified including personal abilities and skills, staff management of inclusion (e.g. allowing and supporting people to go out), the location of the house within the community (and access to transport etc) and community attitudes and the facilities available in the community.

5.1.12 Normalisation and Offending Behaviour

Community life for people with ID connotes an expectation of normalisation i.e. that with some support the individual will live a ‘normal life’ (as defined by ‘The Same as You’ March 2000)

(Sinason, 1992). Previously institutionalisation meant the availability of locked wards to contain those with problematic, challenging or offending type behaviours where necessary (Kearns, 2001). Deinstitutionalisation posed the problem of contact with the criminal justice system for some of this group. Kearns (2001) suggests two important issues within this context. The first suggests that a person with ID may be more likely to fall into contact with the criminal justice system because of limited intellect and social skills; and secondly that the criminal justice system is less likely to proceed with action against him/her (Kearns, 2001). The latter, Kearns (2001) suggests, is more likely to occur when the person with ID is more obviously handicapped. For example, indicators such as physical appearance, his/her social or intellectual performance, or that he/she is already in a care provision service, such as a hostel for people with ID, or a hospital assessment unit which identifies their status, may make proceedings less likely under CJS procedures (Kearns, 2001). According to Kearns in these cases, the police or the criminal justice system may be reluctant to proceed with the case for a variety of reasons, among them the perception that to charge the person with ID is oppressive, or the belief that the behaviour of the intellectually disabled person is 'challenging' rather than performed with criminal intent which leads to legal culpability.

5.1.13 Offenders with ID

To examine the incidence of people with ID in the criminal population Lyall et al. (1995b) reviewed adults living in residential placements for people with ID and investigated those who had been interviewed by police because of alleged offences. Interestingly, the effect on criminal justice services of the context of residency appeared to have been a significant factor. Despite the seriousness of many of the offences, no one appeared in court, nor were any diverted to specialist health services. A further issue is the under reporting of crime committed by offenders with ID

(see Lyall et al., 1995b). Categorised as one of the most stigmatised populations (Simpson and Hogg, 2001) offenders with ID are noted as one of the most poorly served and under recognised groups of individuals (Barron Hassiotis, and Banes, 2002) .

5.1.14 Prevalence of Offending Within the Population of People with ID

The difficulties ascribed by Kearns (2001) to the due process of offenders with ID within the criminal justice system are just a part of a number of issues leading to difficulty in determining the prevalence of offenders with ID. Research has observed prevalence rates of ID in criminal populations ranging from 4-10% however rates vary relative to the context of the study and diagnostic variation (Dwyer and Frierson, 2006). For example estimated rates in US prisons vary between 0.2% and 14%. (Brown and Courtless, 1968; Denkowski and Denkowski, 1985; MacEachron, 1979; Petersilia, 1997). More recently prevalence rates of 28% have been found in the Irish prison system (Mulrooney, Murphy, Harrold and Carey 2004; Murphy, Harrold, Carey and Mulrooney, 2000). This high prevalence rate may be due to the broader definition of intellectual disability applied within this study. Research in the UK on the prevalence of offending by people with intellectual disability found rates between 0% and 8.6% (Holland, Clare and Mukhopadhyay, 2002). Caution must be exercised when interpreting the results of prevalence studies as prevalence estimates of offenders with ID are complicated by diagnostic variation, inconsistencies of criminal justice procedures and contextual variation (Holland et al., 2002; Jones, 2007, Lindsay Hastings and Beech, 2011). These issues are likely to be responsible for some of the variation in the figures described here.

5.1.15 Validity of Diagnosis

Holland (1991) and MacEachron (1979) reviewed studies of prevalence and found serious methodological flaws. Lack of consistency in assessment of ID within studies calls into question the validity of the assertion that the study is providing a valid contribution to research on offenders with ID. For example in a study of individuals in high security hospitals of England and Wales, Walker and McCabe (1973) relied on legal categorisation, rather than psychometric assessment, as their definition of ID. The results suggest that 34% of men and 38% of women were detained under the 'mental sub normality' categories of the English Mental Health Act (MHA) 1959. Messinger and Apfelberg (1961) relied on psychiatric interview, but no formal psychometric testing, in a study of approximately 57,000 individuals assessed for the courts in the city of New York, and found that about 2.5% had ID. MacEachron (1979) carried out a review of studies relative to prevalence rates of ID among prisoners and found wide ranging prevalence rates from 2.6% to 39.6%. Her own study of 436 adult male prisoners in US state penal institutions found prevalence rates of ID of 0.6 to 2.3%, using recognised intelligence tests (MacEachron, 1979). Lyall (1995a) reviewed people arrested and screened by police custody officers and found to have been in a special school for children with mild or moderate ID. They found that none of the subjects had a measured IQ less than 70. However, several participants reported having learning support at school and by this less exact assessment, they may have been classified as falling within an ID range. Despite the criteria laid down by diagnostic classification systems many studies of prevalence include problems in the definition of ID and therefore may lend little to the study of prevalence in this field.

5.1.16 Taking Account of the Diagnostic Criteria for ID

Herrington (2009) evaluated the cognitive functioning in 185 adult male prisoners aged between 18 and 21 years of age. Assessment of cognitive functioning was carried out using the Kaufman Brief Intelligence Test (Second Edition) (KBIT2). Adaptive behaviour was tested using the Vineland Adaptive Behaviour Scales (Second Edition) (VABS2). Ten percent of participants were found to have an IQ composite of 69 or below, indicating a level of intellectual functioning with the ID range; however none were found to be functioning within that range relative to adaptive behaviour. Overall, this author concluded that when taking intellectual functioning (KBIT2) scores and adaptive behaviour (VABS2) scores together, in line with diagnostic criteria, the participant sample equated to a prevalence of ~~borderline~~ intellectual functioning of 11% rather than qualifying as having an ID per se. Additionally, in a cross sectional study of inmates from a Norwegian prison population Sondena, Rasmussen, Palmstierna and Nottestad, (2008) found a prevalence of 10.8% of inmates with an IQ less than 70 using the Hayes Ability Screening Index (HASI) which was validated using the Wechsler Abbreviated Scale of Intelligence (WASI).

5.1.17 Change in Social Policy

The change in social policy affected research on prevalence rates of offending in ID populations. For example, Lund (1990) identified a significant increase in offenders with mild ID receiving a first sentence in 1984 compared to 1973. However rather than an increase in the prevalence of offending behaviour, Day (1993) suggests that this may have been an early result of the influence of care in the community policies. Barron et al. (2002; 2004) suggest that the deinstitutionalisation movement left a gap in service provision for offenders with ID.

Overall there does not seem to be a consensus on the actual prevalence rates of individuals with ID who find themselves in contact with the criminal justice system (Crocker, Cote, Toupin, St-Onge, 2007). Prevalence rates of offending do not include those who were found either not criminally responsible on account of mental disorder or unfit to stand trial (Crocker et al. 2007). In addition prevalence rates may vary as a function of general rates of incarceration, jurisdiction, and the IQ test used (Baroff, 1996; Holland et al., 2002; Simpson and Hogg, 2001; Spruill and May, 1998). Despite not being able to reliably quote a percentage there is a body of evidence that suggests a number of people with ID do offend and do come into contact with the criminal justice system and therefore constitute an appropriate research group for this thesis (Brackenridge and Morrisey, 2010; Carson et al., 2010; Hogue et al., 2006; Keeling, Rose and Beech, 2007; Lindsey, Steptoe and Beech, 2008; Lindsey, Steptoe and Haut, 2011).

5.1.18 Contextual Sampling Bias

Research has been carried out in a variety of settings, such as high security hospitals (Walker and McCabe 1973), medium secure hospitals (Day 1994), criminal justice services (Mason and Murphy 2002), courts (Messinger and Apfelberg 1961) or police stations (Lyll, Holland, Collins, and Styles 1995). Studies have a tendency to restrict themselves to single populations or single locations in their investigations. This may result in contextual biases in their findings. The multi site study carried out by Hogue et al., (2006) highlighted this issue. This comparative study of offenders with ID examined a number of factors pertaining to offenders with ID across three levels of security, high, medium/low and community. A total of 212 offenders with ID as defined by the Wechsler Adult Intelligence Scales (mean IQ 65.88, SD=8.46) took part in the study. The mean age of participants was 36.14 (SD=10.31 years).

The study examined both offending across the lifespan and index offence behaviour, the index behaviour being defined as the last behaviour which brought the offender into contact with criminal justice services. There were no overall significant differences between levels of security with regard to sexual offending behaviour either across the lifespan or as an index offence. However Hogue et al., (2006) suggest several contextual differences in relation to the details of sexual offending which are important. For example both High and Medium secure patients had records of some use of weapons in sexual offences whilst patients in the community setting did not. Patients in the community setting had a higher level of sexual assault against female victims and known victims than those in the other two levels of security. Fatal violence was a feature of high security participants only. An index offence of a violent nature, having a male or stranger victim within the violent index offence appeared to relate to a higher level of security as did alcohol/drug use at time of index offence. Early psychiatric service contact was found to be more likely in the lower security groups whilst co morbid personality disorder diagnosis was more likely in the high secure group. These authors show that the context of sampling may affect relationships found between ID and typology of offending behaviour when the methods for measuring ID are held constant. Their findings also highlight the heterogeneity of offences within offenders with ID. Leonard, Shanahan, and Hillery, (2005) suggest that evidence which purports that offenders with ID are more prone to offending than mainstream offenders without ID is either incorrect or a minimalistic expression of what is actually going on. For example, Simpson and Hogg (2001) conclude from their systematic review of the evidence regarding intellectual disability and offending behaviour, that clear evidence is lacking to suggest that the prevalence of offending behaviour in people with intellectual disability is greater than that in the mainstream population.

5.1.19 The Mentally Disordered Offender (Mental Health (Scotland) Act (2003)).

Web and Harris, (1999) suggest that dealing with offenders with ID under the Criminal Justice System is further complicated by the fact that such offenders fall under the rubric of mental disorder. They suggest that mentally disordered offenders are often categorically awkward for the Criminal Justice System, as they are seen as neither exclusively ill, nor exclusively bad (Web and Harris, 1999; Peay, 2002). The two issues which are often presented to health, criminal justice personnel and policy makers, with regard to offenders with mental disorder, are firstly, should the priority be to treat the mental disorder or to punish the offender for infractions. Secondly should offenders with ID be housed within prisons, hospitals, or in the community (Peay, 2002).

Police may also be loathe to proceed on the grounds that the person should be managed within health and social services, and may be further influenced by a belief that to pursue such a case will be unsuccessful with regard to *mens rea* (literally 'guilty mind'). However failing to consider this population within a forensic light may be an omission, since it has been suggested that there exists an elevated prevalence of sexual offending and sexual abuse (Walker and McCabe, 1973; Day 1993), aggression (Emerson et al. 2001, Novaco and Taylor 2001, Taylor 2002) and an elevated prevalence of fire-raising in this client group (Walker and McCabe 1973, Prins 1980, Raesaenen et al. 1994).

5.1.20 Psychopathology

In the past fifteen to twenty years it has been recognised that individuals with ID are as, (or are even more) vulnerable to, psychiatric and emotional disorders than the general population (Sovener and Hurley, 1983, Szymanski et al., 1991; Ryan, 1994; Lunskey, Palucka, 2004; Smith,

2004, Smith, and O'Brien, 2004). In a review Rojhan and Tasse (1996) noted that between 20% and 40% of individuals with ID also have co-occurring mental health problems. In addition those with dual disorders are more likely to exhibit various forms of aggressive behaviour (Borthwick-Duffy, 1994a, 1994b; Rojhan, Borthwick-Duffy and Jacobson, 1993). In a multi-site study with a cohort of 212 offenders with ID, Hogue et al., (2006) found 21.1% were diagnosed with psychotic disorders 6.4% were diagnosed with mood disorders. Significant differences between three levels of security (which were defined as high secure, medium/low secure and community based) were found with regard to patients' emotional problems such as anxiety, depression, withdrawal, low self esteem and somatic concerns, with patients in secure care showing higher levels of emotional difficulties than those in the community sample. Hogue et al., (2006) found no differences between the three sites in terms of thought/behaviour disorder, non compliance, distractibility, hyperactivity, verbal aggression and sexual maladjustment. A number of issues were discussed by Hogue et al., (2006) which were relevant to incarceration in the high secure setting however the main issue would appear to reflect the level of antisociality and the willingness to use weapons within the index offence. With no differences found between high secure, medium/low secure and community settings on non compliance, hyperactivity, verbal aggression and sexual maladjustment it may be those who are more prone to the use of physical aggression who are housed within the high secure setting.

5.1.21 Substance Misuse

Within the Criminal Justice System, Hayes (1997) found that 81.2% of individuals surveyed in local courts reported that they had consumed alcohol on the day of the offence, and 79.4% reported that they were intoxicated. There were no differences found between ID and non ID groups. Mannynsalo, Putkonen, Lindberg, and Kotilainen, (2009) carried out a nationwide study

which reviewed pre trial psychiatric reports of offenders with ID in Finland. Almost half of offenders were diagnosed with alcohol abuse/dependence and two thirds with substance abuse/dependence. Investigating recidivism in male offenders with ID, Klimicki, Jenkinson and Wilson (1994) also found substance abuse to be an important factor. When compared to other prison inmates in a Norwegian prison, Sondenaa, et al., (2008) suggest fewer offenders with ID have difficulties relative to drug use. Additionally Hayes (1994) and Lindsey et al., (2007) report low levels of drug use in samples of offenders with ID, however alcohol and/or drug use appear to be a significant factor within the cycle of offending when present within this client group.

5.1.22 Personality Disorder

The prevalence of antisocial personality disorder in the general population varies depending on the methodology used, and the countries studied, but all show that the condition is much more prevalent among men. The lifetime prevalence in North American studies varies slightly from 4.5% among men and 0.8% among women (Robins *et al.*, 1991), 6.8% among men and 0.8% in women (Swanson *et al.*, 1994) and 7.3% of males and 1.0% of females (Bland, Orn and Newman, 1988; Robins, Tipp and Przybeck, 1991). Two European studies found a prevalence of 1.3% in men and 0% in women (Torgensen *et al.*, 2001) and 1% in men and 0.2% in women (Coid *et al.*, 2006, Singleton, Bumpstead, O'Brien, Lee, and Meltzer, 2002). Antisocial personality disorder is common in prison settings. Surveys of prisoners worldwide indicate a higher rate of antisocial personality disorder when compared to community settings. Examining the prevalence of ASPD in male prisoners Moran (1999) found a prevalence of between 40% and 60% while community samples were between 2% and 3%. Similarly Singleton *et al.*, (1998) found the prevalence of people with antisocial personality disorder as 63% male remand prisoners, 49% male sentenced prisoners, and 31% female prisoners. When evaluating

prevalence of ASPD in a high secure hospital setting Blackburn, Logan, Donnelly and Renwick (2003) found a prevalence of 40% to 60% in their study of male patients in two high security hospitals. In the Epidemiological Catchment Area (ECA) study, when men with and without antisocial personality disorder were compared, those with antisocial personality disorder were three and five times more likely to misuse alcohol and illicit drugs (Robins *et al.*, 1991).

A particularly consistent finding in the field of personality disorders is the relationship between Antisocial Personality Disorder (ASPD) (DSM-IV-TR) and violent offending (Lindsay, Hogue, Taylor, Mooney, Steptoe, Johnstone, O'Brien and Smith, 2006). The relationship between ASPD and criminogenic factors is not surprising as the diagnosis includes a failure to conform to social norms with respect to lawful behaviour, being deceitful, conning others for personal profit or pleasure, irritability, reckless disregard for the safety of others, irresponsibility, and aggressiveness (Lindsay *et al.*, 2006).

In an investigation of the prevalence of PD in offenders with ID (n164) 39.3% were considered to satisfy full diagnostic criteria for at least one PD (Hogue *et al.* 2007). The most common diagnosis was ASPD. Additionally within large sample studies of offenders with ID (Hogue *et al.*, 2007; Mannynsalo *et al.*, 2009) found the prevalence of Personality Disorder diagnosis in offenders with ID to range between 22% and 25%.

5.1.23 Characteristics of Offenders with ID

Similar characteristics can be noted between offenders with ID and offenders within the mainstream population (Leonard, Shanahan, and Hillery, 2005). It is also well recognised that adults with ID, mental health difficulties and forensic issues are a complex group of people

(Leonard et al., 2005; Raina and Lunskey, 2010). The lack of validated forensic assessment schedules for this population poses a further challenge to research and clinical practice with this group of people (Leonard et al., 2005). In their review of studies on the characteristics of offenders with ID, Holland et al., (2002) noted that, in common with offenders in the general population, these individuals tended to be young, male, to have experienced severe psychosocial disadvantage and offending from other family members. In their multi centred study of adults with learning disabilities referred to services for antisocial or offending behaviour, Carson et al., (2010) found the mean age of offending onset was sixteen years of age in community settings and 12 years of age for those in secure settings. Additionally over 33% of cases were referred for multiple incidents of the index behaviour (at least five instances) suggesting that these individuals present with a significant and enduring issue. Offences against the person were more prevalent than non person offences, aggression being the most common antisocial or offending behaviour. Low rates of property damage, arson and substance misuse behaviour were recorded with higher rates of sexual offending and theft. A number of studies suggest there exists an elevated prevalence of sexual offending and sexual abuse (Walker and McCabe, 1973; Day 1993) within offenders with ID.

5.1.24 Sexual and Physical Abuse

Adults with ID are particularly vulnerable to sexual abuse and exploitation, due to their often lifelong dependency on care givers (Tharinger. Horton and Millea, 1990). They also suggest that people with ID hold a relatively powerless position in society, have emotional and social insecurities, and lack of education regarding sexuality and sexual abuse. Sexual abuse in childhood has been considered as a characteristic of sex offenders with ID. Lindsay, Carson and Whitefield, (2000), reported a significantly higher rate of sexual abuse 38% vs 12.7% in the sex

offender group when comparing 48 sex offenders with 50 non sex offenders. Lindsay and MacLeod (2001) rightly point out, that not all sex offenders within a population of offenders with ID, have been sexually abused. Additionally it is well recognised that not all individuals who have been a victim of sexual abuse will go on to abuse (Briggs and Hawkins, 1996). Lindsay et al., (2000) also noted a significantly higher rate of physical abuse in a non sex offender cohort (36% vs 14%). When investigating risk factors associated with the development of antisocial behaviour Farber and Egelend, (1987) observed that although abused and neglected children possessed coping strategies they could use to adapt socially, they still had significant emotional problems.

5.1.25 Sex Offenders with ID

Investigating the characteristics of sex offenders with ID Glaser and Deane (2000) compared sex offenders with other offenders with ID and found common characteristics to both groups. For example, the majority had been institutionalised at some point during their childhood and participants in both groups had a disrupted family life. Following structured reviews of clinical practice several authors (Griffiths, Quinsey, and Hingsburger, 1989; Day, 1994; Caparulo, 1991; Lakey, 1994; Hayes, 1991) identified a number of characteristics of offending with ID populations. These characteristics include, high incidence of family psychopathology, inability to form normal sexual and personal relationships, lack of social sexual knowledge, poor impulse control, low self esteem and family history of ID. In a study of 212 offenders with ID across three sites, over fifty percent of each group had committed at least one sexual offence (Hogue et al. 2006). One caveat to these results is that the results may be a reflection of clinical referral patterns (Lindsay and MacLeod, 2001).

5.1.26 Non Sex Offenders with ID

In their multi site study of 212 offenders with ID across three levels of security Hogue et al., (2006) identified a varied pattern of offence types. Offence types varied from serious sexual assault through a wide variety of sexual offences. A varied typology of violent offences were also evident from serious offences such as murder/manslaughter or assault occasioning actual bodily harm to lower level offences such as criminal damage, threatening behaviour or Breach of the Peace. The prevalence of Arson offences was significantly higher in the medium/low secure setting suggesting a possible contextual bias relative to some studies which report an over representation of arson offences within offenders with ID¹. Weapon use and alcohol/substance misuse were also a feature. The findings of Hogue et al., (2006) lend support to the assertions made by Hayes (1994) and Thomson and Brown (1997), who report that individuals with ID commit offences across the range of criminal behaviours.

5.1.27 Conclusion:

People with ID have experienced significant changes to their lives and residencies in the past four decades. Many have adapted to a normalised life in the wider community however for some individuals there exists offending behaviour. The typology of offending behaviour is comparative to that found within mainstream offender populations. Given the similarities that exist between offenders in the mainstream population and offenders with ID, factors recognised as relating to the development of antisociality in mainstream populations such as poor parental relationships, insecure attachment relationships, psychosocial difficulties in childhood and

childhood abuse may also be relevant to the development of offending behaviour in offenders with ID and may be worthy of further exploration in this cohort.

Although in studies on general offending, attachment difficulties in childhood have been related to criminality (Ward, Hudson and Marshall 1996; Stirpe, Abracen, Stermac, and Wilson, 2006), no study has yet explored whether attachment issues in childhood may be a factor relative to mental health issues in adulthood and/or offending behaviour for offenders with ID. One reason attachment orientation may not have been explored in this population may be the lack of appropriate measurement tools to do so. Many therapeutic intervention programmes developed for mainstream populations have been adapted for offenders with ID. The programme adapted for use as intervention for sex offenders with ID integrates therapeutic intervention for insecure attachment orientation based on research findings in mainstream offending populations. If we are unable to measure this concept in people with ID, clinicians and researchers remain unable to identify factors of attachment which may or may not be related to offending behaviour in offenders with ID. Leonard et al., (2005) have alluded to the lack of validated forensic assessment schedules for this population.

This thesis will explore attachment in offenders with ID. Firstly it will select an appropriate method of assessment of attachment orientation in mainstream populations and will adapt this measure for use with a population of individuals with mild ID. Construct validity and reliability of the adapted assessment will be carried out. Data will be gathered on attachment alongside additional data in line with that already collected for 18 participants who previously were included in the Dangerous and Severe Personality Disorder (DSPD) study (Hogue et al. (2006). The researcher gathered all data for the community site in the DSPD study. This included data for 69 participants who were offenders with mild ID. Data was collected from file review and

clinical interview for each participant. Data collection included background and forensic information from file review, emotional stability, interpersonal style, presence of personality disorder consensus diagnosis rating of psychopathy and risk assessment. The study aim was to explore whether the concept of DSPD was applicable to offenders with ID.

The data collection within this study is in line with that from the DSPD study. The same psychometric testing will be used in the same format and file review of information will collect the same data and will include data on offence history and index offence, childhood abuse. Clinical data on emotional problems, interpersonal style, personality disorder and risk assessment will also be gathered however no data will be gathered on the rating of psychopathy for the current study. Additional data will be collected on perceived parenting which will be used to evaluate the relationship between attachment, offending behaviour and the development of personality disorder. Analysis will also explore the effects of childhood abuse on attachment orientation within this cohort.

Chapter 6: Characteristics of Offenders with Mild ID

6.0 Defining the Cohort of Offenders with Mild ID

This chapter aims to provide a description of the cohort of offenders with ID (n38) who participated within this thesis. This will include the mean age of the sample, types of offences both historically and with regard to the index behaviour. Within the literature on the development of offending, childhood maltreatment and poor parenting are cited as risk factors for the development of antisocial behaviour (Farrington, 1995; Farrington and Coid, 2003), thus the association of childhood abuse and residency with parents or in care will be explored.

6.1.1 Method

The participants for this study were obtained from the forensic services for people with intellectual disability at Strathmartine Centre, Dundee. Some participants (n18) had already been included in the Dangerous and Severe Personality Disorder study (Community Site) on which the researcher gathered the data in the position of research assistant. Participants within the control condition were obtained from Castlebeck Care, Dundee.

Permission for this study was obtained from the East of Scotland Research Ethics Service (Rec. ref number 11/S0501/2). Permission was also granted from the grant holders of the DSPD study to add to and extend the existing data.

6.1.2 Description of Participants

Thirty eight participants were employed in this study. Eighteen of the thirty eight participants had previously been employed within the 'Dangerous and Severe Personality Disorder' (DSPD) study. The DSPD study was a multi site study and ethical approval was sought and granted locally for each site. Data was gathered under Caldicot Guardian Approval in the NHS Tayside site. Based on the Diagnostic and Statistical Manual IV-TR (DSM-IV-TR) classification of learning disability all participants had a mild intellectual disability, with a mean IQ of 62.89, S.D. = 4.34, range = 55 ó 70. Their mean age was 37.87 years S.D. 9.13, range 23-60 years. All participants had at least one incident of offending or offending type behaviour.

6.1.3 Measures

The Background Information Report (BIR) and the Basic General and Forensic History form previously used in the DSPD study were employed to record information from file review. The BIR collects information on, age at first contact with the justice system, type and number of offences, failure on conditional release or breach of probation, school behaviour, issues of parenting such as being placed in care, abuse (physical or sexual), any alcohol or substance misuse, work history and romantic history, and diagnosis. The Basic and General Forensic History: Data Collection Form asks for psychiatric service contact, sentencing dates pre and post 18 years, types of offences in detail, nature of index offence, frequency of types of offending behaviour, victim type, and weapon use. Separate sections are used to record sexual and violent offences. This form also records institutional sexual or violent behaviour.

6.1.4 Procedure

Participants were made aware of the study by clinical staff. They were either given or read information sheets (Appendix 15) that outlined the aim of the study. They were informed that their responses were confidential and were given the opportunity to ask questions about the study over a seven day period. Participants were also advised they could discuss the study with their key worker or carer and were given the information sheet outlining the study to hand to the key worker or carer (Appendix 17). After a seven day period the participant information sheet was read to individual participants and they were given a further opportunity to ask questions. Participants were then given the consent form (Appendix 16) and were asked if they would wish to participate in the study or decline participation. Consenting participants were asked to place their initials to each statement read out on the consent form if they agreed with the statement and to sign the consent form. Clinical staff that it was felt may be approached with regard to reliability or clarification regarding integrity of file information, were also given the information sheet (Appendix 18) regarding the study. Clinical staff who expressed interest in participating in the provision of additional information if required, completed the clinical staff consent form (Appendix 19).

Extensive review of both medical and psychology files for each individual consenting participant, was carried out to gain background and forensic information for their case. Information was recorded as per the BIR and the Basic and General Forensic History: Data Collection Form.

6.1.5 Assessment Process

The majority of information reported in this study was available in clinical files. Where there was uncertainty regarding the reliability or integrity of the file information, further information was collected from relevant key workers and support workers. This further information was then incorporated into the existing information gathered, regarding background and forensic history.

6.1.6 Demographic Characteristics

The demographic characteristics were analysed in terms of admission source, psychiatric contact and institutional care, alcohol and substance misuse, childhood adversity experienced pre 18 years of age, experiences of childhood abuse, psychiatric diagnosis, lifetime criminality and type of index offence.

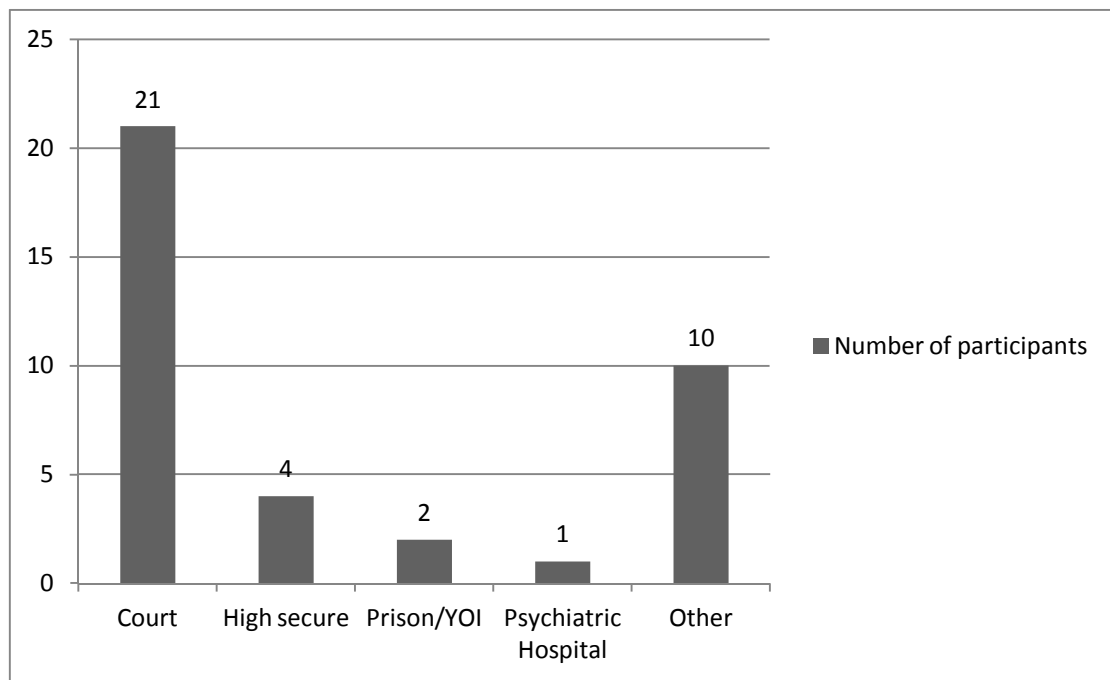
Figure 6.1.0 - Admission Sources of Participants to Forensic Services

Figure 6.1.0 shows more than half of participants were referred to the forensic service from court. Those referred from high secure hospital were on a pathway of return and downgrade of security to local NHS Tayside services. Two participants were referred from prison or young offender institutions with one being referred to the forensic intellectual disability service from another psychiatric hospital. Ten participants were referred to the service from other sources of referral such as Social Work, Forensic Community Learning Disability Nurses, or Psychology.

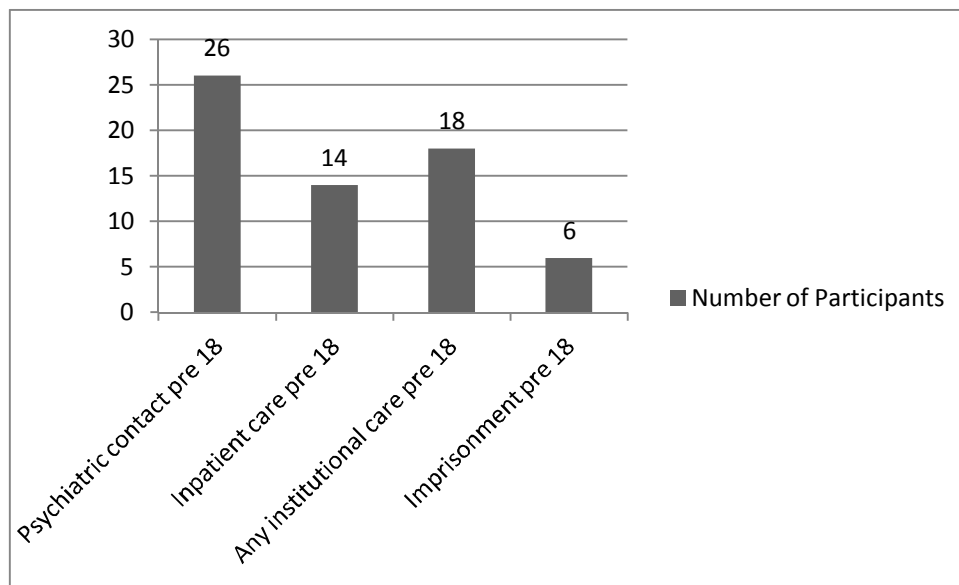
Figure 6.1.1 Psychiatric Contact and Institutional Care Pre 18 Years

Figure 6.1.1 shows the breakdown of psychiatric service contact pre 18 years of age and whether the participant was institutionalised pre 18 years whether within inpatient services, imprisonment or other forms of institutional care such as children's homes. Clearly these categories are not separate and distinct, what is apparent is that a number of offenders with ID have received institutional care pre 18 years which has entailed residency which was away from the parental home. More than half of participants had psychiatric contact pre 18 years.

Figure 6.1.2 Family History of Offending, Psychiatric Contact Pre and Post Index Behaviour and Imprisonment Post 18 Years of Age.

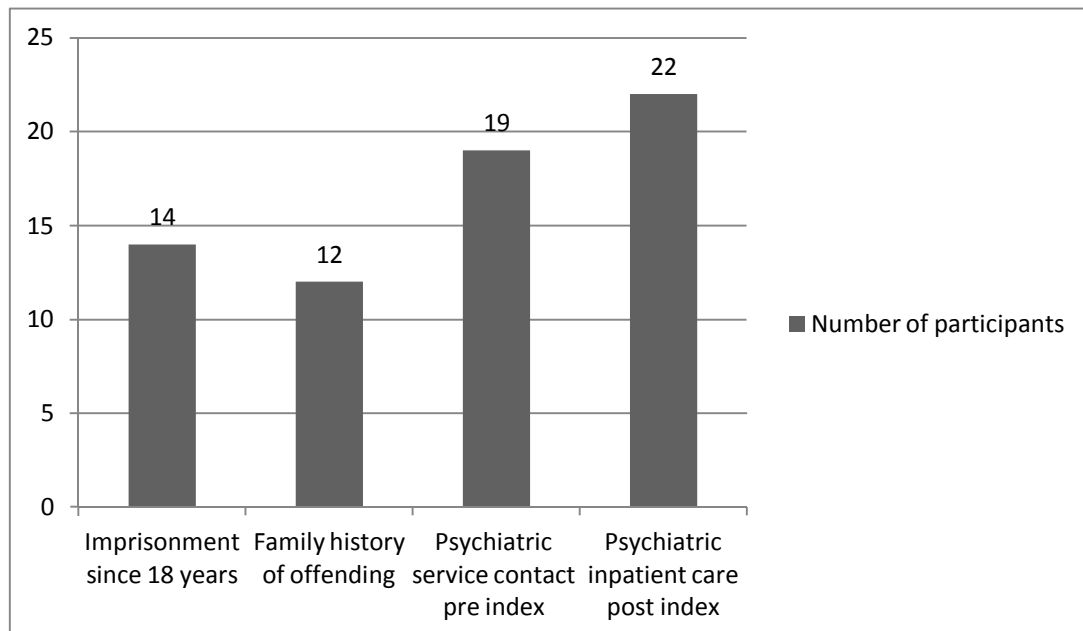


Figure 6.1.2 shows more than half the sample of offenders with ID received psychiatric inpatient care post index offence. Fourteen participants had experienced imprisonment post 18 years of age either as a definitive sentence or on remand. Almost one third of participants (12) had a family history of offending behaviour. As in Table 5.1.1 descriptive categories are not separate and distinct.

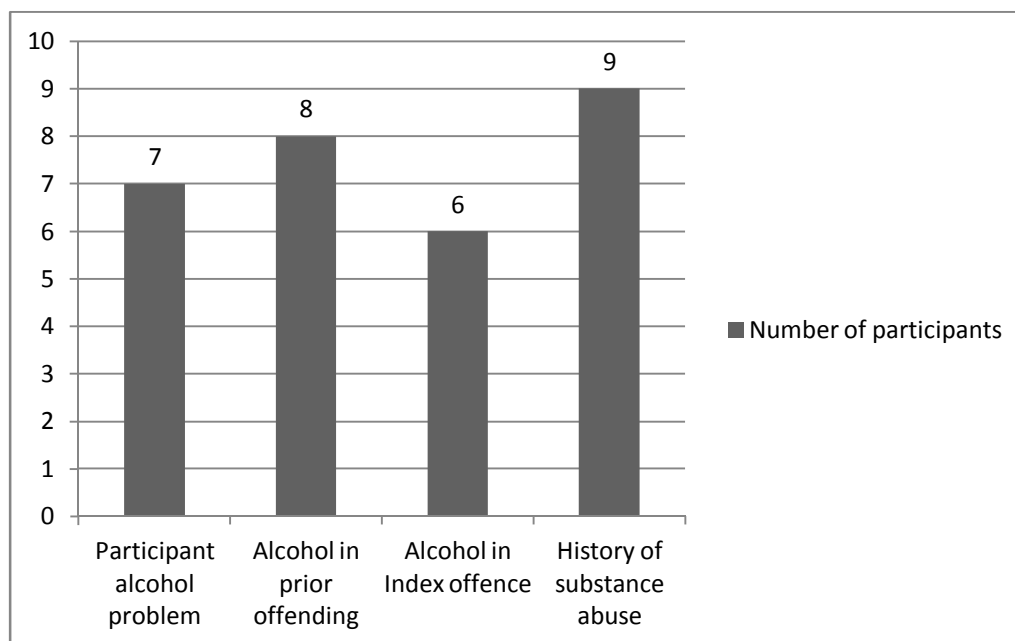
Figure 6.1.3 - Issues of Alcohol and Substance Misuse

Figure 6.1.3 shows a substantial minority of participants had difficulties with alcohol use. Seven participants were considered to have an alcohol problem. Association of alcohol within prior offending behaviour was present for eight participants and association of alcohol with the index behaviour was present in six cases. Nine participants had engaged in past substance abuse.

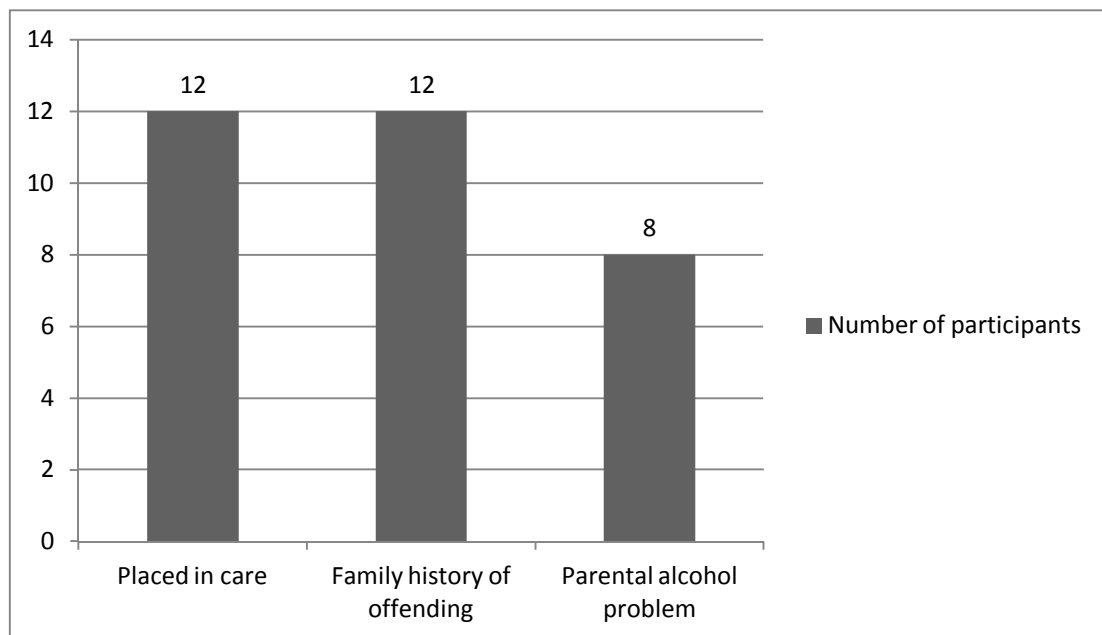
Figure 6.1.4- Childhood Adversity Issues Pre 18 Years

Figure 6.1.4 shows twelve participants were placed in care at some point in their childhood. Twelve participants also came from a family with a history of offending behaviour and eight participants have experienced alcohol problems with regard to either one or both parents.

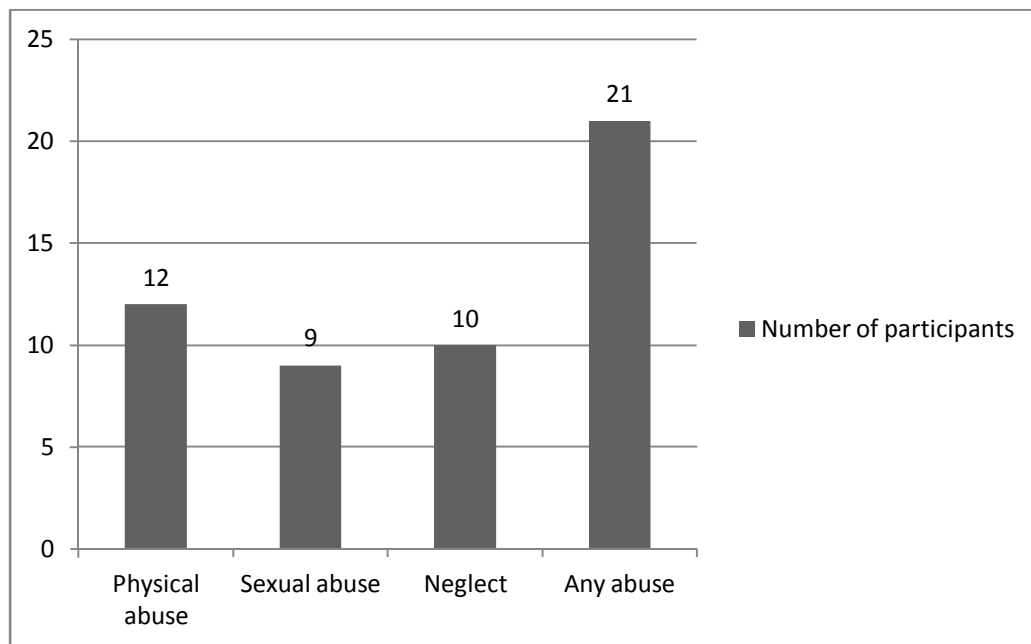
Figure 6.1.5 Experiences of Childhood Abuse Pre 18 Years.

Figure 6.1.5 shows forms of childhood abuse were not mutually exclusive with some participants experiencing multiple forms of abuse. Twelve participants (32%) had experienced some form of physical abuse in childhood. Nine participants (23.7%) experienced sexual abuse with ten participants (26%) experiencing neglect. The variable 'any abuse' is a collapsed variable of the other three categories and demonstrates that overall twenty one (55%) of the thirty eight participants who took part in this study experienced at least one form of childhood abuse.

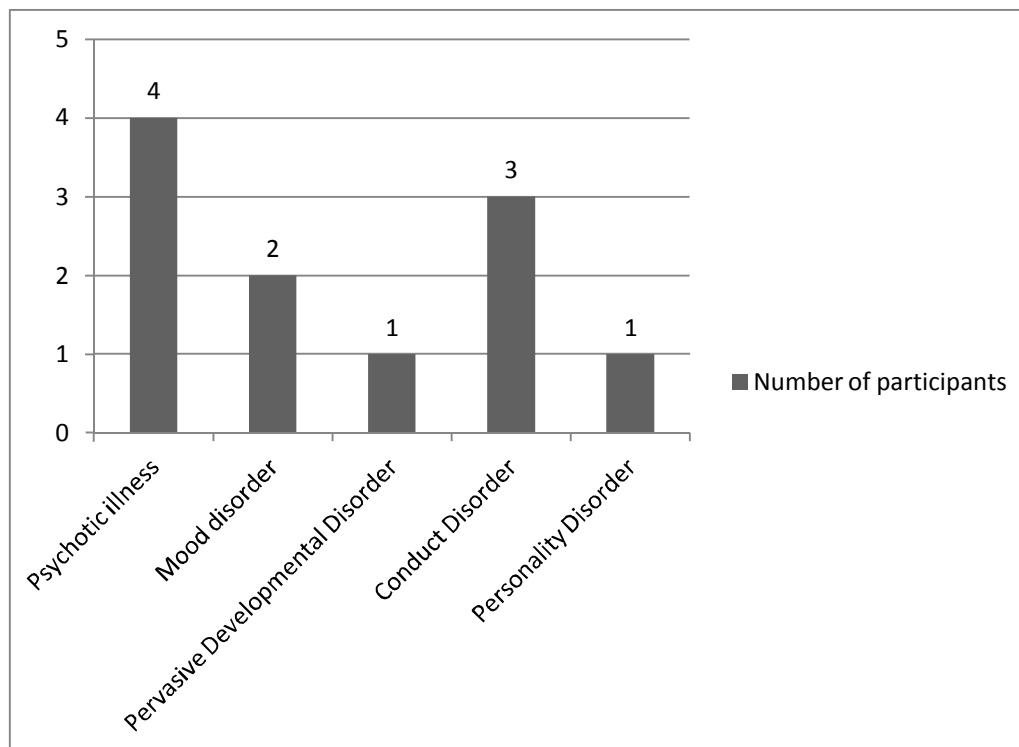
Figure 6.1.6 Psychiatric Diagnosis - ICD-10.

Figure 6.1.6 shows of the thirty eight offending participants who took part in the study eleven participants (29%) attracted a diagnosis under ICD-10 World Health Organisation criteria. Four participants have a diagnosis of psychotic illness. Three participants were diagnosed with Conduct Disorder and one had attracted a diagnosis of Anti Social Personality Disorder. Two participants had a diagnosis of Mood Disorder with one participant having a diagnosis of pervasive developmental disorder in the form of Autistic Spectrum Disorder. All participants were mentally well at time of participation in the study.

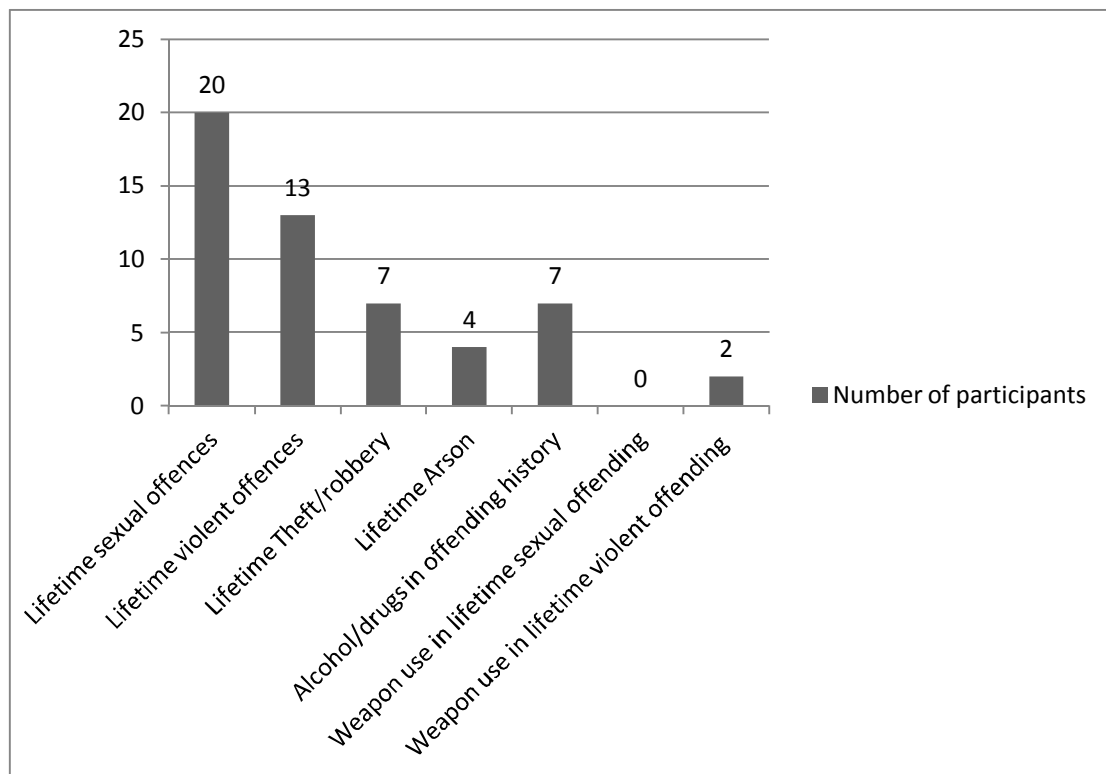
Figure 6.1.7 Lifetime Criminality

Figure 6.1.7 shows a sexual offending history was predominant within the participant sample accounting overall for 53% of participants offending history. This may be a reflection of the specialist nature of the service from which participants were recruited. With regard to violent offending, 34% of participants had a history of violence with further 18% having lifetime offences of Theft/Robbery and 8% having committed an Arson offence within their forensic history. Alcohol or drug use relative to the lifetime offences was present in 18% of participants. No weapon use is apparent within sexual offending history of participants with 5% using a weapon within lifetime violent offences.

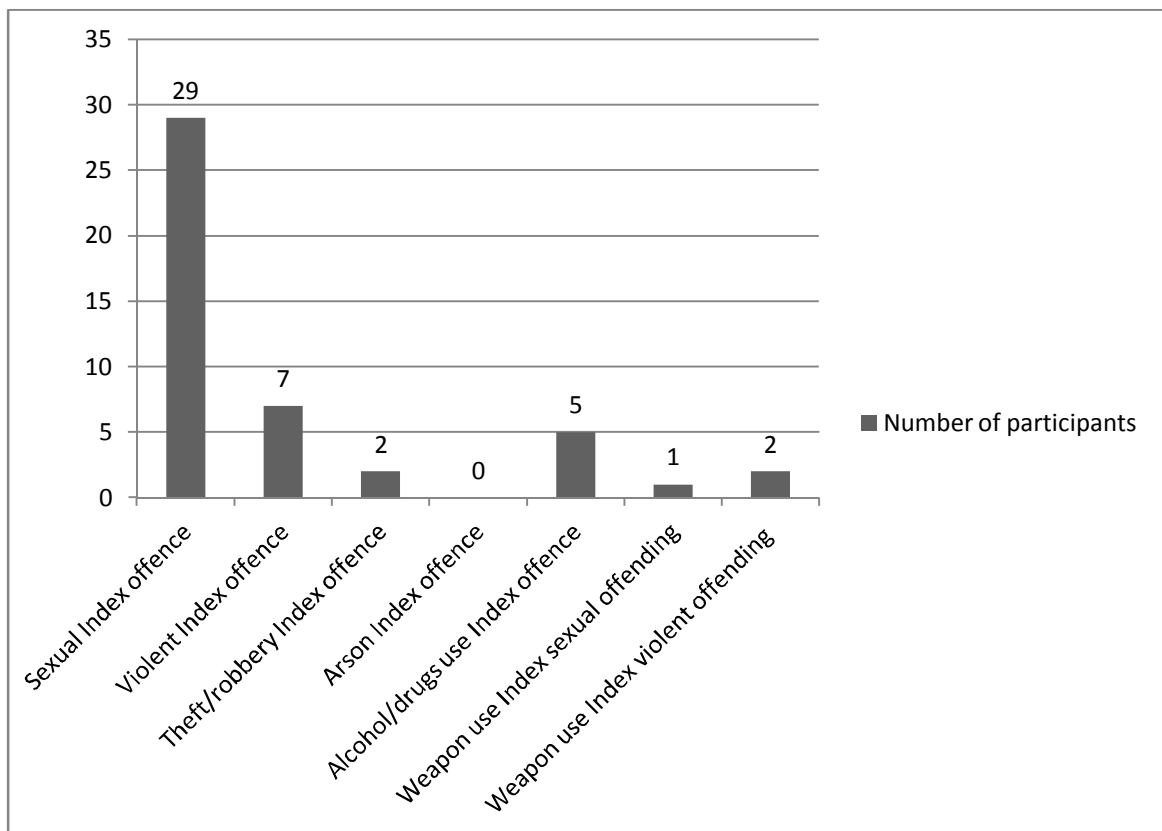
Figure 6.1.8 Participant Index Offences

Figure 6.1.8 shows when categorising the type of index offence the majority of participants (29) (76%) had committed a sexual index offence. A smaller percentage of sample participants (18 %) had been involved in a violent index offence. No participants came to the attention of services through committing an index offence of Arson. Alcohol and/or drug use was present at time of index offence in 13% of participants. Weapon use within the index behaviour was conducted by two (5%) participants violent index behaviour and one (3)% of participants sexual offending index behaviour

6.1.7 Interpretation of Results

The demographic data for the sample shows that participants fall within the mild intellectual disability range. Over half of participants were known to psychiatric services pre 18years. Only a small percentage of participants had a co morbid diagnosis of mental illness.

Within the sample there has been a variety of offences committed both historically and within the index behaviour. Historically just over half of the sample has committed a sexual offence with sexual offending being the predominant index behaviour. Other historical offending behaviours included violence, theft and arson with a higher proportion of violent offending than either theft or arson. A small number of participants had a history of weapon use and also alcohol/drug misuse. Overall there is heterogeneity of offending behaviour within the sample of offenders with mild ID. A number of participants had experienced childhood diversity issues such as being removed from parental care and experiencing abuse. These are issues relevant to the formation of attachment to a primary caregiver and will be discussed in more detail in later empirical chapters.

6.1.8 Interim Discussion

This thesis aims to examine attachment in a population of offenders with intellectual disability. Dubiety of diagnosis of intellectual disability was a difficulty in the definition of intellectual disability in many previous studies (see Chapter 1, Holland, 1991; MacEachron, 1979). In this study all participants have a previously recognised diagnosis

of mild intellectual disability using a nosological system. Assessment of IQ had been carried out using a reliable and valid assessment tool (Wechsler Scales) alongside assessment of adaptive functioning in line with diagnostic criteria.

A number of participants have received psychiatric contact pre and post eighteen years despite the lower level of mental health issues. Admission to the forensic service has in the main been through court referral which may suggest a substantial interest from the court with regard to accessing assessment and subsequent intervention for offending behaviour within this population of offenders rather than pursuing punitive measures. Approximately two thirds of the participant sample has experienced institutional care at some point in childhood. These issues are of interest to the study of attachment and the development of offending and will be discussed in subsequent chapters.

It is important to also establish the heterogeneity of offending behaviour within this group to explore issues of sampling bias. Many studies have described the demographics of offending behaviour within a cohort of offenders with intellectual disability. An elevated prevalence of sexual offending and sexual abuse (Walker and McCabe, 1973; Day 1993), aggression (Emerson et al., 2001, Novaco and Taylor, 2001, Taylor, 2002) and fire-raising has been suggested in relation this cohort (Walker and McCabe, 1973, Prins 1980, Raesaenen et al., 1994). The prevalence of sexual offending is higher than other offences within this participant sample and this may be a contextual sampling bias in relation to specialist service provision in NHS Tayside. In contrast to other studies (e.g. Walker and McCabe, 1973, Prins, 1980, Raesaenen et al., 1994) Arson is not over represented with very few cases of either history of arson within the lifetime and no cases of arson as an index behaviour when referred to services. Given the higher prevalence of

sexual offending within the participant sample, care will be taken to discuss results taking this issue into account.

6.2.0 Study 3: Attachment, Perceived Parenting and Abuse in Offenders with Mild ID

The development of attachment theory has revealed the importance of close affectional bonds in childhood. Within the formation of attachment bonds, parent-child communication and responsivity underpin the development of internal working models of self and others, and expectations of responsivity within interpersonal relationships (Ainsworth et al. 1978; Bowlby, 1973; Feeney and Noller, 1996; Main, 1996).

Studies have also shown the negative effect of childhood adversity on attachment formation (Carlson, Cicchetti, Barnett and Braunwald, 1989; Main and Solomon, 1986; Spieker and Booth, 1988; Zeannah, 2000) however none of this work has been carried out previously on offenders with ID. This study aims to firstly examine the distribution of categorical attachment classifications in people with mild ID (offenders vs controls) in comparison to that of the mainstream normal distribution of categories of attachment orientation. It will then proceed to examine issues of childhood residential status (lived with parents or placed in care) abuse (physical, sexual and neglect) in childhood and perceived parenting style relative to attachment orientation.

6.2.1 Normal Distribution of Attachment Styles

Normal distribution of attachment classifications in both childhood and adulthood are of interest to this study for several reasons. Firstly the study is measuring childhood attachment retrospectively in adulthood and therefore the distribution of categorical attachment should be compared to that of both childhood and adult attachment to ascertain the construct validity of the result found with the adapted version of the RQ. Secondly the attachment measure used as an assessment tool is adapted from the RQ four category model of adult attachment, and therefore comparison needs to also be made to the distribution of adult attachment categories within that model relative to the two factors which measure positive self models in particular i.e. secure and dismissing attachment. Thirdly, to date the researcher has found no information of the normal distribution of attachment categories in people with ID. This thesis has measured attachment for both offenders and controls who are a non offending population of people with mild ID. The literature on mainstream offending populations suggests there is an over representation of insecure attachment in comparison to normal~~s~~ in offending populations and as yet this is unconfirmed for people with ID (Rich, 2006). Fourthly differences in cognitive ability and lifespan development may alter the normal distribution of attachment categories in people with ID in comparison to mainstream populations.

Childhood

Ainsworth et al. (1978) carried out the first empirical studies of attachment in childhood. Studies were carried out through observational methods and determined three different attachment styles which best described the behaviour of children in relation to separation

from an attachment figure. From these studies Ainsworth et al. (1978) determined the distribution of attachment styles in children. Findings suggest that the majority of children fall within the 'secure' attachment category (65%). With regard to insecure attachment a higher percentage of children fall within the avoidant (24%) than the anxious style (11%) of attachment (Ainsworth et al. 1978). O'Connor et al. (1987) highlight that these percentages were not significantly different from the proportions of 70%, 20% and 10% (respectively) that have been described for white middle class populations.

Adulthood

When examining the distribution of attachment styles in adulthood using the RQ in 115 participants, the findings of Stein, et al. (2002) suggest that 51% of participants were classified as 'secure' with 8% of participants 'preoccupied', 13% 'dismissing avoidant' and 28% in the 'fearful avoidant' attachment classification. Within this thesis the distribution of attachment categories in university students (n=101) using the RQ was 'secure' - 70%, 'Preoccupied' 7%, dismissing avoidant 13% and fearful avoidant 5%.

Comparing the findings of this study, to that of Stein et al (2002) suggests that the responses of participants in this study were more likely to fall within the 'secure' category and fewer participants were classified as having a 'fearful avoidant' attachment style. Collapsing the percentage distribution within the two avoidant groups in this study to compare the findings with the three factor model of secure, anxious/ambivalent and avoidant attachment in childhood, similarities can be noted in the distribution of attachment categories. Interestingly participants in this study were asked to complete the

RQ as a measure of retrospective childhood attachment which would be expected to play a part in the resultant percentage distribution of attachment categories.

Both three factor and four factor models of attachment have been used as representing adult attachment (Hazan and Shaver, 1987, Griffin and Bartholomew 1997). Examining the distribution of the three factor attachment categories in a nationally representative sample of US adults Mickelson, Kessler, Shaver, and Phillip (1997) found the distribution of attachment categories to be Secure - 59%, Anxious (preoccupied) -11% and Avoidant - 25% with 5% unresolved. Consistency of normal distribution is found within the three factor and four factor distributions in so far as the 'secure' classification shows the highest percentage of participants with the anxious/preoccupied classifications showing a considerable lesser percentage of the distribution. The avoidant categories, although classifying less percentage than 'secure' classifications tend to fit a notably higher percentage of the distribution than the anxious/preoccupied classification.

6.2.2 Attachment, Parental Separation and Institutionalisation

This thesis has examined attachment in offenders with ID. In the 50's institutionalisation of children and adults who had intellectual disability was considered to be the norm. Children, particularly those who had behavioural difficulties, or whose parents found it difficult to care for them, found themselves in long term institutional care, often within a hospital environment. There were hospital schools which the children attended, and home was likely to be communal living on a hospital ward. Staffing ratios were poor and staff report they had little time to spend on an individual basis with a child. Professionally

staff were unable to occupy the place of a mother substitute or primary caregiver (informal verbal report from staff to the researcher) to the child within their care.

Bowlby's report to the World Health Organisation regarding the mental health of homeless children (Bowlby, 1951) highlighted the view that an essential factor to the positive mental health of an infant and young child is the experience of a warm, intimate, and continuous relationship with his/her mother (or permanent mother-substitute) (Bowlby 1982). Bowlby's report led to an alteration in services and attitudes with relevance to childcare. During hospitalisation of mothers at subsequent childbirth, visiting of children within the immediate family was encouraged. Parents were also encouraged to stay with children through open visiting, or indeed overnight stay if the child was hospitalised, to avoid parental separation in adverse situations. Within the large scale institutional setting of hospitals which housed people with ID, open visiting was not encouraged, perhaps due to the large number of individuals concerned, and it was clearly not feasible for parents to stay with the child in the hospital setting on a long term basis. Therefore despite Bowlby's recommendations being implemented to alter service provision with regard to shorter term parental separation at that time this was less likely to occur for children with ID within the institutional setting. An alteration to service provision has occurred in the 60's and 70's to a more community based service for people with ID, with children no longer being housed in large hospital wards however the effects of institutionalisation on adults with ID and the effects on the formation of healthy attachment styles is as yet unexplored however some previous research has focussed on the effects of institutionalisation of children and also adults without ID.

Attachment disorders have been a focus of research on the effects of institutionalisation over the past 50 years (Zeannah, Smyke and Koga, 2005). For example, when investigating the attachment patterns of institutionalised children in Romania, Smyke, DuMitrescu and Zeanah, (2002) found that infants within a large-scale socially deprived institutional setting had more attachment disorders and other behavioural problems than children in smaller scale less socially deprived units. The social environment is clearly an important factor to the formation of attachment quality and may play a critical role in attachment representation (Lewis, Feiring and Rosenthal, 2000).

With regard to institutionalised adults without ID, an examination of the attachment profile in 247 adult survivors of institutional abuse in Ireland, Carr et al., (2009) found a far greater percentage of adults were classified within the insecure attachment categories than the secure category. For example 44% of adults were classified within the fearful attachment style with 13%, 27%, and 17% being classified within preoccupied, dismissive and secure attachment styles respectively (Carr et al., 2009). The profile of the preoccupied group was most similar to that of the fearful group whilst the profile of the dismissive group was most similar to the secure group. Measurement of attachment style was carried out using the RQ (Griffin and Bartholomew, 1994), which also allocates models of 'self' and 'other' (either positive or negative) to each attachment style. Therefore it could be suggested that these similarities can be explained in terms of the model of 'self' portrayed by these attachment styles, as both the preoccupied and fearful attachment styles have a negative model of self while the secure and dismissing attachment styles have a positive model of self. Negative views of self have been found to be one of the most substantial predictors of psychopathology among maltreatment survivors Muller and Lemieux (2000). Given the lifespan development

issues of institutionalisation, examination of the effect of being placed in care on attachment classification will be explored, in offenders with ID.

6.2.3 Retrospective Perceptions of Parenting

Institutionalisation in childhood for people with ID also provided issues of parental separation. That is not to say that all children with ID placed in the institutional setting had ideal relationships with parents prior to admission, as some may have been placed in care due to parenting difficulties and/or behavioural problems, with some experiencing familial abuse. For some there was also a co morbid diagnosis of mental health issues. Longer term institutional care, posed the problem of a primary caregiver who would become a mother substitute relative to attachment formation. This is possible best explained through the typical report of an offender with ID who resided within the institutional setting from age 5 years to 16 years. This participant identified his primary caregiver as a member of domestic staff who worked in the hospital setting, and who had left this employment after a number of years and during his stay within the institution. His reports suggest he felt protected by this member of domestic staff 'she used to protect me'. He recounted that he was unaware of her departure until after she had left and reported being unaware as a child as to why she left. He also reported a sense of loss at the lack of contact thereafter. He remembers being visited rarely by his biological mother during his stay and of the knowledge that his mother had remarried and his perception as a child that this was the reason he was in hospital care, as his new stepfather did not want him at home. He reports with clarity the trauma experienced the day he entered institutional care and his lack of understanding at that time as to why that had occurred. As an adult he acknowledges that he had behavioural problems as a child,

which he now suggests were the reason he was placed within the institutional hospital setting. He relates the reason for his behavioural problems to his father's alcoholism and subsequent death. His perception of his parent's behaviour towards him as a child is very negative in its report with a sense of abandonment from his mother at the time of being placed in care. Whilst this is only one individual case the experience is fairly typical of those who were placed in long term institutional care at an early age.

The relationship between poor parenting and later psychological distress is well documented (Bowlby, 1973, 1988) and there is a considerable body of literature which recognises the effects of poor parenting on attachment formation (Cicchetti, Barnett and Braunwald, 1989, Cicchetti and Rizley, 1981, Egeland and Sroufe, 1981a, 1981b, Spieker and Booth, 1988) and the development of offending behaviour and antisocial personality (Blackburn, 2003; Chambers, Power, Loucks and Swanson, 2000; Farrington 2002b; Smith and Stern, 1997). Craissati et al., (2002) conclude that an 'affectionless control' style of parenting as measured by the Parental Bonding Inventory (PBI) (Parker, Tupling, and Brown, 1979) was reported as being highly prevalent in the parents of sex offenders. Chambers et al., (2000) report that the PBI may be used to recognise levels of parental contribution to psychological and behavioural difficulties, with respect to the levels of parental care and control as perceived by the participant.

The Parental Bonding Instrument (PBI) (Parker, Tupling and Brown, 1979) represents the child's view of its parents during the first 16 years of life. It has two clear dimensions of care (i.e. warmth and understanding) and control (over-protectiveness or control), with low care and/or high control (affectionless control) thought to be detrimental to healthy psychological development. The 'Care' dimension measures affection and empathy at

one end and indifference and emotional coldness at the other, while 'overprotection/control' ranges between intrusion and prevention of independence to independence and self sufficiency. As well as scores on the two dimensions, Parker and colleagues assigned parental styles based on the interactions of care and control i.e. 'affectionate constraint' ó high care/high control; 'optimal parenting' ó high care/low control; 'affectionless control' ó low care/high control and 'neglectful parenting' low care/low control. Since its development the PBI has been used extensively in research in both normal and clinical populations and has been shown to be a valid measure of parenting when used in twin studies (Parker, 1986) and in studies of adoptive children (Parker, 1982). The scale shows reliability over time and is unaffected by mood at time of rating (Gerslma, Kramer, Scholing and Emmelkamp, 1994).

Clinically perceived parenting has been found to influence outcomes of treatment. For example, low levels of paternal care and high levels of parental protection/control as measured by the PBI (Parker, Tupling, and Brown, 1979) were found at long term follow up, to have influenced the effectiveness of treatment for Anxiety Disorders (Chambers, Power, and Durham, 2004). The parental style of 'affectionless control' (i.e. low care/high protection/control) from either parent was over-represented in those with a continuing diagnosis of Anxiety Disorder at long term follow up, however only maternal control was significant for male patients and paternal care and control for female patients (Chambers, Power, and Durham, 2004). The low care/high protection (affectionless control) parenting style has been associated with higher levels of depression in normal populations and /or the presence of depressive disorders (Narito, Sato, Hirano, Gota, Sakado, and Uehara, 2000; Parker, 1979; Pederson, 1994, Rogers, 1996). Overall the parenting style of

affectionless control (low care/high control) has the highest associations with psychological distress (Chambers, Power and Durham, 2004).

In conclusion poor parenting has been recognised as a factor contributing to the development of offending behaviour (e.g. Blackburn, 2003; Farrington, 1995; Stouthamer-Loeber et al, 2002). Given the higher incidence of mental health problems and emotional difficulties found in people with ID (Smith, 2004), the differences in lifespan development and the development of offending behaviour, perceived parenting in childhood may be worthy of further exploration in offenders with ID. The use of the PBI would facilitate the measurement of parental style in this population. Clearly there is no data regarding reliability of the PBI for use with this population however it is, in its current form, linguistically simple and has a minimal use of jargon. Further examination of Flesch Kincaid Reading Ease and Grade scores will be conducted to evaluate the suitability of that scale for use with people with ID.

6.2.4 Poor Parenting, Abuse and Antisociality.

The absence of parental affection and also parental rejection appear to strongly predict juvenile delinquency (Blackburn, 2003). The early identification of problematic behaviour in the general population recognises poor parenting as having a relationship with adult offending (e.g. Farrington, 1995; Stouthamer-Loeber et al, 2002). Bartholmew, Kwong and Hart, (2001) suggest that the parenting practices associated with insecure attachment, especially physical and emotional abuse, may be modelling antisocial behaviours for children. The effect of childhood abuse on attachment patterns is well documented (Carlson, Cicchetti, Barnett and Braunwald, 1989; Spieker and Booth, 1988)

particularly in relation to disorganised attachment (Main and Solomon, 1996). Additionally a number of authors have reported an association between attachment disorganisation and social-emotional and cognitive deficits in children (Becker-Weidman, 2009, Lyons-Ruth and Jacobvitz, 1999, van Ijzendoorn, Schuengel, and Bakermans-Kranenberg, 1999). The term disorganised attachment is not typically used to describe adult attachment rather the term 'Unresolved' is applied to this classification. In depth discussion of the mental representations of the 'Unresolved' classification system are not within the scope of this study suffice to say that the 'Unresolved' classification is suggested to encompass a dysregulation of the attachment system (George, West and Pittem, 1999). This dysregulation is reported as resulting in clinical symptomology which leaves the individual overwhelmed by feelings of helplessness, vulnerability, and fear of abandonment (George, West and Pittem, 1999). Dysregulation of the attachment system also provides a psychopathological risk in adults e.g., dissociated mental states; depersonalisation; pathological levels of anxiety and self blame; aggressive, reckless, destructive behaviour directed towards self and others; compulsive caregiving; compulsive self reliance and euphoria (Carlson, 1998, George, West and Pittem, 1999).

6.2.5 Attachment, Abuse and the Development of Personality Disorder (Borderline and Antisocial)

Attachment and childhood abuse has also been recognised as a factor in the development of Borderline and Antisocial personality. A number of family interaction factors were identified as relevant to the development of antisocial personality, including inconsistent, harsh or abusive parenting, cold or rejecting parental attitude, poor parental supervision

or monitoring, low parental involvement with the child, separation/divorce and parental conflict (Farrington 2002b; Smith and Stern, 1997). Additionally Zanarini, et al. (1997) examined a sample of 358 patients with Borderline Personality Disorder, 91% reported having been abused and 92% reported having been neglected prior to age 18 years. The Borderline patients were significantly more likely than the 109 patients with other personality disorders to report having been emotionally and physically abused by a carer and sexually abused by a non carer. Further issues relevant to attachment and also poor parenting were reported such as: having a carer withdraw from them emotionally, treat them inconsistently, deny their thoughts and feelings, place them in the role of a parent, and fail to provide them with needed protection (Zanarini et al. 1997).

6.2.6 Method

The participants for this study were obtained from the forensic services for people with intellectual disability at Strathmartine Centre, Dundee. Some participants (n18) had already been included in the Dangerous and Severe Personality Disorder study (Community Site) on which the researcher gathered the data in the position of research assistant. Participants within the control condition were obtained from Castlebeck Care, Dundee. Permission for this study was obtained from the East of Scotland Research Ethics Service (Rec. ref number 11/S0501/2). Permission was also granted from the grant holders of the DSPD study to add to and extend the existing data.

6.2.7 Description of Participants

Sixty three male participants were employed in this study. Thirty eight participants were employed in the forensic group. Each participant within this group had at least one incident of offending or offending type behaviour. Eighteen of this participant group had previously been included as a participant in the Dangerous and Severe Personality Disorder study. Permission was granted from the grant holders of the DSPD study to add to and extend the existing data.

6.2.8 Offenders with Mild ID

Thirty eight participants were currently involved in the forensic service for people with ID and were offenders with mild ID. The mean IQ of the forensic participants was 62.89, S.D. = 4.34, range = 55 ó 70. Their mean age was 37.87 years S.D. = 9.13, range 23-60 years. The group consisted of Offender group ó this group was drawn from community forensic intellectual disability service. Participants were referred from the courts, community services such as social work and community learning disability teams and from consultant psychologists or psychiatrists. The group was made up of 38 male participants. The offences committed are as follows: assault (21%), non-contact sexual offences (35%), contact sexual offences (18%), arson (8%), theft (18%), alcohol related offences (18%).

6.2.9 Non Offenders with Mild ID (Control Group)

Twenty five participants who had no records of offending or offending type behaviour were employed in the control group. All participants in the control group had a mild intellectual disability. The mean IQ of the control group participants was 64, S.D. = 5.13, range = 56 to 71. Their mean age was 32 years S.D. = 8.22, range 21-47 years. This group was drawn from a learning disability acute in patient service. Participants were referred for a range of difficulties including placement breakdown due to challenging and aggressive behaviour, family difficulties, problems of mental health and mental illness and personality difficulties. Individuals were not included in the sample if they had been charged with any offence.

6.2.10 Measures

Within this study it was necessary to employ a variety of measures to measure attachment, perceived parenting and childhood abuse.

6.2.11 Measurement of Attachment

The Adapted Relationship Questionnaire (ARQ) was used to measure attachment style. The ARQ consists of 15 statements set into three sections each of which measures an attachment style. Three attachment styles are measured, -Secure, -Anxious avoidant and -Dismissing avoidant. The -Secure attachment section contains 4 items such as, -I want to feel close to my mum/primary caregiver and I am ok if my mum/primary caregiver depends on me. The -Anxious avoidant section consists of 7 items such as -I find it difficult to totally trust my mum/primary caregiver, I worry that I'll be hurt if I get too

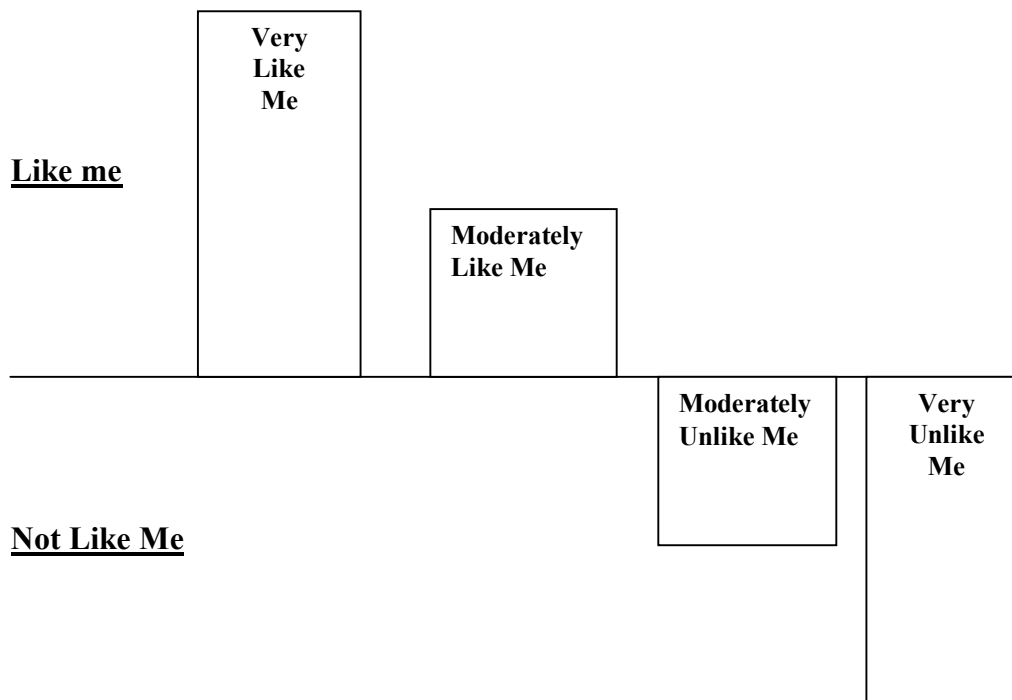
close to my mum/primary caregiver; I find it hard to depend on my mum/primary caregiver. The Dismissing avoidant section contains 4 items such as 'It's important to me to feel I can do things for myself without mums/primary caregiver's support' 'I prefer not depending on my mum/primary caregiver' This section also represents an intolerance of dependency from an attachment figure e.g. 'I prefer my mum/primary caregiver not to depend on me' Respondents complete the measure for how they remember they felt with regard to their mother or primary caregiver pre 16 years and make a judgement of 'how like me' each item is e.g. 'Not like me', 'A bit like me', 'Quite like me' or 'Very like me' A pictorial representation of the answers is also presented in the form of a bar chart with bars increasing in size in relation to an increase in the value of the 'like me' statements. Scores are allocated to each response with 'Not like me' = 0, 'A bit like me' = 1, 'Quite like me' = 2 and 'Very like me' = 3 and mean scores calculated for each categorical section. An equal mean score in two incompatible sections, e.g. 'Secure' attachment and one of the 'Insecure' attachment categories, results in the individual being allocated to the unresolved category as a record of those who have possibly experienced a disorganised attachment style in childhood. As the individual participant cannot be deemed to be securely attached if this occurs, they are then allocated to the relevant insecure category of attachment on which they rated.

6.2.12 Parental Bonding Inventory (PBI) (Parker, Tupling, and Brown, 1979)

The Parental Bonding Inventory is a retrospective measure of perceived parenting style as experienced pre 16 years of age. It has as its core two scales termed 'care' and 'overprotection' often described as level of 'control' There are twenty-five item questions, twelve appertaining to 'care' items and thirteen appertaining to

overprotection items. Respondents complete the measure for how they remember their parents during their first sixteen years and make a judgement of how like me each item is e.g. Very like, Moderately like, Moderately unlike, Very unlike

Figure 6.2.0 Showing the Pictorial Representation of Possible Responses for the PBI.



A pictorial representation of the answers is also presented in the form of a bar chart with bars representing very like me and moderately like me above the horizontal line placed mid centre to the page and increasing in size commensurate with the value of like me and the Moderately unlike and very unlike answers being represented by bars under the horizontal line placed mid centre to the page and again increasing in size according to the value of how unlike me the answer. Twelve items make up the care score, (six are reverse scored) and thirteen items group together to provide the protect score (six are reverse scored). From their responses individuals can be categorised into one of the four quadrant categories of perceived parenting which are Affectionate Constraint which is

characterised by high care and high protection, -Optimal Parentingø characterised by high care and low protection, -Affectionless Controlø characterised by low care and high protection, or -Neglectful Parentingø characterised by low care and low protection. Assignment to -highø or -lowø categories is based on the following cut off scores; for mothers a care score of 27 and a protection score of 13.5, for fathers a care score of 24 and a protection score of 12.5. Dimensional ratings of perceived parenting can also be used through continuous ratings. Flesch Kincaid scores were ascertained for reading ease and grade level of understanding of the PBI prior to its use and four additional clarification statements were introduced for use if required. These statements were also checked for reading ease and grade scores.

6.2.13 The Background Information Report (BIR)

The Background Information Report (BIR) collects information on, age at first contact with the justice system, type and number of offences, failure on conditional release or breach of probation, school behaviour, being placed in care, abuse (physical or sexual), any alcohol or substance misuse, work history and romantic history, and diagnosis. Information is collected from file review and is recorded on the BIR.

6.2.14 Procedure

Potential participants were made aware of the study by clinical staff. Those who expressed an interest in participation were each met in an individual session where the information sheet (Appendix 16) that outlined the aim of the study was read out and they were given time to ask any questions they may have at the time. They were informed of

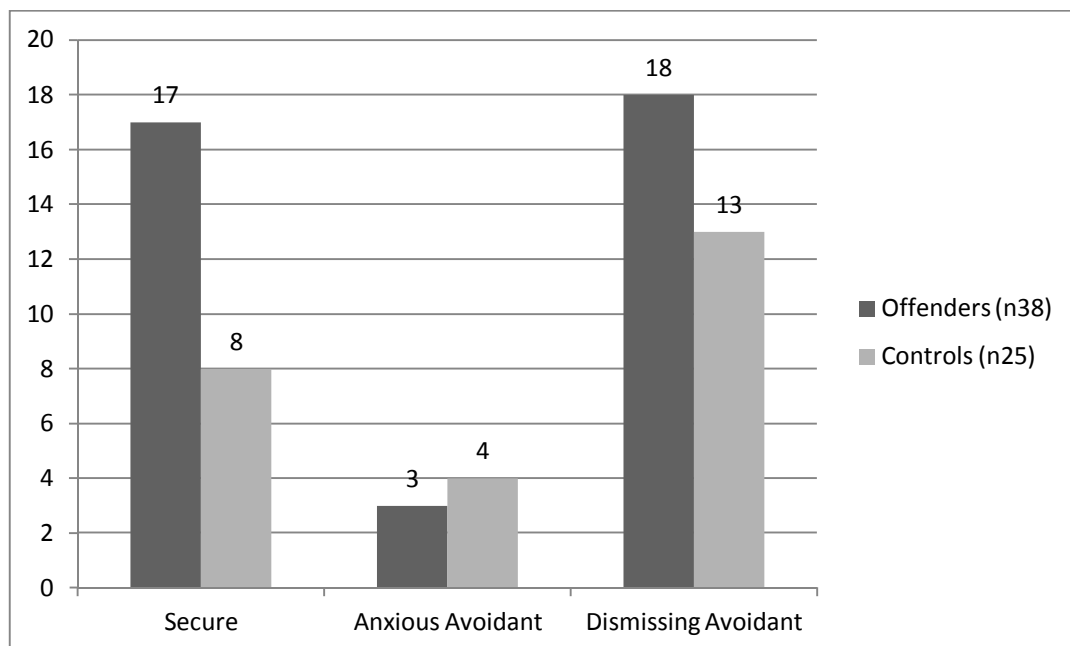
the confidential nature of the study were they to participate. They were provided with an information sheet regarding the study for themselves and also their carer/key worker (Appendix 18). In order that they could discuss the study should they so wish, with people who were involved in their regular care over a seven day period. After a seven day period the participant and the researcher met and the information sheet was read again and the potential participant was given a further opportunity to discuss or ask questions regarding the research. Participants were then given the consent form which was also read to them by the researcher (Appendix 17). They were asked if they would wish to participate in the study or decline participation. Consenting participants were read the consent form and asked to place their initials to each statement as it was read out and if they agreed with the statement, and to sign the consent form.

All participants completed the ARQ and the PBI at an individual interview with the researcher who is a qualified forensic psychologist. Participants were first asked to think back to when they were a child at school. They were advised that the questions they were to be asked was about how they felt about their mother or the person they felt closest to when they were under 16 years of age or during their school years (primary caregiver). The assessment proceeded once the individual to whom they felt closest to as a child (mother or other) was identified, and time placement of pre 16 years for evaluation was established. Due to reading difficulties the statements in each measure were read to participants one at a time, and they were asked to respond to each question as it was read out, using the pictorial bar chart representing the four possible answers. Only when they had provided a response to the statement read out was the next statement read to them.

Extensive review of both medical and psychology files for each individual consenting participant, was carried out to gather data appertaining to abuse and being placed in care which was recorded on the BIR.

6.2.15 Results

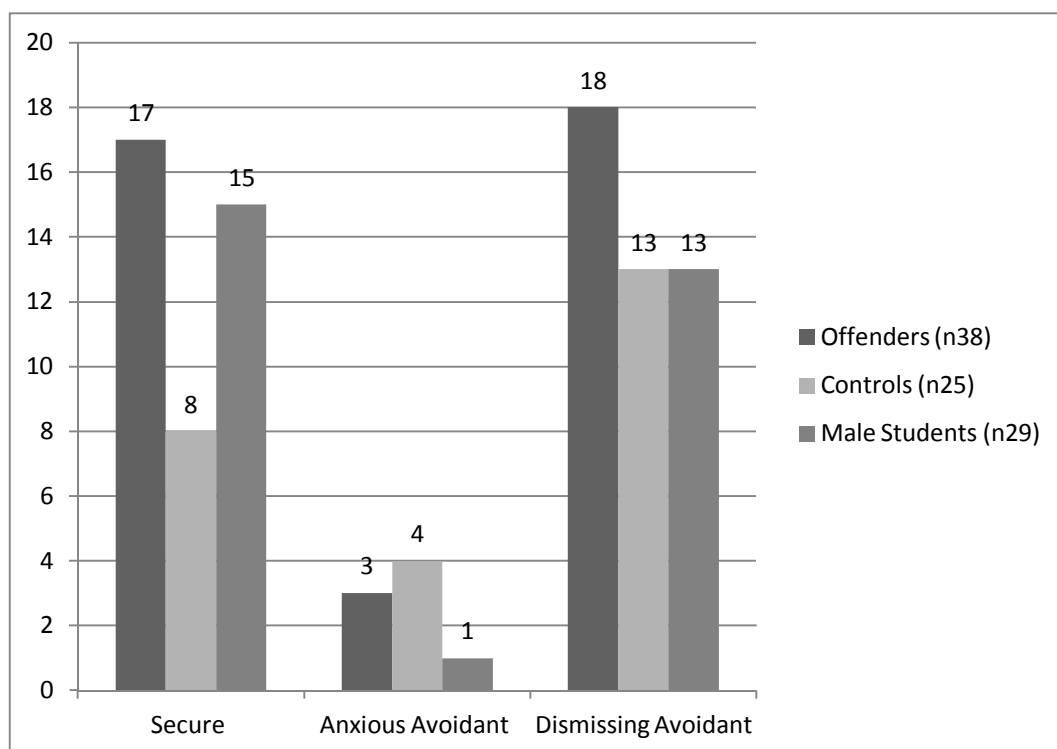
Figure 6.2.1 Shows the Number of Participants Within Each Attachment Category for Offenders (n38) and Controls (n25) with Mild ID.



Although it appears at first glance that there are considerable differences between offenders and controls within attachment categories the differences in numbers of participants within groups has to be taken into account. Overall 17 (45%) of offenders with ID fall into the 'Secure' attachment category in comparison to 8 (32%) participants in the control group. With regard to 'Anxious Avoidant' attachment style 4 (16%)

offenders with ID and 3 (8%) controls with ID fall into this category, however overall numbers are small as would be expected for this category of attachment style and care should be taken in drawing conclusions from this result. There are 18 (48%) offenders with ID who fall within the 'Dismissing Avoidant' attachment style in comparison to 13 (52%) of controls. Examining whether individuals had fallen into an unresolved attachment category suggests that 8 (21%) of offenders fall within this category in comparison to 6 (24%) of controls.

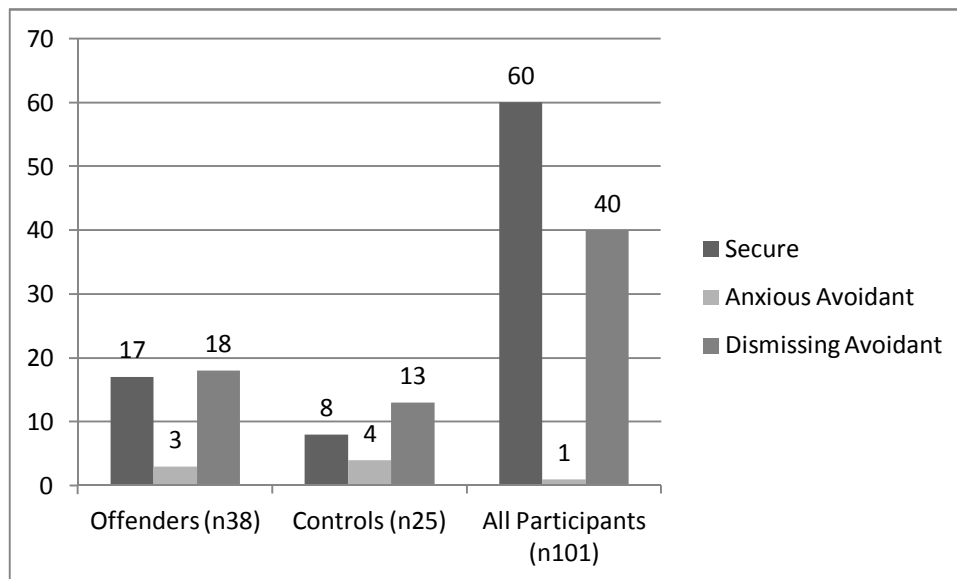
Figure 6.2.2 Shows a Comparison Between Offenders, Controls and also Male Student Participants who had Previously Participated in Study 2.



Comparison of attachment categories across three groups allows comparison of data. The three groups compared in Figure 6.2.2 is that of offenders with ID, Controls with ID and

also mainstream male students who were participants in Study 2b all of whom were students of Abertay University, Dundee. It should be noted that there are slight differences in the numbers of participants in each cohort and therefore percentage distributions are also compared. With regard to the Secure attachment category there were 17 (45%) offenders, 8 (32%) of the Control group and 15 (52%) of Male Students within this attachment category. With regard to the Anxious Avoidant attachment category 3 (8%) offenders, 4 (2%) Control group participants and 1 (3%) male student fall within this category. Numbers within each cohort are low which limits any statistical analysis however both the Control participants and Offenders with ID would appear to fall into this category more so than mainstream male students. The Dismissing Avoidant attachment category appears to have equivalent percentage distribution between Offenders with ID 18 (47%) and Male Students 13 (45%) with a slight rise in the percentage distribution of Control participants Controls 13 (52%) within this category of attachment style.

Figure 6.2.3 Comparison of Distribution of Attachment Categories between Offenders with Mild ID, Controls and Student Participants in Study 2.



As there were no significant gender differences within attachment categories of student participants at the University of Abertay, Dundee distribution comparison has also been made to the whole cohort of students who participated in Study 2b. With regard to the Secure attachment category there were 17 (45%) offenders, 8 (32%) of the Control group and 60 (59%) of Students within this attachment category. With regard to the Anxious Avoidant attachment category 3 (8%) offenders, 4 (2%) Control group participants and 1 (3%) student fall within this category. Numbers within each cohort are low which limits any statistical analysis however both the Control participants and Offenders with ID would appear to fall into this category more so than mainstream male students. The Dismissing Avoidant attachment category appears to have similar percentage distribution between Offenders with ID 18 (47%) and Students 40 (40%) with a slight rise in the percentage distribution of Control participants Controls 13 (52%) within this category of attachment style.

6.2.16 Attachment and Retrospective Perceptions of Parenting

As there was no evidence base in relation to the reliability of the Parental Bonding Instrument as a measure of perceived parenting for use with people with mild ID initial evaluation of this measure was carried out. This was in the form of Flesch Kincaid Reading Ease and Grade scores to establish whether the measure required adaptation. The higher the reading ease score the easier it is to read the text, for example a score of 90 would indicate an easily read text similar to that of a comic while a score of 10 would indicate text which is difficult to read such as a legal document. Grade scores are in line with US school grades and the lower the grade the easier the text is to understand. In general reading ease scores were at a high level indicating text which was easy to read with grade scores at an acceptable level in relation to age of understanding. However four of the twenty five items on the scale showed unacceptably high scores, these were item 4 (score of 33), item 6 (score of 34), item 10 (score of 6) and item 23 (score of 12). Grade scores overall suggested that overall the text could be understood by children of a younger age again with the exception of item 4 (score of 10), item 6 (score of 10), item 10 (score of 13) and item 23 (score of 13)

For each of these statements an alternative additional statement was formed which aimed at clarification of the original statement. Reading ease scores for each of these additional statements suggested an improvement in reading ease (See Table 8.5), item 4a (score of 82), item 6a (score of 78), item 10a (score of 57) and item 23 (score of 76). Grade scores also improved to an acceptable level item 4a (score of 4), item 6a (score of 3), item 10a

(score of 8) and item 23a (score of 4) suggesting that additional clarification if required would be easily understood.

Table 6.2.1 Flesch Kincaid Reading Ease and Grade Scores for the Parental Bonding Instrument (PBI)

Item	Statement	Reading Ease	Grade	Age equiv.
1	Spoke to me in a warm and friendly voice	76	5	10 - 11
2	Did not help me as much as I needed	94	2	7 - 8
3	Let me do those things I liked doing	82	4	9 - 10
4	Seemed emotionally cold to me	33	10	15 - 16
4a	Did not seem to feel any emotion	82	4	9 - 10
5	Appeared to understand my problems and worries	43	9	14 - 15
6	Was affectionate to me	34	10	15 - 16
6a	Hugged me	78	3	8 6 9
7	Liked me to make my own decisions	67	6	11 - 12
8	Did not want me to grow up	115	-1	5 6 6
9	Tried to control everything I did	46	8	13 - 14
10	Invaded my privacy	6	13	18 - 23
10a	Stopped me having my own private time and space	57	8	13 - 14
11	Enjoyed talking things over with me	74	4	9 - 10
12	Frequently smiled at me	55	7	12 - 13
13	Tended to baby me	76	4	9 - 10
14	Did not seem to understand what I needed or wanted	70	6	11 - 12
15	Let me decide things for myself	74	4	9 - 10
16	Made me feel I wasn't wanted	74	4	9 - 10
17	Could make me feel better when I was upset	76	5	10 - 11
18	Did not talk with me very much	103	1	6 6 7
19	Tried to make me feel dependent on her/him	82	4	9 6 10
20	Felt I could not look after myself unless she/he was around	73	6	11 - 12
21	Gave me as much freedom as I wanted	72	5	10 - 11
22	Let me go out as often as I wanted	85	4	9 - 10
23	Was overprotective of me	12	13	18 - 23
23a	Protected me too much	76	4	9 - 10
24	Did not praise me	97	1	6 6 7
25	Let me dress in any way I pleased	82	4	9 - 10

These additional statements were only used if required at interview, to clarify the item for the participant. This procedure occurred on only a few occasions and therefore it is not anticipated that these alterations would have affected the reliability of the scale.

In Table 6.2.2 orderly relationships can be noted within the Parental Bonding Instrument (PBI) categories of parenting and dimensional scores of Care and Protect. For the PBI, there are significant negative correlations between the category of Neglectful Parenting and the dimensional Care, and Protect scores. There are also positive correlations between Optimal Parenting and the two dimensions of Care and Protect. There is also a significant positive correlation between Affectionate Constraint and the Care dimension and Affectionless Control and the Protect dimension, with a negative correlation between Affectionless Control and the Care dimension scores.

Table 6.2.2 The Relationship Between the Categories of Parenting Style and Dimensional Scores of ‘Care’ and ‘Protect’ on the PBI.

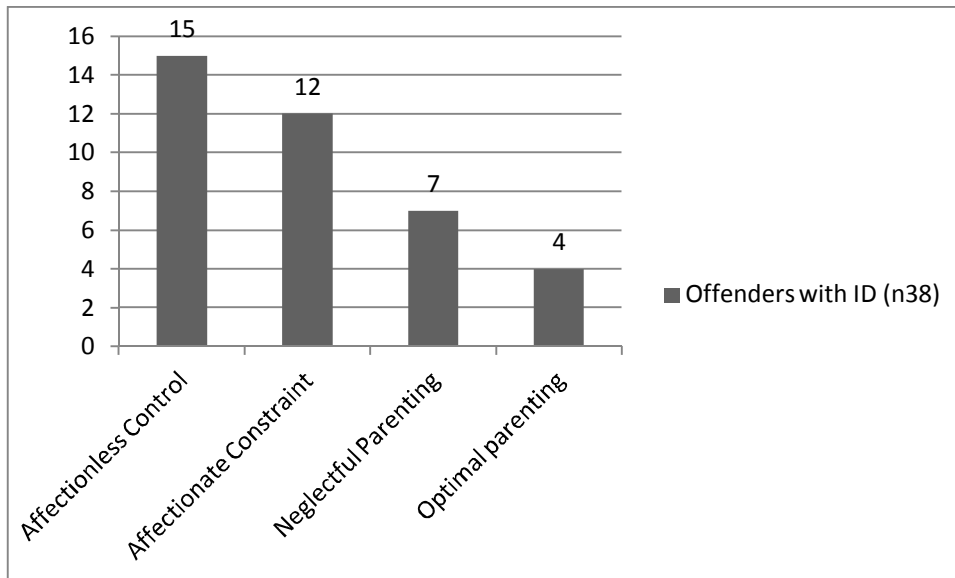
PBI factor	Affectionate constraint	Affectionless control	Optimal Parenting	Neglectful parenting	Dimensional score of Care	Dimensional Score of Protect
Care	0.62**	-0.47**	0.33*	-0.41*	1.0	
Protect	0.15	0.54**	-0.39*	-0.57**	-0.04	1.0

**Correlation significant at $p < 1\%$,

*Correlation significant at $p < 5\%$.

Figure 6.2.3 shows the majority of offenders classified the parenting they had received from a primary caregiver in childhood as either -affectionless controlø 15 (40%) (low care and high protection) or -affectionate constraintø 12 (32%) (high care and high protection). With regard to -neglectful parentingø 7 (18%) participants perceived they had received -neglectful parentingø (low care and low protection) as a child with only 4 (10%) of offenders with ID perceiving they had received -optimal parentingø (high care and low protection) in childhood.

Figure 6.2.3 Numbers of Offenders with ID Within Each Category of Perceived Parental Style Experienced in Childhood



Spearman's rho correlation analysis was conducted using the mean attachment score for each attachment subsection and the perceived parenting categories as well as the continuous scores relevant to parental care and parental protection (see table 6.2.4).

Table 6.2.4 Correlation Between Mean Scores of Dimensional Attachment Style and PBI Categorical Ratings of Affectionate Constraint, Affectionless Control, Optimal Parenting and Neglectful parenting and PBI Dimensional Ratings of ‘Care’ and ‘Protect’ (n38).

	Secure	Anxious avoidant	Dismissing avoidant
Affectionate constraint (high care/high protect)	.07	-.45**	-.11
Affectionless control (low care/high protect)	-.19	.51**	.20
Optimal parenting (high care/low protect)	.36*	-.20	-.35*
Neglectful parenting (low care/low protect)	-.13	.06	.15
Dimensional PBI care score	.37*	-.53**	-.26
Dimensional PBI protect score	-.11	.21	.07

** Correlation is significant at the 0.01 level

*Correlation is significant at the 0.05 level

The relationships between these variables are entirely as might be predicted, therefore, these two measures appear to reflect developmental experiences of attachment and parenting in a consistent fashion. The Secure attachment style shows a significant and orderly relationship with both the Optimal Parenting category (high care and low protection) and the PBI care score. The correlations at .36 and .37 respectively would be considered to have a medium effect size (Cohen, 1992). The Anxious avoidant attachment style shows a significant negative correlation to both the Affectionate Constraint perceived parenting category (high care and high protection) and the PBI Care score. The correlations of -.45 and -.53 respectively would be considered to have a large effect size (Cohen, 1992). Additionally the Anxious avoidant attachment style shows a positive relationship with a large effect size (Cohen, 1992) to the perceived parenting

category of Affectionless Control (low care and high protection). The Dismissing avoidant attachment style shows a negative relationship (-.35) with a medium effect size to the Optimal Parenting category (high care and low protection).

6.2.17 Attachment, Residential Status and Abuse

Figure 5.4.8 shows the number of participants who were placed in care and those who lived with both parents until the age of 16 years. The age of 16 years has been selected as this is the age which there is a shift from childhood to adult services if the individual is no longer at school. The percentage of participants who experience of childhood abuse is also shown. Of the 38 offenders with ID a larger proportion of participants had been placed in care (17 = 45%) than had lived with parents to age 16 years (11 = 29%).

Figure 6.2.5 Demographic Data for Offenders with ID of participants who were placed in care.

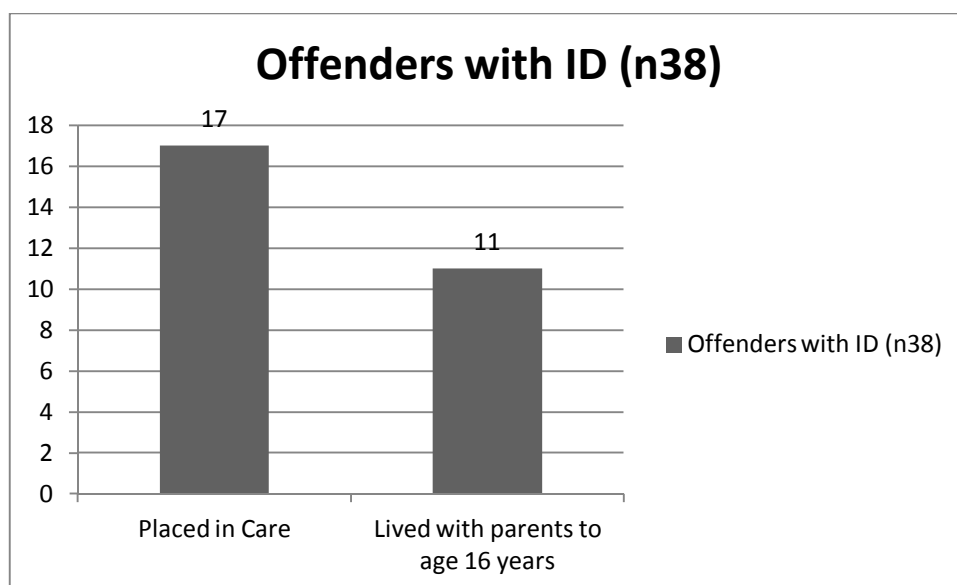
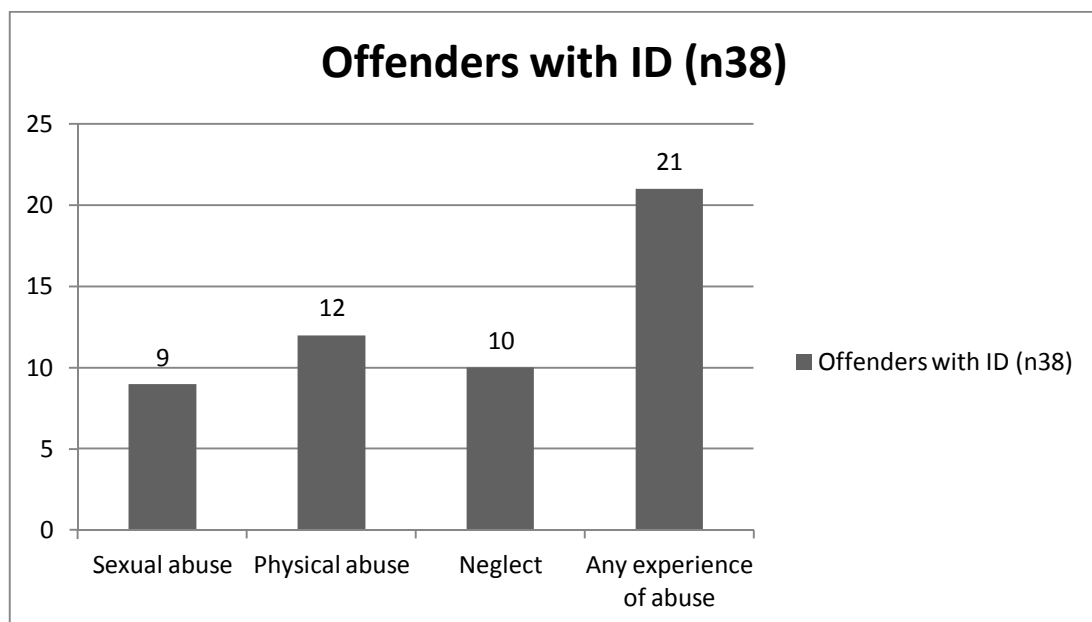


Figure 6.2.6 shows the experiences of abuse within the cohort of offenders with ID and shows that 9 (24%) of the cohort of 38 participants had experienced sexual abuse 12 (32%) of participants had experienced physical abuse, and 10 (26%) had experienced parental neglect. These experiences are not mutually exclusive and the any experience of abuse category captures all experiences of abuse and shows that a total of 21 (55%) of Offenders with ID had experienced some form of abuse within their lifetime.

Figure 6.2.6 Demographic Data for Experiences of Abuse within the Cohort of Offenders with ID (n38).



6.2.18 Attachment style, Residential Status and Abuse

The relationship between attachment style and abuse was explored using categorical attachment classifications within chi square for independence and mean scores of attachment style within Spearman's rho correlation. No sig relationships were found between any of the attachment variables and any form of abuse. Additionally no sig association was found from exploration of the data regarding categorical attachment style and being placed in care or living with both parents until age 16 years. Nor was there a significant relationship within Spearman's correlation analysis between mean scores of attachment style and being placed in care or living with both parents to age 16 years.

Table 6.2.4 Residential Status and the Variable 'Any Experience of Abuse'

	χ^2	df	sig	phi
Placed in care	9.13	1	.003	.490
Lived with both parents to age 16 years	4.91	1	.037	-.359

Further exploration of the data using Chi Square test statistic and examining the categorical variables of residential status and abuse shows that 66.7% of participants experiencing abuse were placed in care $\chi^2(1, n = 38) = 9.13, p < 0.01, \phi = .490$ which is approaching a large effect size (Cohen, 1992). There was a negative association ($\phi = -.359$) between the experience of abuse and living with both parents to age 16 years, with only 14.3% of participants experiencing abuse whilst residing with parents to age 16 years $\chi^2(1, n = 38) = 4.91, p < 0.05, \phi = -.359$. This would suggest that the participant is less likely to have experienced abuse if living with both parents until age 16 years than if placed in care. Further exploration of the separate types of abuse revealed no

significant differences between residential status and type of abuse in the case of physical abuse or neglect. There was significant difference in residential status and the experience of sexual abuse. With a positive association between to experience of sexual abuse and being placed in care $\chi^2(1, n = 38) = 5.21, p < 0.05, \phi = .370$ and conversely a significant negative association between the experience of sexual abuse and living with both parents to age 16 years $\chi^2(1, n = 38) = 4.80, p < 0.05, \phi = -.356$. This result would suggest that the residential status of the participant e.g. whether placed in care or living at home with both parents is a significant protective factor from the experience of sexual abuse.

6.2.19 Perceived Parenting and Abuse

The data were examined with regard to whether the experience of abuse would provide influence to categorical allocation of perceived parenting as measured by the PBI. The results suggest no effect of abuse on perceived parenting within the categories of \pm Affectionate Constraint \emptyset (high care and high protection), \pm Optimal Parenting \emptyset (high care and low protection), or \pm Affectionless Control \emptyset (low care and high protection). Unsurprisingly there is a significant association between \pm Neglectful Parenting \emptyset (low care and low protection) and the experience of neglect $\chi^2(1, n = 38) = 9.00, p < 0.01, \phi = -.487$. Examination of PBI continuous scores of \pm Care \emptyset and \pm Protect \emptyset reveals a significant negative correlation between the experience of sexual abuse and PBI Care scores $r^s = -.43, n = 38, p < 0.01$ with a medium effect size. There was no relationship between PBI Care and Protect scores and either physical abuse or neglect.

6.2.20 Discussion

Overall there would appear to be striking similarities in the percentage distribution of attachment style between Offenders with ID and normative data acquired from Male Students at the University of Abertay Dundee. Of the three groups compared (Offenders with ID, Control Group and Male Students) it is the Control group who appear proportionally to have a lower percentage distribution of 'Secure' attachment style. It is difficult to account for this finding other than to examine the origin of the Control group of participants with mild ID. This group have no records of offending behaviour or incidents that could be construed as offending behaviour and had been referred to an acute learning disability hospital for reasons of personal and systemic distress. It could be suggested that this group may not serve as an appropriate control group of participants as although they have no record of offending behaviour many may have had challenging behaviour the function of which may derive from difficulties in mental health and/or emotional well being.

There were no significant gender differences found in comparison of student participant attachment categories (Please see previous chapter). For completeness with regard to numbers within the cohort and percentage distribution, comparison was also made to the full cohort (n101) of student participants (including both male (n29) and female participants (n72)). Percentage distributions within this comparison show that more students than offenders with ID and Controls with ID, fall within the 'Secure' attachment category. Within the 'Anxious Avoidant' category there are consistently small numbers of participants across groups with the offenders with ID and Controls with ID showing greater numbers than the cohort of students, however small numbers limit the conclusions

that can be drawn from this data suffice to highlight the consistencies. The normative data from the cohort of students shows a slightly lower percentage distribution within the Dismissing Avoidant attachment category than the other two groups if female student data are included, however if comparison is made between groups using only the male student data, percentage distributions between offenders with ID and male students are almost equivalent.

Previous research (Ward et al. 1996) had found that while these authors could not differentiate between offender typologies and attachment style, all categories of offenders were typified by an insecure attachment style. Unfortunately, these authors did not include a control group which has not been found within this study. Smallbone and Dadds (1998) did include a control group of non-offenders and found that they had a high percentage of individuals with secure attachment style. Indeed, although it was not significant, the offender group reported a higher percentage of individuals with a secure attachment style (45%) than did the control group (32%) who had been referred to an acute learning disability hospital for reasons of personal and systemic distress. Therefore, they had by definition, significant problems. There is not a control group of mainstream individuals with ID however comparison to Male student participants of Abertay University, Dundee who provided normative data for mainstream males which showed a percentage distribution of 52% Secure, 3% Anxious Avoidant and 45% Dismissing Avoidant.

Within this preliminary attachment study almost a quarter of individuals (offenders with ID and Controls with ID), were also classified into an unresolved attachment category. These individuals overall attachment style could be considered to be insecure as they rate

equally to both 'Secure' and also an opposing 'Insecure' attachment category. Whilst categorised as 'Unresolved' each participant within this category was allocated to their relevant insecure attachment style. Those within the 'Unresolved' category tended to show disparity of choice between the Secure and Dismissing Avoidant attachment categories. Each of these categories has retained a similar the model of 'self' and 'others' portrayed by the RQ in so far as the 'Secure' attachment statements reflect a positive model of self and someone who is comfortable with the attachment figure (+ve 'other') depending on them whereas the 'Dismissing avoidant' category portrays independence and comfort with 'self' however is oppositional to the attachment figure (-ve 'other') depending on them. Thus each of these categories has a positive model of self but they differ in the model of willingness to respond to the 'other' (attachment figure) need for dependency.

This is a preliminary study into the attachment of offenders with mild ID. No file review was carried out for the Control group as this group was planned to act as a control group for the purposes of examination of attachment style only and therefore no information is available with regard to what percentage of the control group (n25) experienced institutional care or abuse within childhood. There is little difference between offenders with ID and non offenders with ID (controls) in distribution of attachment style other than levels of attachment anxiety. Insecure attachment style in general is predominant and further research should be carried out to explore in more depth, the underlying factors contributing to attachment insecurity in people with ID.

Orderly relationships between attachment style measured retrospectively in childhood by the ARQ and perceived parenting in childhood as measured by the Parental Bonding

Instrument (PBI) would lend support to reliability of the measures when used with offenders with mild ID. Interestingly only 10% of participants reported Optimal Parenting from their perceptions of quality of perceived parenting in childhood on the PBI. When comparing this to the percentage of offenders with ID who fall within the 'Secure' attachment category there is a greater percentage of securely attached offenders with ID than report experiencing Optimal Parenting. This may be due to the numbers of offenders with ID who were parented in alternative settings to the parental home. It may also be a product of shift of residency and attachment figure with those placed in care possibly developing secure attachments to staff members but not perceiving these staff members as parents with regard to the classification of 'Optimal Parenting' rather staff may be perceived within their role boundaries as being in a caring role, as is reported by many offenders with ID when discussing previous institutional experiences of residential hospital care. The positive relationship with the PBI care score would suggest that the level of care is perhaps more important for a secure attachment than any other factor. In contrast the negative relationship between the PBI care score would suggest that a lack of care leads to an anxious attachment style. The positive relationship found with the 'Affectionless control' (low care/high protect/control) also bears this out, as does the negative relationship with the 'Affectionate constraint' (high care/high protect/control) parental style. The difference between these two styles is the level of care, the level of control is the same in each category.

The 'Dismissing avoidant attachment style shows a negative relationship to optimal parenting although shows no other significant relationship to any other perceived parenting variable although does appear to show a negative trend to the PBI Care score. The most prevalent parenting styles were affectionate constraint (high care/high

protect/control) and affectionless control (low care/high protect/control) with 40% of the cohort falling into this latter style. Affectionless Control has been identified as the parenting style which leads to a higher level of psychological distress (Chambers et al. 2004) and has been recognised as prevalent among sex offenders (Craissati et al., 2002). A sexual offending history was predominant within the participant sample accounting overall for 52.6% (20) of participants offending history. Thus this finding may be influenced by contextual issues and sampling bias.

Orderly relationships were found within the PBI scale when examining relationships between categorical ratings of perceived parenting and dimensional scores of care and Protect. Additionally orderly relationships were found between retrospective childhood attachment ratings and perceived parenting in childhood. Only 10% of offenders with ID perceived they had optimal parenting with a large percentage falling within the affectionless control category identified by Chambers et al. (2004) as having the highest associations with psychological distress.

Over 50% of offenders with ID had experienced some form of abuse. With regard to residency status offenders with ID who have been placed in care are significantly more likely to experience sexual abuse than those who have lived with both parents to age 16 years. Given the adaptive evolutionary nature of attachment (Bowlby, 1982, Buss, 1999) these results may be unsurprising. Residency with biological parents would be expected to offer more protection from abuse than if the individual was cared for by individuals who had no vested attachment interest in their evolutionary survival. Additionally within the present day there is a greater awareness of issues of disclosure for those working with children than in past decades and therefore children may have been more vulnerable and

susceptible to abuse through lack of controls on those who supported and cared for them. Additionally although abuse was reported it was not always perpetrated by an adult. In some cases abuse was carried out from an older child to a younger more vulnerable child. These reports tended to be with regard to residency in the large communal living wards with low staff ratios.

6.3 Study 4: Attachment, Anger and Psychological Symptoms in Offenders and Non Offender Controls with Intellectual Disability.

There is now a fairly well established relationship between attachment difficulties in childhood, childhood adversity, family disruption and the development of problems associated with criminal behaviour and poor mental health in adulthood. In their classic study on the development of criminal careers in 411 males born in 1953 in south London, Farrington and colleagues (West and Farrington 1973, Farrington 2005, Farrington 2006) found a consistent relationship between adverse childhood experience in disrupted families and later criminal behaviour. The most important childhood risk factors for the development of antisociality or offending behaviour were poverty, poor child rearing, low school attainment and early antisocial behaviour.

Disruption to childhood attachments has emerged as a risk factor in the largest risk assessment studies. Harris, Rice and Quinsey (1993) in their large study on 618 men charged with serious offences found that a number of childhood variables correlated significantly with a reoffending. In particular, separation from parents under the age of 16 (a clear proxy for attachment difficulties and disruption) was highly associated with recidivism. In another large scale risk assessment study, Monahan et al (2001) found that abuse in childhood, not living with either parent until the age of 15 and frequent parental disputes were highly associated with violence. Therefore, these large-scale studies attest to the fact that adverse childhood experiences and family disruption (proxies for attachment difficulties) are significantly associated with crime in adulthood.

Specific studies on attachment style have reinforced the relationship between disruptive attachment and adult criminality. Ward, Hudson and Marshall (1996) in a study of 147 participants compared sexual, violent and non-violent offenders on self report measures of attachment. While they found no differences between the offender groups on attachment style, they found that avoidant and dismissive attachment style predominated in all groups of offenders. They found that insecure attachment was associated with all types of offending. Building on this work, Smallbone and Dadds (1998) compared sexual offenders, property offenders and non-offenders on self-reported attachment style. The sexual offenders reported less secure attachment than the control group, with no difference between the offender groups. In a follow-up study, Smallbone and Dadds (2000) found that childhood attachment insecurity predicted aggression, antisociality and coercive sexual behaviour. Stirpe et al. (2006) assessed the attachment style of 101 sexual and nonsexual offenders using the Adult Attachment Interview (AAI). As with previous studies, they found that sexual offenders reported a greater level of insecure attachment styles, however all offenders tended towards insecure attachment.

In a study of violent men with intellectual disability (ID), Novaco and Taylor (2008) investigated 105 male forensic patients to determine whether their exposure to parental anger and aggression was related to assault and violence in adulthood. They used historical records, staff ratings and clinical interviews to assess participants' propensity towards anger and aggression and childhood exposure to parental conflict. Witnessing parental violence in childhood was significantly related to anger and aggression in adulthood. In this study, again parental conflict is a proxy for childhood adversity and problems in attachment. In a recent study comparing 74 forensic patients with ID and 282 mental health patients with ID, Lunsy et al. (2011) found that the forensic group had

significantly higher rates of sexual abuse and neglect in childhood suggesting an association between adversity in childhood and offending. In a study comparing forensic referrals to community services and secure services, Carson et al. (2010) found significantly higher rates of abuse in childhood than those referred to secure services. This association while highly significant was not retained in a regression model predicting referral pathway.

Steptoe et al. (2006) investigated the quality of relationships of sexual offenders and non-offenders, both with ID and found that the relationships and attachments to significant others such as mother, father and siblings of sexual offenders was more impoverished when compared to non-offenders. They found that their sexual offender group reported more isolation and that they were relatively satisfied with these more impoverished relationships. Although they did not investigate specific types of attachment style, their data suggested that isolation and deficits in attachment might be important variables for consideration in assessment and treatment. Keeling, Rose and Beech, (2007) piloted the use of the Relationship Scales Questionnaire (RSQ: Griffin and Bartholomew 1994). This is a four category attachment measure reviewing Secure, Preoccupied, Avoidant/Fearful, and Avoidant/Dismissive attachment styles. Keeling et al. (2007) adapted the RSQ for use with 16 offenders with special needs (most of whom had ID) and assessed its validity against the Relationships Questionnaire (RQ: Bartholomew and Horowitz 1991) which was an earlier version of RSQ measuring four scales of Secure, Fearful, Preoccupied and Dismissive attachment styles. Although the RSQ had been found to have sound psychometric properties in adults without disabilities (Griffin and Bartholomew, 1994, Kurdek, 2002), Keeling et al. (2007) found that it had a low internal consistency and poor validity when correlated with the RQ.

These studies suggest that proxy measures for attachment problems in childhood have a strong relationship with criminal behaviour in adulthood. This study will explore the relationship between attachment and criminal behaviour in the form of anger and emotional difficulty which may lead to aggressive behaviour. Two samples have been used to compare offenders and non-offenders on attachments style and emotional problems. Some of the measures have been collected as part of routine clinical practice and because different samples have been used, different measures of emotional difficulty have been used in the different services.

6.3.1 Method

6.3.2 Participants

Thirty eight male participants were currently involved in the forensic service for people with ID and were offenders with mild ID. The mean IQ of the forensic participants was 62.89, S.D. = 4.34, range = 55 ó 70. Their mean age was 37.87 years S.D. = 9.13, range 23-60 years. Participants were referred from the courts, community services such as social work and community learning disability teams and from consultant psychologists or psychiatrists.

Twenty five participants who had no records of offending or offending type behaviour were employed in the control group. All participants in the control group had a mild intellectual disability. The mean IQ of the control group participants was 64, S.D. = 5.13, range = 56 to 71. Their mean age was 32 years S.D. = 8.22, range 21-47 years. This group was drawn from a learning disability acute inpatient service. Participants were

referred for a range of difficulties including placement breakdown due to challenging and aggressive behaviour, family difficulties, problems of mental health and mental illness and personality difficulties. Individuals were not included in the sample if they had been charged with any offence.

6.3.3 Measures

The Adapted Relationships Questionnaire (ARQ) ó Study 2a and Study 2b developed an adapted model of the RQ (Bartholomew and Horowitz, 1991) identified as the Adapted Relationship Questionnaire (ARQ). This is a fifteen item scale which was formulated through statistical testing using Principal Components Analysis into three sections each of which represents an attachment classification, 'Secure', 'Anxious avoidant' and 'Dismissing avoidant'. The 'Secure' attachment section consists of four statements e.g. 'I want to feel close to my mum' and has a Cronbachs Alpha of .694. The 'Anxious avoidant' attachment section of the ARQ consists of seven statements, two of which are reverse scored. Typical statements are: 'I find it difficult to totally trust my mum', 'I find it hard to depend on my mum'. The Cronbachs Alpha level of the Anxious avoidant section of the ARQ is .875. The Dismissing avoidant section of the scale consists of four statements and has a Cronbachs Alpha of .840. Typical statements are 'I prefer not depending on my mum', 'Its important to me to feel I can do things for myself without mums support'. Participants rate each individual statement within each section as to how like them the statement is e.g. Not like me; A bit like me; Quite like me; Very like me. Pictorial representations of the response choice was used to facilitate understanding of the choices available (Appendix 14).

The Emotional Problems Scale (EPS; Prout and Strohmer 1991) ó the EPS was developed to assess psychological, emotional and behavioural problems in people with mild and moderate ID. It comprises two complementary scales: the behavioural rating scale and the self report inventory. The behavioural rating scale is filled out by nursing staff and was used in the current study. It comprises 135 items structured into 12 clinically relevant subscalesô thought/behaviour disorder, verbal aggression, physical aggression, sexual maladjustment, non-compliance, hyperactivity, distractibility, anxiety, somatic concerns, withdrawal, depression and low self esteem. Four of these scales are combined to represent an Externalising Behaviour Problems Scale (verbal aggression, physical aggression, non-compliance and hyperactivity) and three are combined to represent an Internalising Behaviour Problems Scale (anxiety, depression and low self esteem).

The Brief Symptom Inventory (BSI; Derogatis 1993) óthe BSI is a 53 item self report inventory which assesses psychiatric symptoms in nine areas including somatisation, obsessive-compulsive problems, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation and psychoticism. It is completed on a five point Likert scale ranging from ÷not at all ÷to ÷extremely÷. Kellett et al (2003, 2004) have adapted the presentation format so that it can be used by people with ID and have shown that the adapted format retains good psychometric properties and corresponds to the original factor structure reflecting the symptom areas.

The Dundee Provocation Inventory (DPI; Alder and Lindsay 2007) ô the DPI has a 20 item provocation inventory derived from Novaco's (1993) analysis of anger. In a study on 114 participants with ID Alder and Lindsay (2007) found a five factor structure

reflecting threats to self-esteem, external locus of control, frustration, disappointment and resentment. The DPI also had good reliability and internal consistency.

6.3.4 Ethical Approval

Ethical approval was gained through separate systems. Ethical approval for the administration of the ARQ was given by the local Medical Ethics Committee. The EPS, the BSI and DPI were all assessments used in the course of routine clinical activity and ethical approval for the use of this information in a research exercise was gained through Caldicot Guardian approval which is a process in Scotland whereby ethical approval can be granted for the use of existing information that has been gathered through routine clinical practice. Approval to combine the use of these measures was also gathered through the Caldicot Guardian.

6.3.5 Procedure

Potential participants were made aware of the study by clinical staff in both the experimental and control conditions. Those who expressed an interest in participation were each met in an individual session where the information sheet (Appendix 16 for the offender group and Appendix 21 for the Control group) that outlined the aim of the study was read out and they were given time to ask any questions they may have at the time. Each participant was informed of the confidential nature of the study were they to participate. They were provided with an information sheet regarding the study for themselves and also their carer/key worker (Appendix 18 for the offender group and Appendix 22 for the Control group). in order that they could discuss the study should

they so wish, with people who were involved in their regular care over a seven day period. After a seven day period the participant and the researcher met and the information sheet was read again (Appendix 16 for the offender group and Appendix 21 for the Control group) and the potential participant was given a further opportunity to discuss or ask questions regarding the research. Participants were then given the consent form which was also read to them by the researcher (Appendix 17 for the offender group and Appendix 23 for the Control group). They were asked if they would wish to participate in the study or decline participation. Consenting participants were read the consent form and asked to place their initials to each statement as it was read out and if they agreed with the statement, and to sign the consent form. Within the offender service clinical staff had also been approached for their consent to participation in scoring the EPS and were given the Study Information Sheet for Clinical Staff (Appendix 19). Staff who reported a wish to participate signed the study consent form (Appendix 20)

Since the experimental group and the control group in the study were drawn from two separate services, the measures used in the services differ. The ARQ is the main measure of interest and has been used consistently across both samples in the study. In the offender service, the EPS was used to assess emotional problems and hostility (verbal and physical aggression). In the acute hospital service, the BSI and DPI were used to assess emotional problems and aggression. It should be noted that the EPS is completed by care staff while the BSI and DPI are self report questionnaires. However all measures are thought to have reliability for use with offenders with mild ID and as the all measure emotional difficulty then it could be expected that there should be some consistency of relationship between attachment style and emotional difficulties within each group despite differences in measures.

BSI and DPI ratings had already been gathered by several clinical staff as a part of their everyday assessment process. These previously scored measures were used under Caldicot Guardian Approval. The EPS for each participant was scored by a member of clinical staff who was primarily involved in the care of the participant over the previous 30 day period to which this measure appertains.

6.3.6 Results

Table 6.3 Percentage of Individuals Falling into Each Attachment Style Category.

Attachment category	% Offender group (n38)	% Control group (n25)
Secure	17 (45%)	8 (32%)
Anxious avoidant	3 (8%)	4 (16%)
Dismissing avoidant	18 (48%)	13 (52%)
Unresolved	8 (21%)	6 (24%)

Table 6.3 shows the number of participants falling into each category on the adapted RQ. Of the 38 participants in the offender group, most fell into the categories of secure attachment and avoidant attachment. Only 3 (8%) fell into the category of anxious attachment whilst 4 (16%) of controls fell within this category of attachment.

Table 6.3.1: Shows the Relationship between Mean Scores on Scales of Emotional Problems Scale (EPS) and Mean Scores for each Attachment Style for Offenders with Mild ID.

EPS scale (n38)	Mean Anxious avoidant (n38)	Mean Dismissing avoidant (n38)	Mean Secure (n38)
Thought/behaviour disorder	0.27	-0.01	-0.16
Physical aggression	0.28	0.27	-0.27
Non-compliance	0.11	0.14	-0.15
Anxiety	0.05	-0.08	0.16
Distractibility	-0.01	-0.08	-0.01
Depression	0.14	0.15	-0.13
Hyperactivity	0.08	0.20	-0.22
With drawl	0.25	-0.08	-0.11
Self esteem	-0.34	-0.23	0.37*
Verbal aggression	0.11	0.34*	-0.32
Sexual maladjustment	-0.17	0.01	0.03
Somatic concerns	0.11	0.11	-0.10
Externalising	0.09	0.23	-0.28
Internalising	-0.02	-0.12	0.22

*Correlation is significant at the 0.05 level

Tables 6.3, 6.3.1, and 6.3.2 show the relationships between attachment style and the measures of emotion. Attachment style has been calculated using mean section scores in each category rather than categorical style allocation as has been shown in table 1. This allows us to investigate the relationships between attachment style and scores on the emotional subscales. For the EPS, there were significant correlations between attachment style and the subscales of verbal aggression and self esteem. Table 5.5.1 shows the results for the relationship between each of the three attachment styles and all of the EPS subscales and the two composite scales. As can be seen, there is a significant positive

correlation between verbal aggression and the mean classification score on the dismissing avoidant attachment style and a corresponding negative correlation between verbal aggression and secure attachment style falls marginally outside a significance level of 5% with a medium effect size. There is a positive correlation between self esteem and the mean score for secure attachment style. All of these correlations are medium effect sizes. It should be noted that limitation was placed on the number of comparisons through the computation of separate statistical analysis for the Externalising/Internalising scales on the EPS.

Table 6.3.2: Shows the Relationship Between Mean Scores on Factors of the Dundee Provocation Inventory (DPI) and Mean Scores for each of the Attachment Categories in the Control group.

DPI factor(n25)	Anxious Avoidant (n=25)	Dismissing Avoidant (n=25)	Secure (n=25)
Threat to self esteem	0.58**	0.27	-0.75**
Locus of control	0.45*	0.16	-0.59**
Resentment	0.12	0.10	-0.24
Frustration	0.24	0.15	-0.41*
Disappointment	0.49*	0.22	-0.59**

** Correlation is significant at the 0.01 level

*Correlation is significant at the 0.05 level

For the control group, there were also orderly relationships. Table 5.5.2 shows the correlations between the DPI factors and attachment style. There were significant negative correlations between secure attachment and four of the DPI factors with one medium and three large effect sizes. There were also significant positive correlations between three of the DPI factors and anxious attachment style but in this case, only the

relationship between threat to self esteem and anxious attachment style had a large effect size whilst locus of control and disappointment showed a medium effect size.

Table 6.3.3 shows the relationship for the control group between the BSI factors and attachment style. There was a significant negative correlation with large effect size between secure attachment and hostility. Two significant positive correlations, (Depression and Hostility) with a medium effect size are noted for the anxious avoidant attachment classification. There was also significant negative correlation with a medium effect size between secure attachment and depression.

Table 6.3.3 Correlations between Mean Scores on Factors of the Brief Symptom Inventory (BSI) and Mean Scores for each of the Attachment Styles in the Control Group.

BSI factor (n25)	Mean Anxious (n=25)	Mean Avoidant (n=25)	Mean Secure (n=25)
Somatisation	0.17	-0.20	-.012
Obsessive-compulsive	-0.14	0.12	-0.24
Interpersonal sensitivity	0.24	0.14	-0.37
Depression	0.40*	0.17	-0.41*
Anxiety	0.12	-0.02	-0.20
Hostility	0.47*	0.23	-0.68**
Phobic anxiety	-0.23	-0.25	0.30
Paranoid ideation	0.20	0.09	-0.28
Psychoticism	-0.31	0.14	0.20

** Correlation is significant at the 0.01 level

*Correlation is significant at the 0.05 level

6.3.6 Summary

Fewer offenders with ID than controls fell within the secure attachment classification. The control group were currently resident within the acute care setting and as such may have systemic difficulties which may also have affected their attachment classification. There were a number of positive relationships found within the emotions of controls and mean score within attachment classifications. These relationships are orderly relative to that which would be expected within each attachment classification. A significant positive correlation was found between self esteem and secure attachment style using the staff rated EPS. Additionally a significant negative correlation was found between verbal aggression and dismissing attachment style.

6.3.7 Discussion

The main difficulty with this study is that several of the measures have been collected through routine clinical practice and therefore, there are differences in the assessments of emotion for the offender group and the control group. These differences extend to the way in which the data have been gathered since the EPS has been completed by staff for the offender group, while the DPI and BSI have been completed as self report inventories through structured interview. It had been thought that since both the EPS and BSI were well validated assessments of emotion for people with ID, that they may be equivalent. Both have scales for somatic complaints, depression, anxiety, and hostility (verbal and physical aggression in the EPS) and might be considered to have some equivalence. Having made this point, this drawback can also be considered a strength of the study. The data have been gathered from a number of different sources by several different

individuals. For example, the EPS data has been completed by over a dozen different workers who had been the key member of staff for that participant. The BSI data has been collected through interview with each client by five different psychologists in the course of routine clinical assessment. This reduces the chance of any systematic bias in the collection of data. The reliability of these assessments has been previously tested by the authors and manual based statistics and administration procedures are used to administer clinical assessments thus reducing any possible lack of consistency in data gathering within assessment type. Orderly relationships have emerged in both groups. For the offender group, there are significant correlations with medium effect sizes between verbal aggression, self esteem and attachment style. These are the expected direction in that negative correlations are shown with verbal aggression and secure attachment style and positive correlations with dismissing avoidant attachment style. Similarly positive correlations are found between self esteem and secure attachment style with a negative correlation (albeit lacking significance) to both insecure attachment styles. As I shall discuss below, similar relationships have been seen between the other assessments in the control group.

There were no significant relationships between attachment style and composite measures of emotion (staff rated EPS scales) in this study. Although a few orderly correlations were found between mean scores of attachment style and classifications of emotional difficulties. We have already mentioned problems related to different measures of emotion for the offender and control groups. In fact, previous authors have noted difficulties in equivalence between the self rated and staff rated versions of the EPS. Lewis and Morrissey (2010) reported no relationships between the two versions on the scales of the EPS (except a moderate effect size for the anxiety scale) in assessments of

48 male participants in a maximum security setting. Given that these authors found such a low level of relationship between two versions of the EPS, perhaps it is less surprising to find a lack of equivalence between the self-reported BSI and the staff rated EPS in the present study.

Coming to the data on the control group, there are a number of significant correlations between attachment style and emotional difficulties. The most significant relationships were between the various measures of hostility and secure or anxious attachment. Secure attachment had significant negative relationships with large effect sizes with factors on the DPI and BSI hostility. It also had a significant negative relationship with BSI depression. This suggests that attachment style may be a significant factor in the development of problems of emotion and aggression in individuals with mental illness. Security of attachment is likely to be a protective factor against the development of emotional difficulties (Farrington, 2006). This finding is consistent with that of Novaco and Taylor (2008) who measured a relationship between the experience of parental aggression in childhood and participant aggression in adulthood. Further evidence for this relationship comes from the data in this study showing positive relationships with moderate effect sizes between anxious attachment style and factors on the DPI and anxious attachment style with BSI hostility. This suggests that aspects of insecure attachment relate to the development of difficulties in aggression.

It is interesting that all of the significant relationships between measures of attachment and emotion have occurred in the control group. One interesting caveat is that all of the measures in the control group were collected through self report. It may be that staff, even although they work closely with the client and are familiar with the concepts of

emotional and psychological difficulties, find it difficult to assess accurately the emotion experienced by people with ID. Alternatively, it could be that the relationships between emotion and attachment in offenders with ID are indeed less clear than they are in people with ID who were referred for other types of problems. One further issue that should be explored is the interpersonal problem solving style and emotional regulation of offenders with ID relevant to attachment style. It may be that offenders with ID may have more difficulties in perspective taking which in turn may lead to a lower level of emotional response and a less empathic response. This in turn may be a protective factor to emotional difficulties through a lack of insight into the effect of an individual's behaviour on others alongside a lack of remorse. Not all offenders with ID will fall into this category however future studies exploring the relationship between attachment, empathy development, theory of mind abilities and emotional difficulties may inform of these issues.

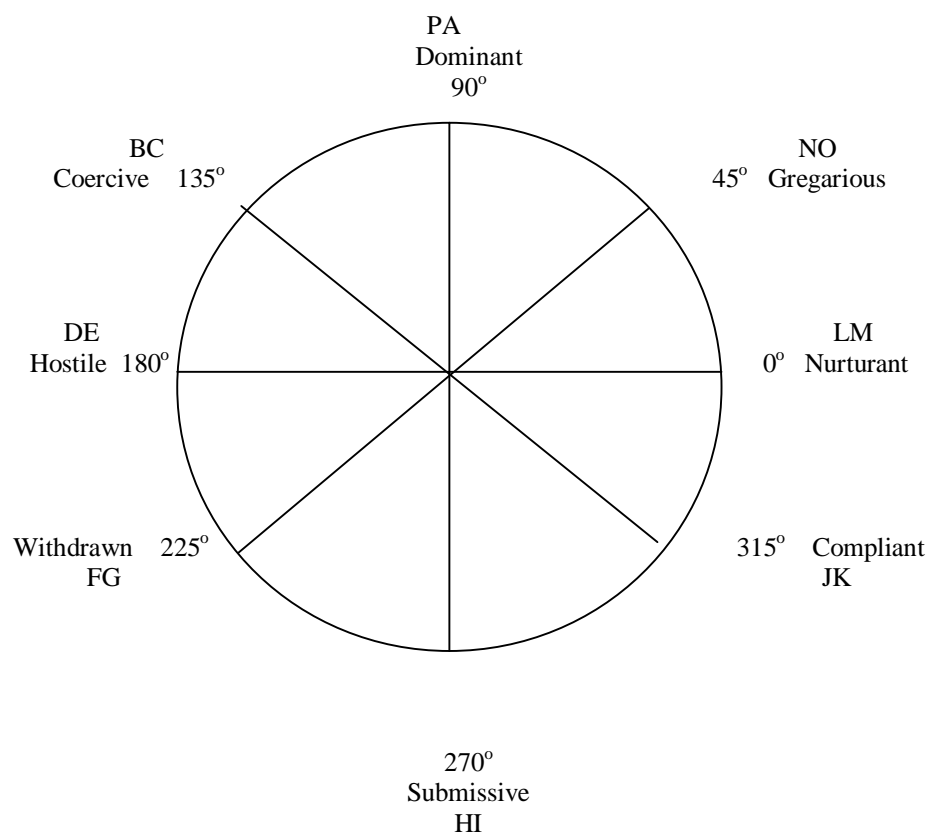
6.4 Study 5: Attachment Style: The Relationship with Interpersonal Style and Personality Disorder.

In this chapter, the author will review the relationship between attachment style, perception of parental bonding, personality as measured by the circumplex model of personality and personality disorder. As will be explained, several authors have been interested in the relationship between personality and psychopathology in the form of emotional disorders. In these studies, personality disorder (as a reflection of personality characteristics) has also been considered in relation to personality and psychology.

As has been described in previous chapters, attachment style has been linked to behaviour and psychopathology in a variety of adult populations. This is particularly important in relation to offending behaviour where it has been shown that various types of offenders have had developmental experiences that may have generated insecure and maladaptive attachments (e.g. Ward, Hudson and Marshall, 1996). It is also the case that personality disorder (PD) has been linked to personality and psychopathology in an effort to understand the underlying structures for a range of psychiatric symptoms. One of the first studies to investigate the relationship between PD and personality employed the circumplex model as outlined by Wiggins (1982). Soltz et al., (1993) reported on 102 consecutive referrals for group therapy who were assessed using the personality disorder examination (PDE, Loranger 1988) and the IIP circumplex scales (Horovitz et al., 1988). The PDE measured personality disorder according to DSM III criteria (American Psychiatric Association, 1987). The IIP circumplex is based on Wiggins (1982) conceptualisation. As with other circumplex models it is based around two axes: domineering/submissive and hostile/nurturant. The octants are labelled alphabetically and

are represented in the following diagram. In this and later conceptualisations of the circumplex model, an individual's responses on the test were represented by two dimensional scorers corresponding to 2 axes: DOM (the dominant/submissive axis), and LOV (the hostile/nurturant access). Figure 5.6.0 shows the circumplex and the way in which the IAS octants are arranged.

Figure 6.4 Characteristics of the Interpersonal Circumplex Model, Fitting the IAS Octant Structure



Soltz et al., (1993) found an orderly relationship between personality disorders and positioning on the circumplex. Antisocial PD and narcissistic PD were placed towards the PA end of the dominant/ submissive dimension and borderline PD was placed more

centrally on the same dimension. They felt that this was understandable since certain aspects of borderline PD such as affective instability were not conceptually represented on the interpersonal circumplex and as a result borderline PD was more likely to be represented closer to the central origin whereas aspects of antisocial PD were clearly represented towards the dominant pole of the vertical axis.

Blackburn et al., (2005) investigated the relationship between personality as measured by circumplex personality measure and PD. They studied 168 mentally disordered offenders and first established two superordinate dimensions of personality disorder. The first factor, which they called "anxious/inhibited", was made up of dependent PD, avoidant PD, schizoid PD and paranoid PD. The second factor, which they called "acting out", was made up of antisocial PD, narcissistic PD and histrionic PD. They found that this latter factor correlated positively with the coercive dimensions of the circumplex model with a positive correlation between the "anxious/inhibited" factor and the withdrawn/submissive quadrant on the circumplex. These two studies (Soltz et al., 1993, Blackburn et al 2005) suggested a consistent relationship in adult samples between personality disorder and circumplex measures of personality. Other authors have extended this work to an investigation of the relationship between psychopathology and PD. Quirk et al (2003) found that neuroticism scores were strongly related to borderline PD while Edens (2009) found that low warmth and high dominance were associated with antisocial and externalising psychopathology (non-compliance and aggression).

Lindsay et al., (2010), in a study in which some of the present data were incorporated and where the data were gathered by the present author, extended some of these findings to offenders with ID. They first established that circumplex measures of personality were

valid with this client group by showing that factor analysis of the Interpersonal Adjectives Scale (IAS: Wiggins 1995) produced two factors of approximately equal magnitude that corresponded with the orthogonal dimensions of dominant/submissive and coercive/nurturant. The fact that the factors were of equal size is important because it suggests that the octants are equally spaced on the circumplex. If the factors were of different magnitude, it would suggest an oval rather than a circular underlying structure. They reported a significant negative correlation between antisocial PD and IAS LOV with further significant relationships between externalising psychopathology and dominant personality features on the IAS. Lindsey et al., (2010) noted a clear convergence in the assessment of various features of emotion, personality and personality disorder and felt that personality might be a mediating variable between emotional problems and violence. They went on to hypothesise that disruption of developmental attachments through developmental adversity might be a significant factor in the prediction of violence. Certainly the most common assessments of risk for future violence, the Violence Risk Appraisal Guide (Quinsey et al., 1998) and the HCR-20 (Webster et al., 1996) both feature developmental factors as significant variables for the assessment of future violence. There is some evidence supporting the notion that adversity in childhood is a significant factor in the development of a propensity towards violence in adulthood for offenders with ID. Novaco and Taylor (2008) found a strong relationship between parental violence in childhood and the development of anger problems in adulthood for a cohort of violent men with ID. Therefore, these enduring developmental experiences may be important factors accounting for personality disruption in adulthood. O'Brien et al., (2010) in a study of 477 offenders with ID, reported that 35% of the cohort had experienced some form of childhood adversity with severe social economic deprivation and neglect being the most common followed by

physical abuse and sexual abuse in childhood. Since these developmental factors are so pervasive in this client group, it leads to the hypothesis in the current study that insecure attachment is likely to be associated with problems in personality as measured by the IAS and personality disorder. The two personality disorders most commonly associated with psychopathology and by extension the two most commonly studied in relation to attachment difficulties (as discussed in the introductory chapters) have been borderline PD and antisocial PD. Therefore, these two personality disorders are used in the current study for the association with attachment style.

6.4.1 Method

6.4.2 Participants.

The participants in the current study have already been described in the previous study. They comprised of 38 male referrals to a forensic ID service. Three participants did not participate in the completion of the measures due to the fact that measures are completed by care staff who have a good knowledge of the participants [presentation on a daily basis. For three participants it was not possible to access staff who knew that offender at this level of knowledge and therefore data may have lacked reliability if completed by a member of staff less knowledgeable of the offender's everyday presentation. Thus of the original 38 participants, 35 participants took part in this study. Ethical approval was sought and gained through the Tayside and Fife committee on Medical Research Ethics.

6.4.3 Measures

Interpersonal Adjectives Scale (IAS: Wiggins 1995). The IAS is a circumplex assessment of personality that contains 64 words that the respondent answers on an eight point scale from *extremely inaccurate* to *slightly inaccurate/accurate* to *extremely accurate*. The 64 words include items such as "wily", "crafty", "undemanding", "shy", "kindhearted", "kind" and "unbold". The resultant T score falls in the circumplex along two axes. The first is the dominant,assured/unassured,submissive (DOM) and the second is cold hearted, hostile/nurturant (LOV close brackets. All participants are assigned a score on the DOM and LOV dimensions both of which were used in the present study.

Assessment of Personality Disorder. The Diagnostic and Statistical Manual of Mental Disorders: Fourth Edition (DSM IV) classifications of borderline PD and antisocial PD were used in this study. One of the consistent criticisms of PD research in the field of ID is the lack of care with which diagnosis is made (Alexander and Cooray 2003). Therefore, in this study measures were taken to ensure the consistency and reliability of classification. DSM IV personality disorder consensus diagnosis (DøSilva and Hogue 2002) was used. In this assessment, each trait is represented by a question (this is a method typical of the various structured assessments). One assessment was completed from a file review, a second by a clinician familiar with the participant (a psychologist or psychiatrist) and a third by an observer rating by nursing or care staff who knew the individual well. A standardised interview with a member of the direct care staff familiar with the participant is also conducted using the Structured Assessment of Personality (Pilgrim and Mann 1990). The four data sources are then checked on each trait and the trait is considered present if at least three sources are in agreement. DSM IV criteria are

then applied to assign a diagnosis. This method has been reported previously by Lindsay et al (2006) where the present author also gathered the data, in the same manner, on offenders with ID in the community.

To assess Personality Disorder in this manner, extensive training on reviewing, collecting, and coding information through file review was conducted through a dedicated 1-week training course undertaken by all staff involved in the collection of previous study data, including the author. Appropriate training was conducted by persons with competence and experience in relevant data collection, and this training was done to ensure consistency of data collection across sites. Research assistants including the author then underwent a further 2-day exercise on ensuring reliability of data recording on a series of test cases.

Reliability was calculated for all cases. With the exception of one category in one case example of personality disorder (78% agreement) agreement between trained observers on each category was between 89% and 100% with an average of 93.9%. Agreement was calculated by dividing the 3 numbers of agreements by the number of agreements plus disagreements expressed as a percentage.

Adapted Relationships Questionnaire (ARQ). The ARQ was administered to all participants in the present study to an assisted completion format where all questions were read to the participant.

Parental Bonding Instrument (PBI). The PBI has been fully described in the previous chapter and was administered to all 35 participants.

6.4.4 Procedure

Potential participants were advised of the study by clinical staff. Those who expressed an interest in participation were each met in an individual session where the information sheet (Appendix 16) that outlined the aim of the study. The information sheet was read out to the participant and they were given time to ask any questions they may have at the time. Each participant was informed of the confidential nature of the study were they to participate. At the end of the information session the participant was provided with an information sheet regarding the study for themselves and also their carer/key worker (Appendix 16 and Appendix 18 respectively). In order that they could discuss the study should they so wish, with people who were involved in their regular care over a seven day period. After a seven day period, the participant and the researcher met and the information sheet was read again (Appendix 16) and the potential participant was given a further opportunity to discuss or ask questions regarding the research. Participants were then given the consent form which was also read to them by the researcher (Appendix 17). They were asked if they would wish to participate in the study or decline participation. Consenting participants were read the consent form and asked to place their initials to each statement as it was read out and if they agreed with the statement, and to sign the consent form. Within the offender service clinical staff had also been approached for their consent to participation in scoring the IAS. Staff were given the Study Information Sheet for Clinical Staff (Appendix 19) and clinical staff who reported a wish to participate signed the study consent form (Appendix 20)

The IAS was completed by clinical staff that were closely involved in the care of the participant and who were aware of his general interpersonal style at time of assessment. Staff completing the IAS were asked to rate how accurately each of the 64 words described the participant as a person and selected a ranked score for each word on an 8 point likert scale which ranged on a continuum of accuracy of description from 1 = Extremely inaccurate to 8 = Extremely Accurate.

Assessment of Personality Disorder was conducted using the DSM IV personality disorder consensus diagnosis (DøSilva and Hogue, 2002). One assessment was completed from a file review, a second by a clinician familiar with the participant (a psychologist or psychiatrist) and a third by an observer rating by nursing or care staff who knew the individual well. The author then conducted a standardised interview with a member of the direct care staff familiar with the participant on the basis of the Structured Assessment of Personality (Pilgrim and Mann 1990). The author then checked the four data sources on each trait and the trait was considered present if at least three sources were in agreement. DSM IV criteria were then applied to assign a diagnosis.

6.4.5 Hypotheses

In this study it is predicted that the secure attachment categories will relate positively to the IAS LOV dimension and negatively to the IAS DOM dimension, and negatively to the personality disorder categories. It is predicted that the insecure attachment categories and styles (anxious/avoidant and dismissive/avoidant) will relate negatively to the IAS LOV dimension and positively to the IAS DOM dimension, and positively to the personality disorder categories.

It is also predicted that the PBI Care dimension will relate negatively to the personality disorder categories and to IAS DOM; correlating positively to IAS LOV. PBI Protect will relate positively to IAS DOM and positively to the personality disorder dimensions.

6.4.6 Results.

Spearman's rho Correlation analysis was carried out firstly to examine any relationship between attachment category (Secure, Anxious Avoidant, and Dismissing Avoidant) and scores on the variables measuring IAS DOM and LOV. Secondly Spearman's Correlation analysis was performed examining the relationship between mean scores of attachment style and IAS DOM and LOV variables. Table 5.6.0 shows the relationship between measures of attachment style within the ARQ and the two main dimensions of IAS. Both categorical and dimensional (mean scores) methods of scoring the ARQ are included in the table. These are, firstly, allocating each individual according to the category of attachment into which their responses fall and, secondly, computing each individual's score on the dimension of each attachment category. There were no significant relationships found between the main dimensions on the IAS (DOM and LOV) and any of the attachment categories or scores on the attachment style dimensions.

Table 6.4: Relationships between the Categories and also the Mean Dimensional Scores for the ARQ and the DOM and LOV dimensions on the IAS.

ARQ Attachment style	IAS DOM	IAS LOV
Category Secure	-0.09	0.22
Category Anxious Avoidant	-0.30	0.11
Category Dismissing Avoidant	0.21	-0.22
Category Unresolved	0.10	-0.17
Mean Secure	-0.23	0.22
Mean Anxious Avoidant	-0.12	0.08
Mean Dismissing Avoidant	0.26	-0.05

** Correlation is significant at the 0.01 level

*Correlation is significant at the 0.05 level

Table 6.4 shows the Spearman's correlations between the IAS octants and the attachment style scores and categories. Although all it was not mentioned in the hypothesis section, we would expect positive correlations between secure attachment and octants reflecting positive personality characteristics (nurturant, compliant and gregarious) with negative correlations between secure and negative personality characteristics of dominant and coercive. We would also expect positive correlations between these negative personality characteristics and insecure attachment styles (anxious/avoidant and dismissive/avoidant) with corresponding negative correlations between positive personality characteristics and these insecure attachment styles.

Table 6.4.1. Relationships between the Attachment Categories and also the Mean Attachment Style Scores for the ARQ and the Eight Quadrant Scores on the IAS.

IAS Quadrant	Mean Secure	Mean Anxious avoidant	Mean Dismissing avoidant	Category Disorganised/ Unresolved	Category Secure	Category Anxious avoidant	Category Dismissing avoidant
PA (Dominant)	-0.04	-0.17	0.13	0.02	-0.20	0.05	-0.11
BC (Coercive)	-0.27	0.20	0.37*	-0.16	-0.23	0.22	-0.08
DE (Hostile)	-0.28	0.30	0.10	0.25	0.02	0.26	0.14
FG (Withdrawn)	0.24	0.16	-0.01	-0.10	0.18	-0.04	0.31
HI (Submissive)	0.35*	-0.14	-0.30	0.30	0.16	-0.36*	-0.01
JK (Compliant)	0.34*	-0.13	-0.40*	0.32	0.28	-0.42*	-0.05
LM (Nurturant)	0.23	-0.27	-0.14	0.25	-0.05	-0.20	-0.21
NO (Gregarious)	-0.04	-0.30	-0.10	0.22	-0.17	-0.11	-0.30

** Correlation is significant at the 0.01 level

*Correlation is significant at the 0.05 level

As can be seen, there were few significant correlations in table 6.4.1. Those that are significant are in the hypothesised direction. The mean 'Secure' attachment score correlates positively with the 'Compliant' and 'Submissive' ratings on the IAS, while the 'Dismissive avoidant' mean score correlates negatively with compliant and positively with coercive. The category of 'Anxious/avoidant' attachment style correlates negatively with both the 'Submissive' and 'Compliant' ratings on the IAS. However, there are 42 correlations in table 6.4.1 and only six are significant. At the 10% level of significance, one would expect around 5 to be significant by chance and since this study is

correlational in nature, the large number of correlations does not allow confidence in the small number of significant results in this table.

Spearman's rho Correlation was again used to explore the relationship between attachment categories and attachment style mean scores and categorical ratings of Borderline or Antisocial personality Disorder. Table 6.4.2 shows the relationship between personality disorder (Borderline and Antisocial) and the measures of attachment style within the ARQ. Both methods of scoring the ARQ (by category and by dimension) are shown in the table. Following assessment, only two participants in this sample were allocated to the category of Borderline PD. There were no significant relationships between Borderline PD and attachment style. Given that so few participants scored above the cut-off for Borderline PD, this may account for the lack of any significant relationships. Fourteen individuals fell into the category of Antisocial PD and there are a large number of significant relationships between Antisocial PD and attachment style. There are significant relationships with a medium effect sizes between all of the dimensional mean scores of attachment style and Antisocial PD. There is a significant negative relationship between Secure attachment style and Antisocial PD.

Table 6.4.2: Relationships between the Categories and Mean Attachment Scores for the ARQ and the Two Personality Disorder Categories of Borderline and Antisocial.

ARQ Attachment Style Mean Score	Borderline PD	Antisocial PD
Mean score Secure	0.13	-0.38*
Mean score Anxious Avoidant	0.01	0.39*
Mean score Dismissive Avoidant	0.08	0.32*

** Correlation is significant at the 0.01 level

*Correlation is significant at the 0.05 level

Table 6.4.3 shows the findings from an examination of the categorical ratings of attachment style and their association to a diagnosis of Antisocial PD using Chi Square statistical analysis. A significant association was found between the Dismissing avoidant attachment category and Antisocial PD. No other significant associations were apparent between attachment categories and Antisocial PD. One factor that must be considered when using Chi Square test statistic is the expected frequencies within the 2 x 2 table produced within the analysis. With large samples, the significance value produced by the Chi Square test provides is an approximation, because the sampling distribution of the test statistic is approximately equal to the theoretical chi-squared distribution. This approximation is inadequate when sample sizes are small, or the data are very unequally distributed among the cells of the table, resulting in the "expected values" (cell counts predicted on the null hypothesis) being low. The usual rule of thumb for deciding whether the chi-squared approximation is good enough is that the chi-squared test is not suitable when the expected values in any of the cells of a contingency table are below 5, or below 10 when there is only one degree of freedom. Therefore whilst there exist expected frequencies less than 5 within the 2 x 2 table of comparison a further Post Hoc test would be conducted using Fischers Exact to ensure reliability of

results within the analysis as this study will show only 1 degree of freedom, therefore the more stringent Post Hoc Fishers Exact test will be used where there are expected frequencies of less than 10 for the 2 x 2 Chi Square(Pallant, 2007). Whilst the Secure and Dismissing avoidant attachment categories showed 0 cells with expected frequencies less than 5 the expected count in each case was less than 10 and therefore Fishers Exact test statistic has been reported in all cases. The 'Anxious Avoidant' showed 2 cells with an expected count less than 10 and the 'Unresolved' attachment category showed 1 cell with an expected count less than 10. Continuity correction values have been reported to minimise the over estimation of the Chi Square value. The Phi value is reported to provide an indication of effect size

Table 6.4.3. Association between Categories of Attachment Style and Antisocial Personality Disorder.

Attachment category	Number in Antisocial PD	χ^2	df	Fishers Exact	Phi value
Secure	4 (29%)	1.42	1	.116	-.248
Anxious avoidant	0 (0)	.570	1	.283	-.224
Dismissing avoidant	10 (71%)	3.73	1	.042*	.368
Unresolved	1 (7%)	1.42	1	.114	-.261

** Correlation is significant at the 0.01 level

*Correlation is significant at the 0.05 level

Chi Square for independence found no significant associations between 'Secure' or 'Anxious avoidant' attachment categories and Antisocial PD. A significant association was found between 'Dismissing avoidant' attachment and Antisocial PD with 71% (10) participants within this category also meeting the diagnostic criteria for Antisocial PD. Using Cohen's (1988) criteria the Phi value shows a medium effect size.

Table 6.4.4 shows the relationship between the PBI dimensions of Care and Protect, the two main dimensions of IAS and the two PD categories of borderline and antisocial using Spearman's correlations. Two significant relationships emerged. There was a significant relationship between the Protect score and IAS DOM and a significant negative relationship between the Care score and antisocial PD. Both of these are the predicted direction.

Table 6.4.4: Parental Bonding Instrument (PBI) and Relationships with the IAS and Personality Disorder.

PBI dimensions	IAS DOM	IAS LOV	Borderline PD	Antisocial PD
Care score	0.018	-0.048	-0.048	-0.341*
Protect score	0.346*	0.009	-0.065	0.032

** Correlation is significant at the 0.01 level

*Correlation is significant at the 0.05 level

6.4.7 Discussion

Individual differences in attachment style are attributed to differences in underlying models of 'self' and 'others' (Collins and Read, 1994; Bartholomew and Horowitz, 1991). Hazan and Shaver (1987) suggest that attachment in adulthood can be conceptualised in terms of developed internal representations or models that guide interpersonal behaviour. Additionally Bartholomew and Horowitz (1991) found the quality of family attachment contributes to the prediction of warmth and dominance dimensions underlying interpersonal problems. They suggest that the attachment styles

which represent a negative model of self (the Preoccupied and the Fearful Avoidant attachment styles from the RQ) expressed higher mean levels of interpersonal distress arising from personal insecurity. Bartholomew and Horowitz (1991) found each attachment style delineated by the RQ to be characterised by a distinct pattern of emotional regulation and interpersonal behaviour.

This study has looked at the relationship between personality as measured by the interpersonal circumplex, personality disorder and parenting/attachment and developmental experiences. It should be noted that the study is correlational in nature and as a result there have been a large number of Spearman's computations reported. This is a major caution to be considered when reviewing the results of this study as if the p value is set at the 1% level to reduce the chance of Type 1 error there would be no significant correlations to be discussed. Having made this point, all but one of the significant relationships reported have been in the predicted direction. Thus caution will be applied within this discussion but it may be more appropriate to suggest that there is a trend in the data which appears to be consistent with previous research evidence on attachment and interpersonal issues (Bartholomew & Horowitz, 1991; Bartholomew, Kwong and Hart, 2001; Kobak and Sceery, 1998; Mikulincer and Orbach, 1995).

Firstly it is helpful to revise some of the issues on interpersonal problems relating to attachment styles discussed in previous chapters. Securely attached individuals report fewer interpersonal difficulties than individuals who have an insecure attachment style (Bartholomew and Horowitz, 1991). Secure individuals interpersonal profile tends to show an elevation of the warm side of interpersonal space and flexibility of response to interpersonal problems. Within the mean attachment scores within the attachment styles

portraying a positive self image, the 'Secure' attachment group show positive relationships to both the 'submissive' and 'compliant' quadrants of interpersonal style. These quadrants are characterised by warmth, empathy and a flexibility of interpersonal style which is adaptive to the needs of others. In contrast the mean scores within the 'Dismissing Avoidant' attachment style show a relationship to a coercive interpersonal style alongside a negative relationship with compliance which would suggest an element of non compliance within the interpersonal presentation. Bartholomew and Horowitz, (1991) suggest that individuals within the 'Dismissing avoidant' attachment style tended to blame others for their lack of intimacy and are characterised by a profound empathy deficit and to show excessive coldness. This was a factor of the downplay of the importance of others whom they have experienced as rejecting (Bartholomew and Horowitz, 1991). Coerciveness and non compliance are considered as negative characteristics of interpersonal style relative to emotional coldness and detachment. There were no relationships found within the categorical attachment ratings for either 'Secure' or 'Dismissing Avoidant' attachment style. This may be due to the lack of variance accounted for by categorical representations of attachment style.

To examine the ratings for the 'Anxious Avoidant' attachment group there were no relationships found within the dimensional ratings of mean scores of attachment style. Within the categorical ratings for this group negative relationships were found with both submissive and compliant interpersonal quadrants suggesting that individuals within this group of attachment style were less submissive and also non compliant in their interpersonal style. Personal insecurity of attachment style is acknowledged Bartholomew and Horowitz, (1991) found that those individuals who fell within attachment groups which had a negative model of self (Preoccupied and Fearful Avoidant

on the original RQ) expressed higher mean levels of interpersonal distress arising from personal insecurity. Collins (1996) found that individuals within the Preoccupied attachment style, underpinned by anxiety with a negative view of self, and are found to display exaggerated attachment behaviours, including anger and anxiety at times resorting to violence. They demonstrate a demanding and intrusive interpersonal style (Bartholomew, Henderson and Dutton, 2001). The Fearful Avoidant attachment groups showed a positive association with difficulties relative to introversion, sub assertiveness and the tendency to be exploited and negative correlations with problems related to being overly nurturing, expressive, autocratic and competitive (Bartholomew and Horowitz, 1991). Whilst the trend of relationships is not anything like as rich as the data from previous studies, there does appear to be a suggestion of inflexibility within the interpersonal style of those within the Anxious Avoidant category. Given that the statements measuring this category are reflective of a negative view of self it may be argued (albeit tentatively) that this interpersonal style may in part represent an individual who is avoidant of closeness. Categorical ratings in this case are the ones to produce results rather than mean scores. This is somewhat difficult to account for as it would be expected that more dimensional mean scores may provide more variance and therefore may be more likely to form relationships to other variables suffice to say that categorical representations may be more fixed whereas dimensional ratings may be more diluted given the small number of participants who fall within this category of attachment style.

The most consistent relationships have been between the mean dimensional scores of attachment on the ARQ and antisocial personality disorder. The Diagnostic and Statistical Manual of Mental Disorders fourth edition (DSM IV-TR), defines antisocial personality disorder as:

A pervasive pattern of disregard for and violation of the rights of others occurring since age 15 years, as indicated by three or more of the following:

- Failure to conform to social norms with respect to lawful behaviours as indicated by repeatedly performing acts that are grounds for arrest.
- Deception, as indicated by repeatedly lying, use of aliases, or conning others for personal profit or pleasure.
- Impulsiveness or failure to plan ahead.
- Irritability and aggressiveness, as indicated by repeated physical fights or assaults.
- Reckless disregard for safety of self or others.
- Consistent irresponsibility, as indicated by repeated failure to sustain consistent work behaviour or honour financial obligations.
- Lack of remorse, as indicated by being indifferent to or rationalizing having hurt, mistreated, or stolen from another.

The individual must be at least age 18 years. There must also be evidence of conduct disorder with onset before age 15 years. The occurrence of antisocial behaviour must not be exclusively during the course of Schizophrenia or a manic episode.

West and Keller (1994) suggest that a maladaptive interpersonal style is a key tenet to most personality disorders. Extreme attachment is also thought to relate to the development of Personality Disorder due to the relatively fixed response to stressful interpersonal situations (Bartholomew, Kwong and Hart, 2001). There was a significant positive correlation between the categorical rating of -Dismissing Avoidant attachment style and antisocial PD. Previous research has also highlighted a link between Dismissing Avoidant attachment style and Antisocial PD (please see Rosenstein and Horowitz, 1996). This reinforces the existing research pointing to the importance of developmental experience in the development of antisocial tendencies (Farrington, 1995; Farrington and Coid, 2003). Novaco and Taylor (2008) found a significant positive relationship between witnessing parental violence and the development of participants' violent tendencies in adulthood. The present study gives further evidence to support the link between insecure attachment and antisocial tendencies in adulthood.

The study has also found some significant relationships between the PBI categories, IAS dimensions and personality disorder categories. The two significant correlations reported are in the predicted direction. Although no significant relationships were found between the IAS dimensions and attachment categories, when data were reported on IAS octants and attachment variables on the ARQ, the few that were significant were the predicted direction. Because there have been so many correlations computed on the matrix of data, we should be mindful of the caution regarding the possibility of some of these relationships occurring by chance. Having said that, it is unlikely that if the significant correlations had indeed occurred by chance, they would have all, been in the predicted direction. This latter fact may add some validity to the findings on the relationship

between attachment experiences, and personality traits in adulthood for this offender population.

If we now accept that this study shows some evidence (albeit tentative) between attachment experiences and personality development, it certainly seems that these are strongest in relation to the development of antisocial personality disorder traits. This in turn adds evidence to the relationship between attachment and offending given that there is such a strong relationship between antisocial personality disorder and offending. Indeed, it adds to the evidence suggesting that intervention in childhood and intervention and families may be some of the most significant and important developments that can be made in the field of criminality (Farrington et al 2006).

Chapter 7: Conclusions

7.0 Summary of Introductory Chapters

The aim of this thesis is to examine attachment in a population of offenders with mild intellectual disability. It has been suggested that internal working models linked to insecure attachment styles are a factor within the development of interpersonal problems, and at the more extreme end of the continuum of interpersonal problems, a link to Borderline and Antisocial Personality Disorders, although these links are far from simple. The association of insecure attachment style in mainstream populations, to sexual offending behaviour is also apparent (Garlick, Marshall and Thornton, 1996; Rich, 2006). Poor quality of parent-child attachments in sexual offenders may lead to low self confidence, poor social skills, little understanding of relationship issues and a lack of empathy (Garlick, Marshall and Thornton, 1996). These difficulties in social competence, particularly when initiating relationships with appropriate others, may result in individuals becoming isolated and withdrawn from social relationships (Ward, Polaschek and Devon, 2006).

Each of these issues highlighted in previous studies is of interest to clinicians working with offenders with ID. Poor social skills, and to varying degrees issues relative to perspective taking with regard to others, may be considered to be a factor of intellectual limitations or developmental delay. However it is important to know whether attachment issues may also be a part of the difficulties experienced by offenders with ID and in turn may be a legitimate focus of intervention for offending behaviour. Models of treatment of mainstream sex offenders and those used by intellectual disability services include work

on attachment related issues. However there is a dearth of information regarding the concept of attachment in offenders with ID to evidence the legitimacy of such work being included within intervention programmes for this client group.

7.1.1 Characteristics of the Sample of Offenders with Mild ID

When examining the characteristics of offenders with ID the uncertainty of diagnosis of intellectual disability limits comparison of previous studies, particularly with regard to prevalence and characteristics of offending behaviour (see Holland, 1991; MacEachron, 1979). In this study all participants have a previously recognised diagnosis of mild intellectual disability using a nosological diagnostic system. Assessment of IQ for all participants had been carried out using a reliable and valid assessment tool (Wechsler Scales) alongside assessment of adaptive functioning in line with diagnostic criteria.

The demographic data collected on offenders with mild ID participants, shows that each participant falls within the mild intellectual disability range. Over half of participants were known to psychiatric services pre 18years. Only a small percentage of participants had a co morbid diagnosis of mental illness and thus the major focus of intervention from services was relative to offending behaviour. Heterogeneity of offences was apparent within the characteristics of the sample of offenders with regard to previous offences committed within the lifetime of the offender and also within the index behaviour. The Index behaviour is that offending behaviour or offending type behaviour which brought the participant to the attention of the forensic service. Historically just over half of the sample of offenders with ID had committed a sexual offence with sexual offending being the predominant index behaviour. Offences appertaining to violence were also

representative of the sample with a smaller number of offences appertaining to theft and arson also present. Alcohol/ Substance misuse was also a feature. An elevated prevalence of sexual offending and sexual abuse (Walker and McCabe, 1973; Day 1993), aggression (Emerson et al., 2001, Novaco and Taylor, 2001, Taylor, 2002) and fire-raising (Walker and McCabe, 1973, Prins 1980, Raesaenen et al., 1994) has been found in previous studies of offenders with ID. The prevalence of sexual offending is higher than other offences within this participant sample, however this may be a contextual sampling bias in relation to specialist service provision in NHS Tayside. NHS Tayside forensic service has a specialist provision of psychological therapy for the treatment and rehabilitation of sex offenders with ID hence there is a higher prevalence of sexual offending within the participant sample taken from the NHS Tayside service. Care will be taken to discuss results taking this issue into account.

In contrast to other studies (e.g. Walker and McCabe, 1973, Prins, 1980, Raesaenen et al., 1994), the offence of Arson is not over represented, with very few cases of either history of arson within the lifetime and no cases of arson as an index behaviour when referred to services. Significant differences between services have been found with regard to the multisite study carried out by Hogue et al., (2006) where the highest prevalence of Arson as an offence within offenders with ID was within the medium secure setting. It is difficult to account for this difference other than to suggest that Arson may be evaluated as an offence which may cause a serious risk of harm to the victim. However the Mental Health Act (2007) in England and Wales and Mental Health (Scotland) Act (2003 each suggest that patients should be kept with the least restrictive option of security. Within the study carried out by Hogue et al. (2006) there was a significantly higher percentage of offenders with ID having been convicted of the crime of Arson who resided in the

medium/low secure facility than in either the community based or high secure service. It can only be assumed that to continue to reside in the community is inappropriate for these individuals. Additionally the willingness of care providers to provide residency for individuals who commit Arson, with all the additional risks to others living within the residential setting, either in group accommodation or individual staff supported flats, may be lacking. In contrast the additional scrutiny and constraint of the high secure setting may not be required and therefore the least restrictive option may be the medium/low secure setting.

Admission to the forensic service from which the sample of offenders with ID was gathered, has in the main been through court referral, which may suggest a substantial interest from the court with regard to accessing assessment and subsequent intervention for offending behaviour within this population of offenders rather than pursuing punitive measures. This also may suggest the court may be taking a more rehabilitative approach to this group through accessing rehabilitative treatment services through the use of community sentencing. In contrast it could also be suggested that there may be concerns regarding the oppressive nature of sentencing such a group to prison systems, particularly if the offender overtly presents as having a disability (Kearns, 2001). Additionally if the offender is already within the forensic service the court may see little utility in altering service provision to more punitive sources (Kearns, 2001).

7.1.2 Offenders with ID and Childhood Adversity

Childhood adversity issues featured highly in the sample of offenders with ID. Approximately two thirds of the participant sample of offenders with mild ID in this study had experienced institutional care at some point in childhood. When examining childhood adversity Scneider-Rosen and Cicchetti, (1984) found that children who have experienced abuse or neglect are more frequently insecurely attached to parents when compared to controls who have experienced no abuse. A number of authors have found a relationship between experiences of abuse and juvenile sexual offending (e.g. Bailey, 2000; Weinrott, 1996). A large percentage of offenders with ID had experienced some form of childhood abuse however no significant relationships were found between attachment style and childhood abuse in this study. Living with both parents until age 16 years was found to be a protective factor to the experience of childhood abuse however care must be taken not to assume that individuals who were placed in care were the sample who were abused. People with Id may have experienced care from other members of the family, may have lived in institutional children's homes or with Foster families. Clearly they may have been placed in care as a factor of the experience of abuse elsewhere.

7.1.3 Attachment and Rehabilitative Intervention for Sexual Offending

The rehabilitative treatment model conceptualising adult sexual offending suggested by Ward, Hudson and McCormack (1997), utilises the concept of attachment style in adulthood developed by Bartholomew and Horowitz (1991) within the four category model Ward et al., (1997) suggest this model of attachment orientation is applicable to

sex offenders and may be helpful with regard to treatment approaches when exploring interpersonal problem solving and expectations from relationships in particular. As stated previously the NHS Tayside service provides an adapted treatment programme specifically for sex offenders with ID which is based on the model put forward by Ward et al., (1997) however to date there is no measure of attachment either self report or interview based, that facilitates the reliable measurement of attachment in adult offenders with ID. Therefore the treatment model follow put forward by Ward, Hudson and McCormack (1997) includes a module on attachment however lack of a reliable measurement tool inhibits the delivery of the adapted version of the full treatment programme. This may in turn affect the reliability and effectiveness which can be attained from delivery of the therapeutic model. Thus the identification of this need has been a primary factor leading to this piece of research.

7.1.4 Summary of the Adaptation of the Relationship Questionnaire (RQ)

As stated previously Ward, Hudson and McCormack (1997), suggest the concept of attachment within the four category model put forward by Bartholomew and Horowitz, (1991), may be applicable to sex offenders and may be helpful with regard to treatment approaches. Two questionnaires have been developed in relation to the two dimensional four category model of attachment suggested by Bartholomew and Horowitz, the Relationship Scales Questionnaire (RSQ) (Griffin and Bartholomew, 1994) and the Relationship Questionnaire (RQ) (Bartholomew and Horowitz 1991). Each of these questionnaires is a four category attachment measure reviewing Secure, Preoccupied, Fearful Avoidant and Dismissing Avoidant attachment styles. Keeling, Rose and Beech, (2007) adapted the RSQ for use with 16 offenders with special needs (most of whom had

ID) and assessed its validity against the Relationships Questionnaire (RQ: Bartholomew and Horowitz 1991) which was an earlier version of RSQ measuring four scales of Secure, Fearful, Preoccupied and Dismissive attachment styles. Although the RSQ had been found to have sound psychometric properties in adults without disabilities (Griffin and Bartholomew 1994, Kurdek 2002), Keeling et al (2007) found that it had a low internal consistency and poor validity when correlated with the RQ. Given the poor reliability of the previously adapted RSQ (Keeling et al., 2007), the decision was taken to adapt the RQ in this thesis, for use with people with intellectual disability.

7.1.5 Adapting the RQ: Findings re Internal Consistency and Construct Validity

The adaptation of the RQ consisted of a breakdown of paragraph information into constituent statements and the introduction of a summative rating scale giving four choices of response with scores that could be added for each section representative of an attachment category and a mean section score attained which replaced the seven point likert scale. Flesch Kincaid reading ease and grade scores highlighted an improvement to the ease with which the information in the adapted measure could be understood. The comparison of results from the RQ and the adapted version (ARQ) administered to university students revealed issues of internal consistency of the adapted scale. Mikulincer and Shaver, (2007) had previously referred to the low internal consistency of the RQ. Within the correlation analysis there were issues of convergence between attachment styles, particularly the 'Fearful avoidant' and 'Preoccupied' styles although some statements within the Secure attachment style also showed convergence to the 'Fearful avoidant' and 'Preoccupied' styles which was more concerning. The 'Fearful avoidant' and the 'Preoccupied' attachment style may be underpinned by a level of

anxiety and behavioural avoidance of attachment relationships from this emotional issue and some convergence may be expected. However the 'Secure' attachment category is very different and purported to delineate an individual with low anxiety and low avoidance and who is comfortable with emotional closeness. Therefore the convergent relationships between variables did not support the assertions underpinning Bartholomew's four category model.

Notwithstanding issues of internal consistency, attachment classifications using the RQ and the ARQ showed 75% concordance between the two questionnaires administered one week apart. The distribution trend found with regard to attachment categories using the RQ and the ARQ shows a U shaped distribution when comparison is made between the attachment classifications on each scale. No significant differences were found between categorical attachment classifications; however the small number of participants in the 'Fearful avoidant' and 'Preoccupied' categories limits the reliability of these findings.

The overall trend of attachment classification appears orderly in so far as the majority of participants fall within the secure attachment classification with a considerably smaller number within the anxious (Preoccupied) classification.

Given the issues of construct validity highlighted within the convergent and discriminant analysis the reliability of the ARQ was further explored through the statistical properties of a Principal Component's analysis. There are varied recommendations as to the participants to variable ratio suitable for a Principal Components analysis and it was concluded that the total number of participants was suitable to concur with the advisory criteria regarding participant to variable numbers for factor analysis. A varied debate is also available regarding a suitable cut off criteria for factor loadings. For example

Guadagnoli and Velicer (1988) suggest that if a factor has four or more loadings greater than 0.6 then it is reliable irrespective of sample size. However factor loadings of 0.6 are regarded as high, compared to moderately high if they are above 0.30 (Kline, 1994). Kline (1994) suggests that setting a cut-off at too high a level can be misleading and unrealistic. Similarly he argued that it can be unreliable to consider very low factor loadings (e.g. 0.19) as salient (Kline, 1994) as they account for very little of the variance. Researchers tend to vary the cut-off criteria they use. For example, Abel, Gore, Holland, Camp, Becker and Rathner (1989) used 0.30 for criterion when determining whether or not a particular item loaded substantially well, in comparison to Duncan, Kennedy and Patrick (1995) who used a cut-off of 0.40. Considering the sample size and number of variables in this study it was felt appropriate to select 0.50 or higher as the cut-off criteria, as it is neither too strict nor too lenient. Additionally, this level of cut off implies that factor loadings correlate highly with the variable and a reasonable amount of the variables variance is explained by the factor.

7.1.6 The ARQ: A Three or Four Factor Structure?

Examination of the loadings on the four factor structure suggested it did not show a goodness of fit to the model and therefore further exploration of the data were carried out using the Principal Components statistical analysis. The final statistically derived version of the ARQ showed a three factor model to be the strongest solution, consisting of 'Secure', 'Anxious Avoidant' and 'Dismissing Avoidant' attachment classifications allocated to the factors on the basis of the linguistic content of the statements loading onto each factor. Furthermore when examining the concept of mental representations of 'self' and 'other' as derivations from section statements, the 'Secure' attachment

classification shows a +ve self, +ve other connotation, whereas the 'Anxious Avoidant' classification shows a +ve self - -ve other connotation and the 'Dismissing Avoidant' attachment style shows a +ve self +ve other connotation of mental representation. In line with previous studies of attachment (Hazan and Shaver, 1987; Bartholomew and Horowitz, 1991; Griffin and Bartholomew, 1994), the ARQ shows both a level of anxiety and a level of avoidance within the categories identified as measuring attachment insecurity. Therefore the four factor structure shown in Bartholomew's model was not supported by the Principal Components analysis as a reliable solution to fit the data attained from University students in this study.

7.1.7 The Best Fitting Model of Attachment: Adult or Childhood?

However the focus of attachment figure in this research differs from that used in Bartholomew's studies in so far as this study focuses on the measurement of retrospective childhood attachment rather than romantic or peer attachment which is synonymous with the four factor model.

Studies of attachment in childhood have consistently found validity and goodness of fit within a three category model, with the addition of the disorganised attachment style which has found validity and reliability particularly in the classification of high risk samples (Main, 1996). Ainsworth et al. (1978) portrays three attachment styles in childhood, 'Secure', 'Anxious Ambivalent' and 'Fearful Avoidant' which are underpinned by both attachment anxiety and avoidance. The development of self report measures was based on the classifications delineated in Ainsworth's studies. Unsurprisingly the results found when measuring attachment in adulthood using the self

report measures were also found to be underpinned by attachment anxiety and attachment avoidance (Hazan and Shaver, 1987).

It is therefore unsurprising that within statistical analysis of responses within a measure of retrospective childhood attachment (ARQ) that a three category model emerges which appears underpinned by attachment anxiety and attachment avoidance. Firstly it could be argued that childhood attachment may be less complex than adult attachment and is based on dependency within the attachment relationship. Secondly the ARQ is an adaptation of Bartholomew's RQ which is a self report measure developed from Hazan and Shavers, (1987) self report questionnaire developed from Ainsworth's three category model of childhood attachment. However there are subtle differences in the categories of attachment which can be derived from interpretation of the statements in each section of the ARQ.

The ARQ appears to show a 'Secure' attachment classification in line with Ainsworth's and Bartholomew's models with a +ve 'self' and +ve other orientation, but there are differences in the way the insecure classifications of attachment emerge. Ainsworth and colleagues found an 'Anxious Ambivalent' classification in childhood attachment, whereas this research has found an 'Anxious Avoidant' classification measuring childhood attachment retrospectively in adulthood. This is of interest, as the meaning of 'ambivalence' suggests the child is 'undecided' whereas the word 'avoidant' suggest a behavioural choice has been made not to go near somebody (Encarta Dictionary, 2011).

It could be suggested that due to the dynamics of dependency in childhood and the development of attachment style within relationships with a primary caregiver, that it

may be difficult for a child to enact complete avoidance of an attachment figure. Additionally the child is learning and developing attachment bonds and therefore may be more naive than the adult with regard to outcome and effects of particularly negative interpersonal interactions with the primary caregiver. Each of these factors may contribute to a lack of decision making and therefore attachment ambivalence. In adulthood, independent functioning without the direct and continual need of involvement from the primary caregiver may facilitate avoidance of the attachment figure to whom an insecure but anxious attachment has formed. Thus ambivalence may be a part of dependency within the developmental attachment process which may subsequently lead to avoidance in adulthood through the ability to sustain oneself as an individual. Thus the \pm Anxious Ambivalent \emptyset style in childhood may lead to an evaluation of \pm Anxious Avoidant \emptyset attachment when asked to rate attachment in childhood retrospectively. Notwithstanding these untested assertions, there is a classification of anxiety which underpins attachment style in Ainsworth's and also Bartholomew's attachment classification system and also the ARQ retrospective measure of childhood attachment style. Additionally there is also an avoidance dimension within the ARQ, however this differs from attachment style in childhood within Ainsworth's classification in so far as it encompasses Bartholomew's Dismissive style of avoidance rather than Ainsworth's Fearful style and appears to represent a more positive view of self as an independently functioning figure within an attachment relationship.

7.1.8 Gender Differences in Attachment Classification

Student participant data was reorganised and then reanalysed according to the final version of the adapted attachment questionnaire (ARQ) and was explored for gender

differences within attachment style. Hazan and Shaver (1987) reported in their study that gender was unrelated to the -Secure, -Avoidant, and -Anxious/ambivalent attachment styles within their findings from their self report questionnaire. This finding has been replicated by other researchers using the three category model (Brennan, Shaver and Tobey, 1991; Feeney and Noller, 1990; Feeney, Noller and Patty, 1993) with findings revealing no gender differences in the prevalence of the major attachment styles (Feeney and Noller, 1996).

However Bartholomew's four category model (Griffin and Bartholomew, 1994) has yielded strong gender differences within the two -Fearful Avoidant and -Dismissing Avoidant categories only, with males being much more likely than females to endorse the -Dismissing Avoidant attachment style and less likely than females to endorse the -Fearful Avoidant attachment style (Brennan et al. 1991). Gender differences within continuous measurement of the four attachment styles delineated within Bartholomew's model are partially supportive of these findings in so far as males obtain higher mean ratings of -Dismissing Avoidant attachment, whereas females obtain higher mean ratings of -Preoccupied attachment (Bartholomew and Horowitz, 1991; Scharfe and Bartholomew, 1994). These gender differences are evident within interview ratings, self reports and partner reports with regard to the four category model. From these findings Mikulincer and Shaver (2007) suggest that the four category model shows more sensitivity than the three category model in identifying gender differences in attachment patterns.

Studies of multi-item scales (Feeney, 1994; Feeney, Noller and Callan, 1994) do suggest that females are more comfortable with intimacy (Feeney, 1994; Feeney, Noller and

Callan, 1994), together with a greater willingness to rely on their partners (Kobak and Hazan, 1991). Additionally Kirkpatrick and Davis (1994) suggest that men describing themselves as avoidant in attachment provided relatively more negative reports of their relationships. Women's anxiety (measured in various ways) has been linked with negative reports of the quality of dating and marital relationships as provided by both self and partner (Feeney, 1994; Feeney, Noller and Callan, 1994; Kirkpatrick and Davis, 1994; Simpson, 1990). However the relationship between gender, attachment and relationship satisfaction is complex (Feeney, Noller and Callan, 1994) and may be linked to stereotypical gender normalisation (Feeney, 1996). Attachment confirming behaviour out-with the stereotypical gender - role would appear to have a mediating effect on attachment security (Feeney, 1994).

Consistent with previous studies of gender and attachment using a three category model, no significant gender differences were found when the ARQ is completed by student participants (n101) made up of 28 male participants and 72 female participants. The convergence of the 'Fearful Avoidant' and the 'Preoccupied' attachment category may be worthy of note in this respect. Bartholomew noted gender differences within the two avoidant categories in so far as males tended to rate more on 'Dismissing Avoidant' attachment whilst females tended to rate more so on 'Fearful Avoidant' categories. If we give consideration to stereotypical gender roles it would be expected that males may become more avoidant of attachment and have more independence to behave in an independent and avoidant manner when dissatisfied with relationships. Females on the other hand take on a nurturing stereotypical role in society and during relationship dissatisfaction may experience more anxiety about effects of relationship dissatisfaction on the family. Additionally and stereotypically she may earn less than the male of the

household which may provide additional boundaries on her ability to leave a dissatisfying relationship and continue to provide for the family to the same degree. Taking a stereotypical gender ó role view may explain in part some of the gender differences found within the avoidant categories of attachment within Bartholomew's model when rating participants on romantic attachment.

7.1.9 The Final Version of the ARQ

This analysis has developed the ARQ into a statistically reliable measure of retrospective childhood attachment. The claim is not to say that all issues with this form of measurement have been dealt with, and several issues must be noted. Firstly, retrospective measurement of attachment in childhood may be subject to memory bias and interpretation. Secondly the proposed transfer of ambivalence to avoidance within the anxious attachment classification may be a product of complex memory issues alongside of a selection of a method of coping (avoidance) rather than indecision (ambivalence) relevant to adult independence. In adulthood there may be less perceived dependency on parents within attachment orientation and this may have led to less anxiety with a greater perception of self sufficiency. Thirdly, given the self report method of data collection, it was not possible to eliminate defensive idealisation of attachment should it occur in the data. Whilst it could be suggested that this would be expected to be at a low level, it is still possible that there may be some present within the dataset on attachment gathered from University students. The effect of on the data of defensive idealisation would be to falsely reduce levels of attachment anxiety where they may otherwise exist.

7.1.10 Attachment in Offenders with ID

Insecure attachment style has been consistently evidenced within offending populations. For example Ward et al (1996) found that while they could not differentiate between offenders, all categories of offenders were typified by an insecure attachment style. On comparing a control group of non offenders with offenders Smallbone and Dadds (1998) found the control group to have a high percentage of individuals with secure attachment style when compared to offenders. This research compared attachment style between offenders with mild ID and a control group of non offenders with mild ID. Somewhat surprisingly there were no significant differences in attachment category classifications when comparing these two groups. The main difference found between the two groups was that offenders with ID were 50% less likely to be classified as having an anxious attachment style than controls. Indeed, although results did not reach statistical significance, the offender group reported a higher percentage of individuals with a secure attachment style (45%) than did the control group (32%) who had been referred to an acute learning disability hospital for reasons of personal and systemic distress. Given the type of referral and context, it is likely that participants within the control group would also have significant health or behavioural issues reflected in their presentation which also may be underpinned by difficulties relevant to attachment style. No data regarding previous experience of institutionalisation or abuse was collected for these participants as their participation was solely as a comparison group for measures of attachment. Whether these factors may contribute to the attachment style noted within the control group may require further investigation within future research.

Within this preliminary study of attachment almost a quarter of individuals (offenders with ID and Controls with ID), were also classified into an unresolved attachment category. An unresolved attachment style was allocated if the participant scored equally on two incompatible attachment classifications e.g. Secure and also one of the insecure categories. To be allocated a 'Secure' attachment style it would be expected that the individual would be comfortable with emotional closeness with low levels of attachment anxiety and attachment avoidance. Insecure attachment style contains levels of attachment anxiety and attachment avoidance that are not compatible with the 'Secure' attachment classification. Therefore responses of the participant when rating attachment style within the measure suggest equal presence of both 'Secure' and 'Insecure' attachment styles and they are therefore showing inconsistency of attachment representation and are separately classified as 'Unresolved'. These individuals confused attachment style could be considered to be insecure and each participant within this category was allocated to the predominantly rated insecure attachment categorical classification from their responses. The lack of resolution of attachment classification occurred primarily between the 'Secure' and 'Dismissing Avoidant' attachment styles. Each of these categories has retained a similar the model of 'self' and 'others' portrayed by the RQ in so far as the 'Secure' attachment statements reflect a positive model of self and someone who is comfortable with the attachment figure depending on them (positive 'other') whereas the 'Dismissing avoidant' category portrays independence and comfort with 'self' however is oppositional to the attachment figure depending on them (negative 'other'). Thus each of these categories has a positive model of self but they differ in the model of willingness to respond to the 'other' (attachment figure) need for dependency.

7.1.11 Attachment and Childhood Adversity

Experiences of abuse show that a third of participants had experienced physical abuse, and a quarter had experienced sexual abuse with a quarter of the sample also experiencing parental neglect therefore this result cannot be contributed to lower numbers of participants in this study. Almost half of the sample of offenders with ID had been placed in care pre sixteen years of age. Further exploration of the data regarding residential status and abuse shows that two thirds of participants experiencing abuse were placed in care, this particularly related to sexual abuse. This result would suggest that the residential status of the participant is a significant predictor of the experience of sexual abuse.

Whilst it is acknowledged that over half of offenders with ID had experienced some form of abuse interestingly no relationship was found between attachment classification and abuse, either through categorical measurement inclusive of the 'Unresolved' category, or through dimensional mean scores of attachment style. Additionally living with both parents until age 16 years was a protective factor to the experience of abuse and it would be expected that a significant relationship with this variable and 'Secure' attachment style would emerge this did not occur. Furthermore there was a significant relationship found between the experience of sexual abuse and being removed from parents and placed in care prior to age 16 years for offenders with ID however there was again no relationship to any insecure attachment style as would have been expected. Experiences of abuse in childhood have been associated with a Disorganised attachment style in childhood (Main, 1990, 1996) which in adulthood is classified as 'Unresolved' attachment style however

no significant relationship was found between the experience of abuse and the development of an 'Unresolved' attachment style.

To further ascertain which childhood experiential factors may contribute to insecure attachment style, the perception of parenting experienced by participants was explored. Perceived parenting was measured with regard to a primary caregiver, who, given the high percentage of participants who were placed in care, may not necessarily have been a parent.

7.1.12 Attachment and Perceived Parenting in Offenders with ID.

Orderly relationships between attachment style measured retrospectively in childhood by the ARQ and perceived parenting in childhood as measured by the Parental Bonding Instrument (PBI) would lend support to reliability of the measures when used with offenders with mild ID. The significant correlations found between variables on the ARQ and variables on the PBI have been in the expected direction suggesting that these two instruments are measuring retrospective attachment experience and retrospective experience of parental bonding in a consistent manner.

Prior to use the PBI was examined using the Flesch Kincaid Readability Index and whilst it was felt to be appropriate for use with people with mild ID the researcher team was also of the opinion that two particular statements required minimal additional supportive information which could be used to aid the understanding of offenders with ID at time of assessment. This supportive information was to be used only if required and was used in only two cases when assessing offenders with mild ID. It would be expected to find a

significant relationship between the 'Secure' attachment style and the 'Optimal parenting' factor within the PBI. Interestingly despite 45% of offenders having a predominantly 'Secure' attachment style only 10% reported 'Optimal Parenting' from their perceptions of quality of perceived parenting in childhood on the PBI. Whilst no significant relationship was found between 'Secure' attachment style and 'Optimal Parenting' a significant positive relationship was found between the continuous score on the PBI 'Care' but not the PBI 'Protect' dimension. This would suggest that the level of perceived 'care' received from a primary caregiver/parent is perhaps more important for the development of 'Secure' attachment than perceived 'Protection' as measured by the PBI 'Protect' continuous score. Additionally the negative relationship between the PBI 'Care' dimension and the 'Anxious Avoidant' attachment style, would suggest that a lack of perceived care may lead to an 'Anxious avoidant' attachment style.

Examining categorical ratings of perceived parenting on the PBI and attachment mean scores on the ARQ attachment classifications, significant relationships were apparent. For example mean scores on the 'Anxious Avoidant' attachment style showed a significant positive relationship to the 'Affectionless Control' (low care/high protect/control) category of parenting on the PBI, with a significant negative relationship with the 'Affectionate constraint' (high care/high protect/control) category of perceived parental style. The main difference between these two parenting categories is the level of 'care' the level of 'protection' or control is the same in each category. The 'Dismissing avoidant' attachment style shows a negative relationship to Optimal Parenting and a negative trend to the PBI Care score again suggesting a lack of perceived 'Care' to be a factor in the development of insecure attachment style.

The most prevalent parenting styles were Affectionate Constraint (high care/high protect/control) and Affectionless Control (low care/high protect/control) with 40% of the cohort falling into this latter style. Affectionless Control has been identified as the parenting style which leads to a higher level of psychological distress (Chambers et al. 2004) and has been recognised as prevalent among sex offenders (Craissati et al., 2002). A sexual offending history was predominant within the participant sample accounting overall for 52.6% (20) of participants offending history. Thus this finding may be cyclical in nature and may have been influenced by contextual issues and sampling bias. As Affectionless Control is the parenting style which is recognised as leading to a higher level of psychological distress this thesis explored the possibility that psychological distress may be a factor relative to attachment style in offenders with ID.

7.1.13 Attachment and Emotion in Offenders and Non Offender Controls with ID.

Bowlby (1982) recognised attachment security as a protective factor against the development of mental health difficulties in adulthood. Mental health difficulties often encapsulate emotional distress issues such as anxiety, anger or indeed depressive illness. The concept of attachment orientation and the relationship to emotional problems was explored within both the offender and the control group of participants. As stated previously the origin of the control group was to facilitate comparison only of attachment orientation between offenders and non offenders with ID. However several of measures of emotional issues had been collected through routine clinical practice for the control group of non offenders and therefore the opportunity arose to attempt to compare these two groups with regard to attachment and emotional issues.

The first issue of note within this comparative study is that there are differences in the assessments of emotion for the offender group and the control group. These differences are firstly in the measurement scales used for clinical assessment and secondly in the way in which the data have been gathered. For example the Emotional Problem Solving (EPS) scale was rated for the offender participants by care staff, while the Control group non-offender participants, were assessed clinically by self report structured interview method using the Dundee Provocation Inventory (DPI) and Brief Symptom Inventory (BSI). As the EPS and BSI are well validated assessments of emotion for people with ID it was assumed that there may exist a comparatively reliable relationship in measure of emotions between each scale. Both measures have scales for somatic complaints, depression, anxiety, and hostility (verbal and physical aggression in the EPS) and might be considered to have some equivalence. It was also thought that this drawback could be considered a particular strength of the study as the data have been gathered from a number of different sources by several different individuals. This reduces the chance of any systematic bias in the collection of data. Despite these considerable differences in the way that the data has been gathered, orderly relationships have emerged within both groups.

For the offender group, a positive relationship was established between Dismissing avoidant attachment style and verbal aggression. Secure attachment style showed a positive relationship to self esteem and a negative relationship to verbal aggression. These relationships are in the expected direction suggesting reliability of results. This would suggest that the individual with a 'Dismissing Avoidant' attachment may present as more hostile while the individual with a 'Secure' attachment style may present as more confident and comfortable with 'self' with a less hostile presentation. There were no

significant relationships between attachment style and composite measures of emotion (Externalising or Internalising) in this study. This latter finding was somewhat surprising as it would be expected that an 'Anxious Avoidant' attachment style may relate to the 'Internalising' composite as previous studies have found a relationship between internalising events and anxiety levels in adulthood (Goodwin, Ferguson and Horwood, 2004).

Coming to the data on the control group, there are a number of significant correlations between attachment style and emotional difficulties. The most significant relationships were between the various measures of hostility and 'Secure' or 'Anxious Avoidant' attachment. Secure attachment had significant negative relationships on the DPI and BSI hostility and the BSI depression. Thus there is some consistency of findings within both groups of participants that, as hypothesised by Bowlby (1982), 'Secure' attachment orientation is a significant protective factor to the development of problems of emotion and aggression. This hypothesis is further upheld by the positive relationships found between the insecure 'Anxious Avoidant' attachment style and factors relating to anger arousal on the DPI and also to the variable measuring 'hostility' on the BSI. This suggests that aspects of insecure attachment relate to the development of difficulties in interpersonal hostility and aggression.

It is interesting that the majority of the significant relationships between measures of attachment and emotion have occurred in the control group. The obvious difference is that all of the measures in the control group were collected through self report. Although a few orderly correlations were found between mean scores of attachment style and classifications of emotional difficulties using the EPS, previous authors have noted

difficulties in equivalence between the self rated and staff rated versions of the EPS. For example Lewis and Morrissey (2010) reported no relationships between the two versions on the scales of the EPS (except a moderate effect size for the anxiety scale) in assessments of 48 male participants in a maximum security setting. Given that these authors found such a low level of relationship between two versions of the EPS, perhaps it is less surprising to find a lack of equivalence between the self-reported BSI and DPI measures and the staff rated EPS in the present study. It may be that staff, even although they work closely with the client and are familiar with the concepts of emotional and psychological difficulties, find it difficult to assess accurately the emotion experienced by offenders with ID. Alternatively, it could be that the relationships between emotion and attachment in offenders with ID are indeed less clear than they are in people with ID who were referred for other types of problems.

7.1.14 Attachment, Interpersonal Style and Personality Disorder in Offenders with ID

A further aim of this thesis is to explore the relationship between attachment, interpersonal style and personality disorder in offenders with ID. Interpersonal style shows a particular focus on interpersonal relatedness. Extreme attachment insecurity may be associated with personality pathology and interpersonal difficulties (Bartholomew, Kwong and Hart, 2001). Insecure attachment style is well documented in its relationship to maladaptive strategies in solving interpersonal problems (Bartholomew, Kwong and Hart, 2001). In contrast a 'Secure' attachment style is noted as leading to the use of adaptive and rational strategies within interpersonal problem solving within attachment relationships.

In contrast insecure attachment style is well documented in its relationship to maladaptive strategies in solving interpersonal problems (Bartholomew, Kwong and Hart, 2001). Statements within the ARQ section measuring the 'Secure' attachment style connote a positive view of 'self' and a positive view of 'others'. The data suggest the more 'Secure' the individual's attachment style (as measured by mean ratings) the less likely they are to use verbal aggression. The 'Dismissing avoidant' style which also represents a positive view of 'self' but connotes a negative view of 'others' is noted as relating to a less adaptive form of interaction within a problem solving style within interpersonal interactions. Bartholomew, Kwong and Hart (2001) note that individuals who are identified as rating positively within the 'Dismissing' attachment style as rated by the RQ, tend to defensively deactivate the attachment system, reducing their tendency to experience the anxiety that typically follows an unmet attachment need. Therefore those identified as having a 'Dismissing' attachment style downplay the importance of potential stressors and defensively avoid acknowledgement of distress that could activate the attachment system (Bartholomew, 1990; Mikulincer and Orbach, 1995). This defensive emotional stance is complimented by an avoidant behavioural stance within which they maintain distance in close relationships (Bartholomew, Kwong and Hart, 2001). Interpersonal problems associated with 'Dismissing' attachment style are centred on the cold side of the interpersonal circle. Their problems tend to be associated with distance and alienation from close others, not necessarily active hostility towards close others, (Bartholomew, Kwong and Hart, 2001). Thus the relationship between 'Dismissing Avoidant' attachment style and 'verbal aggression' found when measuring the emotional difficulties within offenders with ID is surprising. Based on previous evidence (Bartholomew, Kwong and Hart, 2001) it would be expected that individuals

within this attachment classification would downplay the importance of any stressor and employ an avoidant behavioural stance rather than react with a display of emotion such as verbal aggression. One possible explanation for this finding may be that cognitive limitations within intellectual disability also provide limitations on the inhibitory ability of emotional arousal in offenders with ID. This may also be linked to communicative disabilities in expressive language where frustration for example may not be able to be rationally discussed due to lack of linguistic ability and difficulties of understanding more abstract emotional concepts.

This study is correlational in nature and as a result there have been a large number of Spearman's computations reported. The significance value of $p < 0.5$ has been adopted when reporting these findings as there were no significant relationships found between variables at the 1% p value. Therefore caution must be applied when reviewing the results of this study as given the number of correlations in the analysis there is the distinct possibility of Type 1 error. However having made this point, all but one of the significant relationships reported have been in the predicted direction and therefore what may be reported is the trend in the data within the 5% level of significance. Consistency of results to those reported in previous research in mainstream populations when using the RQ may lend some validity to some of the findings on the relationship between attachment experiences, and personality traits in adulthood for this offender population.

Examining the separate IAS octant scores and both mean attachment style ratings and also categorical ratings on the ARQ, there were a few that were significant in the predicted direction. These related to three octants in particular, 'Compliance', 'Submissiveness' and 'Coerciveness'.

7.1.15 Interpersonal Style and 'Secure' Attachment

Dimensional ratings of 'Secure' attachment were positively related to both the 'Submissive' and the 'Compliant' octants of interpersonal style, whilst dimensional ratings of 'Dismissing Avoidant' attachment were positively related to a 'Coercive' and negatively related to a 'Compliant' interpersonal style. A negative relationship was apparent to a 'Submissive' interpersonal style however this did not reach significance.

These findings would suggest that individuals who are securely attached offenders with ID may employ a more submissive and compliant interpersonal style. This would suggest that these individuals do not see a need for aggression to fulfil their needs but rather are comfortable within engagement with others. This may be other individuals or support staff. The medium effect size of found in these relationships may be a factor of the compliance with varying levels of staff support given to people with ID. Secure attachment also appears to be a factor of the amount of perceived 'Care' within perceptions of parenting received as a child. Therefore a higher level of compliance and perhaps submissiveness is developed in line with the varied needs for staff support within this client group. It could also be suggested that this is in line with an appropriate adaptive strategy for solving interpersonal problems and may assist the individual in working with staff teams to attain and make use of support commensurate with their level of need.

7.1.16 Interpersonal Style and ‘Insecure’ Attachment – ‘Dismissing Avoidant’ Attachment Style

The relationships between the ‘Dismissing Avoidant’ mean dimensional scores and also categorical ratings are orderly relative to the interpersonal style characteristic of this attachment style. Bartholomew and Horowitz (1991) suggest adults with a ‘Dismissing avoidant’ attachment style, place a great deal of value on remaining independent and invulnerable to negative feelings and are viewed by others as emotionally aloof and cold. They suggest individuals who fall within this attachment style blame others for their lack of intimacy and are characterised by a profound empathy deficit the overall interpersonal style being one of disengagement (Howe et al., 1999). Individuals within this attachment style are identified as disengaging with interpersonal interactions (Bartholomew and Horowitz, 1991; Howe et al., 1999). Dismissing attachment appears to be a generally successful form of adaptation: though it is related to low relationship satisfaction (Bartholomew, 1997; Scharfe and Bartholomew, 1995), it is also associated with high self esteem and low levels of subjective distress and depression (Bartholomew and Horowitz, 1991).

Within this study a negative relationship was found between ‘Dismissing Avoidant’ attachment and ‘Compliance’ in the IAS suggesting these individuals within this attachment style show a trend of interpersonal non compliance. Whilst this could be construed as disengaging from interpersonal interactions, results within measures of emotional problems also found a positive relationship between ‘Dismissing Avoidant’ attachment and verbal aggression. This would suggest that individuals within this style are not so much disengaging but show a trend to be more actively verbally hostile in their engagement within the interpersonal domain. The positive relationship between the

‘Coercive’ interpersonal style and ‘Dismissing avoidant’ attachment suggests a trend of coercion of others within the interpersonal domain. Accompanied by a trend towards verbal aggression this may be an adaptive interpersonal style to gain others compliance from the use of control or fear again negating the need to become positively involved in interpersonal interaction within relationships. Lack of empathy, which is characteristic of this style of attachment, may facilitate the avoidance of distress regarding coercion of others, whilst reinforcing the negative view of ‘others’ characteristic of this attachment style.

7.1.17 Interpersonal Style and ‘Insecure’ Attachment – ‘Anxious Avoidant’ Attachment Style

To explain the manifestation of behaviour within this anxious attachment style, comparison is made to the ‘Preoccupied’ attachment style in Bartholomew’s model. The ‘Preoccupied’ attachment style is evidenced as relating to high anxiety with low avoidance. Within the ARQ the ‘Anxious Avoidant’ attachment style is recognised as representative of high anxiety and high avoidance of attachment relationships. Thus it could be suggested that one of the dimensions may differ within these attachment styles. What is consistent is that the statements in each of these attachment styles appear to have face validity with a ‘negative view of self’ and a ‘negative view of others’ and from this perspective some comparison of findings can be suggested.

Individuals with an anxious attachment style (as measured by the RQ ‘Preoccupied’ category) explain events in a more negative way, (Collins, 1996), report more emotional distress and behaviours likely to lead to disagreement (Bartholomew and Horowitz, 1991; Kobak and Sceery, 1998; Mikulincer and Orbach, 1995). Individuals within this

attachment style are noted to display strong negative reactions to external stress, (Mikulincer, Florian and Weller, 1993). They often communicate their need for support in a demanding, histrionic or manipulative manner; they may over rely on potential supporters, and are indiscriminate in help seeking behaviours (Bartholomew and Horowitz, 1991; Mikulincer and Nachson, 1991). These forms of support seeking generally serve to alienate potential support providers, leading to further anxiety and frustration and in turn further demands, (Bartholomew, Kwong and Hart, 2001).

Examination of categorical ratings of offenders with ID in the 'Anxious Avoidant' attachment style as measured by the ARQ suggest a negative relationship between 'Anxious Avoidant' attachment and the octants measuring 'Submissive' and 'Compliant' interpersonal styles. These results are in direct contrast to those found in the 'Secure' attachment style. Thus personal insecurity may lead individuals within this attachment category to show a trend of assertiveness or demanding behaviour consistent with the findings of Bartholomew and Horowitz, (1991) and uncooperativeness within attachment relationships which may lead to interpersonal problems.

Mean ratings of 'Anxious Avoidant' attachment showed a positive relationship with the PBI 'Affectionless Control (low care/high protect) category of perceived parenting. This style of parenting is noted in previous research as relating to high levels of anxiety in adulthood (Chambers, Power and Durham, 2004). A negative relationship was also found to PBI 'Affectionate Constraint' (high care/high protect), and PBI dimensional 'Care' scores. Thus a perceived lack of parental care with high levels of parental control as measured within retrospective parenting perceptions may underpin this attachment style. Considering the trends found within significant correlations at the 0.5 level this

attachment style would appear to show a trend of an assertive, uncooperative individual whose perception of parenting received in childhood is one of lack of care and which may be overly controlling. However it should be noted that ratings on each of these measures have been taken retrospectively and it has been evidenced as stated previously that Individuals with an anxious attachment style (as measured by the RQ 'Preoccupied' category) explain events in a more negative way, (Collins, 1996), report more emotional distress and behaviours likely to lead to disagreement (Bartholomew and Horowitz, 1991; Kobak and Sceery, 1998; Mikulincer and Orbach, 1995). Therefore the findings within the trends found in the data may be affected by retrospective bias of report from participants. Should this be the case this may also lend some support to the consistency of this attachment style to previous findings.

No significant relationships were found between attachment style (either categorical or dimensional ratings) and the main two dimensions of interpersonal style on the IAS (DOM and LOV).

7.1.18 Attachment and Differences in Lifespan Development for People with ID

In terms of differences in lifespan development, individuals with a disposition towards 'Anxious Avoidant' attachment style may provide a challenge to the provision of carer support. Weiner, (1985) developed a cognitive model which linked help giving behaviour to attributions of control. This model suggests that where patients are perceived as having greater control over incidents of aggression and violence they are more likely to be regarded with negative attributions by staff, i.e. staff are more likely to experience negative emotions towards such patients.

Using Weiner's (1985) model to explain the interpersonal presentation of the 'Anxious Avoidant' individual would suggest that an individual with an 'Anxious avoidant' style of attachment would show more assertiveness and uncooperativeness within their interpersonal style given the findings from the relationship between the IAS octants and ARQ attachment category. Thus the individual may be perceived by carers as more challenging and in control of their behaviour. Negative staff attributions and attitudes may develop, with carers experiencing negative emotions towards the individual. This may in turn, result in poorer interactions and responsiveness within attachment formation to the primary caregiver. Positive interaction, responsiveness and sensitivity of a primary caregiver are identified as crucial to the formation and continuity of secure attachment bonds (Bowlby, 1969, 1973; Bretherton, 1988).

The relationship between 'Anxious Avoidant' attachment style and 'Affectionless Control' parental style would suggest that individuals who fall within this style of attachment may perceive less care within perceived parenting in childhood. It is well documented that individuals with a 'Preoccupied' (-ve self/-ve others) attachment style do not expect consistent responsiveness and have unrealistically high demands for supportiveness from close others which are unlikely to be met (Bartholomew, Kwong and Hart, 2001). Therefore this perception of lower levels of care may be formed within the unrealistic demands for care noted as relevant to this attachment style. For those placed in care, institutionalisation may also have played a part in relation to staff attributions and the caregiving relationship. There may have existed poor development of responsive and positive interactions with staff involved in their care at a young age due to the formation

of negative attributions by some care staff involved in direct care of the individual in childhood.

The model of care in past decades of institutionalisation was very different to the model of Positive Behavioural Support and Person Centred approaches within current service provision. During the period prior to the 60s and 70s when children with ID were institutionalised, they were resident in large wards or dormitories as they were known (patient communication to the author). Staff to patient ratios were low, which did not facilitate time for responsive and sensitive communication between staff as primary caregivers within the institutional setting, and children in their care, a factor essential for the development of healthy attachment formation. Additionally a large percentage of participants in this study experienced abuse pre 16 years of age, in particular sexual abuse, with the data suggesting that being placed in care was a significant risk factor to this occurring. Whilst there are no significant relationships between attachment style and abuse per se, the level of abuse experienced may be indicative of the lack of staff support available to prevent such occurrences at the time.

7.1.19 Attachment and Personality Disorder (PD)

The assessment of Personality Disorder revealed only two participants who were allocated to the category of Borderline PD. Unsurprisingly there were no significant relationships between Borderline PD and attachment style. Given that so few participants scored above the cut-off for Borderline PD, this may account for the lack of any significant relationships.

Fourteen individuals were allocated the category of Antisocial PD. There are significant relationships with a medium effect sizes between all of the dimensional mean scores of attachment style and Antisocial PD. There is a significant positive relationship between mean scores of both 'Anxious Avoidant' and 'Dismissive Avoidant' attachment style and Antisocial PD and a significant negative relationship between 'Secure' attachment style and Antisocial PD. This clearly shows evidence for the relationship between insecure attachment style and the development of antisocial tendencies and reinforces the existing research pointing to the importance of positive developmental experience as a protective factor to the development of antisocial tendencies (Farrington, 1995; Farrington and Coid, 2003). Additionally Novaco and Taylor (2008) found a significant positive relationship between witnessing parental violence and the development of participants' violent tendencies in adulthood. That is not to say that everyone with an insecure attachment style will develop antisocial tendencies but merely to report that insecure attachment may be a developmental risk factor for such and may be additive to other complex factors leading to antisociality.

7.1.20 Overall Conclusion

The Relationship Questionnaire was first selected as it was evidenced as relevant to measurement within the concept of Bartholomew's four category model of attachment. The Relationship Scales Questionnaire (RSQ) also measured the four category model but had previously been adapted and was found to be sub optimal in aspects of internal consistency (Keeling, Rose & Beech, 2007) The four category model suggested by Bartholomew and Horowitz, (1991) had been identified as of particular use in the treatment of sex offenders Ward et al., (1997) and has been included within ongoing

development of treatment programmes for this group of clients. Thus there was the identified relevance of a measure of attachment for offenders with ID.

Due to linguistic complexity and cognitive load on working memory, adaptation of the RQ was required and carried out. Statistical properties of the adapted version (ARQ) found convergence between the insecure Fearful Avoidant and Preoccupied attachment categories. The reorganisation of the questionnaire into a more statistically derived psychometric measurement tool, through Principal Component analysis facilitated a statistically acceptable improvement to internal consistency and reliability of the ARQ.

Comparison of attachment style was carried out between groups i.e. offenders with ID to each of a control group of non offenders with ID and also mainstream student participants and also gender groups within the cohort of mainstream participants, as measured by retrospective childhood attachment using the ARQ. No significant differences in attachment style were found between any of the comparisons. A significant trend within relationships between attachment experiences measured retrospectively in childhood using the ARQ, perceived parenting, emotional difficulties, interpersonal style, and the development of Antisocial Personality Disorder was found.

Within the comparisons of attachment and emotion and attachment and interpersonal style there were significant relationships at the 0.5 p value. However given the number of computations the p value should be reduced to the 1% rather than the 5% level to limit Type 1 error. No significant relationships exist at the 1% level and thus relationships were reported as a significant trend in the data at the 5% level. Some caution must be

given to these results due to the possibility of Type 1 error within the number of correlation computations conducted.

The relationship between attachment style and offending is notable given the strongly evidenced relationship between Antisocial Personality Disorder and offending behaviour. Indeed, it adds to the evidence suggesting that intervention in childhood and intervention within primary caregiver relationships, whether elicited by families or support staff, may be some of the most significant and important developments that can be made in the field of criminality (Farrington et al 2006) and in relation to the development of offending behaviour in people with mild ID.

There is consistent research evidence that attachment within interpersonal relationships is underpinned by varying levels of emotional anxiety and behavioural avoidance within attachment relationships. Clearly Bowlby's suggestion that the formation of a secure attachment orientation is a protective factor to the development of mental health issues in adulthood has been upheld in many previous studies. This research has found 'Secure' attachment measured retrospectively to a primary caregiver in childhood using the ARQ reflects positively with other variables measuring perceptions of optimal parenting, emotional stability and a more positive interpersonal style orientation.

With regard to insecure attachment styles, given the consistently lower numbers of participants falling within the attachment categories which connote attachment anxiety both in this and previous studies, it may be more helpful to utilise a more dimensional approach to attachment orientation. Given there is consistency of agreement in a variety of studies both self report and interview based of the underpinning of attachment style by

anxiety and avoidance, what may be of interest to clinicians, is how these two concepts affect the individual within interpersonal relationships. It can be assumed from previous research that both emotional anxiety and behavioural avoidance within attachment relationships may each be on a continuum. Thus it is not so much whether these variables exist and how they can be categorised, but rather at what levels do they exist for each individual, how do they interact and how do they affect the interpersonal attachment relationships and interpersonal problem solving of each individual? Thus at what point is the individual experiencing a level of interpersonal problems within attachment relationships, and also at what point are such difficulties deemed to represent an attachment disorder deemed to be clinically significant and worthy of intervention? It may also be helpful if categorical measurement is required that this is refined into -Secureø and -Insecureø attachment style. There are clear arguments for this form of categorical measurement relative to the identified protection that is emanated from the -Secureø attachment style and the risk factors identified from the -Insecureø attachment style. An insecure attachment style may then be further explored relative to the dimensions of anxiety and avoidance through further assessment. Further relationships to emotional difficulties and interpersonal problems may also be explored and an individual profile attained to inform identified areas for clinical intervention.

Thus not everyone with insecure attachment may have clinically significant difficulties however it may be assumed that everyone with a clinical diagnosis of attachment disorder may have an insecure attachment (Brisch, 2004).

7.1.21 Noted Issues in this Research

There were some difficulties in studies within this thesis which have been highlighted throughout the chapters but which are still worthy of further discussion.

Firstly the cohort of offenders with mild ID consisted of a predominance of sex offenders. This may be a contextual sampling bias in so far as participants were employed from a forensic service in NHS Tayside which specialises in the delivery of assessment and intervention for sex offenders with ID.

Secondly, the control group participants were not from a mainstream ID population, but were from a participant sample who were resident in an acute hospital setting. Although all participants within the control group were non offenders it has to be acknowledged that issues of mental illness and challenging behaviour may be contributory factors to their presentation. No measure of previous institutional care was taken for this group and therefore no comment can be made on whether institutional care may have been a factor relevant to attachment development within this participant sample.

Thirdly measures of emotional distress were not consistent between groups (although equivalence of measures was thought to exist at time of study development). Previous research examining Carer ratings and self report ratings on the Emotional Problem Solving scale (EPS) have found a lack of relationship between reports. This issue may be relevant to inconsistencies of results in relationships between scales relevant to emotional difficulties (EPS) used with offenders with ID, and scales used as self report measures of

emotional distress (Dundee Provocation Inventory (DPI) and Brief Symptom Inventory (BSI)) to attain ratings of emotional distress in the control group.

Fourthly, only two participants attained a diagnosis of Borderline Personality Disorder. This issue limited comparisons of attachment style for this group of participants and therefore no reliable data was obtained to examine the relationship between attachment style, perceived parenting, childhood adversity, interpersonal style and the development of Borderline PD in this thesis.

Fifthly the measurement of retrospective attachment style through short questionnaire assessment may be subject to memory bias. Further measures of attachment style (e.g. interview and/or observational) should be developed for this client group to enable triangulation of data relevant to the allocation of attachment style in people with ID and also to facilitate the measurement of attachment style in people with moderate levels of intellectual disability.

7.1.22: Recommendations for Future Research

- Future studies on attachment in people with ID would benefit from normative information from the evaluation of attachment style in a control group of participants with mild ID, who are community based and who do not have issues of mental health or challenging behaviour.

- Further research should include the examination in more detail of the relationship between attachment style and interpersonal problem solving in offenders with mild ID to explore whether specific attachment styles relate to specific interpersonal problem solving styles.
- Further exploration of attachment style and self esteem (Rosenberg Self Esteem Scale) and loneliness (UCLA Loneliness scale) could be carried out to ascertain whether attachment style relates to issues of self criticalness. Low self esteem and loneliness are thought to be variables which contribute to the dynamic risk factors for sexual offending.
- Data already gathered could be split into two separate dimensional forms e.g Secure and Insecure attachment irrespective of types of insecure attachment, and the data analysed again using these two variables only.
- Attachment data could be re-examined using underpinning concepts of anxiety and avoidance where the attachment styles are represented by dimensional ratings of anxiety and avoidance and analysis explored relevant to emotional problems, interpersonal style and Antisocial Personality Disorder.
- Relationships should be explored between attachment in offenders with mild ID, self reported emotion (anger, sensitivity to provocation, depression, anxiety and self esteem to explore specific emotional styles which may underpin attachment styles or categories.

- Further development of interview measures should be conducted relevant to the Adult Attachment Interview to explore any differences between a more in depth interview and shorter questionnaire measurement of attachment style in people with mild ID.
- Exploration of a possible relationship between attachment style and Borderline PD should be conducted by interview based case study using qualitative theme analysis.
- Further development of attachment measures, such as observational measures, would facilitate the assessment of attachment in people with lower levels of intellectual disability.

REFERENCES

- Abott, S. and McConkey, R. (2006). The Barriers to Social Inclusion as Perceived by People with Intellectual Disabilities. *Journal of Intellectual Disability, 10* (3): 275-287.
- Abrahams B. S., Geschwind, D. H. (2008). "Advances in autism genetics: on the threshold of a new neurobiology". *National Review of Genetics, 9* (5): 341-655.
- Ainsworth, M. D. S. (1967). *Infancy in Uganda: Infant care and the growth of love*. Baltimore: John Hopkins University Press.
- Ainsworth, M. D. S. (1969). Object relations, dependency and attachment: A theoretical review of the infant-mother relationship. *Child Development, 40*, 960-1025.
- Ainsworth, M. D. S. (1982). Attachment: Retrospect and prospect. In C. M. Parkes and J. Stevenson-Hinde (Eds.), *The place of attachment in human behaviour* (pp3-30). New York: Basic Books.
- Ainsworth, M. D. S. (1989). Attachment beyond infancy. *American Psychologist, 44*, 709-716.
- Ainsworth, M. D. S., Bell, S. M. V. and Stayton, D. J. (1973). Individual differences in the Strange Situation behaviour of one-year-olds. In L. S. Stone, H. T. Smith, and L. B. Murphy (Eds.) *The competent infant* (pp17-52). New York: Basic Books.

- Ainsworth, M. D. S., Blehar, M. C. Waters, E., and Wall, S. (1978). *Patterns of Attachment: A Psychological Study of the Strange Situation*. Hillsdale, N. J. Erlbaum.
- Alder L, Lindsay W. R. (2007). Exploratory factor analysis and convergent validity of the Dundee Provocation Inventory. *Journal of Intellectual and Developmental Disability*. 32(3):190-199
- Alexander, P. (1993). The differential effects of abuse characteristics and attachment in the prediction of long term effects of sexual abuse. *Journal of Interpersonal Violence*, 8(3), 346-362.
- Alexander R. and Cooray S. (2003). Diagnosis of personality disorders and learning disabilities. *British Journal of Psychiatry*, 182 (Supplement 44), S 28 -- S 31.
- Allen, J. P., Hauser, S. T., and Borman-Spurrell, E. (1996). Attachment theory as a framework for understanding sequelae of severe adolescent psychopathology: An 11 year follow up study. *Journal of Consulting and Clinical Psychology*, 64, 254-263.
- Alves, E., Williams, C., Stephen, I. Prosser, G. (1991). *Mental Impairment and Severe Mental Impairment: A search for definitions*. Leicester, British Psychological Society.
- American Association on Mental Retardation (2002). *Mental Retardation: Definition, Classification, and systems of support* (10th Edition).

American Psychiatric Association (1980). *Diagnostic and statistical manual of mental disorders (third edition)* . Washington, DC: American Psychiatric Association.

American Psychiatric Association (1995). *Diagnostic and Statistical Manual of Mental Disorders (Fourth Revision)*. Washington D.C.: American Psychiatric Association.

Andrews, D. A. and Bonta, J. (1998). *The Psychology of Criminal Conduct* (2 edn). Cincinnati, OH: Anderson.

Arend, R. A., Gove, F. L., and Sroufe, L. A. (1979). Continuity of individual adaptation from infancy to kindergarten: A predictive study of ego-resiliency and curiosity in preschoolers. *Child Development*, 50, 950-959.

Awad, G.A., Saunders, E., and Levine, J. (1984). A clinical study of male adolescent sex offenders. *International Journal of Offender Therapy and Comparative Criminology*, 28, 1056-116.

Badcock, C. R. (2004). Mentalism and mechanism: The twin modes of human cognition. In: *Human nature and social values: Implications of evolutionary psychology for public policy*, (ed.) C. Crawford and C. Salmon, (pp. 99-116). Erlbaum. (Published online in 2002.).

Bailey, S. (2000). Sadistic, sexual and violent acts in the young. In C Itzen (Ed), *Home truths about child sexual abuse: Influencing policy and practice* (pp200-221). London: Routledge.

Bailey, A., Philips, W., and Rutter, M. (1996). Autism: towards an integration of clinical, genetic, neuropsychological, and neurobiological perspectives, *Journal of Child Psychology and Psychiatry*, 37, 8- 126.

Bakermans-Kranenberg, M. J., and Van Ijzendoorn, M. H. (1993). A psychometric study of the Adult Attachment Interview: Reliability and discriminant validity. *Developmental Psychology*, 29, 870-879.

Baldwin, M. W. and Fehr, B. (1995). On the instability of attachment style ratings. *Personal Relationships*, 2, 247-261.

Baldwin, M. W., Keelan, J. P. R., Fehr, B., Enns, V., and Koh Rangarajoo, E. (1996). Social cognitive conceptualisation of attachment working models: Availability and accessibility effects. *Journal of Personality and Social Psychology*, 71, 94-109.

Ball, J. S. and Links, P. S. (2009). Borderline personality disorder and childhood trauma: evidence for a causal relationship. *Current Psychiatry Reports*, 11(1), pp63-68.

Banks, G. (2005) Learning about intellectual disability and health, (psychological treatments for people with learning disabilities)
http://www.intellectualdisability.info/mental_phys_health/treatments_rb.html; (accessed 14th January 2005)

Barbaree, H. E., Marshall, W. L., and Hudson, S. M., (1993). *The Juvenile Sex Offender*. London: Guilford Press.

Bar-Haim, Y., Sutton, D., Fox, N. A. and Marvin, R. S. (2000). Stability and change of attachment at 14, 24 and 58 months of age: Behaviour representation and life events. *Journal of Child Psychology and Psychiatry*, 41, 381-388.

Barkley, R. A. (1998). *Attention deficit hyperactivity disorder: a handbook for diagnosis and treatment*. 2nd Ed. New York: Guildford.

Barkley RA, Fischer M, Edelbrock C, Smallish L. (1991). The adolescent outcome of hyperactive children diagnosed by research criteria III. Mother-child interactions, family conflicts, and maternal psychopathology. *Journal of Child Psychology and Psychiatry*, 32: 233-55.

Baroff, T.S. (1996). The mentally retarded offender. In J. W. Jacobson and J.A. Mulick (Eds.), *Manual of diagnosis and professional practice in mental retardation* (pp. 311-321). Washington, DC: American Psychological Association.

Baron-Cohen, S. (1997). *Mindblindness: An essay on autism and theory of mind*. London: MIT Press.

Barone, L. (2003). Developmental protective and risk factors in borderline personality disorder: A study using the Adult Attachment Interview. *Attachment and Human Development*, 5(1) 64-77.

- Barrett, P. M., and Holmes, J. (2001). Attachment relationships as predictors of cognitive interpretation and response bias in late adolescence. *Journal of Child and Family Studies*, *10*, 51-64.
- Barron, P., Hassiotis A., and Banes, J. (2002). Offenders with intellectual disability: the size of the problem and therapeutic outcomes. *Journal of Intellectual Disability Research*, *46*, 454 ó 463.
- Barron, P., Hassiotis A., and Banes, J. (2004). Offenders with ID: a prospective comparative study. *Journal of Intellectual Disability Research*, *48* (1) 69 ó 76
- Bartholomew, K. (1990). Avoidance of intimacy: An attachment perspective. *Journal of Social and Personal Relationships*, *7*, 147-178.
- Bartholomew, K. (1997). Adult attachment processes: Individual and couple perspectives. *British Journal of Medical Psychology*, *70*, 249-263.
- Bartholomew, K., Henderson, A. and Dutton, D., (2001). Insecure Attachment and Partner Abuse. In C. Clulow (Eds.), *Adult Attachment and Couple Psychotherapy*, Hove, East Sussex, Brunner-Routledge.
- Bartholomew, K. and Horowitz, L.M. (1991). Attachment styles among young adults: a test of a four-category model. *Journal of Personality and Social Psychology*, *61*, 226-244

- Bartholomew, K., Kwong, M. J., and Hart, S. D. (2001). Attachment. In W. J. Livesley (Eds) *Handbook of Personality Disorders: Theory, Research, and Treatment*. London: Guilford Press.
- Beadle-Brown, J., Mansell, J., and Kozma, A. (2007). Deinstitutionalisation in intellectual disabilities. *Current Opinion in Psychiatry*, 20, (5). 437-442.
- Becker, J. V. (1998). What We Know about the Characteristics and Treatment of Adolescents Who have Committed Sexual Offenses. *Child Maltreatment*, 3, (4) 317-329
- Becker-Weidman, A. (2009). Effects of early maltreatment on development: A descriptive study using the Vineland Adaptive behaviour Scales-11, *Child Welfare*, 88(2), 137-161.
- Beckwith, L., Cohen, S. E. and Hamilton, C. E. (1999). Maternal sensitivity during infancy and subsequent life events relate to attachment representation at early adulthood. *Developmental Psychology*, 35, 693-700.
- Bee, H. (1998). *Lifespan Development*, (2nd Ed). New York: Longman
- Belsky, J. and Cassidy, J. (1994). Attachment Theory and Evidence. In M. Rutter and D. Hay (Eds) *Development Through Life; A Handbook For Clinicians* (pp. 373-402). Oxford; Blackwell Scientific Publications.

Benoit, D., and Parker, K. C. H. (1994). Stability and transmission of attachment across three generations. *Child Development*, 65, 1444-1456.

Bentall, R. (2006). "Madness explained : Why we must reject the Kraepelinian paradigm and replace it with a 'complaint-orientated' approach to understanding mental illness". *Medical hypotheses* 66 (2), 220-233.

Biederman, J., Faraone, S., Milberger, S., Curtis, S., Chen, L. and Marris A. (1996). Predictors of persistence and remission of ADHD into adolescence: results from a four-year prospective follow-up study. *Journal of the American Academy of Child and Adolescent Psychiatry*; 35, 343-51.

Birmingham, L., Mason, D. and Grubin, D. (1996). Prevalence of mental Disorder in remand prisoners: Consecutive case study. *British Medical Journal*, 313, 1521-1524.

Blackburn, R. (1994 and 2003). *The Psychology of Criminal Conduct: Theory, Research, and Practice*, Chichester, England: Wiley and Sons, Inc

Blackburn, R., Logan, C., Donnelly, J., and Renwick, S. (2003). Personality disorders, psychopathy and other mental disorders: Comorbidity among patients at English and Scottish high security hospitals. *The Journal of Forensic Psychiatry and Psychology*, 14, 111-137.

Blackburn, R., Logan, C., Renwick, S.J.D., and Donnelly, J.P. (2005). Higher order dimensions of personality disorder: Hierarchical and relationships with the five factor model, the interpersonal circle and psychopathy. *Journal of Personality Disorders, 19*, 597-623

Bland, R.C., Orn, H., and Newman, S. C. (1988). Lifetime prevalence of psychiatric disorders in Edmonton. *Acta Psychiatrica Scandinavica, 338*, 24-32.

Blatt, S. J., Auerbach, J. S., and Levy, K. N. (1997). Mental representations in personality development, psychopathology and the therapeutic process. *Review of General Psychology, 1*, (4), 351-374)

Borthwick-Duffy, S. A. (1994a). Epidemiology and prevalence of psychopathology in persons with mental retardation. *Journal of Consulting and Clinical Psychology, 62*, 17-27.

Borthwick-Duffy, S. A. (1994b). Prevalence of destructive behaviours: A study of aggression, self injury, and property destruction. In T. Thompson and D. B. Gray (Eds). *Destructive behaviour in developmental disabilities: Diagnosis and treatment*. 3-23. Thousand Oaks, CA: Sage.

Bowlby, J. (1969, 1982). *Attachment and Loss: Vol. 1: Attachment*. New York: Basic Books.

Bowlby, J. (1973). *Attachment and Loss: Vol. 2: Separation*. London: Hogarth Press

- Bowlby, J. (1980). *Attachment and Loss: Vol. 3: Loss*. London: Hogarth Press
- Brackenridge, I. And Morrisey, C. (2010). Trauma and post-traumatic stress disorder (PTSD) in a high secure forensic learning disability population: future directions for practice. *Advances in Mental Health and Intellectual Disabilities*. 4, (3): 49-56.
- Brazelton, T. B., Koslowski, B., and Main, M. (1974). In M. Lewis and L. A. Rosenbaum (Eds.), *The effect of the infant on its caretaker*. New York: Wiley.
- Breakey, W. R., Fischer, P. J., Nestadt, G., and Romanoski, A. (1992). Stigma and stereotype: Homeless mentally ill persons. In P. J. Fink and A. Tasman (Eds), *Stigma and mental illness*. (pp97-112). Washington DC: American Psychiatric Press.
- Brennan, K. A., Clark, C. L., and Shaver, P. R. (1998). Self report measurement of adult romantic attachment: an integrative overview. In J. A. Simpsn and W. S. Rholes (Eds), *Attachment theory and close relationships* (pp. 46-76). New York: Guildford Press.
- Brennan, K. A., and Shaver, P. R. (1998). Attachment Styles and Personality Disorders: their connections to each other and to parental divorce, parental death, and perceptions of parental caregiving. *Journal of Personality*, (66), 835-878.
- Brennan, K. A., Shaver, P. R., and Tobey, A. E. (1991). Attachment Styles, gender and parental problem drinking. *Journal of Social and Personal Relationships*, 8, 451-466.

- Bretherton, I. (1992). The origins of attachment theory: John Bowlby and Mary Ainsworth. *Developmental Psychology, 28*, 759-775.
- Briggs, F., and Hawkins, R. M. F. (1996). A comparison of childhood experiences of convicted male child molesters and men who were sexually abused in childhood and claim to be non-offenders. *Child Abuse and Neglect, 20*. 221-233.
- Brisch, K. H. (1999). *Treating Attachment Disorders*. New York: Guildford Press.
- British Institute of Learning Disabilities (BILD) - <http://www.bild.org.uk/> accessed 17th January 2005.
- Brown, B. S. and Courtless, T. F. (1968). The mentally retarded in penal and correctional institutions. *American Journal of Psychiatry, 124*, 1164-1170.
- Browne, K. D., and Herbert, M. (1997). *Preventing Family Violence*. Wiley: Chichester
- Burmehster, D. and Furman, W. (1986). The changing functions of friends in childhood: A neo-Sullivanian perspective. In V. J. Derlega and B. A. Winstead (Eds.), *Friendship and Social Interaction* (pp41-62). New York: Springer.
- Bruner, J. S., (1977). Early social interaction and language acquisition. In H. R. Schaffer (Ed.), *Studies in mother-infant interaction*. London: Academic Press.

- Bryson, S. E., Bradley, E. A., Thompson, A., and Wainright, A. (2008). Prevalence of autism among adolescents with intellectual disabilities. *Canadian Journal of Psychiatry*, 53, (7), 449-459.
- Burk, L. R., and Burkhart, B. R. (2003). Disorganised attachment as a diathesis for sexual deviance. Developmental experience and the motivation for sexual offending. *Aggression and Violent Behaviour*, 8, 487-511
- Buss, D. (1999). *Evolutionary Psychology*. Alyn and Bacon
- Calamari, E., and Pini, M. (2003). Dissociative experiences and anger proneness in late adolescent females with different attachment styles. *Adolescence*, 38, 287-303.
- Campbell, D. T., & Fiske, D. W. (1959). Convergent and discriminant validation by the multitrait-multimethod matrix. *Psychological Bulletin*, 56, 81-105.
- Caparulo, F. (1991). Identifying the developmentally disabled sex offender. *Sexuality and Disability*, 9, 311-322.
- Capps, L. Sigman, M. and Mundy, P. (1994). Attachment Security in Children with Autism. *Development and Psychopathology* 6: 249-261
- Carlson, E. A. (1998). A prospective longitudinal study of attachment disorganization/disorientation, *Child Development*, 69, 1107-1128.

Carlson, E. A., and Sroufe, L. A. (1995). The contribution of attachment theory to developmental psychopathology. In D. Cicchetti and D. Cohen (Eds.), *Developmental processes and psychopathology: Vol. 1. Theoretical perspectives and methodological approaches* (pp. 581-617). New York: Cambridge University Press.

Carlson, V., Cicchetti, D., Barnett, D., and Braunwald, K. (1989). Disorganised/Disoriented Attachment Relationships in Maltreated Infants, *Developmental Psychology*, 25, (4) 525-531.

Carr, A., Flanagan, E., Dooley, B., Fitzpatrick, M., Flanagan-Howard, R., Shevlin, M., Tierney, K., White, M., Daly, M., and Egan, J. (2009). Profiles of Irish survivors of institutional abuse with different adult attachment styles, *Attachment and Human Development*, 11(2): 183-201.

Carson, D., Lindsay, W., O'Brien, G., Holland, A. J., Taylor, J. Wheeler, J., Middleton, C., Price, K., Steptoe, L. R., and Johnston, S. (2010). Referrals into services for offenders with intellectual disabilities: Variables predicting community or secure provision. *Criminal Behaviour and Mental Health*, 20, 1-12.

- Cassidy, J. (1994). Emotion regulation: Influences of attachment relationships. In N. Fox (Ed) *The development of emotion regulation: Biological and biobehavioural considerations. Monographs of the Society for Research in Child Development* (Serial No 240, Vol 59, Nos 2-3).
- Cattell, R.B. (1963). Theory of fluid and crystallized intelligence: A critical experiment. *Journal of Educational Psychology*, 54, 1-22
- Chalk, R. Gibbons, A. and Scarupa, H.J. (2002). The multiple dimensions of child abuse and neglect: new insights into an old problem, Washington D.C. Child Trends
Viewed online www.childtrends.org/files/ChildAbuseRB. Accessed 14th May 2004
- Chambers, J.A., Power, K.G., Durham, R.C. (2004). The relationship between trait vulnerability and anxiety and depressive diagnoses at long-term follow-up of Generalized Anxiety Disorder. *Journal of Anxiety Disorders* 18, 587-607.
- Chambers, A., Power, K. G., Loucks, N., and Swanson, V. (2000). Psychometric properties of the Parental Bonding Instrument and its association with psychological distress in a group of incarcerated young offenders in Scotland. *Social Psychiatry and Psychiatric Epidemiology*, 35, 318-325.
- Charman, T. and Clare, I. (1992). Education about the laws and social rules relating to sexual behaviour, *Mental Handicap*, 20, 74-80.

- Cicchetti, D. and Rizley, R. (1981). Developmental perspectives on the etiology, intergenerational transmission, and sequelae of child maltreatment. In R Rizley and D, Cicchetti (Eds.), *Developmental Perspectives on Child Maltreatment* (pp31-55). San Francisco: Jossey-Bass.
- Choi-Kain, L.W., Fitzmaurice, G.M., Zanarini, M.C., Laverdiere, O., and Gunderson, J. G. (2009). The relationship between self reported attachment styles, interpersonal dysfunction, and borderline personality disorder. *Journal of Nervous and Mental Disease*. 197(11). 816-821.
- Ciechanowski,P., Sullivan, M., Jensen, M., Romano, J., and Summers, H. (2003). The relationship of attachment style to depression, catastrophizing and health care utilisation in patients with chronic pain. *Pain*, 104, 627-637.
- Clarke, L., Ungerer, J.A., Chahoud, K., Johnson, S., Stiefel, I. (2002). Attention Deficit Hyperactivity Disorder is associated with attachment insecurity. *Clinical Child Psychology and Psychiatry*, (7) 179-198.
- Clegg, J., and Sheard, C. (2002). Challenging behaviour and insecure attachment. *Journal of Intellectual Disability Research*, 46. (6), 503-506.
- Clements, J. (2000). Development, Cognition and Performance In E. Emerson, C. Hatton, J. Bromley and A Caine (Eds) *Clinical Psychology and People with Intellectual Disabilities* (pp39-53) Wiley: Chichester.

- Clements, J. (1987) *Severe Learning Disability and Psychological Handicap*. Wiley: Cichester.
- Cohen, J. (1988). *Statistical Power Analysis for the Behavioural Sciences* (2nd Ed.). Lawrence Erlbaum Associates.
- Cohen, J (1992). "A power primer". *Psychological Bulletin* (112): 1556159.
- Coid, J., Yang, M., Tyrer, P., (2006). Prevalence and correlates of personality disorder in Great Britain. *The British Journal of Psychiatry*, (188), 4236431.
- Cole, P.M., Llera, S.J., Pemberton, C.K. (2009). Emotional instability, poor emotional awareness, and the development of borderline personality. *Development and Psychopathology*. 21(4), 1293-1310.
- Collins, N. L. and Read, S.J. (1990). Adult attachment, working models, and relationship quality in dating couples. *Journal of Personality and Social Psychology*, 58, 644-663.
- Collins, N. (1996). Working Models of Attachment: Implications for Explanation, Emotion, and Behaviour. *Journal of Personality and Social Psychology*, 71, (4), 810-832.
- Consedine, N. S., and Magai, C. (2003). Attachment and emotion experience in later life: The view from emotions theory. *Attachment and Human Development*, 5(2), 165-187.

- Coombes, R. (2003). Adolescents who sexually abuse. In A. Matravers, *Sex Offenders in the Community: managing and reducing the risks*. (pp167-188). Willan Publishing: UK.
- Craissati, J., McClurg, G., and Browne, K. (2002). Characteristics of perpetrators of child sexual abuse who have been sexually victimized as children. *Sexual Abuse: A Journal of Research and Treatment*, 14, 225-239.
- Critchfield, K.L., Levy, K.N., Clarkin, J.F., and Kernberg, O.F. (2008). The relational context of aggression in Borderline Personality Disorder: Using Adult Attachment Style to predict forms of hostility. *Journal of Clinical Psychology*. 64(1). 67-82.
- Crittenden, P.M. (1988). Distorted patterns of relationship in maltreating families: The role of internal representational models. *Journal of Reproductive and Infant Psychology*, 6, 183-199.
- Crittenden, P. M. (1992). The quality of attachment in the preschool years. *Development and Psychopathology*, 4, 209-241.
- Crocker, A. G., Côté, G., Toupin, J., and St-Onge, B. (2007). Rate and characteristics of men with an intellectual disability among pre-trial detainees. *Journal of Intellectual and Developmental Disabilities*, 32(2), 143-15.
- Crowell, J. A., Fraley, R. C., and Shaver, P. R. (1999). Measurement of adult attachment. In J Cassidy and P. R. Shaver (Eds.), *Handbook of attachment: Theory, research and clinical applications* (pp 434-465). New York: Guilford Press.

- Crowell, J.A. and Treboux, D. (1995). A review of adult attachment measures: Implications for theory and research. *Social Development*, (4), 294-327.
- Crowell, J.A. and Treboux, D., and Waters, E. (2002). Stability of attachment representations: The transition to marriage. *Developmental Psychology*, 38, 467-479.
- Cummings, E. M. and Davies, P. (1996). Emotional security as a regulatory process in normal development and the development of psychopathology. *Development and Psychopathology*, 8, 123-139.
- DøSilva, K., and Hogue, T. (2002). Directions for the classification of DSM-IV personality disorder diagnoses. Unpublished manuscript.
- Davilla, J., and Cobb, R.J. (2003). Predicting change in self-reported and interviewer-assessed adult attachment: Tests of the individual difference and life stress models of attachment change. *Personality and Social Psychology Bulletin*, 29, 859-870.
- Day, K. (1993). Crime and mental retardation: a review. In K Howells and CR Hollin (Eds.) *Clinical approaches to the mentally disordered offender*. Chichester. Wiley.
- Day, K. (1994). Male mentally handicapped sex offenders. *British Journal of Psychiatry*, 165, 630-639.
- De Wolff, M., and van Ijzendoorn, M. H. (1997) Sensitivity and attachment: A meta-analysis on parental antecedents of infant attachment. *Child Development*, 68, 571-591.

Denkowski, G. C. and Denkowski, K. M. (1985). The mentally retarded offender in the state prison system: identification, prevalence, adjustment, and rehabilitation. *Criminal Justice and Behaviour*, 12, 55-70.

Douglas, J. D. and Atwell, F. C. (1988). *Love, Intimacy and Sex*. Newbury Park, CA: Sage Publications

Dunn, J. (1996). The Emanuel Miller Memorial Lecture 1995. Childrens relationships: bridging the divide between cognitive and social development. *Journal of Child Psychology and Psychiatry*, 37, 507-518.

Dutton, D., Saunders, K., Starzomski, A., and Bartholomew, K. (1994). Intimacy-anger and insecure attachment as precursors of abuse in intimate relationships. *Journal of Applied Social Psychology*, 24, 1367-1386.

Dwyer, R. G. and Frierson, R. I. (2006). The presence of low IQ and mental retardation among murder defendants referred fro pretrial evaluation. *Journal of Forensic Sciences*, 51, 678-682.

Dykas, M. J. and Cassidy, J. (2011). Attachment and the processing of social information across the lifespan: theory and evidence. *Psychological Bulletin*, 137, (1): 19-46.

Dykas, M. J., Ehrlich, K. B. and Cassidy, J. (2011). Links between attachment and social information processing: examination of intergenerational processes. *Advances in Child Development and Behaviour*. 40: 51-94.

Easterbrooks MA, Biesecker G, LyonsóRuth K. (2000). Infancy predictors of emotional availability in middle childhood: The roles of attachment security and maternal depressive symptomatology. *Attachment and Human Development*. 2: 170-187.

Edens, J.F. (2009). Interpersonal characteristics of male criminal offenders: Personality, psychopathological and behavioural correlates. *Psychological Assessment*, 21, 896-98.

Egeland, B. and Farber, E. A. (1984). Infant-mother attachment: factors related to its development and expression over time. *Child Development*, 55, 753-771.

Egeland, B. and Sroufe, L. (1981). Attachment and early maltreatment. *Child Development*, 52, 44-52.

Elicker, J., Englund, M., and Sroufe, L. A. (1992). Predicting peer competence and peer relationships in childhood from early parent-child relationships. In R. Parke and G. Ladd (Eds), *Family-peer relations: Modes on linkage* (pp77-106). Hillsdale, NJ: Erlbaum.

Erdman, P. (1998). Conceptualizing ADHD as a contextual response to parental attachment. *The American Journal of Family Therapy*, 26(2), 177-185.

Erickson, M., Sroufe, L. A., and Egeland, B. (1985). The relationship of quality of attachment and behaviour problems in preschool in a high risk sample. In I. Bretherton and E. Waters (Eds.), *Growing points in attachment theory and research. Monographs of the Society for Research in Child Development*, 50(1-2, Serial No. 209), 147-186.

- Emerson, E. (2001 and 2004). *Challenging Behaviour: Analysis and Intervention in People with Intellectual Disabilities* (2nd Eds). Cambridge: Cambridge University Press.
- Epstein, S. (1983). Aggregation and beyond: Some basic issues on the prediction of behavior. *Journal of Personality*, 51, 360-392.
- Escher-Graeb, D. and Grossman, K. E. (1983). *Attachment security in the second year of life: The Regensburg cross-sectional study*. Research Report, University of Regensburg.
- Fagot, B. I. and Pears, K. C. (1996). Changes in attachment during the third year: consequences and predictions. *Development and Psychopathology*, 8, 325-344
- Farber, E. A., and Egelend, B. (1987). Invulnerability among abused and neglected children. In Farrington, D. B. And Coid, J. W. (2003) *Early Prevention of Adult Antisocial Behaviour*, (pp130-204) Cambridge University Press.
- Farrington, D. (1991). Childhood aggression and adult violence: Early precursors and later life outcomes. In Pepler, D. and Rubin, K. (Eds.). *The Development and Treatment of Childhood Aggression*. Hillsdale, NJ: Lawrence Erlbaum.
- Farrington, D. P. (1995). The development of offending and antisocial behaviour from childhood. *Journal of Child Psychology and Psychiatry*, 36, 929-64.

- Farrington, D.P. (2002) 'Developmental criminology and risk-focused prevention' in M. Maguire et al. (Eds.) *The Oxford Handbook of Criminology* (3rd Eds.). Oxford: Oxford University Press.
- Farrington, D. P., and Coid, J. W. (2003). *Early Prevention of Adult Antisocial Behaviour*, Cambridge University Press.
- Farrington, D. P. (2006). Origins of violent behaviour over the life span. In Flannery, D. J., Vaszonyi, A. T. and Waldman, I. (Eds.) *The Cambridge Handbook of Violent Behaviour*. Cambridge: Cambridge University Press.
- Feeney, J. A., and Noller, P., (1990). Attachment style as a predictor of adult romantic relationships. *Journal of Personality and Social Psychology*, 58, 281-291.
- Feeney, J. A., and Noller, P., (1996). *Adult Attachment*. Thousand Oaks, CA: Sage.
- Feeney, J. A., Noller, P., and Callan, V. J. (1994). Attachment style, communication and satisfaction in the early years of marriage. In K Bartholomew and D. Perlman (Eds) *Advances in Personal Relationships* (Vol 5, pp269-308) London: Jessica Kingsley.
- Feeney, J. A., Noller, P., and Hanrahan, (1994). Assessing adult attachment. In M. B. Sperling and W. H. Berman (Eds.), *Attachment in adults: Clinical and developmental perspectives*, (pp. 128-152). New York: Guildford Press.

Feeney, J. A., and Noller, P., and Patty, J. (1993). Adolescents' interactions with the opposite sex: influence of attachment style and gender. *Journal of Adolescence*, 16, 169-186.

Fergusson DM, Horwood LJ, Lynskey MT. (1993). The effects of conduct disorder and attention deficit in middle childhood on offending and scholastic ability at age 13. *Journal of Child Psychology and Psychiatry*; 34: 899-916.

Flesch, R. (1948). "A new readability yardstick". *Journal of Applied Psychology* 32, 221-233.

Flesch Kincaid Reliability Index Calculator, <http://www.standards-schmandards.com/exhibits/rix/index.php>. Accessed 02/05/2006.

Fleiss, J.L. (1981). *Statistical methods for rates and proportions* (2nd ed.). New York: John Wiley

Fonagy, P, Steele, H., and Steele, M. (1991). Maternal representations of attachment during pregnancy predict the organization of infant-mother attachment at one year of age. *Child Development*, 62, 891-905.

Fonagy, P. and Target, M. (1997). Attachment and reflective function: Their role in self-organization. *Development and Psychopathology*, 9, 679-700.

- Fraley, R. C. (2002). Attachment stability from infancy to adulthood: Meta-analysis and dynamic modelling of developmental mechanisms. *Personality and Social Psychology Review, 6*, 123-151.
- Fraley, R. C., Davis, K. E., and Shaver, P. R. (1998). Dismissing-avoidance and the defensive organization of emotion, cognition, and behavior. In J. A. Simpson and W. S. Rholes (Eds.), *Attachment theory and close relationships* (pp. 249-279). New York: Guilford Press.
- Fraley, R. C., and Waller, N. G. (1998). Adult attachment patterns: A test of the typological model. In J. A. Simpson and W. S. Rhodes (Eds.), *Attachment theory and close relationships* (pp.77-114). New York: Guildford Press.
- Franc, N., Maury, M., Purper-Ouakil, D. (2009). ADHD and attachment processes: are they related? *Encephale, 35*, (3): 256-261.
- Freedle, R., and Lewis, M., (1977). Prelinguistic conversations. In M. Lewis and L. rosenblum (Eds.), *Interaction conversation and the development of language*. New York: Wiley.
- Freedman, M. (1993). *The Kindness of Strangers*. San Francisco: Jossey Bass.
- Friedemann, P., and Adshead, G. (2004). *A Matter of Security: The application of attachment theory to forensic psychiatry and psychotherapy*. New York, Jessica Kingley.

Gardner, H. (1999) *Intelligence Reframed: Multiple Intelligences for the 21st Century.*"
New York: Basic Books

Garlick, Y., Marshall, W.L., and Thornton, D. (1996). Intimacy deficits and attribution of blame among sexual offenders. *Legal and Criminological Psychology, 1*, 251-258.

George, C., Kaplan, N., and Main, M. (1996). *The Attachment Interview for Adults.*
Unpublished Manuscript, Department of Psychology, University of California, Berkeley
(3rd Edition).

Gerslma, C., Kramer, J.J.A.M., Scholing, A., and Emmelkamp, P.M.G. (1994). The influence of mood on memories of parental rearing practices. *British Journal of Clinical Psychology, 33*, 159-172.

Gigerenzer, G., & Hoffrage, U. (1995). How to improve Bayesian reasoning with instruction: Frequency formats. *Psychological Review, 102*, 684-704.

Glaser, W. and Deane, K. (1999). Normalisation in an abnormal world: a study of prisoners with intellectual disability. *International Journal of Offender Therapy and Comparative Criminology, 43*, 338-356.

Goodwin, R.D., Fergusson, D.M., Horwood, L.J. (2004). Early anxious/withdrawn behaviours predict later internalising disorders, *45*, (4): 874-83.

Greenberg, M. T., Cicchetti, D., and Cummings, EM., (Eds) (1990) *Attachment in the Preschool Years: Theory, Research and Intervention* University of Chicago, Chicago

Greenberg, M. T., Speltz, M. L. and DeKlyen, M. (1993). The role of attachment in the early development of disruptive behaviour problems. *Development and Psychopathology*, 5, 191-213.

Griffin, D., and Bartholomew (1994a). The metaphysics of measurement: The case of adult attachment. *Advances in Personal Relationships*, 5, 17-52.

Griffin, D. and Bartholomew, K. (1994b). Models of the Self and Other: Fundamental Dimensions Underlying Measures of Adult Attachment. *Journal of Personality and Social Psychology*, 67, (3), 430-44

Griffiths, S. D. M., Quinsey, V. L. and Hingsburger, D. (1989). *Changing inappropriate sexual behaviour: A community based approach for persons with developmental disabilities*. Baltimore: Paul Brookes Publishing.

Grossman, K. E. and Grossman, K. (1991). Attachment quality as an organiser of emotional and behavioural responses in a longitudinal perspective. In C. M. Parkes, J. Stevenson-Hinde and P. Marris (eds), *Attachment Across the Life Cycle* (pp. 93 ó 114). London: Routledge.

Grossman, K. Grossman, K. and Kindler H. (2005). Early care and the roots of attachment and partnership representations: The Bielefeld and Regensburg longitudinal studies. In K. E. Grossman, K. Grossman and E. Waters (Eds.) *Attachment from infancy to adulthood: The major longitudinal studies* (pp98-136). New York: Guildford Press.

Guadagnoli, E., and Velicer, W. F. (1988). Relation of sample size to the stability of component patterns. *Psychological Bulletin*, (103), 265-275.

Guedeny, N., Fermanian, J. and Bifulco, A. (2010). Construct validation study of the Relationship Scales Questionnaire (RSQ) on an adult sample. *L' Encéphale*; 36 (1): 69-76

Gunn, J., Maden, A. and Swinton, M. (1991). *Mentally Disordered Prisoners*. London: Home Office.

Haapasalo, J. Aaltonen, T. (1999). Mother's Abusive Childhood Predicts Child Abuse, *Child Abuse Review*, 8, 231-250

Hamilton, C. E. (2000) Continuity and discontinuity of attachment from infancy through adolescence. *Child Development*, 71, 690-694.

Hanson, K.R., and Harris, A.J.R. (2001). A Structured Approach to Evaluating Change Among Sexual Offenders. *Sexual Abuse: A Journal of Research and Treatment*. 13(2), 105-122.

- Harley, T. (2001). *The Psychology of Language*. Sussex: Psychology Press.
- Harlow, H. (1958). The Nature of Love. *American Psychologist*, *13*, 573-685
- Harris, G. T., Rice, M. E., and Quinsey, V. L. (1993). Violent recidivism of mentally disordered offenders: The development of a statistical prediction instrument. *Criminal Justice and Behaviour*, *20*, 315-335.
- Hart, S., Dutton, D. G., and Newlove, T. (1993). The prevalence of personality disorder among wife assaulters. *Journal of Personality Disorders*, *7*(4), 329-341.
- Hay, D. F. (1994). Prosocial Development. *Journal of Child Psychology and Psychiatry*, *35*, 29-72.
- Hayes, S. (1991). Sex Offenders. *Australia and New Zealand Journal of Developmental Disabilities*, *17*, 221-227.
- Hazan, C., and Shaver, P. (1987). Romantic love conceptualised as an attachment process, *Journal of Personality and Social Psychology*, *52*, 511-524
- Hazan, C. and Shaver P. R. (1990). Love and Work: An attachment-theoretical perspective. *Journal of Personality and Social Psychology*, *59*, 270-280.
- Hazan, C. and Zeiffman, D. (1994). Sex and the psychological tether. In K. Bartholomew and D. Perlman (Eds.) *Advances in personal relationships: Attachment processes in adulthood* (Vol 5, pp151-177) London: Jessica Kingsley.

- Herbert, M. (2000). *Clinical Child Psychology: Social Learning, Development and Behaviour*, (2nd Ed.), Wiley: Chichester
- Herrington, V. (2009). Assessing the prevalence of intellectual disability among young male prisoners. *Journal of Intellectual Disability Research*, 53, (5), 397-410.
- Hesse E., (1999) The Adult Attachment Interview: Historical and Current Perspectives. In J. Cassidy and P. R. Shaver (Eds.), *Handbook of Attachment: Theory, Research and Clinical Applications* (pp395 ó 433). New York: Guildford Press.
- Hesse, E. and Main, M. (2000). Disorganized infant, child, and adult attachment. Collapse in behavioural and attentional strategies. *Journal of American Psychoanalytic Association*, 48, 1097-1127.
- Hill. J. (2003) Early identification of individuals at risk for antisocial personality disorder. *The British Journal of Psychiatry*, 182.11-14
- Hinshaw, S. P. (1992). Externalising behaviour problems and academic underachievement in childhood and adolescence. Causal relationships and underlying mechanisms. *Psychological Bulletin*, 111, 127-155.
- Hoekstra, R. A., Happe, F., Baron-Cohen, S., and Ronald, A. (2009). Association between extreme autistic traits and intellectual disability from a general population twin study. *British Journal of Psychiatry*, 195: 531-536.

- Hogue, T., Lindsay, W., Taylor, J., Johnson, S., Smith, A., O'Brien, G. (2003). *The applicability of Personality Disorder and Risk assessment in a sample of learning disability offenders*, unpublished research protocol document.
- Hogue, T., Steptoe, L., Taylor, J., Lindsay, W. R., Mooney, P., Pinkney, L., Johnston, S., Smith, A. W., O'Brien, G (2006). A comparison of offenders with intellectual disability across three levels of security. *Criminal behaviour and Mental Health, 16*, 1-16.
- Holland, A. J. (1991). Challenging and offending behaviour by adults with developmental disorders. *Australia and New Zealand Journal of Developmental Disabilities, 17*, 119-126.
- Holland, A. J. (2004). "Criminal behaviour and developmental disability: an epidemiological perspective." In W. R. Lindsay, J. L. Taylor, and P. Sturmey, eds., *Offenders with Developmental Disabilities*. (pp23 ó 34) Chichester: Wiley and Sons, Ltd, .
- Holland, T., Clare, I. C., and Mukhopadhyay T. (2002). Prevalence of "criminal offending" by men and women with "intellectual disability" and the characteristics of "offenders" implications for research and service development. *Journal of Intellectual Disability Research, 46*, (Suppl 1), 6-20.
- Holmes, J. (1993) *John Bowlby and Attachment Theory*. Routledge

Horowitz, L.M., Rosenberg S. E., and Bartholomew (1993). Interpersonal Problems, Attachment Styles, and Outcome in Brief Dynamic Psychotherapy. *Journal of Consulting and Clinical Psychology*. 61, (4) 549-560.

Horowitz L. M., Rosenberg, S. E., Bauer, B. J., Ureno, G. and Villasenor, V. S. (1988). Inventory of interpersonal problems: psychometric properties and clinical applications. *Journal of Consulting and Clinical Psychology*, 56, 885 -- 892

Howe, D., Brandon, M., Hinnings, D., and Schofield, G. (1999). *Attachment Theory, Child Maltreatment and Family Support: A Practice and Assessment Model*, Palgrave, New York.

<http://library.adoption.com/articles/attachment-biology-evolution-and-environment.html>
accessed 17/04/12.

Hudson, S. M. and Ward, T. (1997). Intimacy, loneliness, and attachment style in sexual offenders. *Journal of Interpersonal Violence*, 12, (3) 323-339.

Iwaneic, D., and Sneddon, H. (2001). Attachment style in adults who failed to thrive as children: Outcomes of a twenty year follow up study of factors influencing maintenance or change in attachment style. *British Journal of Social Work*, 31, 179-195.

Jacobvitz, D. and Hazen, N. (1999). Developmental pathways from infant disorganization to childhood peer relationships. In J Solomon and C George (Eds) *Attachment Disorganization* (pp127-159) New York: Guilford Press.

- Jensen, P. S., Martin, B. A., and Cantwell, D. P. (1997). Co morbidity in ADHD: Implication for research, practice and DSM IV. *Journal of the American Academy of Child and Adolescent Psychiatry*, 36, 1065-1079.
- Johnson, J. H. and Goldman, J. (1993) Approaches to developmental assessment. In T. H. Ollendick and R. J. Prinz (Eds) *Advances in clinical child psychology*. New York: Plenum Press.
- Jones, J. (2007). Persons with intellectual disability in the criminal justice system. *International Journal of Offender Therapy and Comparative Criminology*, 51, 723-733.
- Kanner L (1943). Autistic disturbances of affective contact. *Nervous Child* 2, 217-650.
- Kanner, L (1968). Reprint. *Acta Paedopsychiatr* 35 (4), 100-636
- Kaufman, A., S., and Lichtenberger, E. (2006). *Assessing Adolescent and Adult Intelligence* (3rd Ed.). Hoboken (NJ): Wiley.
- Kazdin, A. E., Kraemer, H. C., Kessler, R. C., Kupfer, D. J., and Offord, D. R. (1997). Contributions of risk factor research to developmental psychopathology. *Clinical Psychology Review*, 17, 375-406.
- Kearns, A. (2001). Forensic Services and people with learning disability: in the shadow of the Reed Report, *The Journal of Forensic Psychiatry*, Vol. 12, (1) 8 - 12

Keeling, J. A., Rose, J. L., and Beech, A. R. (2007). A preliminary evaluation of the adaptation of four assessments for offenders with special needs. *Journal of Intellectual and Developmental Disability*, 32, (2), 62-73.

Kincaid, J.P., Fishburne, R.P., Rogers, R.L., and Chissom, B.S. (1975). Derivation of New Readability Formulas (Automated Readability Index, Fog Count, and Flesch Reading Ease formula) for Navy Enlisted Personnel. Research Branch Report 8-75. Chief of Naval Technical Training: Naval Air Station Memphis. http://en.wikipedia.org/wiki/Flesch%E2%80%93Kincaid_readability_test#History
Accessed July 2011.

Kirkpatrick, L. A., and Davis, K. E. (1994). Attachment style, gender and relationship stability: A longitudinal analysis. *Journal of Personality and Social Psychology*, 66, 502-512.

Kirkpatrick, L. A., and Hazan, D. (1994). Attachment styles and close relationships: A four year prospective study. *Personal Relationships*, (1), 123-142.

Klimecki, M. R., Jenkinson, J. and Wilson, L. (1994). A study of recidivism among offenders with an intellectual disability. *Australia and New Zealand Journal of Developmental Disabilities*, 19, 209-219.

Klohnen, E. C. and Bera, S. (1998). Behavioural and experiential patterns of avoidantly and securely attached women across adulthood: A 31 year longitudinal perspective. *Journal of Personality and Social Psychology*, 74, 211-223.

Kobak, R. R., Cole, H.E., Ferenz-Gillies, R., and Fleming, W. S. (1993). Attachment and emotion regulation during mother-teen problem solving: A control theory analysis. *Child Development, 64*, 231-245.

Kobak, R. R., and Duemmler, S. (1994). Attachment and conversation: Toward a discourse analysis of adolescent and adult security. In K. Bartholomew and D. Perlman (Eds.), *Advances in Personal Relationships* (Vol 5, pp121-149). London: Jessica Kingsley.

Kobak, , R. R., and Hazan, C. (1991). Attachment in marriage: Effects of security and accuracy of working models. *Journal of Personality and Social Psychology, 60*, 861-869.

Kobak, R. R., and Sceery, A. (1988). Attachment in late adolescence: Working models, affect regulation, and representations of self and others. *Child Development, 59*, 135-146.

Kolvin, I., Miller,F. J. W., Fleeting, M., and Kolvin, P. A. (1988). Risk/protective factors for offending with particular reference to deprivation. In M. Rutter (Ed), *Studies of Psychosocial Risk: The Power of Longitudinal Data* (pp77-95) Cambridge University Press.

Kolvin, I., Charles, G., Nicholson, R., Fleeting M., and Fundudis, T. (1990). Factors in prevention in inner-city deprivation. In D. Goldberg and D. Tantom (Eds), *Public Health Impact of Mental Disorder* (pp115-123). Stuttgart: Hogrefe and Huber.

- Kraemer, G. W. (1997). Social attachment, brain function, aggression and violence. In A. Raine, P. A. Brennan, D. P. Farrington and S. A. Mednick (Eds.), *Biosocial Bases of Violence* (pp207-229). New York: Plenum Press.
- Krueger, R. F., Watson, D., Barlow, D. H. (2005). Introduction to the Special Section: Toward a dimensionally based taxonomy of psychopathology [Special Issue]. *Journal of Abnormal Psychology, 114*, 491-493.
- Kurdek, L. A. (2002). On being insecure about the assessment of attachment styles. *Journal of Social and Personal Relationships 19*(6), 811-832.
- Lakey, J. (1994). The profile and treatment of male adolescent sex offenders. *Adolescence, 29*, 755-761.
- Lamb, M. E. (1981). *The role of the father in child development (Revised edition)* New York: Wiley.
- Lamb, M. E., Thompson, R. A., Gardner, W. P., Charnov, E. L. and Estes, D. (1985). Security of infantile attachment as assessed in the strange situation: Its study and biological interpretation. *Annual Progress in Child Psychiatry and Development, 53-114*.
- Landis, J.R.; and Koch, G.G. (1977). "The measurement of observer agreement for categorical data". *Biometrics 33* (1): 159-174.

Leary, T. (1957). *Interpersonal Diagnosis of Personality*. New York: Ronald Press

Lee, J. K.P., Jackson, H.J., Pattison, P., and Ward, T. (2002). Developmental risk factors for sexual offending. *Child Abuse and Neglect*, 26, 73-92.

Leibowitz, J., Ramos-Marcuse, F. And Arsenio, W. F. (2002). Parent-child emotion communication, attachment, and affective narratives. *Attachment and Human Development*, 4, (1),:55-67.

Lengevin, R. and Pope, S. (1993) Working with learning disabled sex offenders. *Annals of Sex Research*, 6, pp149-160.

Leonard, P., Shanahan, S. and Hillery, J. (2005). Recognising, assessing and managing offending behaviour in persons with intellectual disability. *Irish Journal of Psychological Medicine*, 22, (3), 107-112.

Levinson, A. and Fonagy, P. (1999). -Criminality and attachment. The relationship between interpersonal awareness and offending in a prison population.øPaper presented at the 8th Annual Meeting of the International Association for Forensic Psychotherapy, May 7-9, Sheffield, UK. In Pfafflin, F. and Adshed, G. (Eds). *A Matter of Security* (pp225-249). London: Kingsley.

- Levy, M. B., and Davis, K. E. (1988). Love styles and attachment styles compared: Their relations to each other and to various relationship characteristics. *Journal of Social and Personal Relationships*, 5, (pp439-471). In Livesley, W. J. (2001). *Handbook of Personality Disorders: Theory, Research, and Treatment*. London: Guilford Press.
- Levy, M. B., and Orlans, M. (1998). *Attachment, Trauma and Healing. Understanding and Treating Attachment Disorder in Children and Families*. Washington, DC: Child Welfare League of America Press.
- Lewis, M., Feiring, C., and Rosenthal, S. (2000). Attachment over time. *Child Development*, 71, 707-720.
- Lewis, C. and Morrissey, C. (2010). The association between self report and informant reports of emotional problems in a high secure intellectual disability sample. *Advances in Mental Health and Intellectual Disabilities*, 4, 44 – 49
- Lieberman, A. (1977). Preschoolers' competence with a peer: Relations with attachment and peer experience. *Child Development*, 48, 1277-1287.
- Lindsay, W. R., Carson, D. and Whitefield, E. (2000). Development of a questionnaire on attitudes consistent with sex offending for men with intellectual disabilities. *Journal of Intellectual Disability Research*, 44, 55-68.

Lindsay, W.R., Hastings, R.P., and Beech, A.R. (2011). Forensic research in offenders with intellectual and developmental disabilities: Prevalence and risk assessment. *Psychology, Crime and Law*, 17, 3-8.

Lindsay, W.R., Hogue, T., Taylor, J.L., Mooney, P., Steptoe, L., Johnstone, S., O'Brien, G., and Smith, A. H. W., (2006). Two studies on the prevalence and validity of personality disorder in three forensic intellectual disability samples. *The Journal of Forensic Psychiatry and Psychology*, 17 (3). 485-506.

Lindsay, W. and Macleod, F. (2001). A review of forensic learning disability research. *British Journal of Forensic Practice*. 3 (1), 4-10

Lindsey, W. R., Steptoe, L. R. and Beech, A. T. (2008). The Ward Hudson Pathways Model of Sexual Offense Process Applied to Offenders With Intellectual Disability. *Sexual Abuse*, 20, (4): 379-392.

Lindsey, W. R., Steptoe, L. R. and Haut, F. (2011). The sexual and physical abuse histories of offenders with intellectual disability. *Journal of Intellectual Disability Research*, 56, (3): 326-331.

Lindsey, W. R., Taylor, J. L., Hogue, T. E., Mooney. P., Steptoe, L. and Morrissey, C (2010). Relationship between assessed emotion, personality, personality disorder and risk it on offenders with intellectual disability. *Psychiatry Psychology and Law*, 17, 385 -- 97

- Lizardi, H. and Klein, D. N. (2005). Long term stability of parental representations in depressed outpatients utilising the Parental Bonding Instrument. *Journal of Nervous and Mental Disease, 193*, pp183-188.
- Loesel, F. (1994). Protective effects of social resources in adolescents at high risk for antisocial behaviour. In H-J Kerner and E. G. M. Weitekamp (eds), *Cross-national Longitudinal Research on Human Development and Criminal Behaviour* (pp283-301). Dordrecht, Netherlands: Kluwer.
- Loesel, F and Bender, D. (2003) Protective factors and resilience. In D. P. Farrington and J. W. Coid (Eds) *Early Prevention of Adult Antisocial Behaviour* (pp130-204). Cambridge University Press.
- Loranger, A. (1988). Personality Disorder Examination (PDE) Manual. Winchester, NY. Cornell University medical College, Department of psychiatry.
- Lorenz, K. 1952. *King Solomon's ring; new light on animal ways*. New York: Crowell.
- Lund, J. (1990). Mentally retarded criminal offenders in Denmark. *British Journal of Psychiatry, 156*, 726-731.
- Lunsky, Y., Graceya, C., Koeglc, C., Bradleyd, E., Durbina, J., and Raina, P. (2011). The clinical profile and service needs of psychiatric inpatients with intellectual disabilities and forensic involvement. *Psychology, Crime and Law, 17*, 9-23

- Lunsky, Y. Palucka, A. M. (2004). Depression in Intellectual Disability, *Current Opinion in Psychiatry*, 17, 359-363
- Lyall, I., Holland, A.J., Collins, S. (1995a). Offending by adults with learning disabilities: Identifying need in one health district. *Mental Handicap Research*, 8, 99-109.
- Lyall, I., Holland, A.J., Collins, S. (1995b). Offending by adults with learning disabilities and the attitudes of staff to offending behaviour: implications for service development. *Journal of Intellectual Disability Research*, 39, 501 -508.
- Lyall, I., Holland, A.J., Collins, S., and Styles, P. (1995c). Incidence of persons with a learning disability detained in police custody: a needs assessment for service development. *Medicine, Sciences and the Law*, 35, 61-71.
- Lyons-Ruth, K., Alpern, L., Repacholi, B. (1993). Disorganized infant attachment classification and maternal psychosocial problems as predictors of hostile-aggressive behavior in the preschool classroom, *Child Development*, 64: 572-585.
- Lyons-Ruth, K and Jacobvitz, D. (1999). Attachment disorganization: Unresolved loss, relational violence, and lapses in behavioural and attentional strategies. In J Cassidy and P. Shaver (Eds) *Handbook of Attachment* (pp520-544) London: Guilford Press.
- Madigan, S., Ladd, M., and Goldberg, S. (2003). A picture is worth a thousand words: Children's representations of family as indicators of early attachment. *Attachment and Human Development*, 5, 19-37.

Madjidi, F. (2011) Measurement and Scaling, (Power Point Presentation) Pepperdine University, Graduate School of Education and Psychology. faculty.pepperdine.edu/fmadjidi/Stats/elap/scal.ppt (accessed 05/06/2009)

Magai, C., Hunziker, J., Mesiais, W., and Culver, L. (2000). Adult attachment styles and emotional biases. *International Journal of Behavioural Development, 24*, 301-309.

Magai, C., Distel, N. and Liker, R. (1995). Emotion socialisation, attachment and patterns of adult emotional traits. *Cognition and Emotion, 9*, 461-481.

Main, M. (1990). Cross cultural studies of attachment organisation: recent studies, changing methodologies, and concept of conditional strategies. *Human Development, 33*, 48-61.

Main, M. (1996). Introduction to the Special Section on Attachment and Psychopathology: 2. Overview of the field of attachment. *Journal of Consulting and Clinical Psychology, 64*, (2) 237-243

Main, M., & Cassidy, J. (1988). Categories of response to reunion with the parent at age 6: Predictable from infant attachment classifications and stable over a 1-month period. *Developmental Psychology, 24*, 415-426.

- Main, M., Kaplan, N. and Cassidy, J. (1985). Security in infancy, childhood and adulthood: a move to the level of representation. In Bretherton, I. and Waters, E. (Eds.): *Growing Points of Attachment Theory and Research. Monographs of the Society for Research in Child Development, 50*, 66-104
- Main, M., and Solomon, J. (1986). Discovery of an insecure disorganised/disoriented attachment pattern: Procedures, findings and implications for the classification of behaviour. In M. Yogman and T. B. Brazelton (Eds) *Affective Development in Infancy* (pp95-124): Norwood, N J Ablex.
- Main, M., and Solomon, J. (1990). Procedures for identifying infants as disorganised/disoriented during the Ainsworth Strange Situation. In M. T. Greenberg, D Cicchetti, and E. M. Cummings (Eds)., *Attachment in the preschool years* (pp121-160) Chicago: University of Chicago Press.
- Man K. O., and Hamid, P. N. (1998). The relationship between attachment prototypes, self esteem, loneliness and causal attributions in Chinese trainee teachers. *Personality and Individual Differences, 24*. (3). 357-371
- Mannysalo, L., Putkonen, H., Lindberg, N., and Kotilainen, I. (2009). Forensic psychiatric perspective on criminality associated with intellectual disability: a nationwide register-based study. *Journal of Intellectual Disability Research, 53*. (3), 279-288.
- Marshall, W. L. (1989). Invited essay: intimacy, loneliness and sexual offenders. *Behaviour Research Therapy, 27*, 491-503

- Marshall, W. L. (1993). The role of attachments, intimacy, and loneliness in the aetiology and maintenance of sexual offending. *Sexual and Marital Therapy*. 8, (2), 109-121.
- Marshall, L.A. and Cooke, D. J. (1999). The childhood experiences of Psychopaths: A retrospective study of familial and societal factors, *Journal of Personality Disorders*, 13., (3) 211-223
- Marshall, W. L., Hudson, S. M., and Hodgkinson, S. (1993). The Importance of Attachment Bonds in the Development of Juvenile Sex Offending. In H. E. Barbaree, W. L. Marshall and S. M. Hudson (Eds) *The Juvenile Sex Offender*. London: Guilford Press.
- Marshall, W. L., Serran, G. A., and Cortoni, F. A. (2000). Childhood attachments, sexual abuse, and their relationship to adult coping in child molesters. *Sexual Abuse: A Journal of Research and Treatment*, 12, 17-26.
- Mason, J., and Murphy, G. (2002). People with an intellectual disability in the criminal justice system: developing an assessment tool for measuring prevalence. *British Journal of Clinical Psychology*, 41(3), 315-320.
- Mason, J. and Murphy, G. (2002a). People with intellectual disabilities in the Criminal Justice System: Developing an assessment tool for measuring prevalence. *British Journal of Clinical Psychology*, 41, 315-320.

- Mason, J. and Murphy, G. (2002b). People with intellectual disabilities on probation: prevalence and outcome. *Journal of Intellectual Disability Research*, 46, 230-238.
- Matas, L., Arend, R., and Sroufe, L. A. (1978). Continuity of adaptation in the second year: The relationship between quality of attachment and later competence. *Child Development*, 49, 547-556.
- McArdle P, O'Brien G, Kolvin I. (1995). Hyperactivity: prevalence and relationship with conduct disorder. *Journal of Child Psychology and Psychiatry*, 36: 279-303
- McCormack, J., Hudson, S. M., and Ward, T. (2002). Sexual offenders' perceptions of their early interpersonal relationships: an attachment perspective. *Journal of Sex Research*, 39, (2) 85-93.
- MacEachron, A. E. (1979). Mentally retarded offenders: prevalence and characteristics. *American Journal of Mental Deficiency (American Journal on Mental Retardation)*. 84, 165-176.
- McIver, J. P. and Carmines, E. G. (1981). *Unidimensional Scaling*. Thousand Oaks: Sage.
- Messenger, E. and Apfelberg, B. (1961). A Quarter century of Court psychiatry. *Crime and Delinquency*, 7, 343-362.

Mickelson, Kristin D.; Kessler, Ronald C.; Shaver, Phillip R., (1997). Adult attachment in a nationally representative sample. *Journal of Personality and Social Psychology*, 73(5), 1092-1106.

Mikulincer, M. (1998). Adult attachment style and individual differences in functional as well as dysfunctional experiences of anger. *Journal of Personality and Social Psychology*, 74, 513-524.

Mikulincer, M., Dolev, T., and Shaver, P. R. (2004). Attachment-related strategies during thought suppression: Ironic rebounds and vulnerable self representations. *Journal of Personality and Social Psychology*, 87, 940-956.

Mikulincer, M. and Florian, V. (1998). The relationship between adult attachment styles and emotional cognitive reactions to stressful events. In J. A. Simpson and W. S. Rholes (Eds) *Attachment theory and close relationships* (pp143-165). New York: Guildford.

Mikulincer, M., Florian, V., and Tolmacz, R. (1990). Attachment styles and fear of personal death: A case study of affect regulation. *Journal of Personality and Social Psychology*, 58, 273-280.

Mikulincer, M., Florian, V. and Weller, A. (1993). Attachment styles, coping strategies, and post traumatic psychological distress: The impact of the Gulf War in Israel. *Journal of Personality and Social Psychology*, 64, 817-826.

Mikulincer, M. and Nachson, O. (1991). Attachment styles and patterns of self disclosure. *Journal of Personality and Social Psychology*, 61, 321-331.

Mikulincer, M. and Orbach, I. (1995). Attachment styles and repressive defensiveness: The accessibility and architecture of affective memories. *Journal of Personality and Social Psychology*, 68, 917-925.

Mikulincer, M. and Shaver, P. R. (2007). *Attachment in Adulthood; Structure, Dynamics and Change*. Guildford Press

Millon, T. (1994). Personality Disorders: Conceptual distinctions and classification issues. I P. J. Costa and T. A. Widiger (eds). *Personality Disorders and the five-factor model of personality*. (pp279-301) Washington D. C; American Psychological Association.

Monahan, J., Steadman, H., Silver, E., Appelbaum, P., Robbins, P., Mulvey, E., Roth, L., Grisso, T., and Banks, S. (2001). *Rethinking risk assessment: The MacArthur study of mental disorder and violence*. New York: Oxford University Press.

Moran, P. (1999). The epidemiology of antisocial personality disorder. *Social psychiatry and psychiatric epidemiology*, 34(5), 231-242.

- Morrison, J. A., Frank, S. J., Holland, C. C. and Kates, W. R. (1999) Emotional development and disorders in young children in the child welfare system. In J.A. Silver, B. J. Amster and T. Haecker (Eds) *Young Children and Foster Care a guide for professionals* (pp33-64) Baltimore MD: Paul H. Brookes
- Moss, E., Rousseau, D., Parent, S., St Laurent, D., Saintong, J. (1998). Correlates of attachment at school age: Maternal reported stress, mother-child and behaviour problems. *Child Development, 69*, 1390-1405.
- Muller, R. T., and Lemieux, K. E. (2000). Social support, attachment, and psychopathology in high risk formerly maltreated adults. *Child Abuse and Neglect, 24(7)*: 883-900.
- Mulrooney, M., Murphy, M., Harrold, M. and Carey, S. (2004). A survey of the level of intellectual disability among the prison Population in Ireland. *Journal of Intellectual Disability Research, 48*, 463-471.
- Murphy, M., Harnett, H. and Holland, A. J. (1995). A survey of intellectual disabilities amongst men on remand in prison. *Mental Handicap Research, 8*, 81-98.
- Murphy, M., Harrold, M., Carey, S. and Mulrooney, M. (2000). *A Survey of the level of Learning Disability among the prison Population in Ireland*. Dublin: Department of Justice, Equality and Law Reform.

Narito, T., Sato, T., Hirano, S., Gota, M., Sakado, K., and Uehara, T. (2000). Parental child rearing behaviour as measured by the Parental Bonding Instrument in a Japanese population: Factor structure and relationship to a lifetime history of depression. *Journal of Affective Disorders*, 57, 229-234.

National Clearing House of Childhood and Neglect Information (2004) Child Maltreatment 2002: Summary of Key Findings. <http://nccanch.acf.hhs.gov/pubs/factsheets/canstats.pdf> accessed 14th May 2004

National Statistics Office

<http://www.statistics.gov.uk/STATBASE/Expodata/Spreadsheets/D7795.csv> accessed 25th January 2005

Neighbors, B., Forehand, R. and McVicar, D. (1993). Resilient adolescents and interparental conflict. *American Journal of Orthopsychiatry*, 63, 462-471.

Novaco, R. W. (1976). The function and regulation of the arousal of anger, *American Journal of Psychiatry*, 133, 1124-1128.

Novaco, R. W., and Taylor, J. L. (2008). Anger and assaultiveness of male forensic patients with developmental disabilities: Links to volatile parents. *Aggressive Behavior*, 34, 380-393.

Nunnally, J. (1978). *Psychometric theory*. New York: McGraw-Hill.

- Nunnally, J. and Bernstein, I. H. (1994). *Psychometric Theory* (3rd ed). New York: McGraw-Hill.
- Oatley, K., and Jenkins, J. M. (1996). *Understanding Emotions*. Cambridge, M A: Blackwell.
- O'Connor, M.J., Sigman, M. and Brill, N. (1987). Disorganization of attachment in relation to maternal alcohol consumption. *Journal of Consulting and Clinical Psychology*, 55, 831-836.
- Osborn, A. F. (1990). Resilient children: a longitudinal study of high achieving socially disadvantaged children. *Early Child Development and Care*, 62, 23-47.
- Pallant, J. (2007). *SPSS Survival Manual* (3rd Ed), Open University Press.
- Parent, G., Guay, J. P., and Knight, R. A. (2011). An assessment of long-term risk of recidivism by adult sex offenders: One size doesn't fit all. *Criminal Justice and Behavior*, 38. 188-209.
- Parker, G. (1979). Parental characteristics in relation to depressive disorders. *British Journal of Psychiatry*, 13, 138-147.
- Parker, G. (1982). Parental representations and affective symptoms: Examination for an hereditary link. *British Journal of Medical Psychology*, 55, 57-61.

- Parker, G. (1986). Validating an experiential measure of parenting style: The use of a twin sample. *Acta Psychiatrica Scandinavica*, 74, 22-27.
- Parker, G., Tupling, H., and Brown, L.B. (1979). A Parental Bonding Instrument. *British Journal of Medical Psychology*, 52, 1-10.
- Peay J (2002). "Mentally Disordered Offenders" in Maguire M, Morgan R, Reiner R (eds.) *The Oxford Handbook of Criminology*. Oxford: Oxford University Press.
- Pederson, W. (1994). Parental relations, mental health and delinquency in adolescents. *Adolescence*, 29, 975-990.
- Perlman, D., and Fehr, B. (1987). The development of intimate relationships. In D. Perlman and S. Duck (Eds.), *Intimate relationships: Development, dynamics, and deterioration* (pp. 13-42). Newbury Park, CA.: Sage.
- Petersilia, J. (1997). Unequal justice: Offenders with mental retardation in prison. *Corrections Management Quarterly* 1(4), 36-43.
- Pierce, T., and Lydon, J. (2001). Priming relational schemas: Effects of contextually activated and chronically accessible interpersonal expectations on responses to a stressful life event. *Journal of Personality and Social Psychology*, 75, 1441-1448.
- Pilgrim J. and Mann A. (1990). Use of ICT 10 version of the standardised assessment of personality to determine the prevalence of personality disorder in psychiatric inpatients. *Psychological Medicine*, 20, 985-92.

- Pistole, M. C. (1989). Attachment in adult romantic relationships: Style of conflict resolution and relationship satisfaction. *Journal of Social and Personal Relationships*, 6, 505-512.
- Pithers, W. D., Gray, A., Busconi, A., and Houchens, P. (1998). Children with sexual behaviour problems: Identification of five distinct child types and related treatment considerations. *Child Maltreatment*, 3, 384-406.
- Pliszka SR, Carlson CL, Swanson JM. (1999). *ADHD with co-morbid disorders - clinical assessment and management*. Guilford Press, New York.
- Plutchik. R. (2002). The Circumplex as a general model of the structure of emotions and personality, in Plutchik and Conte, *Circumplex Models of Personality and emotion*. (pp 17 ó 46) American Psychological Association
- Pottharst, K. (Ed.). (1990a). *Explorations in adult attachment*. New York: Peter Lang.
- Pottharst, K. (1990b). The search for methods and measures. In K Pottharst (Ed.), *Explorations in adult attachment* (pp9-37). Newe York: Peter Lang.
- Prins, H. (1980). *Offenders, Deviants or Patients? The Study of Socio-forensic Problems*. London: Tavistock Publications.

- Quinsey, V.L., Harris, G.T., Rice, M.E., and Cormier, C.A. (1998). *Violent offenders: Appraising and managing risk*. Washington, DC: American Psychological Association.
- Quirk, S.W., Christiansen, N.D., Wagner, S.H., and McNulty, J.L. (2003). On the usefulness of normal measures of personality for clinical assessment: Evidence of the incremental validity of the revised NEO personality inventory. *Psychological Assessment, 15*, 311-325.
- Raesaeen, P., Hirvenoj, A., Hakko, H. and Vaesaenen, E. (1994). Cognitive functioning ability of arsonists. *Journal of Forensic Psychiatry, 5*, 615-620.
- Raina P, Lunsky Y. (2010). A comparison of adults with intellectual disability and psychiatric disorder with and without forensic involvement. *Research in Developmental Disabilities 31*(1): 218-23.
- Rholes, W. S., Simpson, J. A., and Orina, M. (1999). Attachment and anger in an anxiety provoking situation. *Journal of Personality and Social Psychology, 76*, 940-957.
- Rich, P. (2006). *Attachment and Sexual Offending: understanding and applying attachment theory to the treatment of juvenile sex offenders*. John Wiley
- Ricks, M. H. (1985). The social transmission of parental behaviour: Attachment across generations. *Monographs for the Society for Research in Child Development 50*, 211-227.

Robins, L. N., Tipp, J., and Pryzbeck, T. (1991) Antisocial personality. In L. N. Robins and D. A. Regier, (Eds), *Psychiatric Disorders in America* (pp224-271) New York: Free Press.

Roe, K. V., Drivas, A., Karagellis, A., and Roe, A (1985). Sex Differences in Vocal Interaction with mother and stranger in Greek infants: some cognitive implications, *Developmental Psychology*, 21, 372-377.

Rogers, B. (1996). Reported parental behaviour and adult affective symptoms. 1. Associations and moderating factors. *Psychological Medicine*, 26, 51-61.

Rojahn J, Borthwick-Duffy SA, Jacobson JW. (1993). The association between psychiatric diagnosis and severe behaviour problems in mental retardation. *Annals of Clinical Psychiatry* 5, 163-170.

Rojahn, J. and Tasse, M. J. (1996). Psychopathology in mental retardation. In: J. W. Jacobson and J. A. Mulick (Eds.). *Manual of Diagnosis and Professional Practice in Mental Retardation* (pp 147-156). Washington, DC: American Psychological Association.

Rosenstein, D.S., and Horowitz, H. A. (1996). Adolescent attachment and psychopathology. *Journal of Consulting and Clinical Psychology*, 64, 244-253.

Russo, M. F. and Beidel, D. C. (1994). Comorbidity of childhood anxiety and externalising: Prevalence, associated characteristics, and validation issues. *Clinical Psychology Review, 14*, 199-221.

Rutter, M. (1972). *Maternal deprivation reassessed*. Harmondsworth: Penguin

Rutter, M. (1985). Resilience in the face of adversity. Protective factors and resistance to psychiatric disorder. *British Journal of Psychiatry, 147*, 598-611.

Ryan, G. (1999). Recent develops and conclusions. In G Ryan and associates (Eds), *Web of meaning: A developmental, contextual approach in sexual abuse treatment* (pp133-151) Brandon, VT: Safer Society Press.

Sable, P. (2007). Accentuating the positive in adult attachments. *Attachment and Human Development, 9*. (4) 361-374.

Sack, A., Sperling, M. B., Fagen, G., and Foelsh, P. (1996). Attachment style, history and behavioural contrasts for a borderline and normal sample. *Journal of Personality Disorders, 10*, 88-102.

Sakado, K., Kuwabara, H., Sato, T., Uehara, T., Sakado M., and Someya, T. (2000). The relationship between personality, dysfunctional parenting in childhood, and lifetime depression in a sample of employed Japanese adults. *Journal of Affective Disorders, 60*, 47-51.

Scharfe, E. (2003). Stability and change of attachment representations from cradle to grave. In S. M. Johnson and V. E. Whiffen (Eds.), *Attachment processes in couple and family therapy*, (pp64-84) New York: Guilford Press.

Scharfe, E., and Bartholomew, K. (1994). Reliability and stability of adult attachment patterns. *Personal Relationships*, 1, 23-43.

Scharfe, E., and Bartholomew, K. (1995). Accommodation and attachment representations in young couples. *Journal of Social and Personal Relationships*, 12, 389-401.

Schaffer, H. R., Collins, G., and Parsons, G. (1977). Vocal interchange and visual regard in verbal and preverbal children. In H. R. Schaffer (Ed.), *Studies in mother infant interaction*, London: Academic Press.

Schneider-Rosen, K., and Cicchetti, D. (1984). The relationship between affect and cognition in maltreated infants: Quality of attachment and the development of visual self-recognition. *Child Development*, 55, 648-658.

Scottish Community Care Statistics (2001) Adults with Learning Disabilities

accessed 26th January 2005 <http://www.scotland.gov.uk/stats/bulletins/00180-13.asp>

Seto, M. C., and Lalumière, M. L. (2010). What is so special about male adolescent sexual offending? A review and test of explanations using meta-analysis. *Psychological Bulletin*, 136, 526-575.

Shaver, P. R. and Hazen, C. (1993). Adult romantic attachment: Theory and evidence. In D. Perlman and W. H. Jones (Eds.) *Advances in Personal Relationships: A research Annual* (Vol 4, pp29-70). London: Jessica Kingsley Publishers

Shaver, P. R. and Mikulincer, M. (2004). What do self report attachment measures assess? In W. S. Rholes and J. A. Simpson (Eds.), *Adult attachment: Theory, research and clinical implications* (pp17-54), New York: Guildford Press.

Shaver, P. R., Papalia, D., Clark, C. L., Koski, L. R., Tidwell, M., and Nalbone, D. (1996). Androgyny and attachment security: two related models of optimal personality. *Personality and Social Psychology Bulletin*, 22, 582-59.

Shaver, P. R., Schwartz, J., Kirson, D., and O'Connor, C. (1987). Emotion knowledge: Further exploration of a prototype approach. *Journal of Personality and Social Psychology*, 52, 1061-1086.

Shaw, D. S, Owens, E. B., Vondra, J.I., Keenan, K., Winslow, E. B. (1996). Early risk factors and pathways in the development of early disruptive behaviour problems. *Development and Psychopathology*, 8, 679-700.

Shaw, D.S., and Vondra, J.I. (1993). Chronic family adversity and infant attachment security. *Journal of Child Psychology and Psychiatry and Allied Disciplines*. 34, 1205-1215.

- Shmueli-Goetz, Y., Target M., Fonagy, P., and Datta, A. (2008). The Child Attachment Interview: A Psychometric Study of Reliability and Discriminant Validity. *Developmental Psychology* 44, (4), 939-956
- Silverman, A. B. Reinherz, H. Z. and Giaconia, R. M. (1996). The long term sequelae of child and adolescent abuse: A longitudinal community study. *Child Abuse and Neglect*, 20, (8) 709-723
- Simpson, J. A. (1990). Influence of attachment styles on romantic relationships. *Journal of Personality and Social Psychology*, 59, 971-980.
- Simpson, M. K. and Hogg, J. (2001). Patterns of offending among people with intellectual disability: A systematic review. Part II. Predisposing factors. *Journal of Intellectual Disability Research*, 45, 397-406.
- Simpson, J. A., Rholes, W. S., and Philips, D. (1996). Conflict in close relationships: an attachment perspective. *Journal of Personality and Social Psychology* 71(5), 899-914.
- Sinason, V. (1992) *Mental Handicap and the Human Condition*, London: Free Association Books.
- Singleton, N., Bumpstead, R., O'Brien, M., Lee, A., and Meltzer, H. (2002). *Psychiatric Morbidity among Adults Living in Private Households, 2000; Summary Report*. London: Office for National Statistics.

- Smallbone, S. W. and Dadds, M. R. (1998). Childhood Attachment and Adult Attachment in Incarcerated Adult Male Sex Offenders. *Journal of Interpersonal Violence*. 13, (5), 555-573
- Smith, A. H. W. (2004) *Dual Diagnosis and Offending*, Presentation at the IASSID Conference, Montpellier.
- Smith, L. E., Greenberg, J. S., Seltzer, M.M., and Hong, J. (2008). Symptoms and behaviour problems of adolescents and adults with autism: effects of mother-child relationship quality, warmth, and praise. *American Journal of Mental Retardation*, 115 (5): 387-402.
- Smith, A. H. and O'Brien, G. (2004). Treatment of developmentally disabled offenders with dual diagnosis. In W. Lindsay, J. Taylor and P. Sturmeay *Offenders with Developmental Disabilities* (Eds), (pp241-64). Wiley, Chichester.
- Smith, C. A. and Stern, S. B. (1997). Delinquency and antisocial behaviour: A review of family processes and intervention research. *Social Service Review*, 71, 382-420.
- Smyke, A.T., Dumitrescu, A., and Zeanah, C.H. (2002) Attachment disturbances in young children: the continuum of caretaking casualty. *Journal of the American Academy of Child and Adolescent Psychiatry*, 41, 972-982
- Socall, D. W. and Holtgraves, T. (1992). Attitudes towards the mentally ill: The effects of labels and beliefs. *Sociological Quarterly*, 33, 435-445.

- Solldz, S., Budman, S., Demby, A. and Merry, J. (1993). Representation of personality disorders in circumplex and five factor space with a clinical sample. *Psychological Assessment*, 5, 41 -- 52.
- Solomon, J. and George, C. (1999). *Attachment disorganisation*, New York and London: Guilford Press.
- Sondenaa, E., Rasmussen, K., Palmstierna, T., and Nottestad, J. (2008). The prevalence and nature of intellectual disability in Norwegian prisons. *Journal of Intellectual Disability Research*, 52. (12). 1129-1137.
- Sovner, R. and Hurley, D. A. (1983). Do the mentally retarded suffer from affective illness? *Archives of General Psychiatry*, 40, 61667.
- Spector, P. E. (1992). *Summated Rating Scale Construction: An introduction*. Sage Publications.
- Spieker, S. J., and Booth, C. (1988). Family risk typologies and patterns of insecure attachment. In J. Belsky and T. Nezworski (Eds), *Clinical implications of attachment* (pp95-135). Hillsdale, N. J. Erlbaum.

- Spitzer RL, Wakefield JC. (1999). "DSM-IV diagnostic criterion for clinical significance: does it help solve the false positives problem?" *American Journal of Psychiatry* 156, 12. 1856-64.
- Spruill, J. and May, J. (1998). The mentally retarded offender: Prevalence rates based on individual versus group intelligence tests. *Criminal Justice and Behaviour* 15, 484-491.
- Sroufe, L. A. (1988). The role of infant-caregiver attachment in development. In J. Belsky and T. Nezworski (Eds.), *Clinical implications of attachment* (pp18-38). Hillsdale NJ: Lawrence Erlbaum.
- Sroufe, L. A. and Fleeson, J. (1986). Attachment and the construction of relationships. In W. W. Hartup and Z Rubin (Eds.) *Relationships and development* (pp51-71). Hillsdale NJ: Lawrence Erlbaum.
- Starzyk, K. B. and Marshall, W. L. (2003). Childhood family and personological risk factors for sexual offending. *Aggression and Violent Behaviour*, 8, (1) 93-105.
- Steele, H, Steele, M, and Fonagy, P (1996). Associations among attachment classification of mothers, fathers and their infants. *Child Development*, 67 541-555.
- Steele, H, Steele, M., Croft, C., and Fonagy, P. (1999). Infant-mother attachment at one-year predicts children's understanding of mixed-emotions at six years. *Social Development*, 8, 161-178.

- Stein, H., Dawn Koontz, A., Fonagy, P., Allen, J. G., Fultz, J., Brethour, J. R. Jr., Allen, D., and Evans, R. B. (2002). Adult attachment: What are the underlying dimensions? *Psychology and Psychotherapy: Theory, Research and Practice*, (75), 776-91
- Steptoe, L., Lindsay, W. R., Forrest, D., and Power, M. (2006). Quality of life and relationships in sex offenders with intellectual disability. *Journal of Intellectual and Developmental Disability*. 31, (1), 13-19.
- Stirpe, T.S., Abracen, J., Stermac, L., and Wilson, R.J. (2006). Sexual offenders' state-of-mind regarding childhood attachment: A controlled investigation. *Sexual Abuse: A Journal of Research and Treatment*, 18, 289-302.
- Stouthamer-Loeber, M., Loeber, R., Farrington, D. P., Zhang, Q., van Kammen, W., and Maguin, E. (1993). The double edge of protective and risk factors for delinquency: Interrelations and developmental patterns. *Development and Psychopathology*, 5, 683-701.
- Stouthamer-Loeber, M., Loeber, R., Wei, E., Farrington, D., and Wikström, P.H. (2002). Risk and promotive effects in the explanation of persistent serious delinquency in boys. *Journal of Consulting and Clinical Psychology*, 70, 111-123.
- Tannock, R. (1998). Attention Deficit Hyperactivity Disorder: Advances in Cognitive, Neurobiological, and Genetic Research, *Journal of Child Psychology and Psychiatry* 39, 65-99.

- Taylor, J. L. (2002). A review of the assessment and treatment of anger and aggression in offenders with intellectual disability. *Journal of Intellectual Disability Research*, 46, 57-73.
- Taylor, J. L., and Novaco, R. W. (2005). *Anger Treatment for people with Developmental Disabilities: A theory, evidence and manual based approach*. Wiley, UK.
- Teicher, M. D. (2000) Wounds that time won't heal: the neurobiology of child abuse, *Cerebrum: The Dana Forum on Brain Science*, 2 (4), 50-67
- Tepp, A. V. (2007). <http://www.drtepp.com/articles/attachmenttrust.html> (Accessed 20/05/2012).
- Tharinger, D., Horton, C.B., and Millea, S. (1990). Sexual abuse and exploitation of children and adults with mental retardation and other handicaps. *Child Abuse and Neglect*, 14, 301-312.
- The Same as You? A Review of Services for People with Learning Disabilities (March 2000) <http://www.scotland.gov.uk/library3/social/tsay>. (accessed 26th January 2005)
- Thomson, D. and Brown, H. (1997). Men with intellectual disabilities who sexually abuse: A review of the literature. *Journal of Applied Research in Intellectual Disabilities*, 10, 140-158.

- Torgensen, S., Kringlen, E. and Cramer, V. (2001) The prevalence of personality disorders in a community sample. *Archives of General Psychiatry*, 58, 590-596.
- Toupin, J., D'ery, M., Pauzé, R., Mercier, H., and Fortin, L. (2000). Cognitive and familial contributions to conduct disorder in children. *Journal of Child Psychology and Psychiatry*, 41, 333-344.
- Trevarthen, C. (1977). Descriptive analysis of infant communication behaviour. In H. R. Schaffer (Ed.), *Studies in mother-infant interaction*. London: Academic Press.
- Trinke, S. J. and Bartholomew, K. (1997). Hierarchies of attachment relationships in young adulthood. *Journal of Social and Personal Relationships*, 14, 603-625.
- Tronick, E. Z. (1982). Affectivity and sharing. In E. Z. Tronick, (Ed.), *Social interchange in infancy*. Baltimore: University Park Press.
- Urban J, Carlson E, Egeland B, Sroufe LA. (1991). Patterns of individual adaptation across childhood. *Development and Psychopathology*. 3 445-460.
- US Grades/British School Years (accessed 05/11/2011)
<http://homepages.tesco.net/~littlebears/grades.htm>
- Van Ijzendoorn M. H. and De Wolff M. (1997). In search of the absent father: Meta-analysis of infant-father attachment: A rejoinder to our discussants. *Child Development*, 68, 604-609

Van IJzendoorn, M. H., Feldbrugge, J. T. T. M., Derks, F. C. H., DeRuiter, C., Verhages, M. F. M., Philipe, M. W. G., Van der Staak C. P. F., and Riksen-Walraven, J. M. A. (1997). Attachment representations of personality-disordered criminal offenders. *American Journal of Orthopsychiatry*, 67, (3), 449-459.

Van IJzendoorn, M. H., Goldberg, S., Kroonenberg, P., and Frankel, O. (1992). The relative effects of maternal and child problems on the quality of attachment: a meta analysis of attachment in clinical samples. *Child Development*, 63, 840-858.

Van IJzendoorn, M. H. (1995). Adult attachment representations, parental responsiveness, and Infant attachment: A meta-analysis of the predictive validity of the Adult Attachment Interview. *Psychological Bulletin*, 117,(3), 387-403.

Van IJzendoorn, M. H. and Bakermans-Kranenburg, M. J. (1996). Attachment representations in mothers, fathers adolescents and clinical groups: a meta analytic search for normative data. *Journal of Consulting and Clinical Psychology*, 64: 8-21.

Van IJzendoorn, M. H., Schuengel, C., and Bakermans-Kranenburg, M. J. (1999). Disorganised attachment in early childhood: Meta analysis of precursors, concomitants and sequelae. *Development and Psychopathology*, 11, 225-249.

- Vaughn, B., Egeland, B., Sroufe, L. A., and Watters, E. (1979). Individual differences in infant-mother attachment at twelve and eighteen months: Stability and change in families under stress. *Child Development*, *50*, 971-975.
- Vaughn, B. E. and Waters, E. (1990). Attachment behaviour at home and in the laboratory. *Child Development*, *61*, 1965-1973.
- Verdonschot, M.M.L., de Witte, L. P., Reichrath, E., Buntinx, W. H. E., and Cruys, L. M. G. (2009). Community Participation of People with an Intellectual Disability: A Review of Empirical Findings, *Journal of Intellectual Disability Research*, (*53*), 303-318.
- Walker, N. McCabe, S. (1973). *Crime and Insanity in England*. University press: Edinburgh.
- Ward, T., Hudson, S. M., and Marshall, W. L. (1996). Attachment Style in Sex Offenders: A Preliminary Study. *Journal of Sex Research*. *33*, (1), 17-26
- Ward, T., Hudson, S., and McCormack, J. (1997). Attachment Style, Intimacy Deficits, and Sexual Offending. In B. K. Schwartz and H. R. Cellini (Eds) *The Sex Offender: new Insights, treatment innovations, and legal developments*. Kingston, New Jersey: Civic Research Institute.
- Ward, T., Polaschek, D., and Beech, A. (2006). *Theories of sexual offending*. John Wiley and Sons Ltd.

- Waters, E. (1978). The reliability and stability of individual differences in Infant- mother attachment. *Child Development, 49*, 520-616.
- Waters, E., Hamilton, C. E., and Weinfield, N. S. (2000). The stability of attachment security from infancy to Adolescence and early adulthood: General Introduction. *Child Development, 71*, (3), 678-683.
- Waters, E., Merrick, S., Treboux, D., Crowell, J., and Albersheim, L. (2000). Attachment security in infancy and early adulthood: A twenty year longitudinal study. *Child Development, 71*, 684-689.
- Waters, E., and Sroufe, L. A. (1983). Social Competence as a developmental construct. *Developmental Review, 3*, 79-97.
- Waters, E., Wippman, J., and Sroufe, L. A. (1979). Attachment, positive affect, and competence in the peer group: two studies in construct validation. *Child Development, 50*, 821-829.
- Web, D. and Harris, R. (1999). *Mentally Disordered Offenders: Managing people nobody owns*. Routledge: UK
- Webster, C.D., Eaves, D., Douglas, K.S., and Wintrup, A. (1995). *The HCR-20: The assessment of dangerousness and risk*. Vancouver: Simon Fraser University and British Columbia Forensic Psychiatric Services Commission.

- Wechsler, D. (1999). *Manual for the Wechsler Adult Intelligence Scale-Third edition*. San Antonio, TX: Psychological Corporation.
- Wei, M., Mallinckrodt, B., Russell, D.W., and Abraham, W.T. (2004). Maladaptive perfectionism as a mediator and moderator between adult attachment and depressive mood. *Journal of Counselling Psychology*, 51(2). 201-212.
- Weiner, B. (1985). An attributional theory of achievement, motivation and emotion. *Psychological Review*, 92, 548-573.
- Weinfield, N. S., Sroufe, L., and Egeland, B. (2000). Attachment from infancy to early adulthood in a high-risk sample: Continuity, discontinuity and their correlates. *Child Development*, 71, 695-702.
- Weinrott, M. R. (1996). *Juvenile sexual aggression: A critical review*. (Center Paper 005). Boulder, CO: University of Colorado, Centre for the Study and Prevention of Violence.
- Weiss, R. S. (1982). Attachment in Adult Life. In C. M. Parkes and J. Stevenson-Hinde (Eds.), *The Place of Attachment in Human Behaviour* (pp171 ó 184) New York: Basic Books.
- Werner, E. E. and Smith, R. S. (1982). *Vulnerable but Invincible*. New York: McGraw-Hill.

Werner, E. and Smith, R. S. (1992). *Overcoming the Odds*. Ithaca, New York: Cornell University Press.

West, D. and Farrington, D. P. (1973). *Who Becomes Delinquent?* London: Heineman.

West, M. L. and Sheldon- Keller, A. (1994). *Patterns of relating: An adult attachment perspective*. New York: Guildford Press.

Widom, C. S. and Maxfield, M. G. (2001). *An update on the cycle of violence*. Washington DC: National Institute of Justice.

Wiggins, J. S. (1995). *Interpersonal Adjectives Scales, Professional Manual*. Psychological Assessment Resources, USA

Wiggin J.S. (1982) . Circumplex models of interpersonal behaviour in clinical psychology. In P. C. Kendall and J. N. Butcher (Eds.). *Handbook of Research Methods in Clinical Psychology*. (P183 -- 221) New York: Wiley.

World Health Organisation (1993). *The ICD-10 Classification of Mental Health and Behavioural Disorders: Diagnostic Criteria for Research*. Geneva: World Health Organisation.

Zannarini, M.C., Williams, A. A., Lewis, R. E., Bradford Reich, R., Soledad, C. V., Marino, M. F., Levin, A., Lynne Yong, B. A. and Frankenburg, F. R. (1997). Reported

Pathological Childhood Experiences Associated with the Development of Borderline Personality Disorder. *American Journal of Psychiatry*, 154:8, 1101-1105.

Zeannah, C.H., Danis, B., Hirshberg, L., Benoit, D., Miller, D., and Heller, S.S. (1999). Disorganised attachment associated with partner violence: a research note, *Infant Mental Health Journal*, 20, 77-86

Zeannah, C. H., Smyke, A. T., Koga, S. F. and Carlson, E. (2005). Attachment in institutionalised and community children in Romania. *Child Development*, 76, 1015-1028.

Zeannah, C. H. (2000). Disturbances of attachment in young children adopted from institutions. *Journal of Developmental and Behavioural Paediatrics*, 21, 230-236.

Zimmerman, P. (2004). Attachment representations and characteristics of friendship relations during adolescence. *Journal of Experimental Child Psychology*, 88, 83-101.

Appendix 1: Participant Information Sheet Study 2a.

PARTICIPANT INFORMATION SHEET (Study 2a)

(Please keep this document)

Attachment, Childhood Adversity, Emotional Problems and Personality Disorder in Offenders with Mild Intellectual Disability.

You are being asked to take part in a research study. It is important that you understand what the study is about, why we are doing this research and what it will involve.

Please read this information sheet to help you decide if you want, or don't want, to take part in the research.

The aim of the study.

- To adapt and validate a questionnaire used to measure attachment in the mainstream population to make it suitable for use with people with intellectual disabilities.
- To examine the attachment relationship people with intellectual disabilities have with their mother and their father
- This will include people with intellectual disabilities who have committed an offence and people with intellectual disabilities who have no offences
- This will also include men living in residential care, group homes, and independent living people.
- We are trying to find out if getting on well or badly with parents relates to offending behaviour and interpersonal style and emotional difficulties

Why you have been asked to take part.

You have been asked to take part as a student of Abertay University, Dundee to assist in the validation of the adapted attachment questionnaire in relation to the mainstream version.

Do you have to take part?

No, it is your own choice to make. If you decide you want to take part and later change your mind then you can stop at any time, you do not have to say why.

What happens if you say "yes" to taking part?

If you decide to say 'yes' you will be agreeing to take part in the study. You will be asked to sign a consent form. This form says that you understand what the study is about

and that you want to be a part of the research. Once you give your consent you will be asked to fill in two short questionnaires presented seven days apart asking you to rate statements regarding your relationship with your mother.

What happens to the information you give.

All information you give will be anonymous and will be kept strictly confidential.

Contact information

If you have any questions during this study please get in touch with

Lesley Steptoe
Psychology Office
Craigmill Skill Centre
Strathmartine Hospital
Dundee

Phone: 01382 831977

lesley.steptoe@tpct.scot.nhs.uk

Thank you for taking the time to read this information.

Appendix 2: Participant Consent Form Study 2a.

Participant Consent Form (Study 2a)

Participant Identification Number:

Title of Project: Attachment, Childhood Adversity, Emotional Problems and Personality Disorder in Offenders with Mild Intellectual Disability.

Name of Researcher: Mrs Lesley Steptoe, Prof. Bill Lindsay, Dr Derek Carson.

Please tick box

1. I have read and understand the information sheet dated for the above study and have had the opportunity to ask questions.

2. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason.

3. I agree to take part in the above study.

4. I decline participation in this study

Matriculation Number of participant

Date

Signature

of Person taking consent
(if different from researcher)

Date

Signature

Name

Researcher

Date

Signature

1 for researcher, 1 for participant

Appendix 3: Participant Instructions to Complete Self Report Attachment Questionnaires, Study 2a.

Participant Instructions to fill out the Relationship Questionnaires (Study 2a)

These questionnaires ask about your relationship with and how you feel about your mother. All answers are given in the strictest confidence and will be accessed only by the researchers. Do not write your name or matriculation number on the questionnaires.

Questionnaire 1:

1. The Relationship Questionnaire (1) is a single item measure made up of four short paragraphs; each describes a typical attachment pattern as it applies in close relationships.
2. Please rate your degree of correspondence to each attachment type on the 7-point scale. An individual might rate him or herself something like: Type A - 6, Type B - 2, Type C - 1, Type D - 4.
3. These ratings (or "scores") provide a *profile* of your individual attachment feelings and behaviour.

Questionnaire 2:

1. The Adapted Relationship Questionnaire (2) provides separate statements within Type A, Type B, Type C, and Type D.
2. There are five possible ratings to choose from, 0 = not at all like me, 1 = A bit like me, 2 = Quite like me, 3 = very like me, and 4 = totally like me.
3. Please rate your degree of correspondence to each attachment statement by placing a tick in the box appertaining to the statement under the rating of -how like youøthe statement is when thinking of your relationship with your mother.
4. These ratings (or "scores") also provide a *profile* of your individual attachment feelings and behaviour.

Please return the questionnaire with a signed copy of the consent form, retaining this information sheet and the second copy of the consent form for your records.

Appendix 4: The Relationship Questionnaire (RQ) (Bartholomew and Horowitz, (1991).

The Relationship Questionnaire (RQ) Bartholomew and Horowitz (1991)

Following are four general relationship styles that people often report. Place a checkmark next to the letter corresponding to the style that best describes you or is closest to the way you are.

A. It is easy for me to become emotionally close to others. I am comfortable depending on them and having them depend on me. I don't worry about being alone or having others not accept me.

B. I am uncomfortable getting close to others. I want emotionally close relationships, but I find it difficult to trust others completely, or to depend on them. I worry that I will be hurt if I allow myself to become too close to others.

C. I want to be completely emotionally intimate with others, but I often find that others are reluctant to get as close as I would like. I am uncomfortable being without close relationships, but I sometimes worry that others don't value me as much as I value them.

D. I am comfortable without close emotional relationships. It is very important to me to feel independent and self-sufficient, and I prefer not to depend on others or have others depend on me.

Now please rate each of the relationship styles above to indicate how well or poorly each description corresponds to your general relationship style.

				Style A			
	1	2	3	4	5	6	7
	Disagree Strongly			Neutral/ Mixed			Agree Strongly
				Style B			
	1	2	3	4	5	6	7
	Disagree Strongly			Neutral/ Mixed			Agree Strongly
				Style C			
	1	2	3	4	5	6	7
	Disagree Strongly			Neutral/ Mixed			Agree Strongly
				Style D			
	1	2	3	4	5	6	7
	Disagree Strongly			Neutral/ Mixed			Agree Strongly

Appendix 5: The Adapted Relationship Questionnaire (ARQ) Version 1.

The Adapted Relationship Questionnaire (ARQ) Version 1

	QUESTION	No never	Sometimes	Most of the time	All of the time
	<i>Section A</i>				
1.	It is easy for me to feel close to my mum				
2.	I am ok depending on my mum				
3.	I am ok if my mum depends on me				
4.	I don't worry about being alone				
5.	I don't worry about others disliking me				
	<i>Section B</i>				
1.	I am not ok feeling close to my mum				
2.	I want to feel close to my mum				
3.	I find it difficult to completely trust my mum				
4.	I find it hard to depend on my mum				
5.	I worry that I'll be hurt if I get too close to my mum				
	<i>Section C</i>				
1.	I want to feel totally close to my mum				
2.	My mum often doesn't want to feel close to me				
3.	I would feel better having a close relationship with my mum				
4.	I sometimes worry that I am worth less to my mum than she is to me				
	<i>Section D</i>				
1.	I am ok without feeling close to my mum				
2.	It is very important to me to feel I can look after myself on my own without mum				
3.	It is very important to me to feel I can do things for myself without mums support				
4.	I prefer not depending on my mum				
5.	I prefer my mum not to depend on me				

Appendix 6: Scoring sheet to attain the mean score of the Summative Rating Scale used in the ARQ version 1.

Scoring sheet to attain the mean score of the Summative Rating Scale used in the ARQ version 1.

ARQ SCORING SHEET			
	Total score	Mean Score	Prototype Rating
Section A		/5	
Section B		/5	
Section C		/4	
Section D		/5	

Appendix 7: Participant Information Sheet Study 2b.

PARTICIPANT INFORMATION SHEET (Study 2b)

(Please keep this document)

Attachment, Childhood Adversity, Emotional Problems and Personality Disorder in Offenders with Mild Intellectual Disability.

You are being asked to take part in a research study. It is important that you understand what the study is about, why we are doing this research and what it will involve.

Please read this information sheet to help you decide if you want, or don't want, to take part in the research.

The aim of the study.

- To adapt and validate a questionnaire used to measure attachment in the mainstream population to make it suitable for use with people with intellectual disabilities.
- To examine the attachment relationship people with intellectual disabilities have with their mother and their father
- This will include people with intellectual disabilities who have committed an offence and people with intellectual disabilities who have no offences
- This will also include men living in residential care, group homes, and independent living people.
- We are trying to find out if getting on well or badly with parents relates to offending behaviour and interpersonal style and emotional difficulties

Why you have been asked to take part.

You have been asked to take part as a student of Abertay University, Dundee to assist in the validation of the adapted attachment questionnaire in relation to the mainstream version.

Do you have to take part?

No, it is your own choice to make. If you decide you want to take part and later change your mind then you can stop at any time, you do not have to say why.

What happens if you say "yes" to taking part?

If you decide to say "yes" you will be agreeing to take part in the study. You will be asked to sign a consent form. This form says that you understand what the study is about and that you want to be a part of the research. Once you give your consent you will be

asked to fill in a short questionnaire asking you to rate statements regarding your relationship with your mother.

What happens to the information you give.

All information you give will be anonymous and will be kept strictly confidential.

Contact information

If you have any questions during this study please get in touch with

Lesley Steptoe
Psychology Office
Craigmill Skill Centre
Strathmartine Hospital
Dundee

Phone: 01382 831977

lesley.steptoe@tpct.scot.nhs.uk

Thank you for taking the time to read this information.

Appendix 8: Participant Consent Form Study 2b.

Participant Consent Form Study 2b.

Participant Identification Number:

Title of Project: Attachment, Childhood Adversity, Emotional Problems and Personality Disorder in Offenders with Mild Intellectual Disability.

Name of Researcher: Mrs Lesley Steptoe, Prof. Bill Lindsay, Dr Derek Carson.

Please tick box

1. I have read and understand the information sheet dated for the above study and have had the opportunity to ask questions.

2. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason.

3. I agree to take part in the above study.

4. I decline participation in this study

Matriculation Number of participant

Date

Signature

of Person taking consent
(if different from researcher)

Date

Signature

Name

Researcher

Date

Signature

1 for researcher, 1 for participant

Appendix 9: Participant Instructions to complete the Adapted Relationship Questionnaire (ARQ) (Version 1) Study 2b.

Participant Instructions to fill out the Adapted Relationship Questionnaire (ARQ) (Version 1) (Study 2b)

This questionnaire ask about your relationship with and how you feel about your mother. All answers are given in the strictest confidence and will be accessed only by the researchers. Do not write your name or matriculation number on the questionnaires.

Questionnaire:

1. The Adapted Relationship Questionnaire (2) provides separate statements within Type A, Type B, Type C, and Type D.
2. There are five possible ratings to choose from, 0 = not at all like me, 1 = A bit like me, 2 = Quite like me, 3 = very like me, and 4 = totally like me.
3. Please rate your degree of correspondence to each attachment statement by placing a tick in the box appertaining to the statement under the rating of -how like youøthe statement is when thinking of your relationship with your mother.
4. These ratings (or "scores") also provide a *profile* of your individual attachment feelings and behaviour.

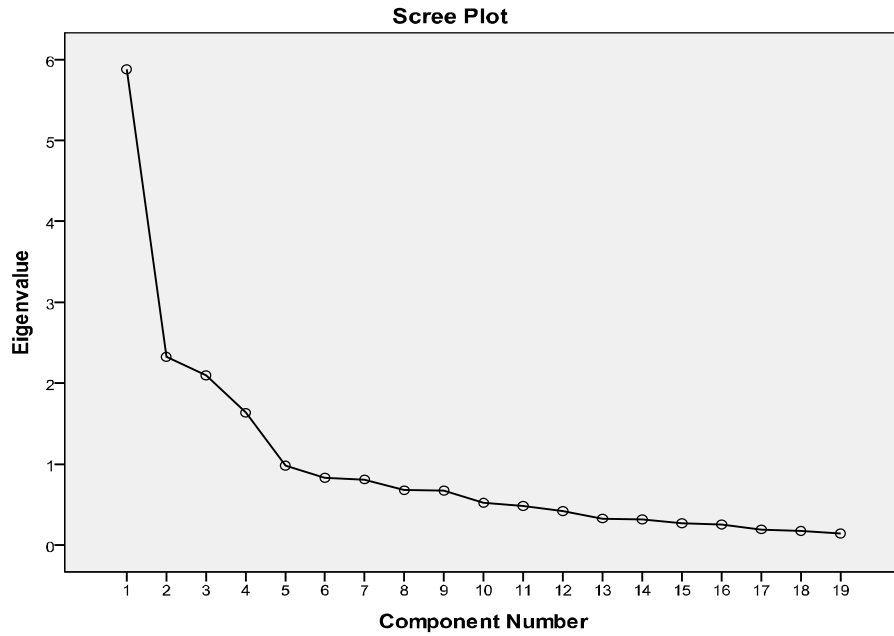
Please return the questionnaire with a signed copy of the consent form, retaining this information sheet and the second copy of the consent form for your records.

Appendix 10: Spearman's Rho Correlation Matrix of the 19 individual ARQ statements: Testing convergent and discriminant validity.

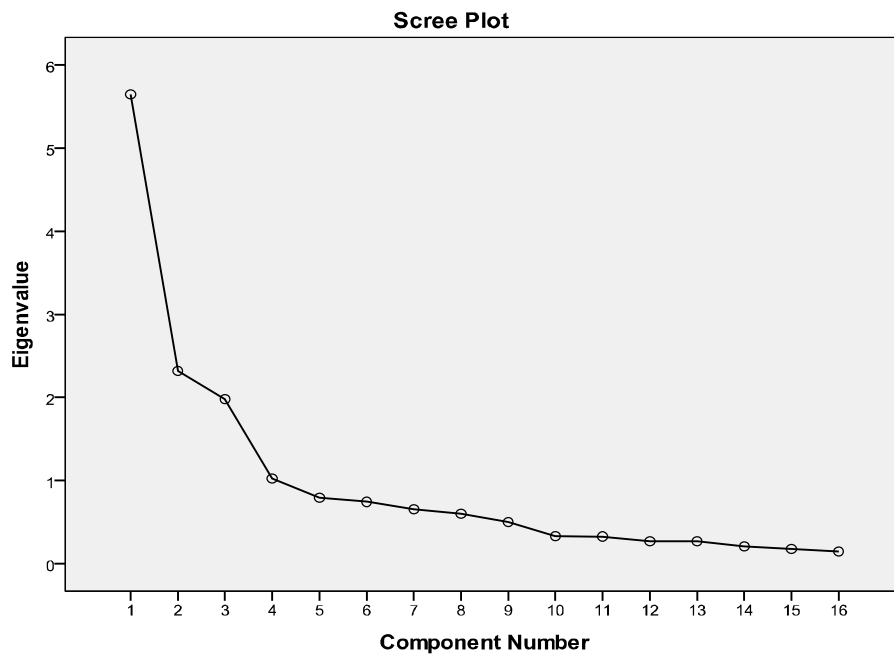
Item no	S1	S2	S3	S4	S5	F1	F2	F3	F4	F5	P1	P2	P3	P4	D1	D2	D3	D4
S1	1.0																	
S2	.584 .000	1.0																
S3	.572 .000	.664 .000	1.0															
S4	.216 .097	.330 .010	.410 .001	1.0														
S5	.049 .709	.075 .567	.121 .368	.344 .007	1.0													
F1	-.609 .000	-.488 .000	-.215 .099	-.150 .253	-.111 .399	1.0												
F2	.446 .000	.387 .002	.318 .013	.235 .071	-.102 .436	-.195 .136	1.0											
F3	-.471 .000	-.439 .000	-.204 .117	-.290 .024	-.125 .343	.616 .000	-.161 .220	1.0										
F4	-.464 .000	-.595 .000	-.391 .002	-.161 .220	-.213 .102	.596 .000	-.095 .468	.578 .000	1.0									
F5	-.388 .000	-.521 .000	-.250 .054	-.220 .092	-.215 .099	.639 .000	-.056 .670	.678 .000	.567 .000	1.0								
P1	.610 .000	.525 .000	.541 .000	.285 .028	-.051 .698	.301 .019	.678 .000	-.156 .234	-.133 .309	-.138 .292	1.0							
P2	-.485 .000	-.466 .000	-.375 .003	-.038 .773	.129 .327	.417 .001	-.224 .086	.492 .000	.495 .000	.457 .000	-.191 .144	1.0						
P3	.316 .014	.266 .040	.459 .000	.172 .189	-.061 .645	-.076 .564	.440 .000	-.056 .672	-.066 .617	-.012 .926	.602 .000	-.137 .297	1.0					
P4	-.295 .022	-.344 .007	-.198 .129	-.315 .014	-.036 .783	.390 .002	.010 .937	.520 .000	.378 .003	.688 .000	-.064 .626	.449 .000	.015 .910	1.0				
D1	-.403 .001	-.343 .007	-.248 .056	.042 .749	.097 .461	.392 .002	-.424 .001	.203 .120	.279 .031	.120 .362	-.433 .001	.163 .214	-.453 .000	.062 .638	1.0			
D2	-.035 .792	-.266 .040	-.071 .587	.022 .868	-.087 .508	.293 .023	-.157 .232	.261 .044	.244 .060	.325 .011	-.199 .127	.157 .230	-.100 .447	.240 .064	.287 .026	1.0		
D3	-.029 .826	-.394 .002	-.234 .072	-.060 .651	-.063 .634	.250 .054	-.137 .295	.207 .113	.284 .028	.323 .012	-.234 .072	.190 .145	.105 .427	.247 .057	.293 .023	.773 .000	1.0	
D4	-.176 .177	-.346 .007	-.163 .213	-.130 .323	.078 .552	.257 .047	-.249 .055	.251 .053	.254 .050	.281 .030	-.231 .076	.197 .131	-.123 .348	.161 .218	.281 .030	.680 .000	.771 .000	1.0
D5	-.128 .330	-.311 .016	-.427 .001	-.207 .113	.084 .522	.175 .182	-.131 .319	.099 .451	.197 .132	.183 .161	-.287 .026	.141 .282	-.231 .075	.113 .389	.214 .101	.355 .005	.490 .000	.415 .001

Appendix 11: Scree Plot for each Principal Component Analysis of the ARQ.

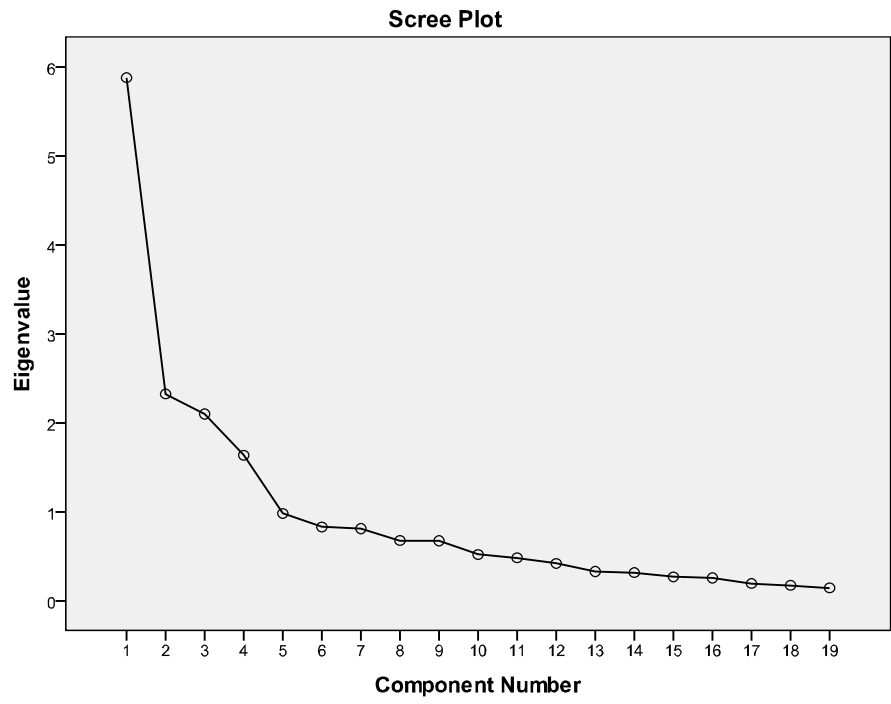
Scree Plot for Principal Components Analysis 1



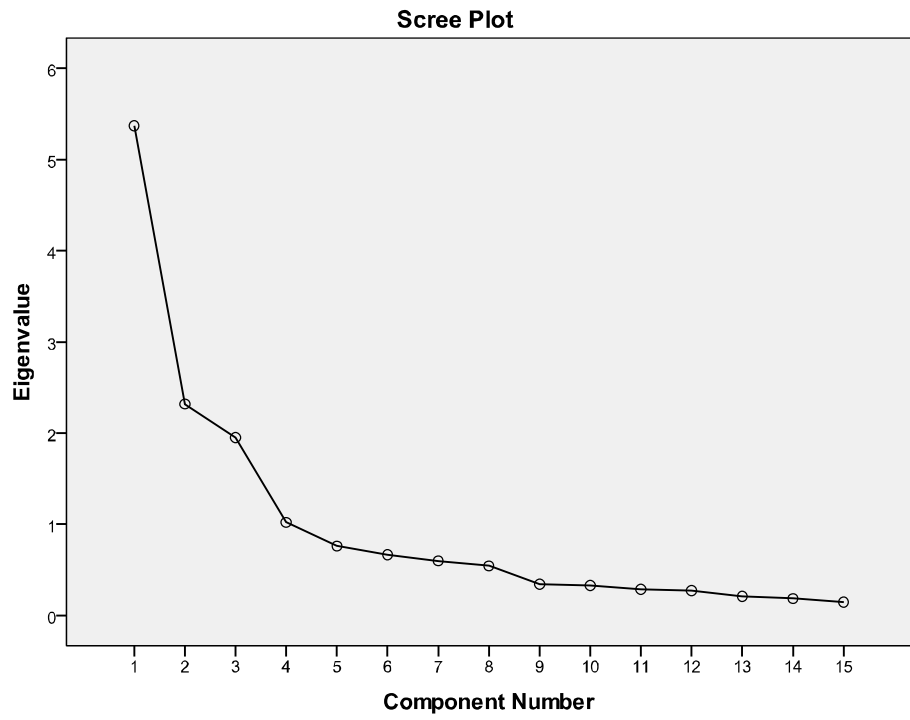
Scree Plot for Principal Components Analysis 2



Scree Plot for Principal Components Analysis 3 - Forced 3 Factor Solution



Scree Plot for Principal Components Analysis 4 - 3 Factor Solution Final Version



Appendix 12: Monte Carlo Parallel Analysis for Each Principal Components Analysis .

Monte Carlo Parallel Analysis for Each Principal Components Analysis showing the four relevant eigenvalues appertaining to the analysis.

Analysis 1 Four Factor Solution

Number of variables = 19

Eigenvalue Number	Random Eigenvalue	Standard Deviation
1	1.8372	.0820
2	1.6714	.0690
3	1.5483	.0646
4	1.4395	.0515

Analysis 2 Four Factor Solution

Number of variables = 16

Eigenvalue Number	Random Eigenvalue	Standard Deviation
1	1.7674	.0832
2	1.5673	.0775
3	1.4467	.0564
4	1.3440	.0479

Analysis 3 Enforced Three Factor Solution

Number of variables = 19

Eigenvalue Number	Random Eigenvalue	Standard Deviation
1	1.8621	.0855
2	1.6757	.0703
3	1.5485	.0577
4	1.4443	.0480

Analysis 4 Three Factor Solution

Number of variables = 15

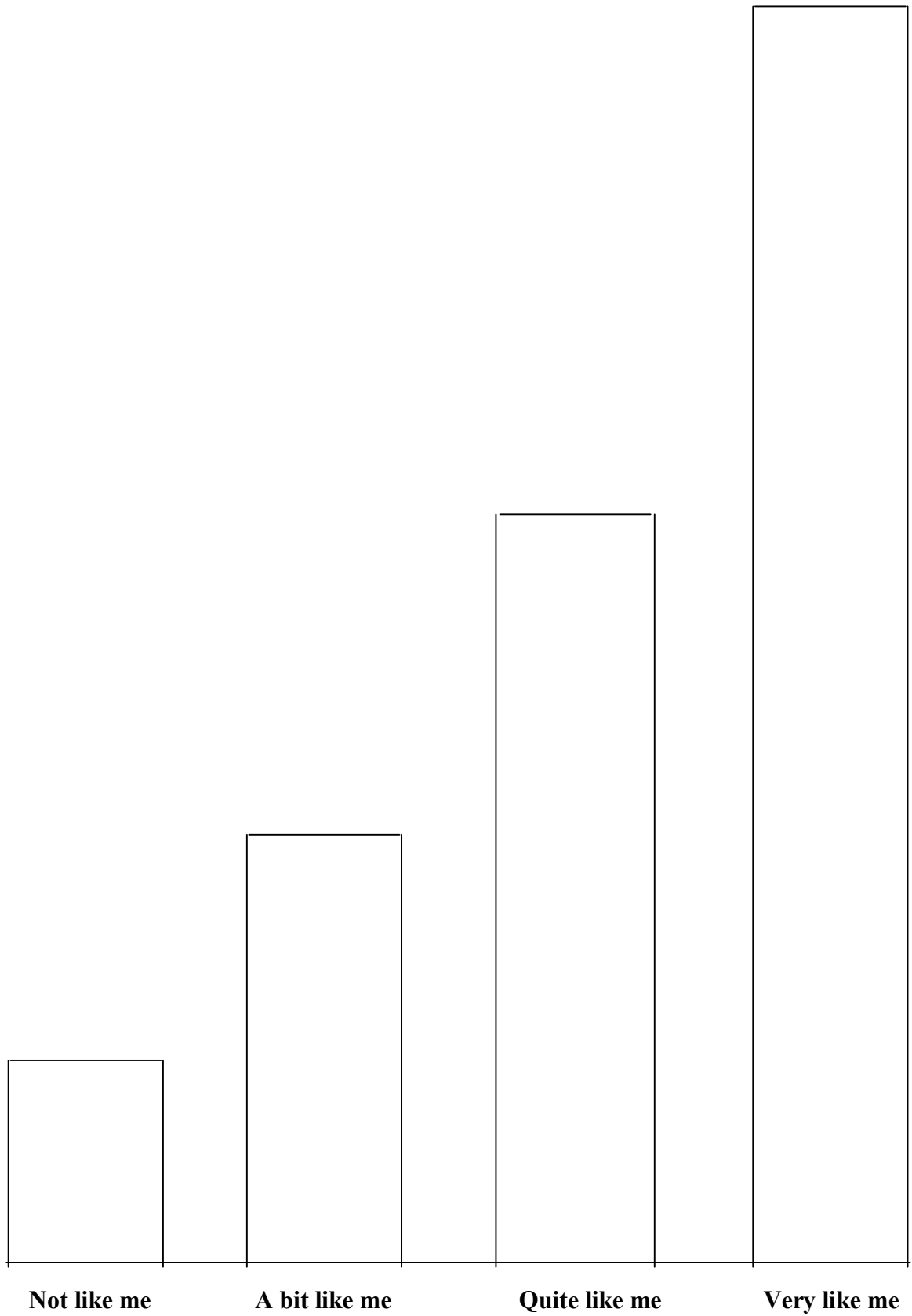
Eigenvalue Number	Random Eigenvalue	Standard Deviation
1	1.7050	.0847
2	1.5313	.0555
3	1.4160	.0537
4	1.3067	.0459

Appendix 13: Adapted Relationship Questionnaire (ARQ): Final Version.

The Adapted Relationship Questionnaire (Final Version)

	QUESTION	Not like me 0	A bit like me 1	Quite like me 2	Very like me 3
	Anxious Avoidant				
1.	I find it difficult to totally trust my mum/primary caregiver				
2.	I worry that I'll be hurt if I get too close to my mum/primary caregiver				
3.	I find it hard to depend on my mum/primary caregiver				
4.	I sometimes worry that I am worth less to my mum/primary caregiver than she is to me				
5.	I am not ok feeling close to my mum/primary caregiver				
6.	I am ok depending on my mum/primary caregiver (reverse score)				
7.	It is easy for me to feel close to my mum/primary caregiver (reverse score)				
	Dismissing Avoidant				
1.	It is important to me to feel I can do things for myself without mums/primary caregivers support				
2.	It is important to me to feel I can look after myself on my own without mum/primary caregiver				
3.	I prefer not depending on my mum/primary caregiver				
4.	I prefer my mum/primary caregiver not to depend on me				
	Secure				
1.	I want to feel totally close to my mum/primary caregiver				
2.	I want to feel close to my mum/primary caregiver				
3.	I am not ok if not having a close relationship with my mum/primary caregiver				
4.	I am ok if my mum/primary caregiver depends on me				

Appendix 14: Pictorial representations of scoring system for ARQ



Appendix 15: The Revised Scoring Sheet for the Final Version of the Adapted

Relationship Questionnaire (ARQ).

The revised Scoring Sheet for the final version of the Adapted Relationship Questionnaire (ARQ).

ARQ SCORING SHEET			
	Total score	Mean Score	Prototype Rating
Anxious Avoidant		/7	
Dismissing Avoidant		/4	
Secure		/4	

Appendix 16: Participant Information Sheet for Offenders with Mild Intellectual Disability

Participant Information sheet for offenders with mild intellectual disability.

Attachment, Childhood Adversity, Emotional Problems and Personality Disorder in Offenders with Mild Intellectual Disability.

My Name is Lesley Steptoe and I am undertaking a PhD at the University of Abertay, Dundee. I am undertaking a project as part of my course and invite you to take part in the following study. However before you decide to do so, I need to be sure that you understand, firstly why I am doing it and secondly what it would involve if you agreed. I am therefore providing you with the following information. Please read it carefully and be sure to ask any questions you might have, and if you want, discuss it with others including your friends and family. I will do my best to explain the project to you and provide you with any further information you may ask for now or later.

The Aims of the Study.

- We are trying to find out whether feeling safe/unsafe to the person closest to you as a child might have affected how you develop relationships as an adult.
- To look at whether feeling unsafe to the person closest to you as a child might have played a part in any emotional and/or personality difficulties which may develop in adulthood.
- To look at whether feeling safe/unsafe to the person closest to you as a child might relate to risk of offending behaviour.

Who we are looking for

- This study will include males who have mild intellectual disability and who have committed at least one incident of offending behaviour.
- This study will also include males with mild intellectual disability who are non offenders.
- Only males will be invited to take part in this study.
- This study will include men living in hospital settings, residential care, group homes, and people who live independently.

Why you have been invited to take part.

You have been invited to take part, as you are currently attending the forensic service provided by NHS Tayside, are male, and you have a recorded charge or conviction in your past history.

Participation in this study is entirely voluntary and you are free to refuse to take part or to withdraw from the study at any time without having to give a reason and without this affecting your future medical care or your relationship with medical staff looking after you.

What happens if you say, “yes” to taking part?

If you decide to say “yes” you will be agreeing to take part in the study. You will be asked to sign a consent form. This form says that you understand what the study is about and that you want to be a part of the research.

Once you give your consent you will be asked questions which ask about your relationship and how you feel about the person you were emotionally closest to as a child. This may have been your mother, a carer or someone else who was your main carer as a child. You will also be asked questions regarding your opinion of how your parents behaved towards you.

These questions will take about 30 minutes to answer

We would also like to ask your consent to use other information on personality held from your medical and psychology file.

Within the duration of this research should you inform me of any additional information such as previous abuse not currently known to the service, additional previous offending behaviour, plans to commit a future offence or to harm yourself in any way, I would need to inform other professionals involved in your care. This may include Criminal Justice Services if appropriate.

Four participants will be asked to give an interview with the researcher about their childhood years and leading up to the present day. This interview may ask about issues of abuse you may have experienced. Interviews will be recorded anonymously and will be typed out by the researcher.

All data and transcripts within this research will be anonymised.

What happens to the information you give?

All information you give will be kept strictly confidential.

Your name and address will not be held on any questionnaires or interviews so that you cannot be recognised from it. All participants will be given a number which will be used instead of a name. The number will be kept against your name on a password protected

Excel sheet on an NHS encrypted laptop. Only Lesley Steptoe will have access to this information.

Storage of Information

The completed Questionnaires within this study will be kept in a locked filing cabinet in the psychology office, Strathmartine Centre, Dundee. The data gathered from this study will be entered onto an encrypted NHS Laptop and will be analysed using the computer statistical package (SPSS). The anonymised data will be viewed by Prof Bill Lindsay, Castlebeck Care and NHS Tayside and also Dr Derek Carson Abertay University, Dundee. Personal data will be kept for up to twelve months, anonymised research data will be kept for ten years, All data will be destroyed in line with NHS Tayside policies.

Ethical Approval

The Fife and Forth Valley Research Ethics Committee, which has responsibility for scrutinising proposals for medical research on humans, has examined this proposal and has raised no objections from the point of view of medical ethics. It is a requirement that your anonymised records in this research be made available for scrutiny by monitors from NHS Tayside and University of Abertay, Dundee, whose role it is to check that research is properly conducted and the interests of those taking part are adequately protected.

Complaints

If you believe that you have been harmed in any way by taking part in this study, you have the right to pursue a complaint and seek any resulting compensation through the University of Abertay, Dundee, who are acting as the research sponsor. Details about this are available from the research team. Also, as a patient of the NHS, you have the right to pursue a complaint through the usual NHS process. To do so you can submit a written complaint to the patient liaison manager, Complaints Office, Ninewells Hospital, Dundee, DD1 9SY. (freephone 0800 027 5507) Note that the NHS has no legal liability for non negligent harm. However if you are harmed and this is due to someone's negligence, you may have grounds for legal action against NHS Tayside, but you may have to pay your legal costs.

Thank you for taking the time to read this information sheet and for considering taking part.

Contact information

If you have any questions during this study please get in touch with

Lesley Steptoe
Forensic Psychologist
Psychology Office
Flat 4
Strathmartine Centre
Dundee Phone: 01382 831977 or e mail: lsteptoe@nhs.net

Appendix 17: Participant Consent Form for Offenders with Mild Intellectual Disability

Participant Consent Form for offenders with mild intellectual disability

Participant Identification Number:

Attachment, Childhood Adversity, Emotional Problems and Personality Disorder in Offenders with Mild Intellectual Disability.

Name of Researcher: Mrs Lesley Steptoe, Prof. Bill Lindsay, Dr Derek Carson.

Please initial box

- | | |
|---|--------------------------|
| 1. I have read (or have been read) and understand the participant information sheet <u>version 6, dated 16/03/11</u> for the above study and have had the opportunity to ask questions. | <input type="checkbox"/> |
| 2. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason, without my medical care or legal rights being affected. | <input type="checkbox"/> |
| 3. I agree to my Responsible Medical Officer being informed of my participation. | <input type="checkbox"/> |
| 4. I agree to information being gathered from my medical/psychology file to be used in this study | <input type="checkbox"/> |
| 5. I decline to information gathering from my medical/psychology file being used in this study. | <input type="checkbox"/> |
| 6. I understand that relevant sections of my medical notes and data collected during this Study may be looked at by individuals from the University of Abertay Dundee or from NHS Tayside, where it is relevant to my taking part in this research. I give permission for these individuals to have access to my records. | <input type="checkbox"/> |
| 7. I agree to take part in the above study. | <input type="checkbox"/> |
| 8. <u>I agree to take part in an interview if asked.</u> | <input type="checkbox"/> |
| 9. <u>I give my permission for the researcher to use anonymised data and transcripts in publications.</u> | <input type="checkbox"/> |

Name of Patient	Date	Signature
-----------------	------	-----------

Name of Person taking consent (if different from researcher)	Date	Signature
---	------	-----------

Researcher	Date	Signature
------------	------	-----------

	Witness	Date	Signature
--	---------	------	-----------

1 copy to be given to participant, one for the researcher and one to be placed in medical notes.

Appendix 18: Participant Information Sheet for Staff Carers and Key Workers of Offenders with Mild Intellectual Disability.

Participant Information Sheet for Staff Carers and Key workers

Attachment, Childhood Adversity, Emotional Problems and Personality Disorder in Offenders with Mild Intellectual Disability.

My Name is Lesley Steptoe and I am undertaking a PhD at the University of Abertay, Dundee. I am undertaking a project as part of my course and am inviting potential participants to take part in the following study. However before they decide to do so, I need to be sure that they understand, firstly why I am doing it and secondly what it would involve if they agreed. I am therefore providing you with the following information as a carer/key worker in order that you are aware of what is involved in this research and why it is being carried out. Please read this information sheet carefully and clarify any points which you may require additional information. Potential participants are encouraged to discuss information regarding the research with others including carers, key workers, friends and family. I will do my best to explain the project to you and provide you with any further information you may ask for now or later.

The Aims of the Study.

- I am trying to find out whether feeling emotionally safe/unsafe to their primary caregiver in childhood might have affected how the potential participant develops relationships as an adult.
- To examine whether feeling unsafe to a primary caregiver as a child might have played a part in any emotional and/or personality difficulties which may develop in adulthood.
- To look at whether feeling emotionally safe/unsafe to a primary caregiver as a child might relate to risk of offending behaviour.

Who we are looking for

- This study will only include male participants who have a mild intellectual disability.
- This study will include men who have committed at least one incident of offending behaviour.
- The study will also have a control group of male participants who are non offenders.

- This study will include men living in hospital settings, residential care, group homes, and people who live independently.

Why the person has been invited to take part.

The person has been invited to take part, as they are currently attending the forensic service provided by NHS Tayside, at Strathmartine Centre, Dundee. Additionally they fit the potential participant criteria in so far as they are male, have a mild intellectual disability and may have a recorded charge or conviction in their past history.

Participation in this study is entirely voluntary and they are free to refuse to take part or to withdraw from the study at any time without having to give a reason and without this affecting their future medical care or their relationship with medical staff looking after them.

What happens if they consent to taking part?

If a potential participant decides to give consent, they will be agreeing to take part in the study. At this point they will be asked to sign a consent form (Participant consent for attached). This form says that they understand what the study is about and that they want to be a part of the research.

Once potential participants give their consent they will be asked to complete three separate self report questionnaires regarding their attachment and parental bonding experiences to their primary caregiver in childhood. This primary caregiver would in many circumstances be their mother or any other person to whom they felt emotionally closest to as a child such as a carer or someone else who was their main carer as a child. The questionnaires ask about their relationship and how they feel about the person they were emotionally closest to as a child. They will also be asked questions regarding their opinion of how their primary caregiver behaved towards them in childhood. This is a retrospective perspective of childhood and for some participants may tap memories of both good and difficult occasions.

These questions will take about 30 minutes to answer

Within the duration of this research should the participant inform of any additional information such as previous abuse not currently known to the service, additional previous offending behaviour, plans to commit a future offence or to harm themselves or others in any way, I would need to inform other professionals involved in their care. This may include Criminal Justice Services if appropriate.

We would also like to ask their consent to gather other information on personality. This information would be gathered from file review of their medical and/or psychology file. This study will also examine current emotional presentation and interpersonal style through administration of a questionnaire to carers who know the participant well.

Separate consent will be sought from participants regarding taking part in a semi structured interview about their childhood years and leading up to the present day. This interview may ask about issues of abuse you may have experienced. Interviews will be recorded anonymously and will be typed out by the researcher.

All data and transcripts within this research will be anonymised.

What happens to the information given by participants?

All information given by participants will be kept strictly confidential.

Their name and address will not be held on any questionnaires or interviews so that they cannot be recognised. All participants will be given a number which will be used instead of a name. The number will be kept against their name on a password protected Excel sheet on an NHS encrypted laptop. Only the principal researcher (Lesley Steptoe) will have access to this information.

Storage of Information

The completed Questionnaires within this study will be kept in a locked filing cabinet in the psychology office, Strathmartine Centre, Dundee. The data gathered from this study will be entered onto an encrypted NHS Laptop and will be analysed using the computer statistical package (SPSS). The anonymised data will be viewed by Prof Bill Lindsay, Castlebeck Care and NHS Tayside and also Dr Derek Carson Abertay University, Dundee. Personal data will be kept for a twelve month period, anonymised research data will be kept for 10 years. After this time all data will be destroyed in line with NHS Tayside policies.

Ethical Approval

The Fife and Forth Valley Research Ethics Committee, which has responsibility for scrutinising proposals for medical research on humans, has examined this proposal and has raised no objections from the point of view of medical ethics. It is a requirement that participants anonymised records in this research be made available for scrutiny by monitors from NHS Tayside and University of Abertay, Dundee, whose role it is to check that research is properly conducted and the interests of those taking part are adequately protected.

Complaints

If participants believe that they have been harmed in any way by taking part in this study, they have the right to pursue a complaint and seek any resulting compensation through the University of Abertay, Dundee, who are acting as the research sponsor. Details about this are available from the research team. Also, as a patient of the NHS, they have the right to pursue a complaint through the usual NHS process. To do so they can submit a written complaint to the patient liaison manager, Complaints Office, Ninewells Hospital, Dundee, DD1 9SY. (freephone 0800 027 5507) Note that the NHS has no legal liability for non negligent harm. however if participants are harmed and this is due to someone's

negligence, they may have grounds for legal action against NHS Tayside, but they may have to pay their own legal costs.

Thank you

Thank you for taking the time to read this information sheet and for assisting in ensuring potential participants have a full understanding of the research and/or are able to contact the principal researcher, Lesley Steptoe, to gain any further information they may require.

Contact information:

If you have any questions during this study please get in touch with

Lesley Steptoe
Forensic Psychologist
Psychology Office
Flat 4
Strathmartine Centre
Dundee

Phone: 01382 831977 or e mail: lsteptoe@nhs.net

Appendix 19: Participant Information Sheet for Clinical Staff Participating in Completion of the EPS, IAS and Assessment of Personality Disorder.

Participant Information Sheet for Clinical Staff Participating in Completion of the EPS, IAS and Assessment of Personality Disorder.

Attachment, Childhood Adversity, Emotional Problems and Personality Disorder in Offenders with Mild Intellectual Disability.

My Name is Lesley Steptoe and I am undertaking a PhD at the University of Abertay, Dundee. I am undertaking a project as part of my course and am inviting potential participants to take part in the following study. However before they decide to do so, I need to be sure that they understand, firstly why I am doing it and secondly what it would involve if they agreed. I am therefore providing you with the following information as a carer/keyworker in order that you are aware of what is involved in this research and why it is being carried out. Please read this information sheet carefully and clarify any points which you may require additional information. Potential participants are encouraged to discuss information regarding the research with others including carers, keyworkers, friends and family. I will do my best to explain the project to you and provide you with any further information you may ask for now or later.

The Aims of the Study.

- I am trying to find out whether feeling emotionally safe/unsafe to their primary caregiver in childhood might have affected how the potential participant develops relationships as an adult.
- To examine whether feeling unsafe to a primary caregiver as a child might have played a part in any emotional and/or personality difficulties which may develop in adulthood.
- To look at whether feeling emotionally safe/unsafe to a primary caregiver as a child might relate to risk of offending behaviour.

Who we are looking for

- This study will only include male participants who have a mild intellectual disability.
- This study will include men who have committed at least one incident of offending behaviour.

- The study will also have a control group of male participants who are non offenders.
- This study will include men living in hospital settings, residential care, group homes, and people who live independently.

Why the person has been invited to take part.

The person has been invited to take part, as they are currently attending the forensic service provided by NHS Tayside, at Strathmartine Centre, Dundee. Additionally they fit the potential participant criteria in so far as they are male, have a mild intellectual disability and may have a recorded charge or conviction in their past history.

Participation in this study is entirely voluntary and they are free to refuse to take part or to withdraw from the study at any time without having to give a reason and without this affecting their future medical care or their relationship with medical staff looking after them.

Why you as a member of nursing/carer/support staff have been asked to take part?

You have been asked to take part specifically to fill in two interview questionnaires regarding each consenting participant. You have been invited to take part as you will know a consenting participant well. The first of the questionnaires, The Emotional Problem Solving Scales (EPS) examines the participant's emotional stability over the past thirty days. The second questionnaire, the Interpersonal Adjectives Scale (IAS) examines the individual participants interpersonal style. It is recommended that each of these questionnaires is completed at interview with the researcher, by a carer who knows the participant well, and who has had contact with him on a regular basis over the past thirty days. Your participation will be limited to providing responses to the questions in the 'EPS' and 'IAS'. Additionally your name as respondent will not be held on the questionnaire.

What happens if potential participants consent to taking part?

If a potential participant decides to give consent, they will be agreeing to take part in the study. At this point they will be asked to sign a consent form (Participant consent for attached). This form says that they understand what the study is about and that they want to be a part of the research.

Once potential participants give their consent they will be asked to complete three separate self report questionnaires regarding their attachment and parental bonding experiences to their primary caregiver in childhood. This primary caregiver would in many circumstances be their mother or any other person to whom they felt emotionally closest to as a child such as a carer or someone else who was their main carer as a child. The questionnaires ask about their relationship and how they feel about the person they were emotionally closest to as a child. They will also be asked questions regarding their opinion of how their primary caregiver behaved towards them in childhood. This is a

retrospective perspective of childhood and for some participants may tap memories of both good and difficult occasions.

These questions will take about 30 minutes to answer

Within the duration of this research should the participant inform of any additional information such as previous abuse not currently known to the service, additional previous offending behaviour, plans to commit a future offence or to harm themselves or others in any way, I would need to inform other professionals involved in their care. This may include Criminal Justice Services if appropriate.

We would also like to ask potential participants consent to gather other information on personality. This information would be gathered from file review of their medical and/or psychology file. This study will also examine current emotional presentation and interpersonal style through administration of a questionnaire to carers who know the participant well.

Separate consent will be sought from participants regarding taking part in a semi structured interview about their childhood years and leading up to the present day. This interview may ask about issues of abuse they may have experienced. Interviews will be recorded anonymously and will be typed out by the researcher.

What happens if you consent to taking part?

If you decide to give consent, you will be agreeing to take part in the study. At this point you will be asked to sign a consent form (consent form attached). This form states that you understand what the study is about and that you want to be a part of the research.

Once a member of nursing/carer/support staff gives their consent they will be asked to complete two separate questionnaires. The questionnaires ask about the consenting participants' interpersonal style and emotional presentation over the past thirty days. You will have been invited to respond to the questionnaires due to your in depth knowledge of the consenting participant.

These questions will take about 60 minutes to answer.

What happens to the information given by participants?

All information given by participants will be kept strictly confidential.

Their name and address will not be held on any questionnaires or interviews so that they cannot be recognised. All participants will be given a number which will be used instead of a name. The number will be kept against their name on a password protected Excel sheet on an NHS encrypted laptop. Only the principal researcher (Lesley Steptoe) will have access to this information.

All data and transcripts within this research will be anonymised.

What happens to the information given by you?

The responses given by you will be anonymous as will participant information. You will be allocated a code in order to identify information provided by you should you wish to withdraw from the study at any time. This code will be stored against your name in a password protected excel sheet which will be stored on an encrypted NHS Laptop. This information will be viewed by the principal researcher only.

Storage of Information

The completed Questionnaires within this study will be kept in a locked filing cabinet in the psychology office, Strathmartine Centre, Dundee. The data gathered from this study will be entered onto an encrypted NHS Laptop and will be analysed using the computer statistical package (SPSS). The anonymised data will be viewed by Prof Bill Lindsay, Castlebeck Care and NHS Tayside and also Dr Derek Carson Abertay University, Dundee. Personal data will be kept for a twelve month period, anonymised research data will be kept for 10 years. After this time all data will be destroyed in line with NHS Tayside policies.

Ethical Approval

The Fife and Forth Valley Research Ethics Committee, which has responsibility for scrutinising proposals for medical research on humans, has examined this proposal and has raised no objections from the point of view of medical ethics. It is a requirement that participants anonymised records in this research be made available for scrutiny by monitors from NHS Tayside and University of Abertay, Dundee, whose role it is to check that research is properly conducted and the interests of those taking part are adequately protected.

Complaints

If participants believe that they have been harmed in any way by taking part in this study, they have the right to pursue a complaint and seek any resulting compensation through the University of Abertay, Dundee, who are acting as the research sponsor. Details about this are available from the research team. Also, as a patient of the NHS, they have the right to pursue a complaint through the usual NHS process. To do so they can submit a written complaint to the patient liaison manager, Complaints Office, Ninewells Hospital, Dundee, DD1 9SY. (freephone 0800 027 5507) Note that the NHS has no legal liability for non negligent harm. however if participants are harmed and this is due to someone's negligence, they may have grounds for legal action against NHS Tayside, but they may have to pay their own legal costs.

Thank you

Thank you for taking the time to read this information sheet and for assisting in ensuring potential participants have a full understanding of the research and/or are able to contact the principal researcher, Lesley Steptoe, to gain any further information they may require.

Contact information:

If you have any questions during this study please get in touch with

Lesley Steptoe
Forensic Psychologist
Psychology Office
Flat 4
Strathmartine Centre
Dundee

Phone: 01382 831977
or e mail: lsteptoe@nhs.net

Appendix 20: Participant Consent Form for Clinical Staff Participating in Completion of the EPS, IAS and Assessment of Personality Disorder.

Participant Consent Form for Clinical Staff

Participant Identification Number:

Attachment, Childhood Adversity, Emotional Problems and Personality Disorder in Offenders with Mild Intellectual Disability.

Name of Researcher: Mrs Lesley Steptoe, Prof. Bill Lindsay, Dr Derek Carson.

Please **initial**
box

1. I have read (or have been read) and understand the participant information sheet version 1, dated 16/03/11 for the above study and have had the opportunity to ask questions.
2. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason, without my medical care or legal rights being affected.
3. I agree to complete the EPS and IAS questionnaires for individual consenting participants
4. I agree to take part in the above study.
5. I give my permission for the researcher to use anonymised data in publications.

Name of Nurse/Carer/Support
staff member

Date

Signature

Name of Person taking consent
(if different from researcher)

Date

Signature

Researcher

Date

Signature

Witness

Date

Signature

1 copy to be given to staff member, one for the researcher.

Appendix 21: Participant Information Sheet: Control Group

Participant Information Sheet: Control Group

Attachment, Childhood Adversity, Emotional Problems and Personality Disorder in Offenders with Mild Intellectual Disability.

My Name is Lesley Steptoe and I am undertaking a PhD at the University of Abertay, Dundee. I am undertaking a project as part of my course and invite you to take part in the following study. However before you decide to do so, I need to be sure that you understand, firstly why I am doing it and secondly what it would involve if you agreed. I am therefore providing you with the following information. Please read it carefully and be sure to ask any questions you might have, and if you want, discuss it with others including your friends and family. I will do my best to explain the project to you and provide you with any further information you may ask for now or later.

The Aims of the Study.

- We are trying to find out whether feeling safe/unsafe to the person closest to you as a child might have affected how you develop relationships as an adult.

Who we are looking for

- This study will include males who have mild intellectual disability and who have committed at least one incident of offending behaviour.
- This study will also include males with mild intellectual disability who are non offenders.
- Only males will be invited to take part in this study.
- This study will include men living in hospital settings, residential care, group homes, and people who live independently.

Why you have been invited to take part.

You have been invited to take part within a group of males who have not offended in their lifetime. The responses you give on the questionnaires will be used to compare to responses from male offenders who have a mild intellectual disability. This comparison is necessary to work out if there are differences between offenders and non offenders with mild intellectual disability in the way they may form and behave within relationships and towards others.

Participation in this study is entirely voluntary and you are free to refuse to take part or to withdraw from the study at any time without having to give a reason and without this

affecting your future medical care or your relationship with medical staff looking after you.

What happens if you say, “yes” to taking part?

If you decide to say “yes” you will be agreeing to take part in the study. You will be asked to sign a consent form. This form says that you understand what the study is about and that you want to be a part of the research.

Once you give your consent you will be asked questions which ask about your relationship and how you feel about the person you were emotionally closest to as a child. This may have been your mother, a carer or someone else who was your main carer as a child. You will also be asked questions regarding your opinion of how your parents behaved towards you.

These questions will take about 30 minutes to answer

Within the duration of this research should you inform me of any additional information such as previous abuse not currently known to the service, previous offending behaviour, plans to commit an offence either currently or in the future or to harm yourself in any way, I would need to inform other professionals involved in your care. This may include Criminal Justice Services if appropriate.

What happens to the information you give?

All information you give will be kept strictly confidential.

Your name and address will not be held on any questionnaires or interviews so that you cannot be recognised from it. All participants will be given a number which will be used instead of a name. The number will be kept against your name on a password protected Excel sheet on an NHS encrypted laptop. Only Lesley Steptoe will have access to this information.

All data in this study will be anonymised.

Storage of Information

The completed Questionnaires within this study will be kept in a locked filing cabinet in the psychology office, Strathmartine Centre, Dundee. The data gathered from this study will be entered onto an encrypted NHS Laptop and will be analysed using the computer statistical package (SPSS). The anonymised data will be viewed by Prof Bill Lindsay, Castlebeck Care and NHS Tayside and also Dr Derek Carson Abertay University, Dundee. Personal data will be kept for up to twelve months, anonymised research data will be kept for ten years, All data will be destroyed in line with NHS Tayside policies.

Ethical Approval

The Fife and Forth Valley Research Ethics Committee, which has responsibility for scrutinising proposals for medical research on humans, has examined this proposal and has raised no objections from the point of view of medical ethics. It is a requirement that your anonymised records in this research be made available for scrutiny by monitors from NHS Tayside and University of Abertay, Dundee, whose role it is to check that research is properly conducted and the interests of those taking part are adequately protected.

Complaints

If you believe that you have been harmed in any way by taking part in this study, you have the right to pursue a complaint and seek any resulting compensation through the University of Abertay, Dundee, who are acting as the research sponsor. Details about this are available from the research team. Also, as a patient of the NHS, you have the right to pursue a complaint through the usual NHS process. To do so you can submit a written complaint to the patient liaison manager, Complaints Office, Ninewells Hospital, Dundee, DD1 9SY. (freephone 0800 027 5507) Note that the NHS has no legal liability for non negligent harm. However if you are harmed and this is due to someone's negligence, you may have grounds for legal action against NHS Tayside, but you may have to pay your legal costs.

Thank you for taking the time to read this information sheet and for considering taking part.

Contact information

If you have any questions during this study please get in touch with

Lesley Steptoe
Forensic Psychologist
Psychology Office
Flat 4
Strathmartine Centre
Dundee

Phone: 01382 831977
or e mail: lsteptoe@nhs.net

Appendix 22: Participant Information Sheet for Staff Support Carers and Key Workers for Control Group.

Participant Information Sheet for Staff Support Carers and Key Workers for Control Group.

Attachment, Childhood Adversity, Emotional Problems and Personality Disorder in Offenders with Mild Intellectual Disability.

My Name is Lesley Steptoe and I am undertaking a PhD at the University of Abertay, Dundee. I am undertaking a project as part of my course and am inviting potential participants to take part in the following study. However before they decide to do so, I need to be sure that they understand, firstly why I am doing it and secondly what it would involve if they agreed. I am therefore providing you with the following information as a carer/key worker in order that you are aware of what is involved in this research and why it is being carried out. Please read this information sheet carefully and clarify any points which you may require additional information. Potential participants are encouraged to discuss information regarding the research with others including carers, key workers, friends and family. I will do my best to explain the project to you and provide you with any further information you may ask for now or later.

The potential participant is being invited to take part in this study as a part of the control group.

The Aims of the Study.

Control group participants and other participants

- I am trying to find out whether feeling emotionally safe/unsafe to their primary caregiver in childhood might have affected how the potential participant develops relationships as an adult. This is the only part of the study that control group participants will be included within.

Participant's outwith the control group

- To examine whether feeling unsafe to a primary caregiver as a child might have played a part in any emotional and/or personality difficulties which may develop in adulthood.
- To look at whether feeling emotionally safe/unsafe to a primary caregiver as a child might relate to risk of offending behaviour.

Who we are looking for

Control group participants and other participants

- This study will only include male participants who have a mild intellectual disability.
- The study will also have a control group of male participants who are non offenders.
- This study will include men living in hospital settings, residential care, group homes, and people who live independently.

Participants outwith the control group

- This study will include men who have committed at least one incident of offending behaviour.

Why the person has been invited to take part.

The person has been invited to take part, as they are currently included in a service provided for people with intellectual disability. Additionally they fit the potential participant criteria in so far as they are male, have a mild intellectual disability.

Participation in this study is entirely voluntary and they are free to refuse to take part or to withdraw from the study at any time without having to give a reason and without this affecting their future medical care or their relationship with medical staff looking after them.

What happens if they consent to taking part?

If a potential participant decides to give consent, they will be agreeing to take part in the study. At this point they will be asked to sign a consent form (Participant consent form attached). This form says that they understand what the study is about and that they want to be a part of the research.

Once potential participants give their consent they will be asked to complete three separate self report questionnaires regarding their attachment and parental bonding experiences to their primary caregiver in childhood. This primary caregiver would in many circumstances be their mother or any other person to whom they felt emotionally closest to as a child such as a carer or someone else who was their main carer as a child. The questionnaires ask about their relationship and how they feel about the person they were emotionally closest to as a child. They will also be asked questions regarding their opinion of how their primary caregiver behaved towards them in childhood. This is a retrospective perspective of childhood and for some participants may tap memories of both good and difficult occasions.

These questions will take about 30 minutes to answer

Within the duration of this research should the participant inform of any additional information such as previous abuse not currently known to the service, previous offending behaviour, plans to commit a future offence or to harm themselves or others in any way, I would need to inform other professionals involved in their care. This may include Criminal Justice Services if appropriate.

What happens to the information given by participants?

All information given by participants will be kept strictly confidential.

Their name and address will not be held on any questionnaires or interviews so that they cannot be recognised. All participants will be given a number which will be used instead of a name. The number will be kept against their name on a password protected Excel sheet on an NHS encrypted laptop. Only the principal researcher (Lesley Steptoe) will have access to this information. All data and within this research will be anonymised.

The control group are an essential part of the study. The attachment style profile from the control group will be used as a comparison to the attachment style profile of offenders with mild intellectual disability to ascertain if there is a difference in attachment styles between these two groups.

The study is also examining whether attachment style in offenders with mild intellectual disability may be a factor relevant to emotional presentation, personality development and risk of offending behaviour.

Storage of Information

The completed Questionnaires within this study will be kept in a locked filing cabinet in the psychology office, Strathmartine Centre, Dundee. The data gathered from this study will be entered onto an encrypted NHS Laptop and will be analysed using the computer statistical package (SPSS). The anonymised data will be viewed by Prof Bill Lindsay, Castlebeck Care and NHS Tayside and also Dr Derek Carson Abertay University, Dundee. Personal data will be kept for a twelve month period, anonymised research data will be kept for 10 years. After this time all data will be destroyed in line with NHS Tayside policies.

Ethical Approval

The Fife and Forth Valley Research Ethics Committee, which has responsibility for scrutinising proposals for medical research on humans, has examined this proposal and has raised no objections from the point of view of medical ethics. It is a requirement that participants anonymised records in this research be made available for scrutiny by monitors from NHS Tayside and University of Abertay, Dundee, whose role it is to check that research is properly conducted and the interests of those taking part are adequately protected.

Complaints

If participants believe that they have been harmed in any way by taking part in this study, they have the right to pursue a complaint and seek any resulting compensation through the University of Abertay, Dundee, who are acting as the research sponsor. Details about this are available from the research team. Also, as a patient of the NHS, they have the right to pursue a complaint through the usual NHS process. To do so they can submit a written complaint to the patient liaison manager, Complaints Office, Ninewells Hospital, Dundee, DD1 9SY. (freephone 0800 027 5507) Note that the NHS has no legal liability for non negligent harm. however if participants are harmed and this is due to someone's negligence, they may have grounds for legal action against NHS Tayside, but they may have to pay their own legal costs.

Thank you

Thank you for taking the time to read this information sheet and for assisting in ensuring potential participants have a full understanding of the research and/or are able to contact the principal researcher, Lesley Steptoe, to gain any further information they may require.

Contact information:

If you have any questions during this study please get in touch with

Lesley Steptoe
Forensic Psychologist
Psychology Office
Flat 4
Strathmartine Centre
Dundee

Phone: 01382 831977
or e mail: lsteptoe@nhs.net

Appendix 23: Participant Consent Form (Control Group).

Participant Consent Form (Control Group).

Participant Identification Number:

Attachment, Childhood Adversity, Emotional Problems and Personality Disorder in Offenders with Mild Intellectual Disability.

Name of Researcher: Mrs Lesley Steptoe, Prof. Bill Lindsay, Dr Derek Carson.

Please initial
box

1. I have read (or have been read) and understand the participant information sheet Version 1, dated 01/02/11 for the above study and have had the opportunity to ask questions.
2. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason, without my medical care or legal rights being affected.
3. I understand that I am participating as part of a control group of non offenders. This control group is to be used for comparison of attachment style in people with mild intellectual disability who have not offended to those who have mild intellectual disability and who have offended.
4. I agree to my Responsible Medical Officer being informed of my participation.
5. I agree to take part in the above study.
6. I give my permission for the researcher to use anonymised data and in publications.

Name of Patient

Date

Signature

Name of Person taking consent
(if different from researcher)

Date

Signature

Researcher

Date

Signature

Witness

Date

Signature

1 copy to be given to participant, one for the researcher and one to be placed in medical notes.

Appendix 24: The ARQ (Final Version)

ADAPTED RELATIONSHIP QUESTIONNAIRE (ARQ)

	ATTACHMENT STATEMENT	Not like me 0	A bit like me 1	Quite like me 2	Very like me 3
	Fearful avoidant				
1.	I find it difficult to totally trust my mum/primary caregiver				
2.	I worry that I'll be hurt if I get too close to my mum/primary caregiver				
3.	I find it hard to depend on my mum/primary caregiver				
4.	I sometimes worry that I am worth less to my mum/primary caregiver than she is to me				
5.	I am not ok feeling close to my mum/primary caregiver				
6.	I am ok depending on my mum/primary caregiver (reverse score)				
7.	It is easy for me to feel close to my mum/primary caregiver (reverse score)				
	Dismissing avoidant				
1.	It is important to me to feel I can do things for myself without mums/primary caregivers support				
2.	It is important to me to feel I can look after myself on my own without mum/primary caregiver				
3.	I prefer not depending on my mum/primary caregiver				
4.	I prefer my mum/primary caregiver not to depend on me				
	Secure				
1.	I want to feel totally close to my mum/primary caregiver				
2.	I want to feel close to my mum/primary caregiver				
3.	I am not ok if not having a close relationship with my mum/primary caregiver				
4.	I am ok if my mum/primary caregiver depends on me				