

**THE EFFECTS OF COGNITIVE DISTORTIONS IN SEX
OFFENDERS AND NON-SEX OFFENDERS WITH MILD
LEARNING DISABILITIES**

ELAINE WHITEFIELD

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

October 2003

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

Signed...

A large black rectangular box redacting the signature of the Director of Studies.

(Director of Studies)

Date... 21/06/04

Abstract

Cognitive distortions of sexual offenders with or without learning disabilities are considered to play a vital role in the etiology and maintenance of sexually deviant behaviour. This assumption has driven research to focus on investigating the cognitive content of distorted cognitions held by sexual offenders. Indeed, to facilitate researchers in this quest, attention has focused on trying to develop psychometrically robust instruments to measure distorted cognitions. However, these attempts have met with little success, as current assessment measures fail to address a wide range of sexual attitudes, are not suitable for use on individuals with learning disabilities, are open to social desirability and some are unable to discriminate sexual offenders from normal males. To address these weaknesses a new measure has been developed by Lindsay (unpublished) to assess cognitive distortions among sexual offenders with learning disabilities (i.e. QACSO; Questionnaire on Attitudes Consistent with Sex Offences).

This thesis tested the reliability and validity of this new measure. Results found this measure to be a promising clinical and research instrument, with good internal consistency and reliability and discriminative ability. A principle component analysis revealed that 11 of the 13 components were reliable and successfully separated sexual offenders from controls. Results confirmed that sexual offenders with learning disabilities held significantly more distorted cognitions, compared to control groups of non-sexual offenders with learning disabilities, non-offenders with learning disabilities and normal males.

To develop understanding of the role cognitive distortions play in sexual offending behaviour it is not enough just to examine the cognitive content, as it is necessary to examine the cognitive processes (i.e. attention) that underlie the initiation, maintenance and justification of sexual deviant behaviour. This would result in better understanding of the cognitive processes that underlie behaviour at all stages of the offence chain and facilitate clinicians' theoretical and practical ideas when developing suitable treatment programmes.

Studies two to six used a number of experimental paradigms to investigate the cognitive processes, and in particular attentional ability, of sexual offenders with learning

disabilities. Study two investigated if conscious recollection of past events influenced the average time sexual offenders spent viewing pictures of people, compared to objects. Results found that the type of picture did not affect viewing time. To reduce the likelihood of conscious influence masking sexual offenders' responses, studies three to six employed experimental paradigms that involve attentional ability being affected by prior experiences with no conscious recollection of past events. Results found sexual offenders with learning disabilities' attentional abilities to be consistent with controls. Failure to obtain significant differences in the attentional abilities of sexual offenders compared to controls does not mean they do not have attentional deficits. Indeed, the methods employed might have been unable to detect any differences.

In light of these findings the appropriateness of the methods employed to investigate attentional abilities was discussed and recommendations for future were made.

Acknowledgements

I would like to thank Bill Lindsay and Derek Carson for the help, support and advice they have given me during this time. Without their guidance and supervision, the last three years would have been an altogether less pleasant experience.

Thanks are also due to the staff and clients of Strathmartine Hospital, the HELM and Dudhope Adult Resource Centre, without their co-operation this research would not have been possible.

A special thanks goes to my friends, in particular Fiona, who have given me support and understanding throughout. I would especially like to thank my family for their understanding, support and encouragement.

Finally, I would like to thank the University of Abertay Dundee for generously funding the research.

Table of Contents

Abstract	1
Acknowledgements	3
Table of Contents	4
Chapter 1 – Defining Learning Disabilities and Sexual Offending	12
1.0 Defining Learning Disability.....	12
Table 1.0 Classification of ‘Mental Retardation’ under ICD-10.....	12
Table 1.1 Classification of Learning Disability under DSM-IV-TR.....	13
1.1.1 Single Factor Theories of Sexual Offending.....	15
1.1.2 Psychoanalytic/Psychodynamic Theory.....	16
1.1.3 Feminist Theory.....	18
1.1.4 Biological Theories.....	20
1.1.5 Psychological Explanations – Behavioural Accounts and Learning Theory.....	22
1.1.6 Psychological Accounts – Empathy Deficits.....	24
1.1.7 Psychological Accounts – Cognitive Processes.....	27
1.1.8 Multifactor Theories of Sexual Offending.....	28
Figure 1.0 Finkelhor’s four staged model of offending.....	31
1.1.9 Summary.....	34
Chapter 2 - The Relationship between Learning Disability and Sexual Offending	36
2.0 Introduction.....	36
2.1.1 Prevalence of learning disability among prison populations.....	36
2.1.2 Prevalence among prisoners on remand.....	39
2.1.3 Prevalence among individuals appearing in court.....	43
2.1.4 Sexual offending and learning disability.....	48
2.1.5 Over representation of sex offenders with learning disabilities.....	52
2.1.6 Gender and sexual offenders with learning disabilities.....	54
2.1.7 Characteristics of sexual offenders with learning disabilities.....	55
2.1.8 Summary.....	60

Chapter 3 – Cognitive Distortions of Sex Offenders	61
3.0 Introduction.....	61
3.1.1 Cognitive Content of Cognitive Distortions.....	62
3.1.2 Three-Process Model of Cognitive Factors.....	66
3.1.3 Cognitive Deconstruction Theory.....	69
3.1.4 Social Cognition Approach.....	71
3.1.5 Implicit Theories.....	75
3.1.6 Summary.....	77
Chapter 4 – Assessment	78
4.0 Introduction.....	78
4.1.1 Physiological Assessment.....	79
4.1.2 Assessment and Cognitive Processes.....	85
4.1.3 Assessment of Cognitive Distortions.....	88
4.1.4 Assessment of Cognitive Distortions among Sex Offenders with Learning Disabilities.....	100
4.1.5 Summary and Interim Conclusion.....	102
Chapter 5 - Study 1	104
5.0 Introduction.....	104
5.1.1 Method.....	106
5.1.2 Description of Participants.....	106
5.1.3 Sex offenders with Learning Disabilities.....	106
5.1.4 Offenders with Learning Disabilities.....	107
5.1.5 Non-offenders with Learning Disabilities.....	107
5.1.6 Normal males.....	107
5.1.7 Measures: Questionnaire on attitudes consistent with sex offences (QACSO).....	107
5.1.8 Procedure.....	109
5.2 Results for Study 1.....	111
5.2.1 Demographic Characteristics of the Sample.....	111
Figure 5.00 - Mean age of Participants in each group.....	111
Figure 5.01 – Mean IQ for participants in each group with learning	

Disabilities (LD).....	109
Figure 5.02 – Sexual convictions of participants.....	113
Figure 5.03 – Non-Sexual convictions of participants.....	114
5.2.2 Analysis Procedure and Results for Study 1.....	114
5.2.3 Reliability.....	114
5.2.4 Discriminative validity of individual items.....	115
Table 5.00 – Total number of items that discriminated wrongly in each subsection.....	117
5.2.5 Internal Consistency.....	118
Table 5.01 - A summary of the internal consistency scores from each of the final questionnaires (Set A questions).....	119
5.2.6 Discriminative validity of final items in each subsection.....	119
Table 5.02 - The mean Total Score for each of the groups with learning disabilities separated by scale.....	120
5.2.7 Discriminative Ability.....	121
Figure 5.04 - Final items for Rape and attitudes to women subsection.....	121
Figure 5.05 - Final Items for Voyeurism Subsection.....	122
Figure 5.06 - Final Items for Exhibitionism Subsection.....	123
Figure 5.07 - Final Items for Dating Abuse Subsection.....	124
Figure 5.08 - Final Items for Homosexual Assault Subsection.....	125
Figure 5.09 - Final Items for Offences Against Children Subsection.....	126
Figure 5.10 - Final Items for Stalking and Sexual Harassment Subsection....	127
5.2.8 Control group of ‘normal males’.....	127
5.2.9 Social Desirability.....	128
Table 5.03 - Percentage of socially unacceptable response to 4 items of the QACSO.....	128
Table 5.04 Percentage of socially unacceptable responses given to 4, 3, 2, and 1 item/s.....	129
5.2.10 Reading Scores.....	130
Table 5.05 - Flesch Reading Ease Scores for A Items.....	130
Table 5.06 - Flesch-Kincaid Scores for A Items.....	131
5.2.11(i) Principal Component Analysis.....	132
Table 5.07 – Eigenvalues and Percentage of Variance Accounted for by the 3 Components.....	133
Table 5.08 - Variables Comprising the Three Components with Variable Loadings as Determined by the Principal Component Analysis.....	134
5.2.11(ii) Voyeurism Subsection.....	136
Table 5.09 -Variables Comprising the Two Components with Variable Loadings as Determined by the Principal Component Analysis.....	137
Table 5.10 – Eigenvalues and Percentage of Variance Accounted for by the 2 Components.....	138

5.2.11 (iii) Exhibitionism.....	138
Table 5.11 -Variables Comprising the Component with Variable Loadings as Determined by the Principal Component Analysis.....	139
5.2.11 (iv) Dating Abuse Subsection.....	139
Table 5.12 -Variables Comprising the Two Components with Variable Loadings as Determined by the Principal Component Analysis.....	140
5.2.11 (v) Offences Against Children Subsection.....	140
Table 5.13 – Eigenvalues and Percentage of Variance Accounted for by the Components.....	141
Table 5.14 -Variables Comprising the Three Components with Variable Loadings as Determined by the Principal Component Analysis.....	142
5.2.11 (vi) Stalking and Sexual Harassment Subsection.....	142
Table 5.15 – Eigenvalues and Percentage of Variance Accounted for by the 3 Components.....	143
Table 5.16 -Variables Comprising the Three Components with Variable Loadings as Determined by the Principal Component Analysis.....	144
5.2.12 Group Characteristics and Subscale Scores.....	144
Table 5.17 – The mean Total Score on all factors for each group.....	145
5.2.13 Discussion.....	146
5.2.14 Methodological Issues.....	151
5.2.15 Recommendations for Future Research.....	153
5.2.16 Interim Conclusion.....	155
Chapter 6 – Empirical Studies.....	157
6.0 Introduction.....	157
6.1.1 Information Processing Studies.....	157
6.1.2 Social Information Processing Models.....	160
Figure 6.00 – Schematic outline of Social Information-Processing Model of Social Skills and Social Competence.....	161
Figure 6.01 – Navon task Stimulus.....	165
Figure 6.02 – Divided Attention Stimulus.....	166
6.2.0 Empirical Studies.....	168
6.2.1 Pilot Study.....	169
6.2.2 Methodology.....	169
6.2.3 Description of Participants.....	170
6.2.4 Procedure.....	170
6.2.5 Results for Pilot Study.....	170
Table 6.00 – Mean time ‘normal’ males spent looking at pictures.....	171

6.3.0 Study Two.....	171
6.3.1 Methodology.....	171
6.3.2 Description of Participants.....	172
6.3.3 Sex offenders with learning disabilities.....	172
6.3.4 Non-offenders with learning disabilities.....	172
6.3.5 Normal males.....	173
6.3.6 Apparatus.....	173
6.3.7 Stimuli.....	173
6.3.8 Procedure.....	173
6.3.9 Results for Study Two.....	174
6.3.10 Demographic Characteristics of the Sample for all 6 studies.....	174
Table 6.01 – Mean Age and IQ of each participant group in all 6 studies...	175
6.3.11 Analysis Procedure and Results for Study Two.....	175
Figure 6.1.3 – Mean time spent looking at pictures for all 3 groups.....	176
6.3.12 Discussion.....	176
6.4.0 Study Three – Introduction.....	179
6.4.1 Description of participants.....	179
6.4.2 Sex offenders with learning disabilities.....	179
6.4.3 Non-offenders with learning disabilities.....	180
6.4.4 Apparatus.....	180
6.4.5 Stimuli.....	180
6.4.6 Procedure.....	181
Figure 16 – Example of stimuli in Study Three.....	182
6.4.7 Results for Study Three.....	183
6.4.8 Analysis Procedure and Results.....	183
Figure 6.1.6 – Mean time to complete task for both groups.....	183
6.4.9 Discussion.....	184
6.5.0 Study Four – Introduction.....	185
6.5.1 Description of participants.....	186
6.5.2 Sex offenders with learning disabilities.....	186
6.5.3 Non-offenders with learning disabilities.....	186
6.5.4 Apparatus.....	186
6.5.5 Stimulus.....	187
6.5.6 Procedure.....	187

6.5.7 Results for Study Four.....	188
6.5.8 Analysis Procedure and Results.....	188
Figure 6.06 – Mean time to complete task for both groups.....	188
6.5.9 Discussion.....	188
6.6.0 Study Five – Introduction.....	190
6.6.1 Study Five.....	192
6.6.2 Description of Participants for the Divided Attention and Selective Attention Tasks.....	192
6.6.3 Sex offenders with learning disabilities.....	192
6.6.4 Non-offenders with learning disabilities.....	193
6.6.5 Apparatus.....	193
6.6.6 Stimulus.....	193
6.6.7 Procedure.....	194
6.6.8 Results for Study Five.....	196
6.6.9 Analysis Procedure and Results for Divided Attention Task.....	196
6.6.10 Analysis of Error Data for the Divided Attention Task.....	197
6.6.11 Analysis Procedure and Results for Selective Attention Task.....	197
6.6.12 Analysis of error data for the Selective Attention Task.....	198
Figure 27 – Mean number of errors made when identifying small and large letters in all 3 conditions for both participant groups.....	199
6.6.13 Discussion.....	199
6.7.0 Study Six – Introduction.....	203
6.7.1 Description of Participants for Attentional Bias Task and Inhibition of Return Task.....	205
6.7.2 Sex offenders with learning disabilities.....	205
6.7.3 Non-offenders with learning disabilities.....	206
6.7.4 Apparatus.....	206
6.7.5 Stimuli.....	206
6.7.6 Procedure.....	207
6.7.7 Results for Study Six.....	208
6.7.8 Analysis Procedure and Results for Attentional Bias Task.....	208
Figure 30 - Mean reaction times for both groups of participants on factors condition and trial.....	209
6.7.9 Analysis Procedure and Results for Inhibition of Return Task.....	209

6.7.10 Discussion.....	210
6.7.11 General Discussion.....	212
6.7.12 Recommendations for Future Research.....	216
6.7.13 Summary.....	217
Chapter 7 – Conclusions.....	218
7.0 Summary of Introductory Chapters.....	218
7.1.1 Summary of Findings for Study One.....	220
7.1.2 Contributions of the QACSO in the Assessment of Cognitive Distortions.....	221
7.1.3 Summary of Research Findings Investigating Attention Deficits.....	222
7.1.4. Contributions of Attentional Deficits to the Underlying Cognitive Processes of Cognitive Distortions.....	225
7.1.5. Future Research.....	227
7.1.6 Negative Priming.....	229
7.1.7. Final Summary.....	230
References.....	232
Appendix 1.....	259
Information Sheet for Study 1.....	259
Appendix 2.....	263
Participant Consent Form.....	263
Appendix 3.....	264
QACSO Version 1.....	264
QACSO Version 2.....	275
Questionnaire on Attitudes Consistent with Sex Offences – A, B and C items.....	280
Appendix 4.....	292
Formula to Calculate Flesch Reading Ease Score.....	292
Appendix 5.....	293
Formula to Calculate Flesch Kincaid Score.....	293
Appendix 6.....	294
Information Sheets for Studies 2, 3, 4, 5 and 6.....	294
Appendix 7.....	296

Sample of Pictures for Studies 2, 3, 4 and 6.....	296
Appendix 8.....	297
Divided Attention and Selective Attention Stimulus.....	297
Appendix 9.....	299
Diagram of valid trial in attentional bias task.....	299
Diagram of valid trial in inhibition of return task.....	300
Appendix 10.....	301
Scree Plots for each Subsections of the QACSO.....	301
Appendix 11.....	304
Full Factor Loadings for each Subsection of the QACSO.....	304
Appendix 12.....	310
ANOVA Tables.....	310

Chapter 1 – Defining Learning Disabilities and Sexual Offending

1.0 Defining Learning Disability

To date there is no single universally accepted definition for learning disability, although a number of key definitions have been put forward by the World Health Organisation, the International Classification of Diseases-10 (ICD-10), Diagnostics and Statistical Manual IV-TR (DMS-IV-TR), the Mental Health Act (1983), the British Psychological Society (BPS) and the American Association on Mental Retardation (AAMR).

The World Health Organisation published in 1992 the tenth revision of the International Classification of Diseases (ICD-10) which defines learning 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 inabilities’*. To assess an individual’s overall level of intelligence ICD-10 advocates that a ‘skilled diagnostician’ should administer and score a standardised intelligence test, as well as a scale to assess the level of social adaptation. Once an IQ score is obtained the diagnostician can then refer to a framework that subdivides learning disability (mental retardation) into four precise categories based on IQ scores. The four categories are mild, moderate, severe and profound levels of intellectual functioning. Table 1.0 shows the classification for learning disability according to ICD-10.

Table 1.0 Classification of ‘Mental Retardation’ under ICD-10

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

DSM-IV-TR defines learning disability as ‘*significantly subaverage 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 on an IQ scale would be classified as having significantly subaverage general intellectual functioning. To assess adaptive functioning, DSM-IV-TR lists a number of ways to ascertain whether someone has deficits or impairments with their adaptive functioning. Clinicians are advised to assess adaptive functioning by examining a person’s effectiveness in meeting the standards expected for his/her age by his/her cultural group in areas such as social skills and responsibility, communication, daily living skills, personal independence and self-efficiency.

DSM-IV-TR is not as inflexible as ICD-10 with its diagnostic criteria, as it states that even if an individual scores below 70 on an IQ score but shows good adaptive skills, they should not be diagnosed with a learning disability. Similarly, if an individual scores above 70 and below 84, but their adaptive skills are markedly impaired, DSM-IV-TR states that such individuals could be diagnosed with a learning disability. DSM-IV-TR also acknowledges the presence of ‘borderline intellectual functioning’, which ICD-10 fails to do. Table 1.1 outlines DSM-IV-TR’s classifications of learning disability.

Table 1.1 Classification of Learning Disability under DSM-IV-TR

Classification	IQ
Borderline intellectual functioning	approx. 70-84
Mild learning disability	50-55 to approx. 70
Moderate learning disability	35-40 to 50-55
Severe learning disability	20-25 to 35-40
Profound learning disability	below 20 or 25

The Mental Health Act (1983) defines learning disability using a two-tier classification system (e.g. mental impairment and severe mental impairment). Instead of using the term ‘learning disability’ the Mental Health Act (1983) opted to use the term ‘mental

impairment' and defined it as '*... a state of arrested or incomplete development of mind which include significant impairment of intellectual and social functioning...*' When defining 'severe mental impairment' the Mental Health Act substitute the word significant with severe, enabling the definition to read 'severe impairment of intellectual and social functioning', rather than 'significant impairment'. Problems arise when trying to establish exactly what is meant by the terms 'severe' and 'mental impairment,' as the Mental Health Act has yet to provide a clear explanation of the difference in the level of social and intellectual functioning needed to warrant either the 'severe impairment' or 'mental impairment' classification.

To make the two-tier classification of the Mental Health Act more operational the British Psychological Society (BPS) offered further clarification. Alves, Williams, Stevens and Prosser (1991) suggested that IQ scores and levels of social functioning should be used to classify someone as either having 'severe' or 'mental impairment'. An individual with an IQ between 55 to 69 would be classified as having a 'mental impairment.' Someone with an IQ of 54 or below would be classified as having a 'severe mental impairment'. Individuals who require occasional help with eating, washing, clothing themselves and keeping warm would be considered to have a 'significant mental impairment' of social functioning. However, an individual who requires repeated support when completing these tasks would be classified as having a 'severe impairment' of social functioning.

Finally, the American Association on Mental Retardation (AAMR) provides a rather comprehensive definition and explanation for what constitutes a learning disability. The AAMR states that three criteria must be fulfilled in order for someone to be classified as having a learning disability. Firstly, an individual must have significant impairment of their intellectual functioning. Secondly, their adaptive living skills must be impaired. 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 learning disability must occur before the age of eighteen years of age. However, an individual whose intellectual impairment is caused by a trauma, such as a head injury in adulthood, or dementia, would not be classified as having a learning disability by the classification set out by the AAMR.

It would appear that there is no single definition for 'learning disability' that is universally accepted and used in either a clinical or academic context. What is clear is that a major problem lies with trying to fix a 'borderline' between those who can and those who cannot be described as having a 'learning disability'. In general, the classification systems used to define learning disability would class someone with an IQ of 69 as having a learning disability, but an individual with an IQ of 70 as not. Who could say that an individual with an IQ of 70 would not require similar help and assistance to that of an individual with an IQ of 69? To address this issue DSM-IV-TR incorporated a broad 'Borderline Intelligence' category that includes individuals with an IQ that falls between 70 to 84. There are problems with this broad classification category, as it fails to offer further explanation or information when trying to distinguish between someone with an IQ of 69 and one with an IQ of 70. Lack of explanation has led clinicians and researchers to class individuals with an IQ that falls between 55 to 75 as having a mild learning disability, rather than follow the classification criteria set out by DSM-IV-TR (Swanson and Garwick, 1990; Charman and Clare, 1992).

After considering the above issues it was decided that the DSM-IV-TR definition of learning disability (mental retardation) would be adopted for use in this study for a number of reasons. In the first instance, it provides a comprehensive definition and explanation for what constitutes a learning disability, as well as recognises the need for a classification system that includes a borderline intellectual functioning category. By including this borderline category it makes this classification system more flexible than the AAMR, as it recognises the difficulty of setting and adhering to static classification criteria.

1.1.1 Single Factor Theories of Sexual Offending

According to Sahota and Chesterman (1998) no single definition for sexual offending exists, as legal definitions tend to change with time, as well as from country to country. Thompson and Brown (1997) highlight that researchers have their own preference for the terms they choose to use when describing sexual offending behaviour. Some researchers (Ryan, 1997; Manocha and Mezey, 1998) prefer to use the term sexually abusive behaviour when discussing sexual offending, whereas others (e.g. Becker and Murphy, 1998) specifically talk about paraphilia. Apart from the terms that are used to describe

sexual offending varying, so too does the actual behaviours that they cover. Indeed, Lanyon (1991) suggested that the act of sexual offending incorporates sexually deviant behaviours such as rape, child molestation, exhibitionism and voyeurism. However, Freund and Seto (1998) referred to paraphilic behaviours such as rape, voyeurism and exhibitionism, and also included fetishism, masochism and frotteurism.

As stated above, there is no single definition for sexual offending and the behaviours that it covers. Unfortunately, a similar situation exists when trying to explain why people sexually offend, as there is no single theory or explanation that can fully account for why individuals engage in sexually deviant behaviour. Traditionally the explanations that have been put forward to try to account for why individuals sexually offend have been single factor theories. Up until the 1980s research into the etiology of sexual offending was dominated by single factor theories including psychodynamic, feminist, biological and psychological explanations.

1.1.2 Psychoanalytic/Psychodynamic Theory

One of the first single factor theories developed to try to explain the etiology of sexual offending was proposed by the psychoanalytic school of thought. The psychoanalytic approach focuses on Oedipal conflicts, repression of the Oedipal desires and castration anxiety when trying to explain sexual offending. This approach postulates that sexual deviation is caused by a fixation at, or a regression to an infantile level of development (Redmond, 1978). Indeed, Rada (1978) suggests that the cause of an individual's sexual deviance can be traced back to their early childhood development and those infantile sexual desires and practices are continued into their adulthood.

The psychoanalytical/psychodynamic explanations have been developed to explain the causes of sexual offending and in particular the sexually deviant acts of rape and child molestation. To explain rape Cohen, Garofolo, Boucher and Seghorn (1971) developed a three-way classification system that suggests that the act of rape is carried out either for aggressive, sexual or sadistic purposes. If the rape is carried out for aggressive purposes it is believed that the motive behind the perpetrator's behaviour is to humiliate and degrade their victim. However, if the motivation behind the behaviour is sexual this suggests that

the rape is influenced by the individual's sexual fantasies. An individual may fantasise that their sexual skill is very good and this results in their sexual partner experiencing great pleasure. However, when their fantasy fails to be fulfilled they will keep having sex in an attempt to achieve their sexual fantasies. Finally, Cohen et al. (1971) suggests that rape may occur for sadistic reasons, as an individual's sexual and aggressive drives might work together in order for some level of violence to occur so that the individual can achieve sexual excitement.

Groth, Burgess and Holstrom (1977) developed a similar explanation to that of Cohen et al. (1971) when trying to explain rape. They argued that rape was motivated by either power or anger needs. Groth and colleagues divided power needs into two subtypes: power-assertive and power-reassurance. Power-assertive motives give individuals the drive to express their virility, mastery and control, whereas power-reassurance motives provide individuals with the opportunity to deal with any annoying doubts that they have about their own masculinity or sexual ability. According to Groth et al. anger needs can also account for rape. Indeed, anger rape enables an individual to use rape as a method to hurt and humiliate a woman. Individuals may use anger during rape as a means of retaliation; so that they can hurt women in order to get revenge for any wrong doings they feel were caused by women in general.

The psychodynamic school of thought has also put forward explanations that try to account for the etiology of child molestation. This approach suggests that an individual is not solely motivated by sex, but by additional factors including expression of non-sexual needs and unresolved life issues. Indeed, Groth, Hobson and Gray (1982) argue that individuals may become focused on children, as they have not developed psychosexually beyond that level themselves. However, Groth et al. (1982) also suggest that some individual's sexual development may involve appropriate sexual behaviour, but then something happens (e.g. failure with adult relationships) which causes them to become sexually involved with children.

Despite the psychodynamic explanation being one of the first single factor theories developed to try to explain the etiology of sexual offending and in particular rape and child molestation, there is no psychological or statistical evidence available to support these theories (Becker and Murphy, 1998). Without empirical support these theoretical

explanations have led researchers to conclude that the psychodynamic account for the etiology of sexual offending loses its credibility and support (Becker and Murphy, 1998).

1.1.3 Feminist Theory

The psychodynamic account for the etiology of sexual offending may have fallen from favour (Becker and Murphy, 1998), but its principles have influenced the feminist explanation of sexual offending. Groth, Burgess and Holstrom (1977) suggest that rape is motivated by power and aggression, a view that fits well with the ethos of the feminist school of thought. Feminists believe that males have a desire to dominate and control situations in order for them to maintain male supremacy (Herman, 1990). Males will use their power and aggression to enable them to gain and maintain their control and authority over women. Relating this to the etiology of sexual offending, feminists (Brownmiller, 1975; Griffin, 1971) argue that sexual assault serves as a mechanism by which terror and power can be used for male dominance to be preserved.

The belief that sexual assault is used as a method by which men maintain power and control is taken a stage further by the feminist school of thought. In a review of feminist literature Herman (1990) highlights that feminists argue that men not only believe sexual assault to be acceptable, they also engage in this behaviour because they find it rewarding. Finding sexual assault rewarding and pleasurable gives males the opportunity to exercise their male dominance and intimidate women. However, research findings from a study carried out by Malamuth and Thornhill (1994) question this feminist belief, as they found that although males have a desire to control women, they believed that the etiology of this need for control was caused by differing factors (e.g. sexual aggression and “hostile masculinity” [i.e. sexual dominance, hostility towards women and attitudes supporting aggression against women]) to the ones raised by feminist theorising (e.g. power and aggression motivated by male supremacy).

Apart from male dominance and power being used to explain sexual offending, specific feminist theories have been developed: the feminist theory of male socialisation and the victimisation explanation (Brownmiller, 1975). The theory of male socialisation examines the role it plays in accounting for sexual offending behaviour by focusing on the attitudes

that males have that are supportive of sexually aggressive behaviour. Experimental designs have tried to measure males' attitudes towards rape and sexual stereotypes. Indeed, research investigated the relationship between attitudes and aggressive behaviour among a subset of sexually aggressive individuals (Malamuth, Sockloskie, Koss and Tanaka, 1991). This study found that there was some support for the relationship between attitudes and aggressive behaviour. However, before any strong conclusions could be drawn from this research, this study would need to be replicated using a sample of individuals who had a sexual offending history. Comparisons would need to be made between the attitudes towards rape and sexual stereotypes held by non-offenders compared to sexual offenders. If there was a significant difference in the attitudes held by these two comparisons groups then some form of conclusion could be made. Indeed, if sex offenders held stronger attitudes related to rape and sexual stereotype than non-offenders, this could offer support for the feminist belief that male socialisation and in particular their development of attitudes could explain sexual offending. Unfortunately, no such conclusion can be made as this research has yet to be instigated.

The feminist approach also proposes the victimisation explanation for sexual offending. This approach argues that if an individual is sexually abused they will in turn go on to be a sexual abuser. If this theory were the sole explanation for sexual offending you would expect a concordance rate of 100% between personal sexual abuse and sexual offending. However, this is not the case, as many individuals who have been sexually abused do not go on to engage in sexually abusive behaviour. Indeed, McCarthy and Thompson (1997) found that of the sex offenders tested, 25% had personal experience of sexual abuse. When Thompson (1997) investigated the personal history of 75 individuals who had been sexually abused, he found that 23% of them had themselves been abused. Consistent with this finding, Lindsay, Law, Quinn, Smart and Smith (1998) found that when a group of 48 sexual offenders with learning disabilities were examined 38% had experienced sexual abuse. These findings suggest that experiencing sexual abuse in childhood does not determine whether an individual will go on to sexually offend in adulthood.

The above discussions have highlighted that the psychodynamic and feminist theories may offer some insight into the etiology of sexual offending, but neither theory can fully explain why individuals engage in sexually deviant behaviour. Another single factor theory that attempts to explain the etiology of sexual offending is the biological approach.

1.1.4 Biological Theories

Particular interest has developed into the etiology of sexual offending, as it is felt that a better understanding will facilitate treatment and prevention programmes. Attention has therefore been directed towards biological explanations to try to explain why individuals sexually offend. To date there is no single biological explanation that can fully account for why individuals engage in sexually deviant behaviour; although Lanyon (1991) suggests that the biological theories that are used fall under one of three categories: plasma testosterone, brain dysfunction, or aggression.

The level of plasma testosterone present in an individual may influence whether or not they engage in sexually deviant behaviour. Rada, Laws and Kellner (1976) investigated the level of plasma testosterone present in a group of rapists compared to a group of non-rapists. No significant difference was found between the two groups, although Rada and colleagues did find that the rapists who had been involved in aggressive assaults had higher levels of plasma testosterone. Other research studies have also found that individuals who are aggressive tend to have higher levels of plasma testosterone (Dolan, Anderson & Deakin, 2001; Aromaki, Lindman & Eriksson, 1999). These research findings imply that it might be plausible to suggest that in order to try to reduce the level of aggression amongst sexual aggressors and aggressors in general, future treatments should try to reduce their level of plasma testosterone. Researchers such as Thibaut, Kuhn, Cordier and Petit (1998) have suggested this could be achieved through hormonal treatments. Thibaut et al. (1998) report that their use of hormonal treatment did reduce plasma testosterone levels and sexual aggression; however, their results may have been influenced by other factors. They failed to control for the effects other types of therapies as the hormonal therapy was not used alone, but it was administered in conjunction with psychotherapy. Future research needs to address this methodological flaw and carry out a controlled study where there is at least three comparison groups: hormonal treatment alone, psychotherapy alone and both hormonal and psychotherapy.

Brain dysfunction has also been suggested as an explanation for sexual deviance, despite there being no research that can provide conclusive evidence to indicate that brain dysfunction could be the sole cause of sexual deviance. Hucker, Langevin, Dickey, Handy, Chambers and Wright (1988) did find slight differences in the neurological and

neuropsychological examinations of sexually aggressive males compared to control subjects, however those differences were not found to be statistically significant. Indeed, using the Luria-Nebraska Neuropsychological Test Battery (LN test) to examine brain function, Hucker et al. (1988) found sexual offenders' to have more global impairment, compared to a control group of non-violent, non-sexual offenders. Despite observing this difference, Hucker et al. were unable to identify the brain sites responsible for these global impairments, as the LN test does not have the ability to do this.

Becker and Murphy (1998) suggested that caution should be exercised when using brain dysfunction as an explanation for sexual offending, as they believe that the studies that have tested the role brain dysfunction plays in sexual offending have a number of methodological flaws. First they argue that studies that have investigated brain, and in particular structural brain damage, have failed to use random samples. They also suggest that studies that have investigated structural brain damage have failed to carry out further studies to examine whether they are able to replicate their initial findings. Considering these methodological weaknesses, Becker and Murphy (1998) concluded that no strong evidence exists that could fully support the view that brain dysfunction is a single causal factor in sexual offending.

In contrast to the biological explanations for sexual deviance that have already been discussed, there has been some research to suggest that mental health problems can account for sexual deviance. Since 1998 Sahota and Chesterman have been investigating the relationship between sexual offending and mental illness. In a study that examined 20 mentally ill sex offenders, Chesterman and Sahota (1998) found support for a link between sexual offending and psychosis. However, recent research by Fazel, Hope, O'Donnell and Jacoby (2002) does not offer support for Chesterman and Sahota's view. Fazel et al. (2002) suggested that the cause of sexual offending might not be due to mental illness or a biological cause, but rather personality factors. In their study Fazel et al. examined elderly sex offenders and non-sex offenders and found that the prevalence of mental illness for the two groups did not differ. They did find that the elderly sex offenders presented with a higher incidence of certain personality traits (e.g. schizoid, obsessive-compulsive and avoidant traits) than the non-offenders. This finding led Fazel et al. to conclude that the cause of sexual deviance may rest with personality factors rather than biological or mental illness explanations.

Future researchers may wish to consider Berlin's (1983) view when trying to explain the etiology of sexual deviance. He suggests that the causes of sexually deviant behaviour may be multiple. Indeed a variety of explanations may account for sexual offending, some of which may be biological in origin (Berlin, 1983).

1.1.5 Psychological Explanations – Behavioural Accounts and Learning Theory

A number of researchers have proposed psychological explanations and in particular behavioural accounts for the etiology of sexual offending (Quinsey and Marshall, 1983; Abel, Blanchard, and Becker, 1978). Based on the premise that behavioural therapy techniques can be used to treat sexual deviance (Earls and Castonguay, 1989), researchers believe that the cause of sexually deviant behaviour may lie with a behavioural explanation.

Learning theories based on classical, operant or social learning theory principles have been put forward to try to explain the etiology of sexual deviance. However, Schwartz (1984) argued that when trying to explain sexual deviance or sexual offending it was difficult to do so by using only a classical or operant conditioning explanation. He believed that classical and operant conditioning assisted one another when trying to explain the cause of sexual deviance.

The principles of classical conditioning can be used to demonstrate how an individual could develop a sexual deviance. An individual would associate a sexual fantasy with the action of masturbation that would result in the individual experiencing high sexual arousal and an orgasm. The individual would continue with this pairing until eventually all he would need to do was think of the fantasy and this would cause him to experience high sexual arousal. However, as earlier stated Schwartz (1984) believed that classical conditioning did not work alone when trying to illustrate how a sexual deviance was learned. He believed that reinforcement had a part to play in the process when trying to explain sexual deviance. For example, an individual's behaviour would be reinforced because he enjoyed the sexual arousal that he experienced when he thought about his sexual fantasy. This pleasurable experience he obtained from his sexual fantasy would act as positive reinforcement to that behaviour.

The above description attempts to explain how classical and operant conditioning principles can be used to explain sexual deviance in general. However, can such principles explain a specific sexually deviant act such as rape? Laws and Marshall (1991) applied the principles of classical and operant conditioning to explain rape. They suggested that an individual might think about his sexual fantasy and wish to carry it out; although when he attempts to act out his fantasy he is rejected by females and this causes him to become angry. Violence and force may then enter his fantasy, as this will enable him to obtain the sexual arousal that he initially got from his sexual fantasy. The presence of violence and force in the individual's sexual fantasy may cause him to act out his fantasy in a sexually aggressive way that results in him raping a woman.

Social learning theory can also be used to explain sexual deviance. Based on the principle of Bandura's social learning theory (Bandura, 1977), sexual deviance could be learned via three processes: participant modelling, vicarious learning and symbolic modelling. Participant modelling involves an individual observing another person's behaviour and then copying it. For example, an individual may watch his father or friend masturbate and try to copy that behaviour. The father or friend may offer instruction to the child observing them and this enables the child to learn a particular behaviour that will result in sexual arousal. Vicarious learning also involves an individual copying another person's behaviour. However, this time the person is not aware that they are being observed and therefore will not offer any tuition. Finally, symbolic modelling occurs when an individual replicates an individual's behaviour through thought and mental images.

Although the principles of learning theories have been used to try to explain the cause of sexual deviance in general, Lanyon (1991) argues that they fail to fully account for the role behavioural principles play in explaining specific sexually deviant acts such as rape, child molestation, exhibitionism or voyeurism. Lanyon suggests that this is probably due to a lack of theoretical literature. Research into the role behavioural principles play in shaping sexual deviance might have been hindered by ethical constraints. As it is unethical to use behavioural principles to teach someone to be sexually deviant, researchers have had to rely on using treatment outcomes from behavioural techniques to help them explain how learning theory could explain sexual deviance (Quinsey and Marshall, 1983).

1.1.6 Psychological Accounts – Empathy Deficits

Empathy is another example of a psychological explanation that has been suggested to explain the etiology of sexual offending. Researchers have argued that sexual offenders have deficits in their ability to empathise (Marshall, Hudson, Jones & Fernandez, 1995; Burke, 2001; Roys, 1997). This finding has led researchers to suggest that those empathy deficits may play an important role in the development and maintenance of sexually deviant behaviour (Marshall et al., 1995).

Empathy has been defined by Moore (1990) as *‘the ability to understand and identify with another person’s point of view, the capacity to experience the same feelings as another, and cognitive role/perspective-taking.’* Indeed, empathy indicates an individual’s ability to understand and imaginatively enter another person’s feeling. Individuals may sexually abuse a female as they become sexually aroused during the attack, but are unable to stop the attack as they do not recognise or have any consideration for the female’s distress (Barbaree, Marshall and Lanthier, 1979).

Burke (2001) specifically investigated sex offender’s ability to empathise. He measured the adolescent male sex offenders’ level of empathy and compared it to the level of empathy among a comparison group of non-offenders. Burke found that on the overall score of empathy, sex offenders scored significantly lower than the non-offenders. These results were consistent with the findings from similar research studies (Rice, Chaplin, Harris & Coutts, 1994; Lindsey, Carlozzi & Eells, 2001; Fisher, Beech, & Browne, 1999). However, earlier research by Hoppe and Singer (1976) failed to produce findings that supported these research studies. Hoppe and Singer did not find a significant difference in the level of empathy among sex offenders and non-offenders. In their study, they measured the empathy levels of rapists, child molesters and non-offenders and were surprised to find that these groups did not differ significantly from one another. Similar research by Langevin, Wright and Handy (1988) found no significant deficits in the emotional empathy of sex offenders compared to non-offenders.

The research studies investigating empathy among sex offenders indicate that there are inconsistencies with the claims that sex offenders have empathy deficits. These inconsistencies might be the result of the type of assessment tools that researchers use to

measure empathy. Although there are many measures that claim to assess empathy, there are three that are used regularly in research studies: Hogan's Empathy Scale (Hogan, 1969); the Emotional Empathy Scale (Mehrabian and Epstein, 1972); and the Interpersonal Reactivity Index (Davis, 1983). A review study carried out by Choplan, McCain, Carbonell and Hagen (1985) on Hogan's Empathy Scale and Mehrabian and Epstein's Scale found them to have relatively good psychometric properties. In general, both measures were found to be reliable and valid. However, when Cross and Sharpley (1982) investigated the psychometric properties of the Hogan Empathy Scale, their findings did not offer support for those of Choplan et al's. (1985) findings. Cross and Sharpley found Hogan's scale to have poor internal consistency and low reliability estimates. Apart from the discrepancies over the psychometric properties of these empathy assessment tools, Choplan et al. found that Hogan's Empathy Scale and Mehrabian and Epstein's Scale measured different aspects of empathy. Indeed, Hogan's scale was found to assess role-taking skills. Greer, Estupinan and Manguno-Mire (2000) also found that these empathy measures failed to take into consideration situational or individual differences that may affect an individual's empathic response. They pointed out that the three most regularly used empathy measures tend to view empathy in a trait-like manner, assuming that an individual's response will be the same in all situations or that they are deficient in empathic responsiveness.

To address some of the problems that have been identified with the way empathy is viewed, measured and assessed; Marshall, Hudson, Jones and Fernandez (1995) developed a four-staged process model of empathy. This model proposes that an individual must progress through all four stages (i.e. emotion recognition, perspective taking, emotion replication and response decision) in order for him or her to be able to empathise.

The first stage of the process, emotion recognition, requires the individual to identify the emotion that the individual is experiencing. Once the individual has identified the emotion he can move onto the second stage – perspective taking. This stage of the process requires that the individual try to put himself in the other person's shoes and try to see the world from that person's perspective. The individual now needs to try to imagine the same emotion that the person he is observing is experiencing. This is the third stage of the process – emotion replication. Finally, the fourth stage of the process, response decision,

requires the individual to decide how to act based on the information that they have obtained from the three previous stages.

Marshall et al. (1995) have suggested that sexual offenders may not have a problem with the first three stages of their empathy model. Sexual offenders may have a problem with the fourth stage of the empathic process, as they may have deficits with their decision making abilities. To test this Marshall et al. suggest that future studies need to examine each stage of the process, rather than try to assess empathy as a whole.

Geer and colleagues reviewed general empathy research that had not been specifically designed to test Marshall et al's model. However, Geer et al. suggested that certain studies did in actual fact test particular stages of the four-staged model. The studies reviewed by Geer et al. tend to review the first stage of Marshall et al's model (e.g. emotion recognition). Indeed, Geer and colleagues examined research carried out by Hudson, Marshall, Wales, McDonald, Bakker and McLean (1993). In this study, participants were required to look at various slides of male and female expressions. Hudson et al. found that the sexual offenders demonstrated the least sensitivity to the emotional stimuli, compared with the violent non-offenders who appeared to be the most sensitive to the stimuli. Both groups of participants found it difficult to differentiate between the emotional expressions fear and surprise, which led researchers to hypothesise that sexual offenders may interpret fear as surprise, thus accounting for why sexual offenders tend to interpret the victim's behaviour as positive rather than negative during a sexual attack (Geer et al., 2000).

Consistent with Hudson et al's research findings, Marshall, Fernandez, Lightbody and O'Sullivan (1994) found similar results. They found that sexual offenders experienced difficulties when requested to recognise emotions. Both these studies suggest that sexual offenders have deficits with emotion recognition and thus the first stage of Marshall et al's four-staged process model of empathy.

Unfortunately, there is still a lack of knowledge about the remaining three stages of Marshall et al's model. Marshall et al. (1994) did suggest that sexual offenders have deficits with stage two and three of their process, but there has been no independent research carried out that is able to substantiate their claims. Future research needs to design experimental research that will examine stage two, three and four of Marshall et

al's model. This is particularly important if researchers wish to follow Geer et al's. (2000) and Marshall et al's. (1995) views and test empathy in a way that does not rely on global and trait-like measures. Future research must also recognise that there may be individual, as well as situational differences involved when testing empathy.

Sex offender literature comprises of a vast amount of theories and explanations that have attempted to explain the etiology of sexual deviance or sexual offending. To date these theories have ranged from biological to psychological explanations such as empathy. Unfortunately, no theory or explanation has been able to fully explain sexual deviance or offending for a number of reasons. Psychological literature reviewing empathy deficits has been criticised for trying to assess empathy in a global manner (Geer et al. 2000) and using assessment tools that have been found to have inconsistencies with their psychometric properties (Choplan et al., 1985). Behavioural explanations have also been criticised as they fail to fully account for the role behavioural principles play in trying to explain sexual deviance (Lanyon, 1991).

1.1.7 Psychological Accounts – Cognitive Processes

In the 1980s there was a change in direction to the way sexual deviance and offending was studied. This change was motivated by a 'cognitive revolution' that recognised the importance of the cognitive processes' of sexual offenders when trying to explain the etiology of sexual offending. There was an explosion of research into investigating the cognitive processes' of sexual offenders and in particular examining their cognitions.

Attention has focused on the role cognitions play in trying to explain the etiology and maintenance of sexual behaviour. Researchers (Bumby, 1996; Stermac and Segal, 1989; Ward, Hudson, Johnston and Marshall, 1997) have focused on investigating the distorted cognitions of sexual offenders, as they are believed to play a pivotal role in the etiology, maintenance and justification of sexual behaviour. Bumby (1996) argued that cognitive distortions were '*learned assumptions, sets of beliefs, and self-statements about deviant sexual behaviours such as child molestation and rape, which serve to deny, justify, minimise and rationalise an offender's actions.*' Despite researchers believing that cognitive distortions play a central role in sexual offending, to date there is little research

to support or explain the exact role cognitive distortions play in sexual offending behaviour (Bumby, 1996; Ward, Hudson, Johnston and Marshall, 1997). Indeed, Ward, Fon, Hudson and McCormack (1998) have argued that understanding of the role cognitive distortions play in the etiology of sexual offending has been hindered by a deficiency in any theoretical framework that would enable models to be developed and empirical research carried out.

There is still a great deal of research interest into the role cognitive distortions play in sexual offending. In particular attention has focused on trying to develop assessment instruments that have good psychometric properties and are able to assess cognitive distortions, as researchers believe that distorted cognitions can be a valid predictor of treatment potential (Bumby, 1996). Research has also attempted to investigate the cognitive mechanisms that generate the cognitive distortions held by sexual offenders (Murphy, 1990; Ward, Hudson, Johnston and Marshall, 1997; Ward and Keenan, 1999). Understanding these mechanisms may provide insight into how cognitive distortions allow sexual offenders to justify and rationalise their sexual offending behaviour. With the growing research interest in this area, this is an issue that warrants further attention and will be addressed in chapter three of the thesis.

1.1.8 Multifactor Theories of Sexual Offending

From the literature reviewed in this chapter it is clear that single factor theories are unable to fully explain the etiology of sexual offending. Further insight into the causes of sexually deviant behaviour may lie with a number of factors, rather than just one single cause (Becker and Murphy, 1998).

Ward and Hudson (1998) criticised single factor theories for being narrow in their focus. Failing to address a variety of issues that could explain sexual offending led Ward and Hudson to suggest that the factors that are dealt with in single factor theories should be incorporated into multifactorial models, as this would offer a wider focus and incorporate a number of causal factors. There are two multifactorial models that have attempted to investigate a number of casual factors in order to facilitate our understanding of the

etiology of sexual offending behaviour: Wolf's (1984) multifactor model and Finkelhor's (1984) model of sexual offending.

Wolf (1984) developed a model that attempted to explain the etiology of sexual offending as being the result of an individual's personal development. This model proposes that early childhood experiences shape an individual's personality and thus play an influential role in whether he will go on to sexually offend. According to Wolf most sexual offenders tend to have experienced an upbringing that has subjected them to physical or emotional abuse, neglect or belonging to a dysfunctional family. He suggested that an individual does not necessarily have to personally experience the abuse, but just being present and observing the abusive attitude is enough to have a detrimental effect on the development of an individual's personality. Observing or experiencing abusive behaviour or attitudes result in the individual learning inappropriate behaviour, which in turn leads the individual to develop a belief system that supports the idea that males are superior and powerful. This belief enables individuals to engage in whatever behaviour they wish to.

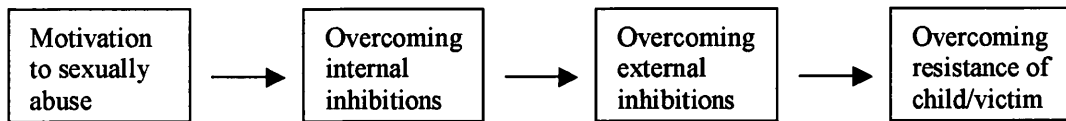
Wolf's multifactor model combines ideas from the behavioural, sociological and feminist school of thought when trying to explain the etiology of sexual offending. This model suggests that an individual will go on to sexually offend because they have learnt from personal experience or observation (e.g. vicarious learning), as well as hold feminist beliefs that males are superior and wish to have power over women. Unfortunately, research has been unable to support the view that rape myths, power and male dominance can account for sexual offending behaviour. Indeed, research has found that sexual offenders and in particular rapists' attitudes towards women do not differ significantly from non-sexual and non-offenders (Stermac and Segal, 1984; Bumby, 1996; Blementhal, Gudjonsson and Burns, 1999).

Wolf's model also suggested that the general way in which individuals are socialised would shape their personality and development. Through observation and modelling they will learn from their peers and society in general. Finkelhor (1986) also shared this view, as he believed that sociological factors play an important role in accounting for sexually deviant behaviour and felt that this was an area that had been neglected by single factor theories. To address this area of weakness, Finkelhor (1984) developed a multifactor model that attempted to explain the cause of sexual offending. He proposed a four-staged

process that tried to explain sexual offending against children. Although this model was initially developed by Finkelhor to explain child sexual abuse, it has been modified to explain sexual offending in general (Thompson and Brown, 1997).

According to Finkelhor's model there are four stages that describe the conditions needed for an offence to take place. The first stage is described as the 'motivation to abuse sexually' and refers to the likelihood of an offence occurring being determined by how motivated the individual is to engage in sexually deviant behaviour. According to Finkelhor an individual's level of motivation can be influenced by a number of factors. In the case of child abuse, a sex offender's motivation may be influenced by the way in which an abuser views a child. Canter, Hughes and Kirby (1998) argued that individuals who sexually abuse children may not all be alike, but they generally view children in a special way. A child molester may view children as weak and non-threatening individuals who they are able to control. The motivation of sexual offenders may also be influenced by their own childhood experiences. If abusers were abused this may cause them to go on to offend as they have learned to identify with the aggressors role. If this were true we would expect all sexual abusers to have been abused or observed abuse during their childhood. However, research has found that many sexual abusers never experience any personal abuse (McCarthy and Thompson, 1997; Thompson, 1997; Lindsay, Law, Quinn, Smart and Smith, 1998).

Finkelhor referred to the second stage of his model as 'overcoming internal inhibitions.' This stage of the model refers to individuals being aware that the deviant sexual beliefs that they find arousing are wrong, but they will overcome their inhibitions by convincing themselves that they will not get caught, use drugs or alcohol as disinhibitors or develop cognitive distortions that will allow them to justify and rationalise their beliefs. Once a sex offender has overcome their internal inhibitions they can then deal with the third stage of Finkelhor's model: 'overcoming external inhibitions.' Sexual offenders need to create situations where they can get access to children. Often this stage of the offending process is referred to as 'grooming' and involves the offender engineering situations where he can meet with a child. They may buy the child sweets or give them money in an attempt to get the child to trust them. The offender may also try to befriend the parents of a child by offering to baby-sit, as this would also give him access to children.

Figure 1.0 Finkelhor's four staged model of offending

The final stage of Finkelhor's model deals with 'overcoming the resistance of the child/victim.' The offender achieves this by continuing with the 'grooming' procedure. If the sex offender is met with any resistance from the child he will try to bribe the child with gifts, money or threats. Figure 1.0 shows a diagrammatic version of Finkelhor's four-staged process that attempts to explain sexual offending. This diagram suggests that each stage of the offence chain logically leads on to the next, indicating that individuals need to deal with each stage of the process before they will sexually offend. However, Ward and Hudson (1998) identified a particular weakness with this model, as they felt the model failed to explain each stage of the process in detail. The first stage of Finkelhor's model states that an individual must have the motivation to sexually offend and suggests that this motivation is influenced by the way the potential offender views a child. Despite Finkelhor stating what some of the views might be (i.e. the child as weak or vulnerable), Ward and Hudson argued that the model failed to explain how such views were initially acquired and how they could influence an individual's motivation. Ward and Hudson felt that each stage of the model failed to explain the actual processes that were involved in accounting for how an individual becomes motivated, overcomes internal and external inhibitions and how they overcome resistance from the child or victim. In Ward and Hudson's view, the model also failed to explain how each stage of the four stage process interacted and could account for why an individual sexually offended.

In general, multifactor models have been criticised for failing to provide enough information that fully explains each stage of the model, as well as how the stages interact in order to explain sexual offending. Ward and Hudson (1998) also argue that multifactor models fail to identify the importance of personality, developmental experiences and genetic inheritance when trying to explain sexual offending, as the models tend to focus

only on situational and causal features. These models place a great deal of importance on factors such as access to victim, stress or intoxication accounting for sexual offending rather than distal factors (e.g. personality, developmental experiences and genetics).

From the material discussed above on both single and multifactor theories of sexual offending, it would appear that there is still no one theory that is able to fully explain the etiology of sexual offending. Limitations appear to exist with all theories and Hudson and Ward (2000) have argued that the current theories on etiology of sexual offending fail to attempt to integrate the theories or explanations together. Current theories are mutually exclusive from other theories and fail to develop new theories that incorporate important aspects from already developed theories. A similar view is held by Kalmar and Sternberg (1988) who argue that by failing to incorporate important aspects from already existing theories, this in turn hinders the development of new theories that may offer further insight into the etiology of sexual offending. Kalmar and Sternberg believe that researchers should acknowledge what has already been developed to prevent future investigations from examining different parts of the same phenomenon.

To overcome some of the flaws with current theories into the etiology of sexual offending Hudson and Ward suggest that global theories should be developed. These global theories should integrate key features from single and multifactor models and ensure that detailed explanations are provided for each stage or process of the model. Global models will also be required to address specific flaws that have been identified with the single and multifactor models. Ward and Hudson criticised multifactor models for failing to explain how each part of the model interacted in order to explain how an individual sexually offended. Global theories must tackle this issue if they hope to provide insight into how future models will explain the offence chain.

According to Hudson and Ward global models must also focus on distal as well as situation and causal factors when trying to explain the etiology of sexual offending. Single and multifactor models were criticised by Ward and Hudson for either focusing just on distal or situational factors. Future research should give equal weighting when investigating factors such as access to victim, stress or intoxication and distal factors such as personality, developmental experiences and genetics.

Despite Ward and Hudson (1998) suggesting that global theories are needed to facilitate and improve current understanding of what causes an individual to sexually offend, to date there is still no sign of this all encompassing theory. Rather than wait until this global theory is developed some researchers have diverted their attention onto specific aspects that they feel play an important part in sexual offending behaviour.

Since the 1980s researchers (e.g. Bumby, 1996; Stermac and Segal, 1989; Ward, McCormack, Hudson, and Polaschek, 1997) have focused their attention on the role cognitions play in accounting for sexual offending behaviour, as they believe that they play an important role in the etiology, maintenance and justification of sexual offending. Although there has been a great deal of research interest into the area of cognitive distortions and sexual offending there is little research that is able to explain the exact role they play in facilitating and justifying sexual offending. Despite this it is generally accepted that cognitive distortions do play a very influential role in sexual offending (Bumby, 1996; Ward, Hudson, Johnston & Marshall, 1997; Ward, Keenan, & Hudson, 2000; Hudson & Ward, 2000; Hayashino, Wurtele & Klebe, 1995) and this could account for why there has been a great deal of interest into treatment programmes using methods which challenge sex offender's cognitions (Lindsay, Olley, Jack, Morrison & Smith, 1998; Lindsay, Neilson, Morrison & Smith, 1998; Marshall & Serran, 2000). Treatment programmes that have targeted cognitive distortions of sex offenders have obtained promising results. Lindsay (1998) reviewed the treatment progress of 49 sex offenders with learning disabilities between 1990 and 1996. Part of the treatment programme that they received focused on challenging their cognitive distortions. Lindsay found that of the 49 clients reviewed, 23% of the cohort had either re-offended or were suspected of re-offending in the 12 months following their discharge from treatment. This figure is notably lower than recidivism rates quoted by other researchers (Marshall, Jones, Ward, Johnston & Barbaree, 1991; Klimecki, Jenkinson & Wilson, 1994; Furby, Weinrott & Blackshaw, 1989). This low recidivism rate may have been influenced by the emphasis placed on treatment programmes assessing and challenging cognitive distortions. Treatment programmes failing to put a strong focus on challenging sex offenders' cognitive distortions may have led to higher rates of recidivism (Marshall et al. 1991; Klimecki et al. 1994). Although these treatment programmes were cognitively based their focus might have been on empathy, sexual fantasies or relationship skills, rather than specifically assessing and challenging cognitive distortions. Conclusions cannot be made

that state that the difference in recidivism rates were due to one treatment programme putting more of an emphasis on challenging cognitive distortions than another, as other factors need to be taken into consideration.

Cognitive-behavioural treatment programmes that are used to treat sex offenders tend to target a number of areas (e.g. cognitive distortions, empathy, self-esteem, intimacy and attachment issues, coping skills, substance abuse and anger; Marshall et al. 2000). To investigate the role cognitive distortions play in sexual offending future research must carry out controlled treatment outcome studies. These studies must clearly define the content of the treatment programme under investigation, as this will enable comparisons and conclusions to be made.

The current research findings into cognitive distortions and sexual offending provides future researchers with food for thought and suggests that this area of research needs to be examined further. Carrying out further research in this area may offer further insight into the etiology of sexual offending, as well as provide material that could be incorporated into a global theory.

1.1.9 Summary

The principle aim of this chapter was to outline and try to establish clear definitions of learning disability, as well as discuss theories that have been used to try to explain the etiology of sexual offending. It was felt important that this thesis attempted to define the term learning disability and thus justify why a particular definition was adopted for use in this thesis. The DSM-IV-TR definition for learning disability was adopted, as it seemed to be flexible and allowed individuals with an IQ of 75 to be included in the mild learning disability category. It was also necessary to identify some of the theories that have been developed to try to explain the etiology of sexual offending. Unfortunately, despite single and multifactor models being developed, no one theory is fully able to account for why an individual sexually offends. However, current and past research has generally identified that there are a number of factors involved when trying to explain the etiology of sexual offending. Indeed, research has highlighted that cognitive distortions play an important

role in the etiology of sexual offending. This is an area that will be discussed in much more detail in chapter three of this thesis.

Chapter 2 – The Relationship between Learning Disability and Sexual Offending

2.0 Introduction

Interest into the relationship between crime and learning disability has been around since the early 1900s (Lund, 1990). Indeed, Goring (1913) held the simplistic opinion that “*the greatest single cause of delinquency and crime is low grade mentality, much of it within the limits of feeble-mindedness*” (cited in Lund, 1990. pg. 726). Barron, Hassiotis and Banes (2002) also argued that low intelligence is a factor that is associated with crime and delinquency. Unfortunately, the link between crime and learning disability is not as simplistic as Goring (1913) or Barron et al. (2002) suggest. Understanding of the true nature of the relationship between learning disability and crime has been hampered by a lack of research into the identification, assessment and treatment of offenders (Taylor, 2000; Johnston and Halstead, 2000; Thompson, 1997; Caparulo, 1991). Factors such as the revision of mental health legislation (Lindsay and Holland, 2000), changes in government policies to ensure provisions are in place to protect the human rights and dignity of individuals with learning disabilities (Holland, Clare and Mukhopadhyay, 2002) and the resettlement of individuals with learning disabilities from long-stay hospitals into the community (Day, 1993) have driven research within the past decade to focus on forensic issues among the population with learning disabilities. By considering these factors, as well as the examination of current literature regarding the prevalence of offending by males with learning disabilities and the characteristics associated with offending, this chapter aims to show how the opinions have been developed with regard the relationship between learning disability and crime.

2.1.1 Prevalence of learning disability among prison populations

Since the early 1970s, a number of investigations of individuals within the criminal justice system has led some researchers to conclude that there is ample evidence to suggest that individuals with learning disabilities are over represented in the offender population (Day, 1994; Hayes, 1991; Griffiths, Quinsey and Hingsburger, 1989). Indeed, research carried out by Brown and Courtless (1971) played a very influential role in shaping this opinion. Brown and Courtless carried out a survey that examined state correctional facilities in the

United States of America. Information on the prevalence of IQ within the prisons, the nature of offence committed and the treatment programs available was collected from all the state correctional facilities participating in the survey. Over 80% of the state correctional facilities provided information on over two hundred and seventy thousand inmates.

Examination of the original 270,000 sample enabled Brown and Courtless to obtain information regarding IQ for ninety thousand inmates. The mean IQ for this sample was 93.2, with a standard deviation of 17.1. Brown and Courtless employed a cut-off IQ of ≤ 69 , which is consistent with both the American Association on Mental Retardation (AAMR) and the Diagnostics and Statistical Manual IV-TR (DMS-IV-TR) diagnostic classification of learning disability. Using this cut-off they calculated that the prevalence of learning disability among this sample was 9.5%.

Apart from the results of this study being influential in shaping opinions about the high prevalence of offending among a population with learning disabilities, it has also led researchers (Barron et al. 2002) to conclude that it is a very controversial study. It highlights a number of serious methodological flaws with the way assessment tools were administered, the failure to ensure that the same assessment measures were used with each inmate and the environment in which psychometry was undertaken. The problems associated with defining what constitutes a learning disability also posed problems for Brown and Courtless's study.

Brown and Courtless did not have any control over the way in which the assessment tools used in their survey were administered; neither did they have any say in which measures were used. In some cases intelligence tests were administered by members of staff who were neither qualified nor proficient in the administration of intelligence tests. Failure to ensure consistencies with the assessment measures used and the way in which they were administered presented problems for Brown and Courtless when trying to make comparisons between the different institutions and offenders. The environment in which the assessment took place may also have influenced the prevalence rate of offenders with learning disabilities. According to researchers, (Gudjonsson, Clare, Rutter and Pearce, 1993; Barron et al, 2002) undertaking psychometric assessment in stressful environments

such as prisons or police stations can lead to the rate of learning disability being inflated. The environment can affect their mood and influence their stress and motivational levels.

The problems associated with defining learning disability also posed a problem for Brown and Courtless's research. First, there was the problem of the terminology. Rather than refer to individuals with a learning disability, they were referred to as having a mental retardation. In the UK the term 'learning disability' has been adopted to replace the term 'mental retardation', as it is perceived as derogatory (Barron et al. 2002). Using the term 'learning disability' has been encouraged by the British government to ensure that the dignity of the individuals with learning disabilities is maintained (Holland, Clare and Mukhopadhyay, 2002). Despite this concern over terminology, it did not pose a methodological problem for the Brown and Courtless study, as both terms refer to individuals whose intellectual and social functioning is significantly impaired and has been so since before the age of eighteen years (AAMR, 2002; APA, 1995). The issue of definition of learning disability did pose a problem when trying to establish what constitutes a learning disability. Brown and Courtless employed an IQ cut-off of ≤ 69 when defining learning disability. Both the AAMR and DSM-IV-TR classification systems advocate this as a suitable cut-off point, as long as a reliable and standardised assessment tool has been used to measure IQ. This assessment tool should have a mean population of 100 and standard deviation of 15. Based on these principles an individual would need to fall two standard deviations below the mean in order to be classified as having a learning disability. Unfortunately, Brown and Courtless did not ensure that all their assessment measures fulfilled the criteria outlined by the AAMR and DSM-IV-TR when trying to assess IQ.

As previously mentioned, both intellectual and social functioning must be significantly impaired to warrant a learning disability being diagnosed (AAMR, 2002; APA, 1995). To Brown and Courtless's credit they did address the social functioning component of learning disability and claimed that their entire sample had impaired social functioning. A claim justified by the belief that being in prison indicates that inmates have some element of impairment with their social functioning. Unfortunately, assessing social functioning is not as easy as Brown and Courtless suggest. According to the BPS (2001) a variety of measures exist, but they each possess their own deficits with psychometric properties, making it difficult to compare or recommend one measure for use. Even with the most

established measures (e.g. Vinelands Adaptive Behaviour Scale) Murphy and Clare (1991) state that they are often difficult to administer. They rely on carers or prison staff providing information about the client or inmate and the logistics of obtaining this information is often difficult.

Brown and Courtless did not attempt to provide information about their sample's social functioning via an assessment tool. They did not gather information in any of the following areas: communication, self-care, home-living, social skills, community use, self direction, health and safety, functional academics, leisure and work, all of which are important components when trying to assess social functioning. Considering these points, Brown and Courtless failed to measure social functioning and therefore defined learning disability solely by relying on intellectual ability.

The prevalence of learning disability in the UK forensic population is lower than that of countries such as the USA or Australia. Indeed, Coid (1988) surveyed 362 mentally abnormal men admitted to Winchester prison on remand for psychiatric reports between 1979 and 1983. Of this sample, Coid was only able to obtain psychiatric reports for 334 inmates and concluded that 5.1% had an IQ less than 75. However, less than 1% were considered 'subnormal' and thus had a learning disability. Caution should be exercised with this prevalence rate, as it was based on information obtained from psychiatric reports regarding each inmate's psychiatric history of mental illness. At no stage during the psychiatric assessment or Coid's investigation were the inmates screened for a learning disability using psychometry.

2.1.2 Prevalence among prisoners on remand

More recently, Murphy, Harnett and Holland (1995) screened 157 men who were on remand at Belmarsh (London) Prison. During screening the prisoners on remand were asked a number of questions including: demographic details, place of residency, if they had been in a psychiatric hospital, if they had had a mental illness recently and if they used drugs. To ascertain whether they had a learning difficulty they were asked whether they had any literacy problems, learning difficulties or had been to a 'special school'. Thirty-three inmates identified themselves as having learning difficulties and they were

administered the reading and numeracy subtests of the British Ability Scale (Elliot, Murray, and Pearson, 1983) and short forms of the Weschler Adult Intelligence Scale-Revised (WAIS-R; Weschler, 1981) and the General Health Questionnaire (GHQ; Goldberg, 1981). From these assessments Murphy et al. calculated that five men had an IQ less than 75. However, no inmate from the sample was found to have an IQ less than 70, indicating that none of the men could be categorised as having a learning disability.

In a study into the prevalence of mental disorder in prisoners on remand at Durham prison, Birmingham, Mason and Grubin (1996) found results that were consistent with Coid and Murphy et al. Four hundred and forty one men were administered the Quick Test (Ammons and Ammons, 1962 cited in Birmingham et al. 1996) to assess IQ. Six men were identified with a learning disability that indicated a prevalence of 1%. Although this figure is marginally higher than the results obtained by Coid and Murphy et al., this could be explained by the different uses of psychometry employed to assess IQ. Coid failed to use any formal assessments, Murphy et al used a short form of the WAIS-R and Birmingham et al used the Quick Test. The use of different assessment tools may have caused Birmingham et al to over or under estimate the number of people with learning disabilities, as quick or abbreviated measures may not gather adequate information that allows for an accurate measure of IQ. Although this could also be true of Murphy et al's study.

The British studies have found the prevalence of learning disability among offenders on remand in prisons to be much lower than that of the USA and Australia. Differences in results may lie with screening methods and the way the criminal justice system deals with offenders with learning disabilities. As previously discussed, Murphy et al. invited remand prisoners to identify themselves as having a learning difficulty by disclosing whether they had attended a 'special school' or had reading difficulties. Once identified they were given formal IQ assessments. However, how reliable is the information inmates provide before being formally assessed. To Murphy et al's credit they did identify this concern by stating that some of the information inmates provided could not be checked (e.g. occupation and special school attended), although information regarding criminal charge could. Also noted by Murphy et al. was the surprising low number of individuals who could not remember the name of the 'special school' that they had attended. Failure to recall the name of school could have been due to them lying or that they had genuinely forgotten.

Either way it does throw into the question the reliability of the information provided by these prisoners. Some inmates may have denied attending a 'special school', as they did not want to be labelled as having a learning disability. Others may have denied it because they feared the tests and assessments that they would have to endure if they agreed to take part in the study. Some prisoners may have falsely said they had learning difficulties because they wished to appear more intelligent. Finally, some remand prisoners may have falsely disclosed having a learning difficulty, as they believed this would influence the legal system to treat them in a more lenient manner.

In all three British studies learning disability was investigated among a population of prisoners on remand. Such a sample may not be representative when the implications of the introduction of the Reed Report (Department of Health, 1992) are taken into consideration. This report recommends the diversion from custody of offenders with learning disabilities, as they are either bailed or placed on hospital orders under the Mental Health Act, 1983. Hence, a sample of remand prisoners may not reflect the actual number of offenders with learning disabilities, as they have been diverted back into the community.

Before they are diverted back into the community, their first point of contact with the legal system is via the police station. If offenders with learning disabilities are being diverted from custody, their prevalence should be higher in police stations than prisons. Indeed, three British studies (Gudjonsson, Clare, Rutter and Pearce, 1993; Lyall, Holland and Collins, 1995; Winter, Holland and Collins, 1997) found the prevalence rate in police stations to be slightly higher than that of prisons.

Gudjonsson et al (1993) investigated a sample obtained from two London police stations to examine whether people with learning disabilities are over-represented amongst those who are apprehended and questioned by the police. From a sample of one hundred and fifty six the mean full-scale IQ was 82 and ranged from 61 to 131. Nearly 9% (8.6%) were calculated to have a full-scale IQ of less than 70, compared to 42% falling within the borderline intelligence category (FSIQ 70-79). Such a high prevalence of 8.6% may have been influenced by the methodology employed by Gudjonsson et al.

Participants were tested on a short-form of the WAIS-R, using three of the eleven sub-tests (vocabulary, comprehension and picture completion). Unfortunately, the sub-tests selected to prorated the estimated IQ are not the same as the ones recommended in the standardised short-form of WAIS-R (e.g. similarities, vocabulary, block design and matrix reasoning). Gudjonsson et al also failed to select a balanced number of sub-tests to measure verbal and performance IQ. Considering these methodological flaws, it could suggest that the prevalence rate for IQ was inaccurate, as the three sub-tests used were unable to collect enough information to enable an accurate estimated measure of IQ.

Like other studies (Brown and Courtless, 1971; Hayes and McIlwain, 1988) Gudjonsson et al based their prevalence rate solely on estimated IQ scores. They did not attempt to measure developmental or social functioning. As previously discussed, it is important to measure both IQ and social functioning when trying to measure learning disability. Again this throws into question whether the 8.6% of people identified in Gudjonsson et al's study did in actual fact have a learning disability.

In 1993, two hundred and fifty one people were screened by police officers while in custody at a Cambridge police station (Lyall et al 1995). They were asked four questions regarding their educational background and literacy skills (i.e. do you have difficulty in reading and writing; while at school, did you receive some extra help because you had difficulty learning; did you attend a special school; please name the last school you attended). Of the total screened, 15.2% either attended a school for children with moderate to severe learning difficulties, or a school for children with emotional or behavioural difficulties, or a learning support unit within mainstream school. 6.7% self-reported to having reading and writing difficulties. From the information gathered by the police officers, Lyall et al estimated that 4.4% had mild learning disabilities, compared to 0.4% having a severe learning disability. Unfortunately, these figures were not obtained by any formal assessment and therefore cannot be considered to be a reliable measure of prevalence of learning disability among a police station population.

More recently, Winter, Holland and Collins (1997) investigated the prevalence of learning disability among adults held in custody at a city police station in Cambridge. A total of 212 individuals were screened using the four-item questionnaire that measures educational background and literacy skills and was utilised in Lyall et al's (1995) study. The screening

process took place over 33 days and identified 21 individuals as having a suspected learning disability. This group then undertook voluntary formal assessment that included questioning to obtain demographic information, medical and forensic history, family history of offending, childhood behavioural problems and drug and alcohol use. They were also questioned about their past and present contact with social, probation, learning disability, voluntary and psychiatric services. Five sub-tests (vocabulary, comprehension, picture completion, block design and object assembly) of the WAIS-R, the Neale Analysis of Reading Ability (Neale, 1978), the Psychiatric Assessment Schedule for Adults with Developmental Disability (PAS-ADD), the Gudjonsson Suggestibility Scales¹ were all administered, as well as a measure for significant life events in the 6 months prior to the alleged offence. Winter et al reported that only 2 individuals from the original sample had an IQ that fell below 70 and could be categorised as having a learning disability. Although only 2 were identified as having significant intellectual impairment, Winter et al stated that many in the sample would have been likely to have had major difficulties with their adaptive behaviour. Considering this, it stresses the need to measure both intelligence and adaptive behaviour when assessing learning disability.

2.1.3 Prevalence among individuals appearing in court

Prevalence studies have also been carried out on individuals with learning disabilities who appear before the court, although there are few examples of this (Hayes, 1997; Murphy and Mason, 1999). Three studies have been carried out in New South Wales (Australia) that have examined the prevalence of learning disability in rural and urban magistrate's courts and local courts (Hayes, 1993, 1996, 1997). In 1993 Hayes surveyed two rural and two urban courts of individuals appearing before the magistrate's court. A total of 113 individuals were surveyed using the Kaufman Brief Intelligence Test (K-BIT) Matrices Section, which is a non-verbal untimed test of fluid intelligence. An abbreviated form of the Mini-Mental State Examination (Folstein, Folstein and McHugh, 1975) was also administered, as well as background and demographic information being gathered. Hayes found 14.2% obtained IQ scores less than 70, indicating that they would be categorised with a learning disability. 8.8% obtained scores between 70 and 79, which indicated that

¹ PAS-ADD and Gudjonsson Suggestibility Scales both cited in Winter et al. (1997).

they would be classified as having borderline intelligence. On the Mini-Mental State Examination, Hayes calculated that 31% of the sample fell below the cut-off point indicating that they would require further mental state assessment.

Using the same methodology as her 1993 study, Hayes examined two rural magistrate's courts in New South Wales that had a large representation of offenders appearing before the court who were Aboriginal in ethnic origin (Hayes, 1996). A total of 88 individuals were tested and Hayes found 36% had an IQ less than 70, compared to 20.9% having an IQ which fell within the borderline intelligence range. Finally, in 1997 Hayes carried out her third study which investigated the prevalence of learning disability among a cohort of individuals appearing before 6 local courts in New South Wales. Again following the same methodology as her other two studies Hayes found that nearly a quarter (23.6%) of her original sample could be classified as having a learning disability. A further 14.1% had an IQ between 70 to 79, indicating that they had borderline intelligence. Overall, the results obtained from the K-BIT indicated that a total of 37.7% of the sample had serious cognitive deficits with their cognitive skills.

The studies carried out by Hayes indicate that people with learning disabilities are over represented amongst the population of individuals who appear before courts in Australia. Indeed, the prevalence of Aboriginal Australians is greatly over-represented in court appearances. Such high prevalence rates are worthy of further investigation.

The Kaufman Brief Intelligence Test (K-BIT) was used to measure intelligence. It is an assessment tool that comprises two sub-tests, which measures vocabulary and matrices. In the matrices sub-test it assesses non-verbal skills and problem solving ability, by using items that involve pictures or abstract designs rather than words. The matrices sub-test has also been recommended for use on individuals who may have difficulties with language (e.g. English is not their first language, dyslexia or problems with speech) or come from different cultural backgrounds (e.g. Aboriginal) (Kaufman and Kaufman, 1990). To Hayes credit she did take into consideration the cultural differences of her sample and used a test of intelligence that could be regarded as culture-fair. However, Hayes only used the matrices sub-test of the K-BIT to assess intelligence. As previously discussed, assessment of both verbal and performance abilities is necessary when trying to measure IQ. Using

only one sub-test is simply not enough to give an accurate measure of IQ. This may have caused IQ scores to be under estimated and thus caused the prevalence rates to be so high.

To date, inconsistencies in prevalence of criminal offending among a population of learning disabilities exist. There seems to be a clear divide between the high prevalence rates in Australia and the USA, compared to low rates in the UK. The studies reviewed have also found that the number of people with learning disabilities who present at police stations varies, however few of them seem to arrive in the prison system. This may be the result of inaccurate screening tools being used to identify individuals with learning disabilities, this population being diverted away from the criminal justice system or failure to report crimes. Indeed, Lyall, Holland and Collins (1995) reported that within many services for people with learning disabilities there is a high tolerance to criminal offences. In particular, they found that crimes such as theft and criminal damage were rarely reported to the police. They also found that out of the 30 services surveyed there were at least three that stated they were unsure whether they would report serious crimes such as rape. Failing to report crimes suggests that a number of people with learning disabilities who offend will never come into contact with the criminal justice system. Under estimation of criminal acts will cause prevalence rates of offending among a population with learning disabilities to be inaccurate.

Whatever the explanation for the disparity between the number of individuals with learning disabilities who are not reported to the police, questioned by the police, appear in court or held in prison or hospital, current researchers still suggest that individuals with learning disabilities are either not being charged, convicted in court, or receiving non-custodial sentences after conviction (Mason and Murphy, 2002a). One of the first studies (Mason and Murphy, 2002a) to examine the prevalence of non-custodial sentences received by individuals with learning disabilities identified a number of individuals within the probation service who were suspected of having a learning disability. Mason and Murphy (2002a) screened 70 probationers who presented to a probation office in southeast Kent (England) using a short structured interview designed to obtain information regarding demographic and criminal history, psychiatric history, 'learning difficulties', reading problems and/or attendance at a special school. Two sub-tests (e.g. basic numerical sub-test and the basic word reading sub-test) of the British Ability Scales (Elliott, Murray and Pearson, 1983) were also administered and probation officers were

asked to identify individuals who they suspected of having a learning disability. From the sample of 70 probationers 16 (22.86%) were identified as likely to have a learning disability. Mason and Murphy examined this group further using the short form of the WAIS-R and the Vinelands Adaptive Behaviour Scales (VABS; Sparrow, Balla and Cicchetti, 1984) and identified four (5.7%) probationers with significant deficits in both their cognitive and social functioning. They also found that in terms of social and cognitive functioning eight (11.4%) probationers obtained scores on both the WAIS-R and VABS that placed them in the bottom 5% of the general population. According to Gudjonsson, Clare, Rutter and Pearce (1993), such a sample require many of the supportive needs that individuals with learning disabilities need.

The results from this study indicate that individuals with learning disabilities are entering the criminal justice system. However, studies that have examined the prevalence of learning disability among British prison populations (Coid, 1988; Murphy, Harnett and Holland, 1995; Birmingham, Mason and Grubin, 1996) have failed to replicate Mason and Murphy's (2002a) research findings. This disparity between the number of individuals with learning disabilities in prison and on probation have led researchers to conclude that offenders with learning disabilities are not receiving custodial sentences and are being diverted back into the community (Mason and Murphy, 2002a). This process of giving individuals with learning disabilities non-custodial sentences places pressure on the probation service to be able to effectively screen probationers for a suspected learning disability. Mason and Murphy (2002b) recognised the need to develop a valid screening tool for learning disability and borderline learning disabilities that could be administered and scored by probation officers.

The assessment tool developed by Mason and Murphy (2002b) consisted of items relating to a participant's demographic history, previous contact with learning disabilities services, type of residence and coping skills (e.g. ability to keep appointments). To test cognitive functioning participants completed the vocabulary test of the Quick Test and the clock drawing test (CDT; Freedman, Leach, Kaplan, Winocur, Shulman and Denis, 1994 cited in Mason and Murphy, 2002b. pg. 317), as both tests correlate highly with the WAIS-R (Weschler, 1981). Eighty participants were screened to test the validity of the assessment tool and Mason and Murphy found that the screening assessment correctly classified 87%

of the participants. Such a high success rate with this screening tool warrants further investigation.

Mason and Murphy (2002b) recognised the importance of assessing both intellectual and social functioning when trying to define learning disability. However, rather than follow the DSM-IV-TR guidelines to assess social skills and responsibility, communication, daily living skills, personal independence and self-efficacy, Mason and Murphy selected certain items of the VABS that related only to one domain (e.g. socialisation). Failure to assess the relevant areas outlined by DSM-IV-TR to measure social functioning suggests that Mason and Murphy may not have been able to obtain enough information, causing them to over or under estimate the actual level of social functioning of the participants. The social functioning ability of participants may also have been affected by Mason and Murphy choosing to assess social functioning using a self-report measure. The items selected from the VABS to assess social functioning should be administered to carers of the participants suspected of having deficits with their social functioning. Relying on participants to provide accurate information about their own social functioning may create problems, as they may wish to over or under estimate their abilities for a number of reasons. Participants may not wish to appear incompetent, they may not fully understand the question or they may wish to appear less able as they believe this will cause the criminal justice system to treat them in a more lenient manner. Overall, the problems associated with self-report measures and day-to-day functioning being assessed rather than social functioning throws into question whether an adequate measure of social functioning was obtain. This may suggest that Mason and Murphy's screening tool relies more on intellectual functioning than a balance between intellectual and social functioning to identify individuals who are likely to have a learning disability. Indeed, a problem that has been encountered by a number of researchers (Brown and Courtless, 1971; Hayes and McIlwain, 1988; Gudjonsson, Clare, Rutter and Pearce, 1993).

Mason and Murphy's (2002c) screening tool also encountered methodological problems when it was used in a study to investigate the prevalence of learning disability among people on probation in the south-east of England. The screening tool was specifically designed so that it could be easily administered and scored by probation officers. However, over a six-month research period Mason and Murphy found that only 45 (22.5%) out of a possible 200 assessments had been completed. Mason and Murphy failed

to offer any explanation for such as low completion rate of assessments by probation officers. Poor completion rates may suggest that probation officers did not like administering the assessment, felt it was too time consuming, added to their work load or felt they were not suitably qualified to administer the assessment tool. Whatever the explanation, it warrants further investigation into why probation officers failed to administer the instrument. This issue needs to be addressed if present and future screening tools hope to be used by probation officers to identify individuals with learning disabilities.

2.1.4 Sexual offending and learning disability

Individuals with learning disabilities engage in a variety of criminal activities (Hayes, 1996; Thompson and Brown, 1997), with a rate of offending that is slightly lower than in the general population (Day, 1994). Indeed, the offences committed by individuals with learning disabilities are comparable to those perpetrated by individuals without a learning disability (Cooper, 1995). According to some researchers, (Lund, 1990; Hodgins, 1992; Day, 1993) property offences is the most common crime committed by individuals with learning disabilities. Hayes (1996) categorised the types of offences most likely to be committed by this population; they included offences against persons, nuisance offences, physical assault, sexual assault, murder and manslaughter. Motoring offences and 'white collar' crimes, such as fraud and deception, were either under represented or not committed by individuals with learning disabilities. According to some researchers, (Holland, Clare and Mukhopadhyay, 2002; Hayes, 1996) they do not possess the necessary skills required or the opportunities needed to allow them to engage in these criminal activities. However, arson offences have been found to be over-represented among this client group. Indeed, Leong and Sliva (1999) reported a prevalence of 15% among an out-patient population of arsonists who had been diagnosed with a learning disability. Sexual offending has also been found to be over-represented among the population with learning disabilities. Indeed, Gross (1984) reported that nearly 50% of prison inmates with learning disabilities had been convicted of a sexual offence. In light of methodological issues already discussed, caution should be exercised when referring to the prevalence rate quoted by Gross, as this study failed to use any form of formal assessment to determine learning disability or social functioning.

When investigating prevalence of sexual offending among people with learning disabilities, researchers often group sexual crimes under the generic term 'sexual offending' (Hayes, 1997; Ryan, 1997; Winter et al. 1997; Day, 1988; Gross, 1984). Such a term encompasses a wide range of sexually deviant behaviours. As previously discussed in chapter 1 (pg. 15-16) the term 'sexual offending' can incorporate the following types of sexual crimes: offences against children (i.e. lewd and libidinous), incest, homosexual assault, sexual assault (i.e. rape), indecent exposure (i.e. exhibitionism), frotteurism, fetishism, masochism and sexual harassment (i.e. stalking and voyeurism) (Freund and Seto, 1998; Lanyon, 1991). Researchers have chosen to group these sexually deviant behaviours under this generic term for two main reasons. First, for practical reasons. Limited numbers of sexual offenders with learning disabilities (e.g. rapists, paedophiles, voyeurs and exhibitionists) creates problems when trying to carry out research with this population. Indeed, low sample size creates problems with the statistical power of experiments developed to investigate different types of sexual offenders. To address this problem and thus increase power, researchers chose to group the different types of sexual deviant behaviours under this generic heading (Lund, 1990; Walker and Biles, 1986; Knopp, 1984). Second, the absence of a clear or single definition for sexual offending means that there is no clear framework for researchers to follow when investigating in this area (Sahota and Chesterman, 1988). This results in researchers using their clinical experience and judgment when deciding which types of sexually deviant behaviours they will group together under the term 'sexual offending' (Hayes, 1997; Ryan, 1997; Winter et al. 1997; Day, 1988; Gross, 1984). Grouping different types of sexually deviant behaviour under this generic term is not a unique process, as current and previous research have followed this procedure (Hayes, 1997; Winter et al. 1997; Day, 1988; Lund, 1990; Walker and Biles, 1986). It is for this reason, as well as practical issues (e.g. as outlined above) that this thesis chooses to follow this procedure and use the term sexual offending to encompass different sexually deviant behaviour. However, unlike previously published research (Winter et al. 1997; Lund, 1990; Gross, 1984) this thesis will state the specific types of sexually deviant behaviours that the term sexual offending covers. When the term 'sexual offending' is used in connection with the six empirical studies of this thesis (see chapters 5 and 6), it will encompass the following sexually deviant behaviours: rape, voyeurism, exhibitionism, dating abuse, homosexual assault, offences against children, stalking and sexual harassment.

As previously discussed, grouping different types of sexually deviant behaviours under the term 'sexual offending' is not a new or unique process. Following this procedure may help assist researchers with some practical problems (e.g. statistical power), but it also creates additional problems for researchers. Indeed, failure to examine different sexually deviant behaviours (e.g. rape, paedophilia, exhibitionism or voyeurism) separately might cause valuable information to go undetected. For example, different types of sexual offenders might hold different cognitive distortions related to sexually deviant behaviour. Although preliminary research by Lindsay (unpublished) has found that, apart from paedophiles, sexual offenders (e.g. rapists, voyeurs, exhibitionist, stalkers, homosexual assault and dating abuse) tend to hold similar cognitive distortions irrespective of the type of sexually deviant crime they have committed. Such a finding suggests that it might be acceptable to keep certain types of sexual offenders (e.g. rapists, voyeurs, exhibitionist, stalkers, homosexual assault and dating abuse) together when investigating cognitive distortions amongst this group.

Grouping all sexually deviant behaviours together also creates problems when trying to ascertain prevalence of certain sexual crimes being committed by individuals with learning disabilities. The following studies (e.g. Hayes, 1997; Klimechi, Jenkinson and Wilson, 1994; Lund, 1990; Walker and Biles, 1986) give a general idea of the overall level of sexually deviant behaviours being committed by people with learning disabilities, however they fail to provide figures for the incidence of rape, voyeurism, exhibitionism, stalking, homosexual assault, fetishism, masochism and frotteurism being committed by individuals with learning disabilities. Apart from this problem these studies also fail to state which sexually deviant behaviours they are grouping under the term 'sexual offending.' For example, between 1980 and 1983, Lund (1990) examined census type data for 57 offenders with learning disabilities receiving their first sentence for a crime they had committed. Although Lund found that 31.6% of this sample was convicted of a sexual offence, he failed to state what these sexual offences were. Lund (1990) also carried out an interview study to examine the types of offence individuals with learning disabilities serving care orders on the 1 January 1984 had been convicted of. From a sample of ninety-one, nineteen (20.9%) had been convicted of a sexual offence. Again, Lund failed to state which sexually deviant behaviours he examined. Despite this failing, these Lund's figures are consistent with other researchers (Gross, 1984; Knopp, 1984; Walker and McCabe, 1973; Day, 1988) who have found that sexual offences account for one-quarter to one-half

of all index offences for men with learning disabilities who have been admitted to hospital or other specialist treatment facilities.

Hayes (1997) investigated the types of offences committed by offenders with learning disabilities who appeared at six local courts in New South Wales (Australia). The most commonly committed offences for the participants in this survey were assault or sexual assault. Like Gross, (1984) Hayes found that for a group of individuals with either a learning disability or borderline intelligence, 46.2% had committed offences against another person.

High prevalence figures obtained by Lund (1990) and Hayes (1997) warrant further investigation. Inspection of these studies has found flaws with their methodology. Both studies base prevalence rates of sexual offending on figures obtained from offenders with borderline intelligence (IQ 70 – 79), as well as those with an IQ less than 70. As previously discussed in this chapter, a number of problems exist when trying to define learning disability. Based on either the AAMR (2002) or APA (1995) definitions for learning disabilities, they both state that the cut-off point for a classification of learning disability is full scale IQ score of less than 70. Failing to follow these guidelines, Hayes and Lund's studies both run the risk of calculating figures that are not a true representation of the number of offenders with learning disabilities who have sexually offended.

Hayes also failed to distinguish between assault and sexual assault, when calculating prevalence for sexual offending among a population with learning disabilities. This causes problems when trying to establish how much of the overall prevalence rate of 46.2% was made up of sexual offences or offences against another person that did not involve sexual assault. Failing to distinguish between sexual assault and assault may have caused Hayes to over estimate the prevalence rates for sexual offending among a forensic population with learning disabilities.

Recent research has found the prevalence of sexual offending by imprisoned offenders with learning disabilities to be much lower (Klimecki, Jenkinson and Wilson, 1994; Winter et al, 1997; Walker and Biles, 1986). In 1994 Klimecki et al investigated a sample of 60 offenders with learning disabilities and found that 16.67% had committed a sex-related offence. However, Walker and Biles (1986) found the prevalence rate to be much

lower. They found that of an Australian prison population with learning disabilities 3.7% had been convicted of a sexual offence. Although Winter et al (1997) found that within a prison sample of 28 inmates suspected of having learning disabilities, two had committed sexual crimes, which calculates to a prevalence rate of 7.14%. Murphy et al (1995) also found that among a sample of 21 remand prisoners suspected of having a learning disability, 9.5% had committed a sexual offence. Caution should be exercised when interpreting Winter et al and Murphy et al's prevalence rates for sexual offending, as they were obtained from samples who were suspected of having a learning disability rather than having a full scale IQ less than 70.

Despite the inconsistencies in prevalence rates for sexual offending among the forensic population with learning disabilities, the research to date (Hayes, 1997; Klimecki et al, 1994; Lund, 1990) still suggests that it is a problem for this group of offenders.

2.1.5 Over representation of sex offenders with learning disabilities

Lack of understanding about legal procedures could account for the over representation of sex offenders with learning disabilities. According to Hayes (1996) they are more likely to be found guilty as they have limited or no understanding of the legal procedures. Gudjonsson, Clare and Cross (1992) investigated their vulnerability during police interviews, by comparing individuals with and without learning disabilities understanding of the 'Notice to Detained Persons.' They found that individuals with learning disabilities could only understand 11% of this caution compared to 68% for the individuals without a learning disability. Clare and Gudjonsson (1995) concluded that the information provided in this caution, which informs them of their right to silence, is too difficult for them to understand. Failure to understand may prevent individuals with learning disabilities using the information from the caution to protect themselves while in police custody (Clare and Gudjonsson, 1995). Even with the amendments to the 'right to silence' caution (Criminal Justice and Public Order Act, 1994) people with learning disabilities still find the information too difficult and complex to use (Murphy and Clare, 1998).

More recently, Day (2000) suggested that individuals with learning disabilities have impaired understanding of the consequences that accompany false confessions. They often

make false confessions to please, gain attention (Day, 2000), or believe that it will result in them being able to return home (Clare and Gudjonsson, 1995). Individuals with learning disabilities do not worry about giving false confessions, as they believe that it can be retracted without any consequences. According to Clare and Gudjonsson (1995) they are unaware that this information can be produced in court as evidence of their guilt.

Lack of knowledge about legal procedures and impaired understanding of a caution and their legal rights makes individuals with learning disabilities vulnerable while in police custody. According to Gudjonsson (1993) they will often answer questions in an affirmative manner, irrespective of whether the content of the statement is true or false. They are also more vulnerable to leading questions than individuals who do not have a learning disability (Clare and Gudjonsson, 1993). The desire to please influences individuals with learning disabilities to agree with police questions and recall events in a way they think they should be remembered, rather than provide an account of actual events.

Another explanation that has tried to account for the over representation of sex offenders with learning disabilities in prisons or secure units is the rate of recidivism. A number of studies have found that the rate of recidivism for this population ranges from 40 to 70% (Klimecki, Jenkinson and Wilson, 1994; Scorzelli and Reince-Scorzelli, 1997; Day, 1994). Swanson and Garwick (1990) investigated the rate of recidivism for 15 sex offenders with learning disabilities. They received weekly treatment sessions for approximately 35 weeks. Following treatment Swanson and Garwick found a 40% re-offending rate. Klimecki et al (1994) reported at 3.5 years after treatment a recidivism rate of 42%. However, more recent research by Lindsay, Neilson and Morrison (1998) has found the re-offending rate for sex offenders with learning disabilities to be as low as 28%. These recidivism rates led Hayes (1996) to conclude that this population may be more inclined to re-offend and this could account for the over representation of sex offenders with learning disabilities. Re-offending will result in repeat sentences and this will increase the over-representation of sex offenders with learning disabilities.

Hayes (1996) suggested that individuals with learning disabilities are more likely to engage in behaviours that are regarded as illegal. Although Thompson and Brown (1997) suggest that both individuals with or without learning disabilities engage in sexual

behaviour that is regarded as criminal, but individuals with learning disabilities do not possess the necessary skills that enable them to conceal their crime. They are also more likely to be detected, as they are restricted to the amount of time they are able to spend alone without supervision from staff or carers. Indeed, the care needs of individuals with learning disabilities often dictates that they require supervision during personal care activities (e.g. bathing and dressing). Assisting clients with these activities provides carers or staff with the opportunity to observe and judge certain behaviours as inappropriate (e.g. private masturbation or consenting same or opposite sex relationships) (Mitchell, 1987). Other sexual behaviours such as, pornography, fetish behaviour towards women's clothing or use of pictures of children to cause sexual arousal have also been detected under similar circumstances (Bowler and Collacot, 1993). However, the sexual behaviour of individuals without learning disabilities cannot be accessed or monitored as easily as those with learning disabilities. Any attempts to compare the sexual behaviour of these two groups is extremely difficult. Although considering these points it could be that both groups engage in similar rates of sexual offending or deviance, but there are just more opportunities for individuals with learning disabilities to be detected.

Lack of knowledge about sexually appropriate and inappropriate behaviour has also been suggested to account for the over representation of sex offenders with learning disabilities (Barmann and Murrey, 1981) Often this population are unaware of the laws pertaining to sexually appropriate behaviour. They are often confused about issues regarding consensual sex and where it is appropriate to have sex. Barmann and Murrey (1981) found that this population often have sex or masturbate in a public place, as they are unaware that this is socially inappropriate. Being naïve about sexual expression and the legalities of sexually appropriate behaviour may increase the rate of sexual offending among the population with learning disabilities, as they try to establish sexual relationships and express their sexual needs.

2.1.6 Gender and sexual offenders with learning disabilities

Sexual offending has typically been seen as a crime committed by males (Constantine, 2004; Dobash, Dobash and Gutteridge, 1986). Little research exists on female sexual offenders with learning disabilities. The research that does exist indicates that the

prevalence of sexual offending among females is extremely low. For example, Lindsay, Smith, Quinn, Anderson, Smith, Allan and Law, (in press 2004) found that of a sample of 179 females with learning disabilities referred to a Scottish community-based service for severe and challenging behaviour and forensic problems between 1990 and 2001 only 18 had committed an offence. Of those 18, only 1 had committed a sexual offence (i.e. procurement for the purpose of sexual assault). This finding was consistent with Maden (1996) who found that of a sample of incarcerated women at Her Majesty's Prisons Holloway, Styal, Drake Hall and Durham between 1988 and 1990, only 1 female identified with a learning disability was convicted of a sexual offence (i.e. indecent assault). Such low incidences of females committing sexual offences could account for sexual offending research focuses predominantly on sexual offending committed by males with or without learning disabilities (Marshall, 1999; Winter et al. 1997; Klimecki et al., 1994). Considering this it was felt appropriate for this thesis to focus solely on sexual offences committed by males with learning disabilities.

2.1.7 Characteristics of sexual offenders with learning disabilities

A wide range of possible contributory factors has been associated with sexual offending of individuals with learning disabilities. These factors include: social circumstances, low self-esteem, recent life events, psychiatric illness, family history of learning disability, history of sexual abuse, psychiatric illness, epilepsy, poor impulse control and distorted cognitions (Lindsay and Macleod, 2001; Winter, et al. 1997; Glaser and Deane, 1999). The extent to which these factors account for sexual offending by this population remains unclear.

Day (1988) studied 20 offenders with learning disabilities who had been discharged from a hospital based treatment programme. Using case note data, Day found that 85% had a history of serious childhood behavioural problems, 50% had a background of psychosocial deprivation, 50% had a family history of offending and 30% had a psychiatric disorder. More recent research by Winter et al. (1997) found similar results. However, the extent to which these factors can be used to account for the characteristics of sexual offending by individuals with learning disabilities has been questioned. A review paper by Lindsay and Macleod (2001) stated that it is difficult to establish the role these characteristics play in sexual offending when most of these studies fail to examine an appropriate control group.

Glaser and Deane (1999) investigated the characteristics of sex offenders and offenders with learning disabilities and found that there were no major differences between the two groups. They found that offenders with learning disabilities committed non-sexual and sexual crimes for similar reasons. Poor socialisation, lack of social skills, history of institutionalisation during childhood, poor anger management and impulse control were all identified as characteristics for both sexual and non-sexual offending. However, these characteristics may also be present among offenders who do not have learning disability.

Several researchers have identified disturbance in family background as characteristic of sexual offending. Langevin and Pope (1993) found that many of their clients who had committed a sexual crime came from disturbed family backgrounds. Investigating approximately 100 sex offenders with learning disabilities, who had perpetrated either a sexual offence against a child, incest or were sexually aggressive towards adult women, they found the sexually aggressive group had the most family disturbance. Langevin and Pope found that the parenting background of this group was far more disturbed than that within the general population. There was a higher incidence of alcoholism, violence, history of forensic contact with one or more of the family members and attitude problems with the parents within the group of sexual aggressive offenders. Langevin and Pope concluded that the high incidence of these family disturbances lead to bad parenting and was often reflected in the child having educational or behavioural problems. Winter et al. (1997) found similar results when they compared the family background of 21 offenders who self-reported themselves with learning disabilities to a match group of offenders who had been identified with a learning disability in childhood. They found that the self-reported individuals with learning disabilities were significantly more likely to have lost contact with their father, criminality, illicit drug use, truancy, experience recent life events in the 6 months prior to their offence and self-reported behavioural problems.

Both studies into the characteristics of family background have highlighted that behavioural and educational problems can be a result of disturbances in parental backgrounds. Indeed, Langevin and Pope found that almost 2 in 3 sex offenders had repeated at least one academic year of school. Of their sample, 85% of sexual aggressive offenders, 48% of pedophiles and 56% of incest perpetrators had repeated at least one year. A high prevalence rate for behavioural problems was also found in these studies.

Winter et al. found that 61.9% of their self-reported offenders with learning disabilities had experienced behavioural problems at school.

Similarities in drug and alcohol misuse were also identified by Langevin and Pope's (1993) and Winter et al. (1997) studies. Langevin and Pope found that there was a significant amount of alcoholism among their sexual aggressive perpetrators. Similarly, Winter et al found that there was a high incidence of drug and alcohol misuse. In their sample of self-reported offenders with learning disabilities 27.8% were found to have a drug and alcohol dependency. These results are not consistent with other studies that have examined drug and alcohol misuse among sex offenders with learning disabilities. Glaser and Deane (1999) found that this population was less likely to have a history of drug or alcohol dependency than non-sex offenders with learning disabilities. Hayes (1996) and Lindsay and Smith (1998) also found that sex offenders with learning disabilities were less likely to engage in illicit drug or alcohol misuse. Differences in results may be explained by the different methodologies employed. Both Langevin and Pope and Winter et al. obtained their samples from a forensic setting, whereas Hayes and Lindsay and Smith obtained participants from a clinical setting. This suggests that the setting may influence the results, as research studies have found alcohol and drug misuse to be prevalent among offenders from a forensic setting (Klimicki et al. 1994; Winter et al. 1997), but not a clinical setting (Hayes, 1996; Lindsay, Law, Quinn, Smart and Smith, 1998). Similarly Glaser and Deane (1999) found that there was a high prevalence of substance abuse among offenders with learning disabilities who were sent to prison than among offenders in an intensive residential treatment programme.

Winter et al's results may also have been affected by the methodology employed to obtain participants. They were asked to self-report whether or not they had a learning disability. Of the offenders who reported themselves as having a learning disabilities only two were found to have a full scale IQ less than 70. This creates problems when trying to make comparison with other studies, as Hayes (1996), Lindsay and Smith (1998) and Glaser and Deane (1999) all tended to use offenders who had an IQ less than 70.

Other characteristics associated with sexual offending behaviour include epilepsy and a history of sexual abuse. Both of these characteristics are controversial, as there are inconsistencies with current and previous research studies. Corbett and Pond (1979)

suggested that as there is a higher prevalence of epilepsy among individuals with learning disabilities, this could contribute to their sexual offending behaviour. They suggest that an offence may be committed as a result of the epileptic seizure. Although Winter et al. found no direct correlation to indicate that offending was a result of an epileptic seizure. In their study only one offender was identified as having an epileptic seizure prior to their offence. However, the seizure had occurred eight days prior to the offence being committed. From this Winter et al. concluded that there was little evidence to support the association between epilepsy and offending.

Differing views also exist between the association of offending and history of sexual abuse. Thompson and Brown (1997) suggest that sexual abuse in childhood is a characteristic of sex offenders with learning disabilities and several studies have found that this population have been sexually abused in childhood (Quinsey, 1986; Griffiths, Quinsey and Hingsburger, 1989). Indeed, recent research by Lindsay et al. (1998) has found that there is a higher prevalence of childhood sexual abuse among sex offenders with learning disabilities than non-sexual offenders. From a sample of 48 sex offenders with learning disabilities 38% had been sexually abused in childhood, compared to 12.7% of a sample of 50 non-sexual offenders. However, a number of authors have argued that the link between family history of abuse and sexual offending is tentative. Langevin and Pope (1993) found that within a population of sex offenders with learning disabilities not all of them had been abused in childhood. Similarly, Day (1994) found little evidence to support the link between sexual offending and history of childhood abuse.

Some recent research has suggested that the prevalence rates of childhood sexual abuse of sexual and non-sexual offenders may be inaccurate due to under reporting (Hunter, 1990; Briggs and Hawkins, 1996). Hunter claims that many males feel embarrassed and are less likely to report being sexually abused than females. Issues such as homophobia, lack of societal acceptance of male sexual abuse and perceived threats to their masculinity have all been identified as reasons why males fail to report sexual abuse.

Recent research has started to examine how learning disabilities may contribute to the incidents of sexual offending. Lindsay and Smith (1998) proposed that deficits in conceptual understanding might lead offenders to develop stronger beliefs that allow them to deny or minimise their crime. Indeed, deficits with the conceptualisation of these

concepts will make it difficult for offenders with learning disabilities to understand that the denial and minimisation of an offence is self-justification rather than a truth.

Lindsay and colleagues have carried out a number of studies that have examined the cognitions associated with denial and minimisation. Investigating the responses to treatment for sex offenders with learning disabilities, Lindsay and Smith (1998) found that the cognitions associated with denial were extremely powerful and difficult to address during treatment. Sex offenders consistently believed that the crime did not take place if people did not talk about it. Lindsay and Smith also found that having a learning disability made it more difficult for individuals to empathise. Several researchers have found that sex offenders experience problems when trying to understand the perspective of the victim (Burke, 2001; Fisher, Beech and Brown, 1999; Barbaree, Marshall and Lanthier, 1979). Deficits with identifying emotions in others create problems for individuals with learning disabilities when they become sexually aroused. They may recognise their emotions, but fail to realise that their victim does not feel that same way. Lindsay and Smith concluded that sex offenders may have problems trying to decentre themselves from their emotions and this in turn affects their ability to understand the perspective of others.

The role cognitions play in accounting for sexual offending behaviour has received a great deal of research interest within the past decade. Researchers (Bumby, 1996; Stermac and Segal, 1989; Ward, Hudson, Johnston and Marshall, 1997) believe that cognitions, and in particular distorted cognitions, play a pivotal role in the etiology, maintenance and justification of sexual behaviour. Despite little research existing to explain or support the exact role cognitive distortions play in sexual offending, it is generally accepted that they play an important role as they enable sex offenders to diminish their responsibility and thus make their deviant sexual behaviour acceptable (Abel, Gore, Holland, Camp, Becker & Rathner, 1989). Considering this clinicians have developed treatment programmes that attempt to address these cognitions (Lindsay, Neilson, Morrison and Smith, 1998b; Marshall and Serran, 2000).

2.1.8 Summary

From the research studies reviewed in this chapter it has become evident that the issue of prevalence of individuals with learning disabilities in the criminal justice system is not straightforward. Disparity between the prevalence rates of individuals with learning disabilities varies not only across countries but also within institutions and a number of factors have been identified to account for these differences. Poor methodological design including problems in the definition of what constitutes a learning disability, variation in the assessment instruments used to assess cognitive and social functioning, varying environments in which psychometry is undertaken and variations in the way individuals are dealt with by the criminal justice system have all contributed to varying prevalence rates.

British studies have found that approximately 8% of the population who come into contact with the criminal justice system have a learning disability, however less than 1% of this population find themselves within the prison system. More recently a British study (Mason and Murphy, 2002a) found that nearly 6% of individuals on probation had significant deficits in their cognitive and social functioning. Indeed, this difference in prevalence figures between the numbers of individuals with learning disabilities who are in prison compared to those who are on probation, suggests that they are being diverted away from custodial sentences. With offenders with learning disabilities receiving non-custodial sentences and being directed back into the community it has put extra pressure on the probation service to be able to accurately screen for learning disability. As yet there is no single screening process that is able to do this.

What is clear from the studies discussed in this chapter is that the learning disability population engage in a variety of criminal activities. Indeed, arson and sexual offending have been found to be over represented within this population. However, no single explanation or characteristic has been identified that can fully account for why individuals with learning disabilities engage in these criminal activities. Indeed, the extent to which factors such as social circumstances, history of learning disability, history of sexual abuse, psychiatric illness, epilepsy, poor impulse control and distorted cognitions account for sexual offending behaviour is unclear.

Chapter 3 – Cognitive Distortions of Sex Offenders

3.0 Introduction

The concept 'cognitive distortions' is used widely across many areas of clinical psychology and is recognised as an important factor in the etiology and maintenance of psychological disorders including bulimia nervosa and depression (Phillips, Tiggerman and Wade, 1997), chronic fatigue (Moss-Morris and Petries, 1997) and chronic pain (Turk and Rudy, 1989). Indeed, Ellis (1970) claimed that many clinicians are of the opinion that cognitive distortions are responsible for nearly all emotional disorders. In the past twenty years significant research has examined the link between cognitive factors and sexual offending (e.g. Abel, Gore, Holland, Camp, Becker and Rathner, 1989; Stermac and Segal, 1989) and concluded that they also play an influential role in the etiology and maintenance of sexual offending behaviour.

Bumby (1996) defined cognitive distortions in relation to sexual offending as '*learned assumptions, sets of beliefs, and self-statements about deviant sexual behaviours such as child molestation and rape, which serve to deny, justify, minimise and rationalise an offender's actions*' (cited in Bumby, 1996 pg. 38). The term 'cognitive' refers to an individual's internal processes that include the justification, perceptions and judgements used by sex offenders to rationalise their sexual offending behaviour. However, according to Segal and Stermac (1984) there are a number of ways cognition in sexual offenders can be conceptualised. Indeed, three different cognitive variables have been identified: cognitive structures, operations and products. Cognitive structures refer to the schemas sexual offenders hold. For example, sexual offenders may hold maladaptive attitudes and beliefs to legitimise their sexually deviant behaviour (Stermac and Segal, 1989; Abel et al. 1989; Bumby, 1996), but use adaptive information processing strategies such as confirmatory biases (e.g. operations) to justify their behaviour and support its continuation (e.g. the product) (Abel et al. 1989). Researchers suggest that sexual offenders may differ from non-offenders on some rather than all three variables (Ward, Loudon, Hudson and Marshall, 1995; Ward, Hudson and Marshall, 1995). Failure to conclude that sexual offenders do or do not differ from non-offenders on all three variables results from researchers failure to examine sexual offenders' information processing abilities. Indeed,

previous and current research (Abel et al. 1989; Bumby, 1996) has primarily focused on the cognitive content of cognitions, rather than try to investigate the cognitive processes of cognitions (e.g. how cognitions are stored, organised, retrieved and altered by new information). Considering this, it appears that the term 'cognitive' relates more to the attitudes and beliefs that reflect sexual offenders behaviours, rather than the cognitive processes that generate them. Although the cognitive content has been recognised to play a pivotal role in trying to explain sexually deviant behaviour, Johnston and Ward (1996) also recognise that it is equally important to investigate the cognitive processes that generate these cognitions. This is an area that warrants further attention and will be addressed in chapter 6 of this thesis.

Research examining the link between cognitive distortions and sexual offending has been delayed by the absence of any theoretical framework that would enable models to be developed and empirical research to be undertaken (Ward, Hudson, Johnston and Marshall, 1997; Ward, Fon, Hudson and McCormack, 1998; Ward, Keenan and Hudson, 2000). By considering this issue, as well as current research regarding the integrated approach of theory building of cognitive distortions, this chapter aims to show how opinions regarding the link between cognitive distortions and sexual offending have developed over the past two decades.

3.1.1 Cognitive Content of Cognitive Distortions

Cognitive distortions are the result of conflict between external reinforcement and internal condemnation. Sex offenders recognise this conflict and develop their own personal belief system of cognitions that enables them to legitimise, justify, minimise and rationalise their sexual offending behaviour. Indeed, child molesters (Abel, Gore, Holland, Camp, Becker and Rathner 1989), rapists (Stermac and Segal, 1989), exhibitionist (Lindsay, Marshall, Neilson, Quinn and Smith, 1998a) and stalkers (Lindsay, Olley, Jack, Morrison and Smith, 1998) have all been found to hold distorted cognitions that enable them to deny or minimise their sexual offending behaviour.

To examine how distorted cognitions facilitate sexual offending behaviour, initial research focused attention on the cognitive content of these attitudes and beliefs (Abel et al. 1989;

Stermac and Segal, 1989; Blumenthal, Gudjonsson and Burns, 1999). Indeed, research carried out by Abel, Gore, Holland, Camp, Becker and Rathner (1989) played an influential role in this research area. They examined 240 child molesters, 48 non-child sexual offenders and a control group of 86 non-offenders. In order to assess cognitions, participants were asked to complete a 29-item questionnaire that had been designed to measure possible cognitive distortions of child molesters (The Cognition Scale: Abel, Becker, Cunningham-Rathner, Rouleau, Kaplan and Reich, 1984). Abel et al compared the results of the assessment for the three groups and found that child molesters held more distorted cognitions relating to children and the consequences of their behaviour on children than the other two groups.

Stermac and Segal (1989) also examined the cognitive content of male child molesters and found results consistent with Abel et al (1989). A sample comprising 20 male child molesters, 17 male rapists and a control of 108 male and female non-offenders were examined using sexual contact with children vignettes and the same 29 item questionnaire to assess cognitive distortions that was utilised in Abel et al's research study. Participants read six vignettes that depicted a male interacting with a 7-year-old child. The degree of sexual contact depicted in the vignettes varied (e.g. touching, fondling genitalia over clothing, fondling and taking the child's clothes off and ejaculation), as well as the response of the 7 year old child (e.g. smiling, no response, crying and resistance). The sample under investigation responded to a set of questions after each vignette to assess their views towards the adult and child's behaviour. Stermac and Segal found, that compared to the other groups, child molesters were more inclined to perceive the children as initiating sexual contact and regarded this sexual contact as harmless to the child, as well as socially acceptable.

Both studies found child molesters to perceive children as being sexually provocative and believed that it was the child who initiated sexual contact. They were also found to believe that children enjoyed having sex with adults and that it is good for the child. Despite these findings, caution should be exercised when interpreting these results as a number of problems existed with their methodological design. In both studies some of the child molesters were receiving treatment. As most treatment programmes for sex offenders comprise an element that challenges distorted cognitions (Marshall and Serran, 2000), the participants in these studies attitudes and beliefs could have been affected by the treatment

they had received. To avoid this future studies should assess cognitive distortions prior to treatment.

There was also a problem with the definition of the samples under investigation. Both studies defined what constituted a child molester, rapist and non-child sexual offender, but failed to state whether the child molesters preferred to have sex with children rather than adults. Failure to clearly define the sample under investigation could suggest that the cognitive content of the child molesters may not be a true reflection of the attitudes and beliefs of individuals who prefer to have sex with children than those who enjoy having sex with both children and adults. The results of Stermac and Segal (1989) study may also have been affected by their sample comprising of both incestuous and extrafamilial molesters. Failure to examine these two groups of offenders separately prevents further insight into the content of the cognitions held by these two types of child molesters.

More recent research addressed the methodological flaws outlined above. Hayashino, Wurtele and Klebe (1995) examined the cognitive content of cognitive distortions held by 22 incestuous child molesters, 21 extrafamilial child molesters, 33 rapists, 27 nonsexual offenders and 26 non-offenders. All offenders were incarcerated and not receiving treatment at the time of assessment. Cognitive distortions were assessed using the 29-item Cognition Scale (Abel et al., 1984). Hayashino et al's results revealed that compared to incestuous molesters, rapists, non-sexual offenders and non-offenders, extrafamilial molesters had a significantly higher level of distorted cognitions. However, the cognitive distortions held by incestuous molesters did not differ significantly from rapists, non-sexual offenders or non-offenders. This difference might suggest that cognitive distortions have a greater function for extrafamilial molesters than incestuous molesters. Indeed, Hayashino et al. suggest that extrafamilial molesters may require more cognitive distortions than incestuous molesters as they have a greater need to minimise, justify and rationalise their behaviour.

Researchers have also been interested in the cognitive content of cognitions held by rapists (Marolla and Scully, 1994). Blumenthal, Gudjonsson and Burns (1999) examined whether 30 adults sex offenders held more cognitive distortions related to sex with adults than children. They also investigated 36 child sex offenders to establish whether they possessed more cognitive distortions related to sex with children than adults. Blumenthal et al (1999)

found that child sex offenders did hold more cognitive distortions relating to sex with a child than sex with an adult. However, adult sex offenders did not differ significantly on the number of cognitive distortions relating to sex with an adult or child that they held. This finding suggests, that unlike child molesters, adult sex offenders cannot be differentiated from other types of sexual offenders.

Neidigh and Krop (1992) examined the content of cognitions of sex offenders further. They found that the cognitions held by child sex offenders could be grouped into eight categories. The cognitive content of three of the categories related to the child molesters perceiving the child as wanting and enjoying sex: 'she enjoyed it,' 'she is flirting and teasing me, so she wants me to do it' and 'we love each other.' Two categories related to how child molesters placed the blame on mitigating circumstances: 'I was high on drugs or alcohol at the time, and 'I wasn't thinking at all or I wouldn't have done it.' The final three categories related to child molesters justifying their behaviour: 'this is not so bad, it's not really wrong,' 'this won't hurt her in any way' and 'no one will ever find out so I won't get caught.'

Research into the cognitive content of distorted cognitions of sex offenders has been valuable and offered insight into the attitudes and beliefs that child sexual offenders and rapists hold. However, this research has predominately been carried out on a population of sex offenders who do not have a learning disability. The literature reviewed in chapter two suggested that the learning disability population engage in a variety of criminal activities, with arson and sexual offending being over represented (Barmann and Murrey, 1984; Klemecki et al. 1994; Hayes, 1997). This high prevalence of sexual offending among individuals with learning disabilities warrants research to be carried out to examine whether they hold similar distorted cognitions to sex offenders without a learning disability. A series of studies that examined the efficacy of cognitive-behavioural therapy on a group of male sex offenders with learning disabilities identified that one of the key areas to address during treatment was their distorted cognitions (Lindsay et al. 1998a,b,c). Again this provides support for cognitive distortions to be examined among this population.

Research to date has predominately focused on the cognitive products of cognitions (Abel et al. 1989; Stermac and Segal, 1989; Blementhal et al. 1999), which has in turn led

research to focus on trying to develop a measure that has good psychometric properties and is able to assess dysfunctional beliefs and attitudes that discriminate sex offenders from others (Bumby, 1996). Efforts to do so have met with little success, as a number of problems exist with current assessment tools. Many fail to address a wide range of sexual attitudes, as they focus on rape and child molestation (Bumby, 1996) and do not address stalking, dating abuse, voyeurism or exhibitionism. Assessment tools measure sexual attitudes using a Likert Scale, which Lindsay (2001) argues might be conceptually too difficult for individuals with learning disabilities to use. Some measures are not able to discriminate between sex offenders and control groups of males (e.g. Rape Myth Acceptance Scale; Burt, 1980). These problems highlight the need for further research in this area and this will be addressed in chapter four of this thesis.

3.1.2 Three-Process Model of Cognitive Factors

Focusing only on the cognitive products of the cognitions led Murphy (1990) to put forward the view that research has neglected to examine the processes that generate these cognitions. To fully understand sexual offending behaviour researchers argue that the cognitive processes that underlie the initiation, maintenance and justification of sexual offending need to be examined (Murphy, 1990; Ward, Fon, Hudson and McCormack, 1998; Ward, Keenan and Hudson, 2000). Murphy (1990) proposed a three-process model of cognitive factors that attempts to explain how sexual offenders process incoming information. Stage one of the process refers to the statements sex offenders make to justify their sexual offending behaviour. These statements do not cause the sexually inappropriate behaviour, but enable sexual offenders to deny, minimise, justify and rationalise their behaviour. This process will in turn enable them to maintain their sexual offending behaviour. The feminist school of thought influenced stage two of the process. Sex offenders hold beliefs that are consistent with the 'rape myth,' as they believe that they are entitled to have sex with women, have control over women and that their sexual impulses must be satisfied. The final stage of the process involves denial. Sexual offenders deny responsibility for their actions and place the blame on their victims. Unfortunately Murphy's model is rather superficial in its attempts to explain how sexual offenders' process information. Indeed, describing each stage of Murphy's model as a process implied that it explained the procedure involved that enabled individuals to disengage self-

regulatory control. Researchers argue that Murphy's model failed to explain these processes, as each stage of the model only enabled cognitive distortions to be classified (Ward, Hudson, Johnston and Marshall, 1997).

Problems also arise with the second stage of the Murphy's process. This stage of the process advocates that sexual offenders, and in particular rapists, possess a number of cognitions that are supportive of rape and the sexual entitlement that males believe they have. Unfortunately, the majority of research that has examined rapists' attitudes towards women and the rape myth has found that they do not differ from other types of sexual offenders (Segal and Stermac, 1984; Bumby, 1996; Blumenthal, Gudjonsson and Burns, 1999).

Like Murphy other researchers recognised the important distinction between the cognitive content of distortions held by sex offenders and the cognitive operations that generate them. Ward, Fon, Hudson and McCormack (1998) examined these cognitive operations by investigating the range of cognitive factors associated with sexual offending using the qualitative method of grounded theory. This is an analysis procedure that utilises methodical practice to obtain a set of categories from qualitative data. These categories then enable more descriptive or quantitative data to be collected.

Investigating 20 imprisoned child molesters, not yet receiving treatment, Ward and colleagues referred to previous assessment notes or any available documented information (e.g. police records and parole board reports) on each client before interviewing them. During the interview the child molesters were asked about their offending patterns (e.g. what motivates them to offend, how they overcome factors that may prevent them from offending and how they deal with a victims resistance), as well as information about significant life events. Analysis of the child molesters' responses to these questions enabled Ward et al. (1998) to formulate a model of dysfunctional cognitions. This model groups child molesters' cognitions into four categories: offence chain, cognitive operations, cognitive content and meta-variables. The offence chain category of the model identifies five stages (e.g. background factors, high-risk situations, lapse, relapse and post relapse) that describe the procedure and cycle of the sexually assaultive behaviour against children. The second category of the model, cognitive operations, describes the seven methods (e.g. describing, explaining, interpreting, evaluating, denying, minimising and

planning) child molesters use to convey information regarding their offending, offences and victims. Cognitive content, describes the child molester's attitudes, beliefs and perceptions about their sexual offending behaviour in relation to themselves, their victims and the situation. Finally, the fourth category of this model, meta-variables, refers to the methods utilised by child molesters to disclose information about their sexual offending behaviour (e.g. detail, euphemisms, concreteness and passivity). Overall this model recognises the distinction between cognitive content and cognitive processes. Indeed, it recognises that the content of the cognitions can vary depending on which stage of the model is being examined.

Elements of the Model of Dysfunction Cognitions have been supported by earlier research. Previously discussed in this chapter, Neidigh and Krop (1992) examined the cognitive content of child sex offenders' cognitions and grouped them into eight categories. Statements such as 'she enjoyed it,' 'she is flirting and teasing me, so she wants me to do it' and 'this won't hurt or affect her in any way' were consistent with the cognitive operations category of the model of dysfunction cognitions. Like Neidigh and Krop (1992), Ward et al. (1998) found that child molesters gave similar responses when providing information regarding their offending and victims. Despite this support for Ward et al's model, caution should be exercised when drawing conclusions from this research. First, a small sample size (e.g. $n=20$) was used which questions the reliability of being able to generalise Ward et al's findings. Before attempting to generalise these results further analysis is needed that examines a larger sample.

Ward and colleagues failed to clearly define their sample as either incestuous or extrafamilial child molesters, which may have affected the results. As previously discussed Hayashino, Wurtele and Klebe (1995) found extrafamilial child molesters to have a significantly higher level of cognitive distortions than incestuous child molesters. Indeed, incestuous child molesters' level of distorted cognitions did not differ significantly from other types of sexual and nonsexual offenders. As these two groups of child molesters have different levels of cognitive distortions, it may suggest that they have different cognitive processes. To ensure that both types of child molesters' cognitions can be grouped into the four categories of the model of dysfunction cognitions, Ward et al's study should be repeated on a sample that clearly distinguishes incestuous from extrafamilial child molesters.

Examining only imprisoned child molesters may have affected Ward et al's research findings. Although offenders were given the opportunity to volunteer to take part in the research study, they may have considered that there would be consequences to their actions if they took part. Forensic assessments are not anonymous and there can be serious consequences to the information that they provide (Bumby, 1996). To prevent any serious ramifications from the information the child molesters provided, they may not have been as honest with the responses given in Ward et al's study. Future research needs to address this and obtain a sample that includes incarcerated offenders, non-incarcerated offenders and non-convicted offenders.

3.1.3 Cognitive Deconstruction Theory

Murphy's model of cognitive process and Ward et al's model of dysfunction cognitions have a number of methodological flaws and lack empirical support, resulting in neither model being able to provide a clear conceptual model that accounts for the process which generates cognitive distortions and enables sex offenders to justify their offending behaviour. Ward, Hudson and Marshall (1995) proposed a general cognitive theory that attempted to describe a possible explanation for the process that generates the cognitive distortions held by sexual offenders. They proposed Baumeister's construct of cognitive deconstruction in an attempt to provide a conceptual model that could explain initial offending, relapse and insight into cognitive distortions (Baumeister, 1991). Cognitive deconstruction works on the premise that individuals try to avoid traumatic or stressful situations by avoiding negative consequences of self-awareness.

The key component of cognitive deconstruction involves a self-regulatory process that enables individuals to focus their attention on certain aspects of behaviour. All aspects of behaviour have different levels of meaning or interpretation associated with them and individuals can narrow their focus of attention to centre their interest on certain features of behaviour that will prevent them from experiencing negative emotional states. According to Covell and Scalora (2002), individuals will only focus their attention on aspects of behaviour that will enable them to achieve their goal.

When applying the cognitive deconstructionist approach to sex offenders Ward et al. (1995) suggest that this cognitive theory works in conjunction with social learning processes and social skills deficits. Sex offenders may have a poorly developed cognitive processing style, unable to evaluate the consequences of their actions and consideration of the victim's response. Rather than consider the wider ramifications of their sexual offending behaviour, they focus on the immediate gratification they receive from their actions. For example, when sex offenders engage in sexually deviant behaviour they narrow their focus of attention to prevent themselves from experiencing the cognitive process of self-regulation. This process would cause individuals to experience feelings of guilt and shame, as well as thoughts about how the victim was feeling. According to Ward et al. during cognitive deconstruction offenders suspend self-regulation to prevent themselves from experiencing cognitive dissonance (e.g. two conflicting thoughts) so that they can continue with their offending behaviour.

The cognitive deconstruction model suggests that when an individual is in a cognitive deconstructed state their self-awareness is rigid and they focus on basic cognitive processes such as feelings and movement. Their focus is narrow to enable them to engage in their deviant behaviour and thus obtain immediate gratification. Unlike Murphy's (1990) model, the cognitive deconstruction approach attempts to explain the process that enables individuals to disengage self-regulatory control. Rather than focus on complex cognitions (e.g. the welfare of their victim, responsibility for their actions and consequences from their behaviour) sex offenders shift their attention to pleasurable thoughts and feelings (e.g. sexual arousal). Unfortunately, the cognitive deconstruction model only accounts for basic cognitive processes and fails to explain more complex cognitive processes (e.g. responsibility and blame) that play an important role in the rationalisation of an offender's sexually deviant behaviour (Geer, Estupinan and Manguno-Mire, 2000).

Another weakness with the cognitive deconstruction model is that the underlying principles of the model are all conjecture, as there is no empirical research that has been able to validate it. Finally, there is a problem with the process of self-regulation. The model implies that all sex offending can be explained through an offender's ability to self-regulate. Unfortunately, there is no empirical evidence to suggest that all sexual offenders

have the ability to self-regulate. Future research needs to develop reliable methods that are able to detect and measure self-regulation.

3.1.4 Social Cognition Approach

Marshall, Laws and Barbaree (1990) stated a 'cognitive gap' (pg.4) exists within the cognitive distortion literature. Despite the research advancements that have been made with the cognitive content of cognitive distortions (Abel et al. 1989; Stermac and Segal, 1989; Blumenthal et al, 1999), researchers (Murphy, 1990; Ward et al. 1995; Ward et al. 1998) have met with little success in their attempts to develop a single theory that can fully account for the cognitive processes involved in the facilitation, justification and rationalisation of sexual offending behaviour. Consistent with previous research (Ward et al, 1995; Geer, et al. 2000; Covell and Scalora, 2002), Johnston and Ward (1996) recognised the important distinction between the cognitive content of cognitions and the cognitive processes that generate them. They proposed a social cognition approach that addresses the cognitive processes that might account for the contributing factors that lead to sexual offending behaviour. Examining both content and cognitive process this model is an approach that aims to guide research to address three areas. First it is concerned with the storage and organisation of information in memory, how existing information stored in memory affects later information processing, decision making and behaviour and finally the model is concerned with how new information and cognitive processes change stored information (Sherman, Judd and Park, 1989).

To investigate how information is stored and organised in memory Johnston and Ward are of the opinion that it is necessary to examine the content of the belief, how information is stored and how new incoming information impacts on existing information and beliefs. This stage of the social cognition framework recognises the important role that information plays and suggests that two types of information exists: general category information and information about specific instances. However, it is likely that these two types of information will be stored differently, as it may be easier to distinguish information about specific examples from the more general information (Johnston and Hewstone, 1992). Emotions and thoughts have also been identified as factors that will influence information (Johnston and Ward, 1996). Memories and thoughts that are closely

related will facilitate in triggering already stored information in memory. For example, a child molester may have stored in their memory a strong association between knowledge about children and sex. This strong association between these two concepts results in the activation of information about children being sexually provocative, which in turn activates information about sex with children being enjoyable.

Stage two of the social cognition model focuses on the way an individual processes information and how existing information affects future information processing, judgements and behaviours. According to Johnston and Ward, existing beliefs stored in memory can be influenced by a number of factors. Indeed beliefs that are readily accessible will be easy to locate, utilise and influence an individual's decision making and behaviour. Unfortunately, these accessible beliefs can result in individuals interpreting information in a biased manner. Once the accessible belief is triggered it will influence an individual's thoughts and behaviour in a specific direction, although a different outcome might have been achieved if the belief had not been initially activated.

Another function of the second stage of the social cognition model is concerned with how new information is integrated with material already stored in memory. Individuals have to deal with a large amount of information on a daily basis, which puts pressure on their information processing mechanisms. Unable to process all this information, individuals use mental short cuts (e.g. stereotypes) to help them process and integrate new information (Fiske and Taylor, 1991).

The final stage of the model is concerned with the process that changes existing beliefs. Sex offenders possess a number of distorted cognitions (Abel et al. 1989; Stermac and Segal, 1989; Blementhal et al, 1999) that need to be changed to more socially accepting cognitions. To do this sex offenders are presented with information that contradicts their cognition. For this process to be effective sex offenders must be presented with information that is not extreme or deviates too much from their existing belief (Johnston and Hewstone, 1992).

The social cognition approach also recognises that emotions can influence the cognitive process. Individuals who experience increased emotional states will rely more on mental short cuts (e.g. stereotypes) when processing information (Ward, Hudson and Marshall,

1994). For example, during an offence child molesters' emotions will be high as they try to satisfy their sexual needs. This increased emotion state may cause child molesters to rely on stereotypes such as 'she wants to have sex with me,' 'she is flirting and teasing me' and 'sex is not harmful to a child.' These cognitions may result in child molesters rationalising their sexual offending behaviour.

Johnston and Ward's social cognition approach provides a structured explanation that attempts to focus on the information processing procedure at all stages of the offence chain in order to offer insight into the information processing mechanisms that generate cognitive distortions. Reviewing literature they attempted to demonstrate how the principles of their approach could be applied to previous research findings. For example, as previously discussed, Stermac and Segal (1989) investigated the cognitive content of child molesters' using sexual contact with children vignettes. Child molesters were found to perceive the children as responsible for the sexual contact. Applying the principles of the social cognition approach to Stermac and Segal's research finding, child molesters' behaviour would be explained by being influenced by stereotypes and existing assumptions they possessed about children. Despite Johnston and Ward attempts to apply their approach to previously carried out research, their social cognition approach is purely theoretical. To establish the true values of their approach, sound methodological research needs to be developed that will test all stages of the social cognition approach.

In their approach Johnston and Ward highlight the need to examine the underlying processes that generate cognitive distortions. They address this by suggesting individuals use mental short cuts and stereotypes to help them process the vast amount of information that they experience on a daily basis. This mechanism enables individuals to be selective with their processing and reduce the amount of information they need to deal with (Ward, Hudson, Johnston and Marshall, 1997). Unfortunately, no empirical research has been carried out to validate this explanation. Rather than stereotypes and mental short cuts being solely responsible for the production of cognitive distortions, researchers suggest that individuals may have deficits with their cognitive abilities which result in them having significant deficiencies in their social information processing skills. Indeed, Dodge (1986) proposed that individuals require appropriate cognitive skills (e.g. attention and memory) to enable them to process information, which will in turn result in socially appropriate behaviour. According to Dodge, individuals with deficits with their cognitive skills will be

unable to successfully follow a five-stage information processing model: interpreting social cues from the environment; creating mental images and interpreting social cues; generating potential behavioural responses; selecting a response from the possibilities generated and initiating the chosen response (Dodge, 1986). Problems in processing information at one or more of these stages will result in socially inappropriate or problem behaviour. Indeed, researchers found aggressive children to have deficits at a number of the stages of Dodge's model compared to non-aggressive children (Dodge, 1986; Gomez and Hazeldine, 1996).

Considering the view of Dodge, the underlying processes that generate cognitive distortions are not as straightforward as Johnston and Ward (1996) suggest. Mental short cuts and stereotypes may have a role to play in explaining part of the information processing mechanisms, although from the literature discussed above it would appear that they are not the only factors to consider. To understand the information processing mechanisms further, future research needs to examine the role cognitive skills (e.g. attention and memory) play.

Attention has been identified as an important area to investigate, as researchers have found that sex offenders may have deficits with their selective attention process (Craig, 1990; Malamuth and Brown, 1994). Research suggests that sex offenders are selective with the information that they will attend to (Lipsitt & Tice, 1988; Craig, 1990). Subjectively weighting the importance of different cues from the environment, they selectively focus on cues that are supportive of their sexual offending behaviour (e.g. 'she's asking for it, and 'she's enjoying it.'). Research has also found that sex offenders appear to have deficits with their ability to interpret cues from the environment (Craig, 1990). Indeed, Malamuth and Brown (1994) found sexually aggressive males misinterpreted clear and assertive cues as hostile, compared to friendly cues as seductive. Despite research suggesting sex offenders have deficits with their selective attention processing and interpretation of cues from the environment, to date no published research has examined the way in which sex offenders attend to and process cues and information. This is an area that warrants further investigation and will be addressed in chapter six of this thesis.

Despite the weaknesses identified with the social cognition approach, it has made a valuable contribution to current understanding of the underlying processes that generate

cognitive distortions by attempting to provide an integrated approach to theory building. It utilised principles from the theory development strategy called ‘theory knitting’ (Kalmar and Sternberg, 1988), which is a technique that incorporates the best key features from competing models with its own. Integrating elements from three-process model of cognitive factors (Murphy, 1990) grounded theory (Ward et al. 1998), cognitive deconstructionist approach (Ward et al. 1995) and underlying structures and stereotypes (Stermac and Segal, 1989; Fiske and Taylor, 1991) the social cognition approach recognised the need to differentiate between cognitive products, structures, processes, mechanisms of change and the interaction between cognitive and affective processes when investigating cognitive distortions. However, from the material reviewed above it is evident that there is still a great deal research to be carried out in this area. In particular the social cognition approach must consider specific cognitive skills (e.g. attention), investigate how attitudes and beliefs are represented in memory, examine whether sex offenders have adaptive information processing styles than non-offenders, as well as carry out empirical research that is able to examine each component of the approach.

3.1.5 Implicit Theories

The extent to which cognitive distortions are the result of underlying schemas stereotypes, dysfunctional cognitive processing or all three is unclear (Ward, 2000). Recent research proposed that causal theories (e.g. implicit theories) could explain how sex offenders acquire their cognitive distortions (Ward & Keenan, 1999; Ward, 2000). Indeed, research suggests that maladaptive implicit theories produce cognitive distortions by enabling sex offenders to interpret and comprehend their social environments, behaviour and thoughts, which will in turn allow them to make assumptions about future events (Ward, 2000). These assumptions enable individuals to make decisions about their life and behaviour (Ward and Keenan, 1999). Implicit theories enable individuals to organise their knowledge into theories, thus permitting them to understand people and situations (Ward, 2000).

Viewing cognitive distortions as implicit theories provides insight into how information is represented and structured in memory. Indeed, research proposes that beliefs and desires are the two key mental constructs that sexual offender’s implicit theories are structured around (Ward and Keenan, 1999; Ward, 2000). These implicit theories enable sex

offenders to know what their victims want, need, prefer and believe. These assumptions guide sexual offenders to process information that will support what they consider the desires and beliefs of their victims are; information that is not supportive will be rejected. According to Ward (2000), implicit theories comprise of different requirements, ideas and beliefs that dictate which information will be considered and how it will be interpreted. They determine how sex offenders will interpret their victims' behaviour and actions and this will influence their views on their victims' need, want and belief. Researchers suggest that the distorted implicit theories held by sex offenders will result in them developing poor interpersonal skills, social skills and view situations in a way that supports their offending behaviour (Ward and Keenan, 1999; Ward, 2000).

Ward and Keenan (1999) reviewed published literature that examined the cognitive content of distortions held by sex offenders (e.g. Abel et al. 1989; Hanson, Gizzarelli and Scott, 1994; Bumby, 1996). From this literature Ward and Keenan identified that the majority of cognitive distortions held by child molesters could be classified into one of five implicit theories (e.g. 'children as sexual objects,' 'entitlement,' 'dangerous world,' 'uncontrollability' and 'nature of harm'). According to Ward and Keenan, each of the implicit theories held by sex offenders contain information that enables them to understand and interpret their victims' behaviour, as well as help them to make decisions at all stages of the offence chain.

Viewing cognitive distortions as implicit theories enable researchers to claim that it offers insight into the mechanisms that generate distorted cognitions (Ward and Keenan, 1999; Ward, 2000). They assume sex offenders have maladaptive implicit theories as they have failed to develop appropriate interpersonal and social skills. This results in dysfunctional implicit theories generating cognitive distortions, as sex offenders will interpret the needs, desires and behaviour of their victims in an offence support way. Unfortunately, this explanation focuses more on post-offence cognitions, as it suggests how faulty implicit theories enable sex offenders to justify and rationalise their sexual offending behaviour by interpreting the desires and behaviour of their victims in a manner that will support their deviant actions. It fails to explain the actual processes (e.g. attentional processing deficits, faulty social information processing) involved that could fully account for maladaptive implicit theories and poor interpersonal and social skills.

Like the majority of studies that have attempted to investigate the mechanisms involved in generating cognitive distortions they are all purely theoretical (Murphy, 1990; Ward et al. 1995; Ward et al. 1997). No empirical research has been undertaken to investigate the claims of these theories. For research to progress in this area controlled studies must be developed that will test each stage of these proposed theories.

3.1.6 Summary

Research has had some success with investigating the cognitive content of distortions held by sex offenders. Despite methodological flaws (e.g. definition of sample, small sample size and cognition affected by treatment) a number of studies have consistently found that sex offenders hold distorted attitudes and beliefs that are significantly different from non-sexual offenders and non-offenders. This success has driven current and previous research to focus on developing a measure that has good psychometric properties and is able to assess dysfunctional beliefs and attitudes that discriminate sex offenders from others. Unfortunately, this research has met with little success, which suggests that research is still needed in this area to develop a valid and reliable instrument that is suitable for use on individuals with a learning disability.

The literature reviewed in this chapter suggests that it is just as important to investigate the cognitive processes that underlie cognitions, as it is to examine the cognitive content. Theories that have attempted to explain the cognitive processes have met with a number of problems (e.g. no empirical research to support theories and failure to explain information processing strategies such as attention). Despite these problems, the research to date has been regarded as just the first step in attempting to provide some insight into the information processing mechanisms involved in generating cognitive distortions. Identifying strengths and weaknesses with this research will help to guide future research in this area.

Chapter 4 – Assessment of Sexual Offenders

4.0 Introduction

Assessments are carried out on sexual offenders for a variety of reasons. Indeed, one of the main reasons is to estimate the likelihood of risk of an individual re-offending (Marshall, 1996; Marshall and Serran, 2000). With the high rates of recidivism among sexual offenders (Lund, 1990; Swanson and Garwick, 1990; Day, 1994) causing a serious and disturbing social problem, this has resulted in pressure being placed on clinicians to assess risk to enable them to make recommendations to the criminal justice system regarding sentencing, probation and release. Despite recent research efforts into developing a suitable risk assessment instrument of sexual offenders (e.g. the Violence Risk Appraisal Guide [VRAG]; Quinsey, Harris, Rice and Cormier, 1998 and The Sex Offender Risk Appraisal Guide [SORAG]; Quinsey et al. 1998), it is still in its infancy (Marshall, 1996; Seghorn and Ball, 2000). Indeed, Marshall (1996) argues that current research into risk assessment fails to address the impact that treatment can have on an individual and currently focuses on assessing sexual behaviour, physical problems, substance abuse (e.g. alcohol or drugs), self-esteem, empathy and cognitive processes. Current research (Grubin, 1997,1998) suggests that when assessing the risk of sexual offenders re-offending, clinicians should examine the effects of both actuarial factors (e.g. static historical data) and clinical predictions (e.g. the effects of treatment).

In Ward, Hudson and McCormack's (1997) view treatment is the ideal result of assessment. Sexual offenders should receive a complete assessment that focuses on examining their sexual behaviour, life history, psychological deficits, cognitive processes (e.g. empathy and cognitive distortions), substance misuse and personality, as this will facilitate diagnosis, as well as ensure that the key areas that need to be addressed during treatment are identified. Once this systematic assessment has been completed, clinicians can use this data as a baseline to evaluate change and the therapeutic progress of sexual offenders.

With the population of incarcerated sexual offenders increasing (Becker and Murphy, 1998) and the incidence of sexual crimes causing a serious and worrying social problem, this has resulted in clinicians recognising the need to develop methodical assessment

programmes that utilise a number of methods to collect relevant information which will facilitate the decision making process concerning the risk posed by sexual offenders and their motivation and willingness for treatment. At present, clinical interviews, administration of psychological scales and phallometric testing are the recommended methods to collect clinical information (Ward, Hudson and Keenan, 2000).

Within the past 30 years, the behavioural and more recently the cognitive behavioural schools of thought have influenced the assessment and treatment of sexual offenders. These approaches utilise an evidence-based practice approach (Kazdin, 1978 [as cited in Marshall, 1999]) and recognise the role cognitive processes play in sexual offending behaviour. Indeed, the cognitive-behavioural approach recognises that sexual offenders possess a number of distorted attitudes relating to sexual behaviour, resulting in researchers focusing their attention on sex offenders' distorted perceptions, negative attitudes towards women and children and their denial and minimisation of their deviant sexual behaviour (Stermac and Segal, 1989; Bumby, 1996; Marshall, 1999). This interest has resulted in researchers trying to develop a reliable and valid assessment tool that is able to measure the cognitive distortions held by sexual offenders (Burt, 1980; Abel, Gore, Holland, Camp, Becker, and Rathner, 1989; Bumby, 1996). Identifying these distorted cognitions will enable clinicians to recognise the areas that need to be addressed and challenged during treatment. Despite this research interest into cognitive distortions, the assessment literature still values the role phallometry can play in providing relevant clinical information (Freund, 1966a,b; Lalumière and Quinsey, 1994; Harris, Rice, Quinsey and Chaplin, 1996; Ward, Hudson and Keenan, 2000). By reviewing current literature that has examined the role phallometry (i.e. a physiological assessment) and cognitive distortions play in assessment, this chapter aims to show how opinions have developed regarding the value and contribution phallometry and cognitive distortions have made to the assessment process.

4.1.1 Physiological Assessment

Physiological assessments are routinely used as part of the assessment procedure for sexual offenders in America and Canada. Indeed, penile plethysmography is a physiological assessment that measures a man's erectile response while viewing or

listening to sexual stimuli. This assessment technique was originally developed by Freund (1963) and involves monitoring any changes in the length and circumference of a man's penis while he watches or listens to appropriate sexual interactions (e.g. consensual sex) or inappropriate sexual acts (e.g. under-age sex). It is argued that examining a male's erectile responses to these two classifications of audio and visual stimuli can determine whether he has a sexual deviance.

Using phallometric assessment Freund (1967a) investigated the sexual preference of child molesters. His sample comprised of 27 heterosexual and 20 homosexual child molesters, 23 homosexuals who preferred to have sex with teenagers between the ages of 13 and 17 years, 25 homosexuals who preferred sex with an adult and 35 participants who were not suspected of having a sexual deviance. Participants were shown 60 colour slides of children of both sexes, with three measurements of their penis volume being taken for each slide (e.g. at the start of exposure to a slide, at the end of exposure and 7 seconds after the end of exposure). From these measurements, Freund concluded that the sexual offenders who had molested young girls demonstrated greater levels of sexual arousal to the slides of young children than they did to the slides of adults. Participants who were not suspected of sexual deviance demonstrated a preferred preference to the slides of adults than children. Freund has replicated these findings in a number of studies (Freund, 1967b; Freund and Blanchard, 1989), although researchers conclude that these studies are controversial as they have a number of methodological flaws (Murphy and Becker, 1988; Marshall, 1996). For example, Marshall and Fernandez (2000) stated that Freund failed to state that the participants in his studies all admitted to having multiple victims. This may have affected Freund's results, as sexual offenders with multiple victims may find any type of sexually inappropriate behaviour sexually arousing, whereas this may not be true for sexual offenders with only one victim, as their sexual experience and preference will be specific to one type of victim. To address this methodological flaw future research should compare the phallometric results of sexual offenders with many victims, with only one victim and individuals who have only committed one offence.

Freund (1967a,b) also failed to define child molesters as either incestuous or nonfamilial child molesters. Incestuous child molesters tend to engage in sexually inappropriate behaviour with the same victim, however nonfamilial will have many victims. Similar to the behavioural explanations offered for sexual offenders with more than one victim, it

would be expected that nonfamilial child molesters would become sexually aroused by most stimuli depicting sexual behaviour with children (Abel and Blanchard, 1974). Incestuous child molesters would be less likely to be generally aroused, as the stimuli would not be of victims that they recognised. Without the preference and experience of inappropriate sexual interaction with a variety of victims, incestuous child molesters would not be expected to become sexually aroused by visual or audio stimulus of children that they were not familiar with. Failing to recognise the differences between incestuous and nonfamilial child molesters, as well as examining them separately may have resulted in Freund's results failing to provide an accurate picture of how these two types of child molesters respond to sexual stimuli of children.

Quinsey and colleagues (Quinsey, Steinman, Bergersen and Holmes, 1975; Quinsey, Chaplin and Carrigan, 1979) have replicated Freund's studies using similar phallometric techniques, whilst addressing one of the methodological flaws identified with Freund's sample. Measuring only the penile circumference of change for each sexual offender Quinsey and colleagues tested 16 incestuous and 16 nonincestuous child molesters (Quinsey, Chaplin and Carrigan, 1979). The incestuous child molesters comprised of 9 individuals who had either sexually abused their daughter or stepdaughter, 4 who had offended against their sisters, 2 against their nieces and finally one against their cousin. Nonincestuous child molesters were matched with incestuous offenders based on their age and their victim's age. Participants were shown slides of people that varied in age and sex and penile circumference measurements were taken for each stimulus that was presented. When this data was statistically analysed to calculate the duration of arousal to each class of stimuli, Quinsey and colleagues found that nonincestuous child molesters demonstrated a stronger sexually deviant preference for children than incestuous child molesters did. Results also indicated that incestuous child molesters, whose victims were either their daughters or stepdaughters, showed more appropriate age preference than their matched counterparts of nonincestuous child molesters. However, when appropriate age preference was examined between incestuous child molesters (e.g. female victim relatives including sisters, nieces and cousins) and their matched control, no significant difference was found. Quinsey concluded that inappropriate sexual age preference was more of a priority for nonincestuous child molesters than it was for child molesters whose victims were their daughters or stepdaughters. These differences identified between incestuous and

nonincestuous child molesters highlight the need for researchers to ensure that they examine them separately.

Interest also exists with the phallometric assessment of rapists. Indeed, Quinsey strongly advocates that phallometric assessments are able to discriminate rapists from non-sexual offenders (Quinsey, Chaplin and Varney, 1981; Quinsey, Chaplin and Upfold, 1984). To investigate the sexual preference of rapists phallometric assessment is guided by the sexual-preference hypothesis. This hypothesis assumes that sexual desires drive sexually deviant behaviour and rapists prefer coercive rather than consenting sex.

A number of researchers have tested the sexual preference hypothesis by carrying out phallometric assessments on rapists (Quinsey et al, 1984; Proulx, Aubut, McKibben and Côté, 1992). In these studies participants are exposed to either audio or visual stimulus depicting consenting and sexually aggressive nonconsenting sex. Measurements of their penile circumference of change for each stimulus are recorded and a 'rape index' (Abel, Barlow, Blanchard and Guild, 1977) calculated. To compute the 'rape index' the mean score of an individual's responses to consenting sexual stimulus is divided by his mean response to nonconsenting sex. Quinsey and colleagues (Quinsey et al. 1981; Quinsey and Chaplin, 1984; Quinsey et al, 1984) have followed this procedure and consistently found that phallometric assessments are able to discriminate rapists from non-sexual offenders. For example, when Quinsey and Chaplin (1984) tested 15 rapists and 15 non-offenders, they found that the rapists responded more to the stimulus that depicted sexually aggressive sex than the stimulus that showed consenting sex. Rapists were also found to respond more to the nonconsenting sex stimulus than the non-offenders did. Consistent with this finding, Proulx, Aubut, McKibben and Côté (1994) obtained similar results when they tested 10 rapists and 10 non-offenders.

Despite these studies consistently finding phallometric assessments to discriminate rapists from non-offenders and offer support the sexual preference hypothesis, there are just as many studies that have been unable to replicate these research findings. Indeed, Eccles, Marshall and Barbaree (1994) compared 19 rapists with 19 non-offenders and found that the rape index derived from the audio descriptions of consenting sex and aggressive and humiliating nonconsenting sex did not differ significantly between the two groups. Consistent with this research finding when researchers compared the rape indices of

rapists and non-sexual offenders, they were unable to discriminate between the two groups (Murphy, Krisak, Stalgaitis and Anderson, 1984).

A debate appears to exist between the ability of phallometric assessments to discriminate rapists from non-offenders. Marshall and Fernandez (2000) suggest that the over estimation of phallometric assessments ability to discriminate could be explained by the type of sample investigated. According to researchers, sadistic rapists may demonstrate a preference for nonconsenting sex, whereas nonsadistic rapists may not (Marshall and Eccles, 1991). If this opinion is correct it could explain Quinsey's results, as his samples of rapists were likely to have comprised mainly of sadistic rapists (Quinsey et al. 1981; Quinsey and Chaplin, 1984; Quinsey et al, 1984). Indeed, obtaining a sample from a maximum-security psychiatric hospital that receives the most violent and aggressive offenders increases the probability that Quinsey's sample was over represented with sadistic rapists. Proulx et al's (1992) research findings may also have been the result of utilising a sample that comprised mainly of sadistic rapists, as they found that rapists could only be discriminated from non-offenders when the nonconsenting stimulus depicted victims being humiliated.

Research that was unable to discriminate rapists from non-rapists may have resulted in their samples comprising of few sadistic rapists (Eccles, Marshall and Barbaree, 1994; Murphy, Krisak, Stalgaitis and Anderson, 1984). To offer further insight into the extent to which phallometric assessment can discriminate between rapists and non-rapists, future research must ensure that they examine these two samples separately.

Variations in results and methodological weaknesses (e.g. defining samples as incestuous or nonincestuous and sadistic and nonsadistic rapists) of phallometric assessments have resulted in three general flaws being identified with this type of research. The first methodological flaw concerns the problem of faking, as this is believed to compromise phallometric assessment. Researchers suggest that to prevent further consequences from the criminal justice system, convicted sexual offenders fake their responses by trying not to show sexual preference to inappropriate and forced sexual contact stimulus (Lalumière and Quinsey, 1994; Marshall, 1996; Marshall and Fernandez, 2000). Indeed, rapists will try to respond more to consenting sexual stimuli and less to nonconsenting stimuli, resulting in sexual preference data for consenting sex being exaggerated.

Participants may also use distraction tactics (e.g. cognitive strategies) to prevent themselves from showing their true sexual arousal to the stimuli presented. They use cognitive strategies to inhibit sexual arousal or increase sexual preference to less favoured sexual stimuli. To prevent sexual offenders from using distraction tactics is extremely difficult, as researchers are unable to detect when and if sexual offenders are using them (Marshall and Fernandez, 2000).

The second methodological flaw deals with the ethical issue raised by showing pictures of sexually deviant behaviour. Stimuli depicting sexually aggressive nonconsenting sex may result in reinforcing a sexual offender's beliefs and deviant sexual behaviour. Exposing these stimuli to sexual offenders may confirm to them that it must be acceptable and encourage them to sexually offend.

Problems also arise with the way women are depicted in the stimuli. Marshall (1996) states that the stimulus degrades women as they are portrayed in a submissive and humiliating manner. Portraying women in this way may reinforce rape myths that some sexual offenders possess. Marshall (1996) also suggests that considering the legal issues of child pornography, depicting children as sexual objects in audio and visual stimulus could be regarded as illegal. Considering these ethical concerns throws into question the appropriateness of using this type of stimulus.

The final methodological flaw deals with administration of the stimulus. With no standardised instructions employed, set method to present stimulus (e.g. slides, film or audiotapes, colour or black and white) or set procedure to record subject's responses (e.g. volumetric or circumference changes) this creates problems when trying to compare the results from different studies and draw conclusions. There is also a problem with ecological validity, as the stimulus used is often artificially created by computers. Generating stimulus in this way is artificial and not reflective of how children and females are presented in society. Failing to use real images of children or females may result in phallometry being affected, as generated images may not elicit the same level of arousal that real images would.

The inconsistencies and methodological flaws identified in the phallometric research questions its clinical ability to fulfil the roles of assessment (e.g. identify risk and

treatment needs and monitor therapeutic progress). Indeed, Marshall (1996) suggests that clinicians should consider using other methods of assessment while further research is carried out on phallometry that addresses the methodological flaws outlined above. Despite Marshall's concerns, Quinsey and colleagues (Quinsey et al. 1981; Quinsey and Chaplin, 1984; Quinsey et al, 1984) are still strong supporters of phallometry and continue to advocate its use. Quinsey acknowledges that phallometry is not perfect and has implemented certain procedures to deal with methodological flaws (e.g. problems with faking). However, it would appear that Quinsey is of the opinion that the number of strengths for phallometry outnumbers the weaknesses.

Although phallometry continues to be used throughout North America as part of the assessment process, with the increase in literature questioning its reliability (Marshall, Payne, Barbaree and Eccles, 1991; Eccles et al. 1994; Marshall and Fernandez, 2000, 2003) and a cognitive revolution, researchers have recognised that for an assessment process to be effective it needs to be comprehensive. Rather than rely on one source of information, researchers suggest that a number of different areas should be examined. Indeed, Marshall (1999) suggests that there are eight areas that should be targeted during an assessment: 'sexual behaviour,' 'social functioning,' 'life history,' 'cognitive processes,' 'personality,' 'substance abuse,' 'physical problems' and 'relapse-related issues' (pg.223).

It is logical to expect that 'cognitive processes' will be examined considering the impact that the cognitive behavioural approach has had on treatment over the past 20 years. Most of the sexual offender treatment programmes in North America (Marshall, 1999) and many in Europe (e.g. UK, Portugal, Spain, Belgium, Ireland and Holland; Frenken, 2003) are based on cognitive-behavioural principles. These programmes aim to prevent relapse by focusing on cognitive factors including empathy, distorted cognitions and deviant sexual preference.

4.1.2 Assessment and Cognitive Processes

Within the sexual offender literature, empathy has received a great deal of research interest. A number of researchers argue that sexual offenders have deficits with their

empathic abilities and therefore incorporate empathic training into treatment programmes (Williams and Finkelhor, 1990; Burke, 2001). Indeed, Knopp, Freeman-Longo and Stevenson (1992 [cited in Marshall et al, 1995 pg. 105]) reported that of the treatment programmes reviewed in a North American survey, 94% contained a large component of empathic training.

Empathy has been defined as *'the capacity to cognitively perceive another's perspective, to recognise affective arousal within oneself and to base compassionate behavioural response in the motivation induced by these concepts'* (Pithers, 1994 pg. 565). Sexual offenders who are unable to empathise will continue with their sexually deviant behaviour, as they are unable to recognise the distress of their victims. Indeed, research suggests that child molesters are unable to demonstrate victim empathy (Abel et al. 1989), as they believe that their behaviour will not distress or harm a child. This belief results in sexual offenders avoiding feelings of guilt or shame and allows them to continue with their sexually inappropriate behaviour.

Believing that sex offenders are unable to empathise is a rational and logical explanation that helps people to understand how they can abuse children and women (Hudson and Ward, 2000). Indeed, research found that child molesters were unable to recognise various emotional states of other people (Hudson, Marshall, Wales, McDonald, Bakker and McLean, 1993). Testing 71 incarcerated offenders, 21 of which were sex offenders, Hudson et al (1993) presented them with 36 slides of males and females showing different facial expressions (e.g. anger, disgust, fear, surprise, happiness and sadness). The results indicated that sexual offenders had deficits in their ability to recognise facial expressions, as they demonstrated the least sensitivity to the emotional stimuli. However, when empathy among sex offenders is examined using self-report measures, the results are not as convincing as that of Hudson et al.

Hayshino, Wurtele and Klebe (1995) examined empathy among 22 incestuous and 21 extrafamilial child molesters, 33 rapists and 27 non-sexual offenders. Participants were tested on the Interpersonal Reactivity Index (Davis, 1980[cited in Hayshino et al. 1995 pg. 109]) which measures four components of empathy (e.g. 'perspective taking,' 'fantasy,' 'empathic concern' and 'personal distress' [cited in Marshall et al. 1995 pg. 101]). Results indicated that there was no significant difference in empathy scores between incestuous

and extrafamilial child molesters. Overall, the results indicated that there were no differences in empathy scores for the four groups tested. Consistent with this research, Hoppe and Singer (1976) found no significant difference in empathy scores between a group of rapists, child molesters and non-sexual offenders.

Inconsistencies in the empathy deficits literature may be the result of methodological flaws. For example, problems with screening the sample may have resulted in the empathy data being affected. Researchers have noted that some sexual offenders score high on psychopathy (Quinsey, 2003). These individuals do not demonstrate empathy for anyone, so it is unlikely that they would be able to show empathy to their victims. A number of studies failed to state whether or not they screened for psychopathy (Hoppe and Singer, 1976; Hayshino et al. 1995). This creates problems when trying to draw conclusions from this research, as it is not clear whether these results were due to sexual offenders not having empathy deficits or because they had high psychopathy scores. Future studies need to address this issue and ensure that samples are screened for psychopathy.

Another problem exists with the measures that are used to assess empathy. Many empathic assessment instruments view empathy as 'trait like', assuming that empathy is fixed over time and across situations and individuals. Indeed there are three commonly used instruments that have been identified as assuming that empathy is 'trait like': the Empathy Scale (Hogan, 1969 [cited in Marshall et al. 1995 pg. 103]), the Interpersonal Reactivity Index (Davis, 1983) and the Emotional Empathy Scale (Mehrabian and Epstein, 1972 [cited in Marshall et al. 1995 pg.103]). Treating empathy in this way fails to recognise that empathy may change depending on the situation, mood and characteristics of a sex offender's victim.

The current literature reviewed here, utilised empathic measures that assume empathy is 'trait like' (Hoppe and Singer, 1976; Hayshino et al. 1995), suggesting that this research offers little insight into the true nature of empathy. Recognising that empathy may vary depending on the situation; Marshall et al (1995) propose that a four-staged process should be used to guide future empathy research. This process proposes that individuals need to go through four stages in order for them to be able to empathise (e.g. 'emotion recognition,' 'perspective taking,' 'emotion replication' and 'response decision' [pg. 101]). Failure at any one of the stages will result in an individual being unable to empathise. This four-

stage process of empathy provides a criterion against which empathic research can be evaluated (Geer, Estupinan and Manguno-Mire, 2000). It breaks empathic responding into logical components that can be monitored and assessed (Marshall, et al. 1995). Unfortunately, there is no research to date that has examined empathic responding in this way.

Despite the inconsistencies in empathy research, it would appear that from the large number of sex offender treatment programmes, which incorporate some component of empathic training (Knopp, Freeman-Longo and Stevenson, 1992), clinicians still feel empathy has an important role to play in sexual offending behaviour. Considering this, future research needs to address the methodological flaws (e.g. sampling and assessment process) in order to provide further insight into the role empathic responses play in accounting for sexually deviant behaviour. Improving understanding of empathy is likely to make clinicians further aware of the key areas that need to be addressed during treatment.

4.1.3 Assessment of Cognitive Distortions

The content of sex offender treatment programmes varies (Frenken, 2003), as there is no standardised manual that outlines the areas that need to be addressed during therapy. However, a review of North American treatment programmes found that they share common features. Empathy and cognitive distortions were both identified as key areas that are addressed in most sex offender treatment programmes (Marshall, 1999).

Both empathy and cognitive distortions have received a great deal of research interest over the past twenty years. Similar to the empathy literature researchers recognise the important role that cognitive distortions play in sexual offending behaviour, but have been unable to explain the underlying cognitive processes that generate these cognitions which enable sexual offenders to justify and rationalise their sexual offending behaviour (Murphy, 1990; Ward, Hudson and Marshall, 1995; Johnston and Ward, 1996). Even with this gap in the literature, researchers still believe that cognitive distortions play a vital role in the etiology, maintenance and justification of sexual offending behaviour (Bumby, 1996; Marshall and Serran, 2000).

Clinicians believe that cognitive distortions provide information about a sexual offender's motivation to treatment and therapeutic progress (Murphy, 1990; Becker and Murphy, 1998). This belief has driven research to date to focus on the cognitive content of sex offenders' distorted cognitions (Abel et al, 1989; Stermac and Segal, 1989; Bumby, 1996). According to Horley and Quinsey (1997), there are two methods that can be utilised to assess cognitive distortions: semantic differential and self-report measures that assess specific attitudes and beliefs related to sexual offending behaviour.

Semantic differential is a method used to obtain information about a sexual offender's thoughts about himself, victims and other people. Sexual offenders are presented with a list of 21 bipolar adjectives (e.g. deceitful-trustful, bad-good, kind-cruel, immature-mature, narrow-minded-broad-minded, trusting-suspicious, selfless-selfish, pleasant-unpleasant, affectionate-not affectionate, as I'd like to be-not liked to be, happy-sad, sexy-sexless, seductive-repulsive, beautiful-ugly, clean-dirty, submissive-dominant, erotic-frigid, constrained-spontaneous, soft-hard, cold-hot and big-small; Horley and Quinsey, 1994 pg. 174) that are placed at either side of a seven point Likert scale. Sexual offenders are asked to rate each of these adjectives based on how they view themselves, the ideal self, boy, girl, woman and spouse. They indicate how they rate these adjectives by placing an 'X' on the 7 point Likert scale.

Horley and Quinsey (1994) followed this procedure to assess the cognitive distortions of child molesters. They assessed 57 imprisoned child molesters, 50 imprisoned non-sexual offenders and 30 non-offenders. Their results found that there were not many significant differences between the three groups under investigation, although differences were found between the way child molesters and non-child molesters rated 'themselves' and their 'ideal self.' When the results of the child molesters and non-child molesters were compared, non-child molesters were found to describe themselves as more seductive, more sexy, more erotic, harder and cleaner. Horley and Quinsey also found a difference between the way child molesters and non-child molesters rated the eroticism of a woman, as non-child molesters viewed women as more erotic.

It is unclear whether the participants in Horley and Quinsey's study were receiving treatment. Failing to state whether the imprisoned participants were currently receiving treatment or yet to start treatment could have affected the results of this research. As most

sex offender treatment programmes incorporate some component of empathic training and challenging of cognitive distortions (Marshall, 1999), it is essential that assessments be taken before treatment starts to obtain data that has not been affected by treatment.

Horley and Quinsey also failed to state whether the participants denied or admitted to their crimes. Individuals who admit to their crime may be more open to the assessment and therapeutic process and be more prepared to take responsibility for their deviant sexual behaviour. This acceptance may result in sex offenders providing an accurate account of their distorted cognitions. Individuals who deny their crime may be more inclined to self-monitor their responses to ensure that they provide socially acceptable answers. Indeed, Scully and Marolla (1983) investigated a group of rapists who admitted to their crime and a group who did not. Both groups were asked to describe the sexual assaults that they had committed. When their descriptions were compared, Scully and Marolla found that the group who did not admit to their crime described their offence with stereotypes that vindicated themselves and placed the blame on their victim. These results were interpreted to suggest that rapists are aware of culturally and socially acceptable beliefs about sexual behaviour, however the beliefs they possess are based upon flawed conceptions.

Examining only imprisoned sexual and non-sexual offenders may also have affected Horley and Quinsey's research findings. Although offenders were given the opportunity to volunteer to take part in the research study, with confidentiality and anonymity assured, Bumby (1996) argues that these types of forensic assessments cannot be solely confidential, as serious consequences can result from the information offenders provide. To prevent serious consequences from the information sexual and non-sexual offenders provide they may fake their responses by giving more socially acceptable ratings of themselves, ideal self, boys, girls, women and spouses. Future research needs to address this issue by obtaining a sample that includes imprisoned offenders, non-imprisoned offenders and non-convicted offenders.

Problems also arise with the suitability of use of semantic differential assessment on certain groups of people. This method of assessment requires that participants are able to read, have a grade 10 level of education (e.g. standard grade or GCSE level of education), can conceptualise a Likert scale method of rating and be able to think in terms of the 'ideal self.' These requirements suggest that it would exclude a number of participants. Indeed,

individuals with a learning disability are very unlikely to meet the inclusion criteria and would therefore be unable to complete a semantic differential assessment. Individuals with learning disabilities are unlikely to have a GCSE or standard grade level of education and would probably have difficulty with the interpretation of certain words (e.g. seductive, constrained, submissive and spontaneous). Failure to understand these words would prevent them from being able to rate them accurately. Second, Lindsay (2001) argues that individuals with learning disabilities find Likert scales conceptually too difficult to understand and use, suggesting that the practicality of using this method to obtain information is not suitable for this population. Finally, individuals with learning disabilities may have problems trying to think in terms of the 'ideal self.' If this population, and in general sex offenders, have problems empathising and trying to put themselves in an other persons situation (Abel et al, 1989; Hudson et al, 1993), this might suggest that they would be unable to think of themselves in terms of how the ideal person should be. Unable to conceptualise the 'ideal self' suggests that individuals with learning disabilities would be unable to complete the semantic assessment.

A second method to assess cognitive distortions is a more focused approach that utilises self-report measures. Researchers (Bumby, 1996; Vanhouche and Vertommen, 1999) believe there are three dominant measures that have been developed to assess distorted attitudes and underlying beliefs of sexually deviant behaviour: Abel and Becker Cognitions Scale (Abel et al, 1989), the Rape Myth Acceptance Scale (Burt, 1980) and two scales of the Multiphasic Sex Inventory (Nichols and Molinder, 1984) – the Cognitive Distortions and Immaturity Scale and the Justifications Scale. These assessment measures focus on the cognitive content of distorted cognitions, as researchers believe these are fundamental to sexual offending (Abel et al, 1989; Stermac and Segal, 1989; Bumby, 1996).

Since the 1980s researchers have focused their attention on trying to develop assessment measures of cognitive distortions that have good psychometric properties, as they believe it is vital to have reliable and valid instruments that are able to identify the cognitive content of sexual offenders' distorted cognitions (Burt, 1980; Abel et al, 1989; Bumby, 1996). Clinicians need these assessment measures to enable them to identify the key distorted cognitions that need to be addressed during treatment. Indeed, research into the cognitive content of child molesters has consistently found that they possess distorted

cognitions that legitimise their deviant sexual behaviour with children (Abel et al. 1989; Stermac and Segal, 1989). Child molesters also believe children initiate sexual contact with adults and perceive them to be sexually provocative.

Pollock and Hashmall (1991) investigated the cognitive content of excuses provided by 86 child molesters and concluded that they could be placed into 6 categories: placing the blame on extenuating circumstances, sexual interactions with children is acceptable, interactions are nonsexual, blaming psychological factors, blaming the victim and denial. However, the research into the cognitive content of rapists is not as clear. Rapists provide explanations that justify and rationalise their inappropriate behaviour that are not significantly different from men in the general population who have not sexually offended (Bumby, 1996; Ward, Hudson, Johnston and Marshall, 1997). Failure to find distinct differences between the cognitions held by rapists and non-rapists has encouraged researchers to focus on issues of responsibility rather than cognitions related to the acceptability of their behaviour. Indeed, Marolla and Scully (1986) found that rapists mitigate responsibility for their sexually deviant behaviour onto their victims. Denial of responsibility results in rapists believing that they are innocent.

A commonly accepted measure used to assess the cognitive content of rapists' maladaptive cognitions is the Rape Myth Acceptance Scale (Burt, 1980). This is a 19-item questionnaire that assesses rape supportive attitudes. Items are scored on a 7-point Likert scale ranging from 'strongly agree' to 'strongly disagree'. The scale comprises of 11 items that relate to justification of rape and displacement of blame to the victim. These items are all worded in the same direction with higher scores indicating greater support for rape supportive attitudes. The remaining 8 items relate to false accusations and the rate at which rapists are likely to believe individuals' claims of rape (e.g. best friend, black and white woman).

The Rape Myth Acceptance Scale claims to have good psychometric properties, with Burt (1980) reporting a Cronbach Alpha of 0.88. This score suggests that the measure has good internal consistency and items are likely to be measuring the same cognition. However, problems appear to exist with the discriminative ability of the measure. Despite Burt (1980) claiming that men who engage in sexually deviant behaviour with females possess a greater number of rape supportive attitudes than a group of controls and university

students who do not sexually offend, research has been unable to provide support for this finding. Indeed, Segal and Stermac (1984) found that rapists did not hold significantly different attitudes towards women than non-sexual or non-offenders. This finding was endorsed by Marolla and Scully (1986), as they found no significant difference between the attitudes held by rapists and other types of offenders. Failing to find significant differences between different groups of sex offenders and non-offenders attitudes has led Bumby (1996) to question the Rape Myth Acceptance Scale's ability to discriminate between these groups.

The Rape Myth Acceptance Scale's inability to discriminate between rapists and other groups may be the result of nearly one-third of the items failing to measure rape myths or distorted cognitions. Indeed, these items relate to demographic factors including age, race and gender, as well as an individual's awareness of whether or not rape allegations are believable. To establish whether rapists do hold more rape supportive attitudes than non-sexual and non-offenders, future assessment measures must ensure that they incorporate items that solely focus on rape myths (e.g. 'men are entitled to have sex with women,' 'men have control over women' and 'men's sexual impulses must be satisfied') and distorted cognitions relating to sexual offending.

Little is also known about the social desirability aspect of the Rape Myth Acceptance Scale. Research has found sexual offenders to be aware of cultural and socially acceptable responses. Indeed, sexual offenders often provide socially acceptable response to avoid negative consequences from their responses, to mitigate responsibility or exonerate themselves (Scully and Marolla, 1983; Bumby, 1996). The Rape Myth Acceptance Scale may encourage sexual offenders to present themselves in a positive and socially acceptable manner, as it is a rather transparent questionnaire with all the items being worded in the same direction. Failing to vary the direction of the wording of the items may encourage sexual offenders to fall into an acquiescence response set. Future assessments must address this concern, as well as the issues of social desirability. Assessment measures may wish to incorporate a 'lie scale' that would detect individuals who were giving unusually high numbers of socially acceptable responses.

Problems have also been identified with the 7-point Likert method of scoring utilised by the Rape Myth Acceptance Scale. Providing participants with an odd number of options

(e.g. 1 to 7) enables individuals to take a neutral stance when rating rape supportive attitudes. They can avoid agreeing or disagreeing with statements, resulting in the usefulness of the scale being hindered. If participants take an indifferent position to the statements this might account for no significant difference being detected between the rape supportive attitudes of rapists, non-sexual and non-offenders.

A second measure of cognitive distortions among sexual offenders is the Abel and Becker Cognitions Scale (Abel, Gore, Holland, Camp and Becker, 1989). This is a 29-item questionnaire, originally developed by Abel, Becker and Cunningham-Rathner (1984), to assess cognitive distortions among child molesters. All items are worded in the same direction and are answered on a 5-point Likert scale ranging from 'strongly agree' to 'strongly disagree'. Lower scores indicate a greater support for sexually deviant cognitions.

The Cognition Scales appears to have acceptable psychometric properties, with test retest reliability ranging from .64 to .77 and an overall reliability score of .76 (Abel et al. 1989). Abel et al (1989) claimed the Cognition Scale to be unidimensional, despite a factor analysis extracting 6 components: 'child-adult sex helps the child,' 'children initiate child-adult sex for specific reasons,' 'adults initiate child-adult sex for specific reasons,' 'the child's behaviour show their desire for child-adult sex' and 'child-adult sex is or will be acceptable in society' (pg. 144-145). Abel et al (1989) reported Cronbach Alphas ranging from .59 to .82 for the six factors, again indicating good internal consistency.

Research has found some promising results with the Cognition Scale's discriminative ability. Indeed, Abel et al. (1989) found that child molesters scored more deviantly on all six subscales than normal controls, although none of the factors were able to discriminate between child molesters and non-child sexual offenders. Factor 1 ('child-adult sex helps the child') of the Cognition Scale was able to discriminate between child molesters and controls. Results also found that non-child sexual molesters scored significantly more deviantly than the controls on factors 1 (child-adult sex helps the child) and 3 (adults initiate child-adult sex for specific reasons).

Stermac and Segal (1989) replicated Abel et al's research and obtained similar results. They found that child molesters differed from non-child sexual offenders and non-

offenders in the types of cognitions and beliefs they held regarding the positive benefits from sexual contact with a child, viewing a child as sexually provocative and viewing a child as responsible for initiating sexual contact. However, contrary to Abel et al's finding, Stermac and Segal did find a significant difference between the deviant cognitions held by child molesters and non-child sexual offenders, thus offering support for the discriminative ability of the Cognition Scale.

Inconsistencies with the discriminative ability of the Cognition Scale within certain sexual offender groups (Abel et al. 1989; Stermac and Segal, 1989) may result from a number of weaknesses that have been identified with the measure. First it has been criticised for being transparent (Horley and Quinsey, 1994; Marshall, 1996), suggesting that it encourages participants to present themselves in a socially acceptable way (Murphy, 1990). Utilising a socially desirable response biases to present themselves in a positive manner, participants can avoid giving a realistic impression of their cognitions related to deviant sexual behaviour. The 5-point Likert method of scoring may also create problems when trying to discriminate the groups based on their cognitions. Similar to the Rape Myth Acceptance Scale, this odd number of response options (1 to 5) provides participants with the opportunity to take a neutral stance, rather than commit themselves to agreeing or disagreeing with specific cognitions.

Problems have also been identified with the content of the some of the items in the measure. Two of the items assess beliefs about the treatment of child molestation, rather than the act of child molestation (e.g. 'if a person is attracted to sex with children, he (she) should solve that problem themselves and not talk to professionals'). Some items contain more than one question. For example, 'most children 13 (or younger) would enjoy having sex with an adult and it wouldn't harm the child in the future'. Some participants may agree that children enjoy having sex with adults, but believe that it could still cause the child harm. Having more than one answer to an item could create problems for participants when trying to rate their belief on a 5-point Likert scale. Similarly, the item 'when a young child asks an adult about sex, it means that she (he) wants to see the adult's sex organs or have sex with the adult' could result in participants having more than one belief to this cognition. It is essential assessment measures contain items that refer only to one cognition when using static scoring methods (e.g. Likert scale).

A third commonly accepted measure of cognitive distortions is the Multiphasic Sex Inventory developed by Nichols and Molinder (1984). This comprises of two subscales designed to comprehensively assess distorted cognitions of sexual offenders: the Cognitive Distortions and Immaturity Subscale and the Justifications Subscale. Both subscales were designed to be used on child molesters, rapists and exhibitionists, unlike Burt's Rape Myth Scale which is specific to rape and Abel and Becker's Cognition Scale to child molestation.

The Cognitive Distortions and Immaturity Subscale consists of 21 items that require a true or false response to statements designed to assess a sexual offender's self-accountability for his offence and the extent to which he adopts a victim's attitude (e.g. 'in some ways I was used by the person who reported me'). Some of the items assess cognitive distortions regarding sexually deviant behaviour (e.g. 'my problem is not sexual, it is that I really love children'), whereas other items assess beliefs sexual offenders may hold to rationalise their behaviour (e.g. 'I'm often hurt by other people').

This scale claims to have satisfactory psychometric properties (Abel et al. 1989), although problems have been identified with the validity of this subscale. Indeed, Murphy (1990) argues that some of the items have poor face validity and may not assess maladaptive cognitions related to sexually assaultive behaviour. These items (e.g. 'I was curious about sex as a child' and 'I became interested in sex after high school') may focus on denial of sexual feelings and sexual issues than distorted cognitions. Problems have also been identified with the discriminative ability of the subscale, as it was unable to differentiate between rapists, non-violent offenders and non-sexual violent offenders (Abel et al. 1989). Further analysis of the discriminative ability of the subscale is hindered by the scale presuming that the participant completing the measure has committed a sexual offence.

The Justification Subscale of the Multiphasic Sex Inventory has also encountered similar problems to the Cognitive Distortions and Immaturity Subscale. The scale comprises of 24 items that require a yes or no response and assess the extent to which a sexual offenders tries to justify his sexual offending behaviour. Some items focus on beliefs which justify sexually deviant behaviour (e.g. 'my sexual offence occurred as a result of my wife's lack of understanding for me' or 'my sexual offence occurred because of stresses in my life'), whereas other items are concerned with the extent to which sexual offenders attribute

blame (e.g. 'my sex offence would not have occurred if the victim had not been sexually loose').

Reliability data has not been provided for the Justification Subscale and little is known about the validity of the scale (Murphy, 1990). It has also been suggested that this subscale is likely to encourage a social desirability response bias (Bumby, 1996). However, when Hogue (1994) investigated the social desirability of the Justification scale, no significant relationship was found between this measure and the Marlowe- Crowne Social Desirability Scale (Crowne and Marlowe, 1960). It would appear that the extent to which the Justification Subscale is affected by social desirability is unclear. Despite these psychometric weaknesses, the Justification Subscale it does have the advantage of being able to be administered to a wide range of paraphiliacs, unlike the Rape Myth Acceptance Scale and the Cognitions Scale.

More recently, Bumby (1996) developed two distinct instruments to assess cognitive distortions among sexual offenders. The first is the MOLEST Scale, which assesses the cognitive distortions of men who sexually offend against children and the second is the RAPE Scale, which measures maladaptive attitudes rapists hold. Both scales comprise of items that have been derived from either the Cognitions Scale (Abel et al. 1989) or the Rape Myth Acceptance Scale (Burt, 1980), although none of them are worded in exactly the same way.

The MOLEST Scale comprises of 38 items that are scored on a 4-point Likert Scale ranging from 'strongly disagree' to 'strongly agree'. All items are scored in the same direction, with a higher score indicating more sexually deviant beliefs about sexual interactions with children. Using a 4-point Likert Scale prevents participants from taking a neutral position on attitudes related to sexually deviant behaviour and forces participants to either agree or disagree with statements. It prevents people from expressing that they may not have a strong opinion about a particular statement or that they do not understand the content of the item. This may result in the arbitrary rating of items, resulting in participants not providing a true reflection of their cognitions.

The MOLEST Scale has promising psychometric properties. Indeed, Bumby reported an alpha co-efficient of .97 indicating the MOLEST Scale to have excellent internal

consistency. On test-retest reliability the scale was found to be relatively stable over the two week administration interval ($r = .84$). The scale was also found to have satisfactory discriminative ability, as it was able to discriminate between child molesters, rapists and non-sexual offenders. Child molesters were found to possess significantly more distorted cognitions than either the rapists or non-sexual offenders, however no significant difference was found between the cognitions held by the rapists and non-sexual offenders. Bumby also reported that the MOLEST Scale was not open to social desirability bias, as no significant correlation was found between the scale and the Marlowe-Crown Social Desirability Scale (Crowne and Marlowe, 1960).

Despite these encouraging psychometric properties, it is not clear the extent to which the type of sample under investigation may have affected the discriminative ability of the MOLEST Scale. Sixty-nine of the 89 sexual offenders tested in this research were involved in a cognitive behavioural sexual offender treatment programme. Receiving treatment may encourage sexual offenders to be more open to the therapeutic process and take responsibility for their sexual offence. Indeed, research has found that sexual offenders who take responsibility for their crimes are less likely to describe their offences in a stereotypical manner, try to vindicate themselves and place the blame on their victim, whereas the opposite is true for sexual offenders who deny their offence (Scully and Marolla, 1983). The participants in Bumby's sample may have been more inclined to admit responsibility for their offences as they were undergoing treatment. This may have resulted in them providing accurate accounts of their maladaptive cognitions rather than socially acceptable responses. Participants responding in this way might have made it easier for Bumby to establish whether there were any significant differences between the cognitions of child molesters, rapists and non-sexual offenders. To avoid contamination of the discriminative ability of the MOLEST Scale future research should treat sexual offenders who are or are not receiving treatment and sexual offenders who admit or do not admit responsibility for the offences as separate groups.

The RAPE Scale was the second scale developed by Bumby (1996) and comprised of 36 items that were also rated on a 4-point Likert Scale. Similar to the MOLEST Scale the RAPE Scale had good internal consistency. Bumby reported an alpha coefficient of .96 indicating that the RAPE Scale was measuring the same construct. It was also reported to have good temporal stability, as the test-retest correlation was $r = .86$ over the two week

administration interval. Bumby also reported that the RAPE Scale was able to discriminate between rapists and non-sexual offenders, as rapists were found to possess significantly more maladaptive cognitions about rape than non-sexual offenders. However, the RAPE Scale was unable to discriminate between rapists and child molesters, despite their mean scores being different. Finally, Bumby reported that the RAPE Scale was not open to social desirability bias, as no significant relationship was found between the scale and the Marlowe-Crown Social Desirability Scale (Crowne and Marlowe, 1960).

The RAPE Scale encountered similar problems to the ones identified above regarding the discriminative ability of the MOLEST Scale. Both scales also experienced problems with some of their items containing statements that required more than one response. However, participants are restricted by the Likert method of scoring to provide only one response for each item. For example, in the MOLEST scale the item 'since some victims tell the offender it feels good when the offender touches them, the child probably enjoys it and it probably won't affect the child' contains two questions. This item first asks whether the sexual offender thinks a child enjoys being touched and then asks whether it will do them harm. Sexual offenders may agree with the first part of the statement and not the second or vice versa. If this occurs they are unable to provide an accurate response to this item, as the method of scoring employed by Bumby restricted one response per item. This problem was also evident within the RAPE Scale (e.g. 'when women act like they are too good for men, most men probably think about raping the women to put them in their place').

The RAPE Scale also contained one item that related to marital rape: 'part of wife's duty is to satisfy her husband sexually whenever he wants it, whether or not she is in the mood.' Sexual offenders may have problems responding to this statement if they have not been married, considering the view that they have empathy deficits (Abel et al. 1989; Burke, 2001). If they are unable to put themselves in another person's situation, they will find it difficult to imagine how a husband thinks.

Research to date has focused on trying to develop reliable and valid assessment measures of maladaptive attitudes and beliefs related to sexually deviant behaviour (Burt, 1980; Abel et al. 1989; Bumby, 1996), although efforts to do so have only had limited success. A number of problems exist with the assessments measures that have been reviewed above. Many fail to address a wide range of sexual attitudes, as they focus on rape and child

molestation (Burt, 1980; Abel et al. 1989; Bumby, 1996) and do not address stalking, dating abuse, voyeurism and exhibitionism. Focusing only on attitudes related to child molestation and rape restricts the population to whom these measures can be administered. The Multiphasic Sex Inventory can be used on different types of sexual offenders, however its weakness lies with it assuming that participants have committed a sexual offence. This restricts its utility, as it cannot be used on individuals who have committed a non-sexual offence and those suspected of committing a sexual or non-sexual offence. It also prevents discriminative ability being examined between the scores of sexual and non-sexual offenders.

The Rape Myth Acceptance Scale failed to discriminate between rapists and a control group of randomly selected males (Burt, 1980), which results in the construct validity of this measure being questioned. On both subscales of the Multiphasic Sex Inventory, rapists were found not to differ significantly from non-sexual offenders (Gillis, 1991 [cited in Vanhouche and Vertommen, 1999 pg. 179]). The RAPE and MOLEST Scales appear to fair more positively than the other measures reviewed, as the MOLEST Scale was able to discriminate between child molesters and non-child sexual offenders. On the RAPE Scale rapists possessed significantly more sexually deviant cognitions than non-rapists. However, these results may have been influenced by most of Bumby's sample being involved in treatment. As discussed above, these participants may have been more willing to disclose their cognitions, rather than provide socially acceptable responses, making it easier to discriminate between sexual and non-sexual offenders.

4.1.4 Assessment of Cognitive Distortions among Sex Offenders with Learning Disabilities

To date the assessment measures reviewed have all been developed and tested for use on individuals without a learning disability. Considering individuals with learning disabilities are over represented within the criminal justice system, (Gross, 1984; Hayes, 1991) it suggests that assessment tools that are suitable for use on this population are required. Indeed, research has found that sexual offences account for one-quarter to one-half of all index offences for men with learning disabilities who have been admitted to hospital or other specialist treatment facilities (Walker and McCabe, 1973; Day, 1988). Lindsay,

Olley, Jack and Smith (1998) reviewed a variety of studies that suggested that up to 50% of offenders with a learning disability had committed a sexual offence (Gross, 1984; Bodna, 1987). This high prevalence of sexual offending among individuals with learning disabilities warrants an assessment tool being developed that has good psychometric properties, discriminates sex offenders from non-offenders and can be administered to individuals with a learning disability.

Unfortunately, there is no single measure currently available that is suitable for use on this population. Lindsay (2001) argues that the current assessment measures of cognitive distortions are too complex for individuals with learning disabilities to understand and use. For example, the Abel and Becker's Cognitions Scale and Bumby's MOLEST Scale have Flesch-Kincaid reading ease scores of 8.2 and 8.1 respectively. These scores indicate that individuals with a grade 8 (age 13 – 14 years) level of education should be able to understand these documents. Research advocates that standard documents should aim for a score between 7 and 8 (D'Alessandro, Kingsley and Johnson-West, 2001). Both the Cognitions Scale and the MOLEST Scale achieved this goal, however it is unlikely that individuals with learning disabilities will have a grade 8 level of education. However, the RAPE Scale (Bumby, 1996) obtained a slightly better Flesch-Kincaid reading ease score of 6. This score indicates that this document should be understood by individuals who have a grade 6 (11-12 years) level of education. Although these measures fulfilled the standard document requirements (i.e. a score between 7 – 8), to enable assessment measures to be administered to a population with learning disabilities documents should aim to obtain low Flesch-Kincaid reading ease scores.

Problems were also identified with the methods of scoring utilised by the assessment measures that were reviewed. The Cognitions Scale, RAPE and MOLEST Scales and the Rape Myth Acceptance Scale were all scored on a Likert Scale. In Lindsay's (2001) view, Likert Scales may be conceptually too difficult for individuals with learning disabilities. To rate attitudes on a scale ranging from 'strongly agree' to 'strongly disagree' is a complex task and one that individuals with a learning disability would find difficult to do on their own (Lindsay, 2001). This questions the suitability of using assessment measures scored on a Likert Scale on this population.

The assessment instruments reviewed are all self-report measures that can provide valuable information. However, they can be affected by cognitive processing, deficits in memory, fatigue, motivation, concentration and defence mechanisms used to protect sexual offenders (e.g. denial) (Ward, Hudson and Keenan, 2000), which results in an inaccurate account of sexual offenders maladaptive cognitions. Apart from these general problems that are associated with self-report measures, additional problems are encountered when they are administered to individuals with learning disabilities. Research suggests that a major problem with individuals with learning disabilities is illiteracy (Langevin and Pope, 1993). Being unable to read or having reading difficulties suggests that the current self-report assessment tools are not suitable for use on individuals with learning disabilities. Even if they have some reading ability they may experience problems trying to understand key terms used in the measures (e.g. child molester, molesting, penetrating, fantasies and manipulation [Bumby's MOLEST Scale]). Failing to ascertain whether participants fully understand the terminology used in the assessment measures, questions the accuracy of the participants' responses.

From the material reviewed it appears that current assessment measures may not be suitable for use on individuals with learning disabilities. It seems there is still a long way to go to achieve an assessment measure of maladaptive cognitions that is suitable for use on this population and addresses the weaknesses identified with the current instruments (e.g. problems with psychometric properties of the scales, failure to assess a wide range of sexual attitudes and unable to be administered to different types of offenders).

4.1.5 Summary and Interim Conclusion

This chapter has reviewed current methods utilised to assess sexual offenders and evaluate their contribution to the assessment process. Despite the methodological weaknesses identified with phallometry (e.g. ethical concerns regarding stimulus material, problems with faking responses and no standardised assessment procedure) and the inconsistencies with its discriminative ability, it is still viewed by many clinicians in North America to play a pivotal role in the assessment process. Although recent acknowledgment that phallometry is not perfect has led clinicians to recognise that to achieve an effective

assessment process it needs to be comprehensive, rather than dependent on one source of information.

A cognitive revolution in the 1980s highlighted key areas that needed to be identified during assessment (e.g. empathy and cognitive distortions). Indeed, chapter three endeavoured to explain the link between cognitive distortions and sexually offending behaviour. The literature reviewed demonstrated that despite failing to account for the underlying processes that generate cognitive distortions, the cognitive content of maladaptive cognitions are believed to play an important role in the minimisation, justification and rationalisation of sexual offending behaviour. Considering this, it is reasonable to understand why researchers have focused their attention of trying to develop reliable and valid assessment instruments of cognitive distortions. Attempts to achieve a psychometrically robust instrument have met with limited success. Problems with discriminative ability, social desirability, word direction of items, method of scoring (e.g. Likert Scale), limited assessment of sexual attitudes, items containing more than one cognition and utility of measures on different types of offenders suggests there is still a long way to go before a reliable and valid assessment instrument is achieved. One conclusion that can be drawn from this chapter is that the assessment measures reviewed are not suitable for use on individuals with a learning disability.

Chapter one and two examined the link between sexual offending and learning disability and highlighted that despite the disparity in prevalence rates of individuals with learning disabilities who offend, it was clear that this population engaged in a variety of criminal activities, with sexual offending being over represented. Considering this and evaluating the effectiveness of current assessment measures, this chapter serves as an introduction to part of the methodology adopted in chapter 5, which attempts to address some of the weaknesses of the reviewed instrument by testing a new measure that has been developed: the Questionnaire on Attitudes Consistent with Sex Offences (QACSO; Lindsay, Carson and Whitefield, 2000). This new measure assesses cognitive distortions across seven areas and has been developed for use on individuals with a mild learning disability. The research presented in chapter five demonstrates the psychometric properties and the utility of this assessment measure being administered to individual with learning disabilities.

Chapter 5 - Study 1

5.0 Introduction

Studies have shown that individuals with learning disabilities engage in a variety of criminal activities, with arson and sexual offending being over represented (see chapter 2). Indeed, several studies have found that sexual offending accounts for one-quarter to one-half of all index offences for men with learning disabilities (Gross, 1984; Day, 1988; Lund, 1990). However, recent research has found the prevalence of sexual offending among individuals with learning disabilities to be lower. Klimecki, Jenkinson and Wilson (1994) reported a prevalence rate of 16.67% compared with Winter, Holland and Collins (1997) who reported a prevalence of 7.14%. Variations in prevalence rates may result from problems when defining learning disabilities and methodological weaknesses (e.g. variations in administration of assessment tools and the environment in which psychometry is undertaken). Despite the inconsistency of these prevalence rates, research to date still suggests that sexual offending appears to be a problem for individuals with learning disabilities.

Concerned with the high prevalence rates and the pernicious effect sexual offending is having on society, research has examined how learning disability may contribute to the incidents of sexual offending. Lindsay and Smith (1998d) propose that deficits in conceptual understanding might lead sexual offenders to develop stronger beliefs that allow them to deny or minimise their crime. An inability to conceptualise these concepts prevents individuals with learning disabilities from realising that the denial and minimisation of an offence is self-justification rather than a reality. Identifying that the beliefs held by sexual offenders plays an important part in their sexually deviant behaviour has encouraged research to focus on the cognitive content of their beliefs. Several studies have examined the cognitive content of sexual offenders' cognitions and found that they hold distorted attitudes and beliefs that are significantly different from non-sexual offenders and non-offenders (see chapter 3). This finding has driven researchers to focus on trying to develop an assessment measure of cognitive distortions that has good psychometric properties (see chapter 4). However, a number of weaknesses exist with current assessment measures (e.g. problems with discriminative ability, limited range of sexual attitudes measured and conceptually too difficult for use on individuals with

learning disabilities). To address these weaknesses a new measure has been developed. This measure, the Questionnaire on Attitudes Consistent with Sex Offences (QACSO); Lindsay, Carson and Whitefield, 2000), assesses agreement or disagreement of maladaptive attitudes relating to sexually deviant behaviour across seven areas (e.g. rape, voyeurism, exhibitionism, dating abuse, homosexual assault, offences against children and stalking) and is suitable for use on individuals with learning disabilities. Based on clinical observations and clinical interviews evaluating a number of sexual offenders with learning disabilities and a review of previously published questionnaires (e.g. Abel and Becker Cognitions Scale: Abel et al. 1989; Rape Myth Acceptance Scale; Burt, 1980) Lindsay (unpublished) originally identified six areas that he felt were necessary to investigate attitudes consistent with sexual offences (e.g. rape, voyeurism, exhibitionism, dating abuse, homosexual assault and offences against children). With continued clinical contact with sexual offenders with learning disabilities Lindsay included a seventh topic to the QACSO (e.g. stalking and sexual harassment). Lindsay (unpublished) now had a questionnaire whose content was based on clinical experience evaluating a number of sexual offenders with learning disabilities that reflected the offences of this group.

To investigate the psychometric properties of this new measure this study (study one) aimed to first test the reliability of the QACSO as an assessment measure of sexual attitudes and secondly, investigate the discriminative ability of each item in the questionnaire. To investigate the psychometric properties of the QACSO it was administered to four participant groups: sexual offenders with learning disabilities, non-sexual offenders with learning disabilities, non-offenders with learning disabilities and 'normal males.' Sexual offenders with learning disabilities comprised the experimental group with the remaining three groups forming the controls. It was important to compare like with like, hence the reason for investigating three groups with learning disabilities. Testing these groups provided the opportunity to investigate whether these three groups differed in their attitudes relating to sexual offences. For the QACSO to be a valid questionnaire it needed to be able to discriminate sexual offenders with learning disabilities from the other two groups with learning disabilities. Including a group of 'normal' males was to address problems identified in previous published research where a questionnaire assessing attitudes towards rape failed to discriminate rapists from non-sexual offenders and non-offenders (e.g. Rape Myth Acceptance Scale; Burt, 1980). It would also have been beneficial to include a sample of offenders without a learning

disability to investigate whether they held significantly different attitudes towards sexual offences than sexual offenders with learning disabilities. It was not possible to access a group of offenders without a learning disability due to the rules governing publication of data obtained from this population. According to Her Majesty Prisons Regulations, all data gathered from prisons is the prison's property and therefore not eligible for use out with the prison service.

5.1.1 Method

The participants for this study were obtained from the learning disability services in Dundee, which include Strathmartine Hospital, Dudhope Adult Resource Centre and the Helm. Participants were also drawn from two non-professional football teams. Permission for this study was obtained from the Tayside Committee on Medical Research Ethics Proposal for Clinical Research.

5.1.2 Description of Participants

One hundred and thirty six participants were employed in this study. Based on the Diagnostics and Statistical Manual IV-TR (DMS-IV-TR) classification of learning disability, 105 of those participants had a mild intellectual disability (mean IQ = 66.80, S.D. = 7.21, range 53-69). Their mean age was 32.09 years (S.D. = 11.78, range 17-60). The 31 participants in the control condition did not have a learning disability.

5.1.3 Sex offenders with Learning Disabilities

The group consisted of 41 male participants. The mean age of this group was 35.64 years (S.D. = 14.17, range 18-60) and the mean Full Scale IQ (WAIS-R) was 64.71 (S.D. = 7.34, range 53-74). Participants had no diagnosed psychiatric condition apart from their learning disability. This group comprised of participants who had either been convicted of perpetrating a sexual offence in the months prior to participating in this study, charged and

awaiting a court appearance and/or cautioned by police in connection with sexual offending behaviours but had been diverted from criminal proceedings.

5.1.4 Offenders with Learning Disabilities

Thirty four male participants made up this Group. The mean age was 28.39 years (S.D. = 11.14, range 17-57) and the mean Full Scale IQ (WAIS-III) was 68.36 (S.D. = 5.82, range 58-78). Participants had no diagnosed psychiatric condition apart from their learning disability. This group comprised of participants who had committed a non-sexual offence. Participants had committed offences such as breach of the peace, theft or assault.

5.1.5 Non-offenders with Learning Disabilities

Thirty male participants made up this group. The mean age was 32.97 years (S.D. = 9.26, range 18-49). The mean Full Scale IQ (WAIS-III) was 68.16 (S.D. = 8.01, range 55-79). Participants had no diagnosed psychiatric condition apart from their learning disability. Participants in this group had not committed a criminal offence.

5.1.6 Normal males

For the remaining 31 participants their mean age was 34.68 (S.D. = 8.24, range 21-52) and they did not have an intellectual disability. Their mean time spent in further education was 2.93 years (S.D. = 3.05, range 0 - 12).

5.1.7 Measures: Questionnaire on attitudes consistent with sex offences (QACSO)

This 108-item questionnaire was originally developed by Lindsay in 1996 (unpublished) to assess cognitive distortions across seven areas: rape and attitudes to women, voyeurism, exhibitionism, dating abuse, homosexual assault, offences against children and stalking and sexual harassment. Each of these seven sections contains questions that measure

sexual attitudes that have been identified in earlier literature (e.g. Abel, Gore, Holland, Camp, Becker, & Rathner, 1989; Burt, 1980; Nichols & Molinder, 1984) as being anti-social in nature or consistent with sexual offending behaviour. These questions were written to be understood by individuals with a reading ability of children who would be in the fourth grade (e.g. 9 – 10 years) of school (see reading scales pg. 130-131).

Each section comprises of questions that follow one of three themes: intent, responsibility, or victim awareness. Previous research has highlighted that individuals' attitudes toward such themes is important, as it may provide information that is vital when trying to assess their risk of re-offending (Bumby, 1996; Abel et al., 1989). Some of these themes have been further divided into sub-themes. Responsibility has been divided into 'personal' (blame or force) and 'other' responsibility (blame, lying or provoking). Obtaining this detailed information enables a clinician to develop a suitable treatment programme that meets the needs of the individual client.

Two versions (Version 1 and Version 2) of the QACSO exist. Both contain exactly the same questions, with version 1 (see appendix 3) providing further explanation for some of the items used in the questionnaire. This form of the QACSO contains additional explanations at the start of 4 of the 7 subsections (i.e. rape and attitudes to women, exhibitionism, homosexual assault and offences against children) for some of the terms/concepts used in this measure. This additional information ensures that the individual understands the terminology that appears in some questions. For example, at the start of the section 'rape and attitudes to women' an individual with an intellectual disability would be asked 'what does it mean to be raped?' and in the subsection 'offences against children' individuals would be asked 'what does it mean to have a period?'. Clinicians need to be satisfied that the individual understands the terms before going on to ask the questions related to those concepts. Version 2 (see appendix 3) of the QACSO was developed for administration to individuals without a learning disability. This form does not provide conceptual definitions, but does include response boxes and demographic detail questions.

The original QACSO assesses sexual attitudes consistent with sexual offending using a 'yes', 'no' and 'don't know' response method. Responses to questions are either socially acceptable or socially unacceptable. In its original form the QACSO would be scored as

follows: if an individual gives a socially acceptable response it was assigned a score of 0, whereas a socially unacceptable response received a score of 2. 'Don't know' responses were scored as 1. The scores were totalled for each section and then combined in order to give an overall score. The higher the score the more socially unacceptable responses were given.

5.1.8 Procedure

Participants were either given or read information sheets (see appendix 1) that outlined the aim of the study. They were informed that their responses were confidential and given the opportunity to ask questions about the study. Normal males were informed that they could contact either the qualified clinical psychologist or research assistant involved in the administration of the study. Participants were also given participation consent forms (see appendix 2), which required their signature. Demographic information including age and IQ was obtained from participants and case notes. Normal males stated their age and number of years they had spent at college or university on the actual questionnaire.

The sex offenders and offenders, who participated in this study, had been referred to psychological services, as individuals who had previously offended and were suspected of having a learning disability. These participants were referred to their local Clinical Psychology Department for assessment, with some going on to receive treatment.

Prior to starting treatment all sex offenders were administered the Questionnaire on Attitude Consistent with Sex Offences (QACSO, Version 1). This was administered during a one hour semi-structured interview session by a qualified Clinical Psychologist. To obtain test-retest data the QACSO was administered again approximately four weeks later. The maximum and minimum time interval between the first and second administration of the QACSO was four and six weeks respectively. It is important to note that during the first and second presentation of the QACSO participants received no treatment intervention.

Administration of the QACSO (Version 1) to the offenders with learning disabilities followed a similar procedure to the sex offenders. Participants were administered the

QACSO during a one hour semi-structured interview and completed it again approximately four to six weeks later. Of the 34 participants who initially completed the first administration of the QACSO, only 17 completed it for a second time.

The QACSO (Version 1) was administered to all participants, who had not offended but had a learning disability, by a research assistant who had been trained by the clinical psychologist with expertise with the sex offender and non-sex offender groups. Again, the QACSO was administered to individuals during a one hour semi-structured interview. Six of the 31 completed the second administration of the QACSO. With such a discrepancy between the number of non-offenders and offenders with learning disabilities who completed the second administration of the QACSO, this could have resulted in the data being skewed. However, it is unlikely that the data was skewed, as there was no significant difference between these two group's QACSO scores.

All normal males received two copies of the QACSO (Version 2) and were asked to complete anonymously one of the questionnaires and return it by post to a research assistant for analysis. Participants were informed that by returning the completed QACSO in the post they were consenting to participate in the study. Four weeks later, participants were requested to complete the second QACSO and return it by post. Twenty-two of the thirty-one participants completed and returned their second questionnaire. Prior to sending out, the questionnaires had been coded to enable each questionnaire to be paired with its correct partner and also maintain anonymity for the participants.

5.2 Results for Study 1

5.2.1 Demographic Characteristics of the Sample

Age

The differences in age of the four groups of participants can be seen in Figure 5.00.

Figure 5.00 - Mean age of Participants in each group

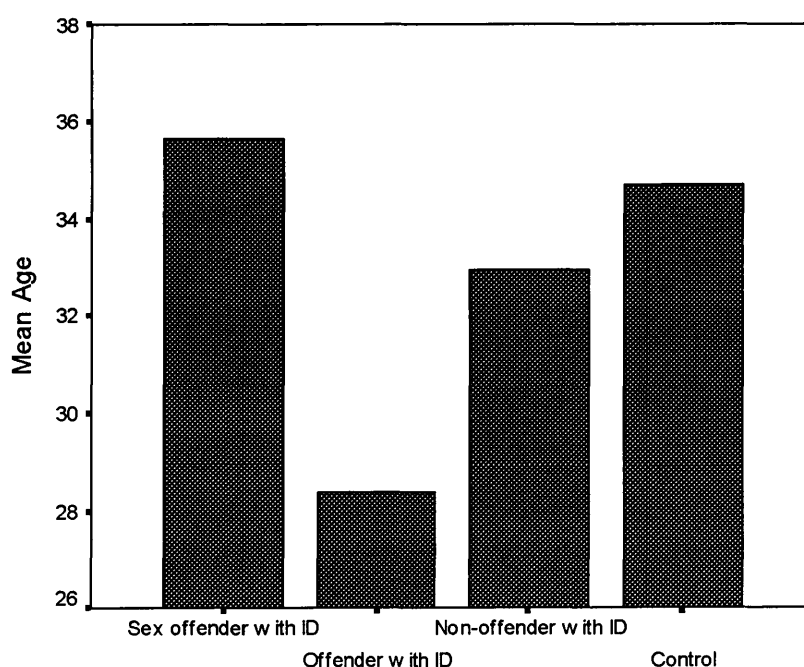


Figure 5.00 seems to indicate that the offenders with learning disabilities were as a group young than the other groups. However, when a one way analysis of variance was performed the result only approached significance ($F(3,113) = 2.64$ $p = 0.053$). Given the proximity of this finding to the 0.05 level, a post hoc test (Tukey's LSD) was performed on the pairs of groupings and the offenders with learning disabilities was found to be significantly younger than the sex offenders ($t(113) = 7.25$ $p = 0.01$) and the controls ($t(113) = 6.29$ $p = 0.02$), but not the non-offenders with learning disabilities ($t(113) = 4.58$ $p = 0.09$).

IQ

The difference in IQ for the three groups of participants with learning disabilities can be seen in Figure 5.01.

Figure 5.01 – Mean IQ for participants in each group with learning disabilities (LD)

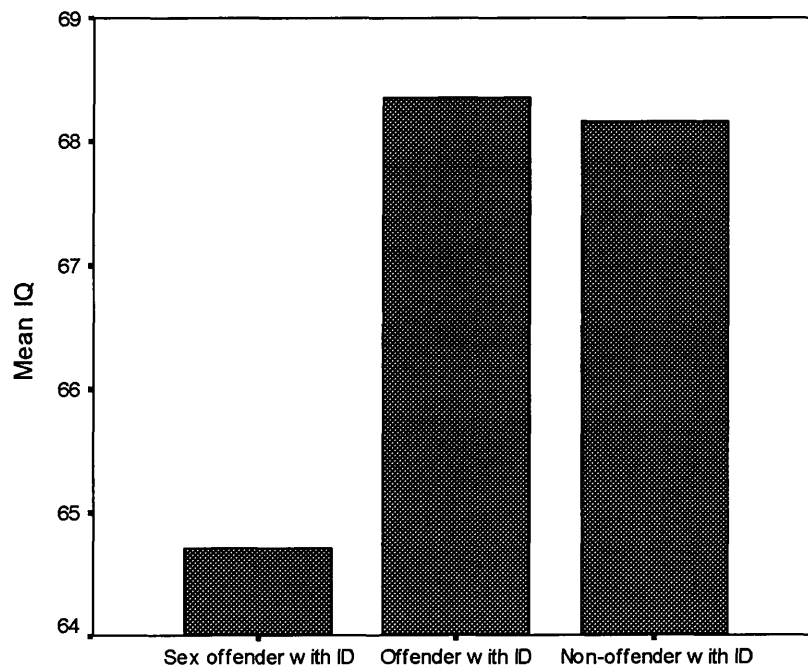


Figure 5.01 shows that the mean IQ of sex offenders appears to be lower than the other two groups. When a one-way analysis of variance was performed, the result approached significance ($F(2, 96) = 3.08$ $p = 0.051$). A post hoc test (Tukey's LSD) analysis was performed on the pairs of groupings, which revealed the mean IQ of sexual offenders to be significantly lower than non-offenders ($t(96) = 3.66$ $p = 0.03$) and approaching a significant level for the non-offenders ($t(96) = 3.45$ $p = 0.057$).

Convictions

Figure 5.02 shows the breakdown of sexual offences committed by the sex offenders. The most common type of offences committed were sexual assault and lewd and libidinous. Sexual assault included rape and attempted rape and accounted for 34.62% of all sexual offences committed, compared to lewd and libidinous which accounted for 30.77% of the crimes committed. However, due to the limited number of participants in the study the analysis did not differentiate between the different types of offences committed by the participants.

Figure 5.02 – Sexual convictions of participants

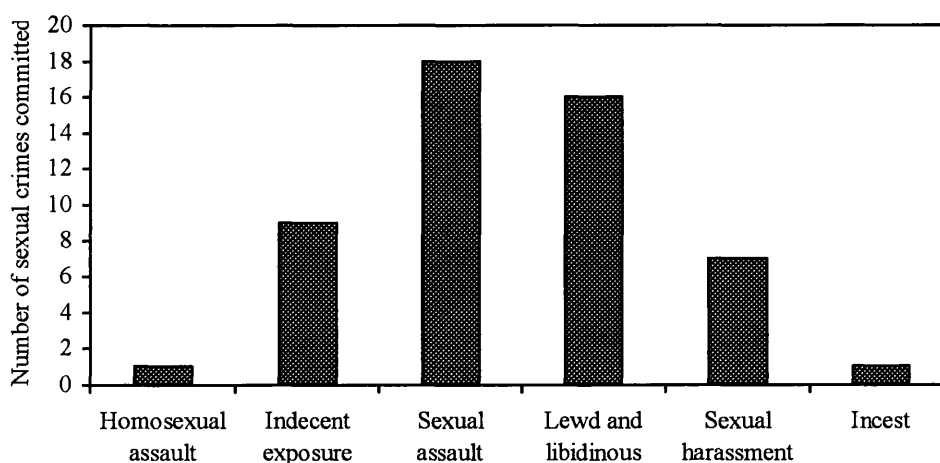
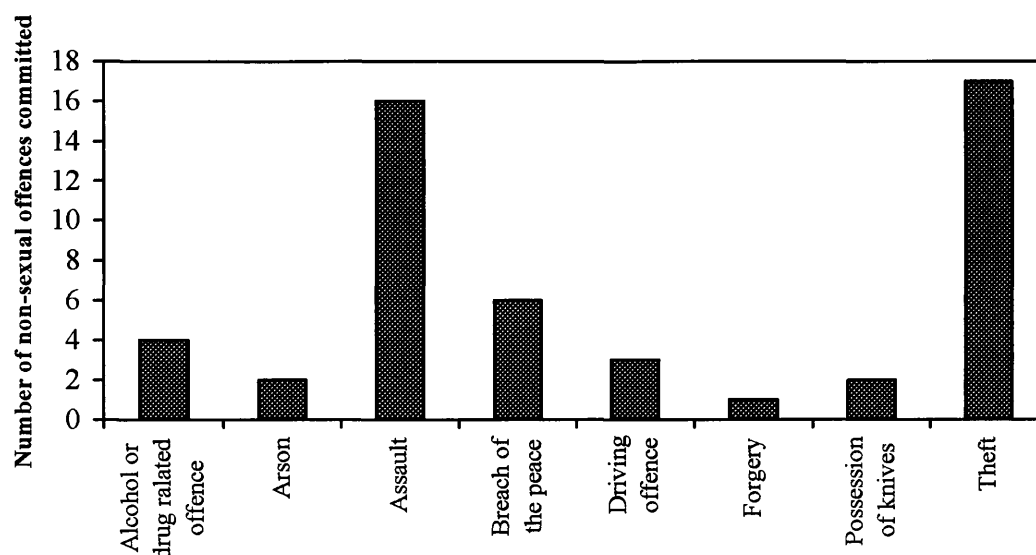


Figure 5.03 shows the breakdown of non-sexual offences committed by the non-sexual offender. Theft and assault were the most common offences committed. Theft included robbery and breaking and entry and accounted for 33.33% of all the non-sexual offences committed. Assault, which included aggravated assault, accounted for 31.37% of non-sexual offences committed.

Figure 5.03 – Non-Sexual convictions of participants

5.2.2 Analysis Procedure and Results for Study 1

Initially, the 108 items from the QACSO were scored in one of three ways – socially acceptable, socially unacceptable or ambiguous. Items were scored on a nominal scale, with no inherent order. For example, a socially acceptable response was awarded a score of 0 and a socially unacceptable a score of 2. An ambiguous answer was one that the investigator found difficult to allocate as either being an acceptable or unacceptable response. Those answers were typically ‘don’t know’ responses to the statements and awarded a score of 1.

5.2.3 Reliability

The reliability of each item of the QACSO was investigated using a test-retest design. Each participant provided answers to the questionnaire on two separate occasions with a gap of between four to six weeks.

A simple Chi-Square was performed on all items to test for reliability and thus determine whether the responses were likely to be consistent over time. Data from all four participant groups was pooled and responses were coded with either a '0' to indicate no change or '1' to indicate change. The direction of change (e.g. from socially unacceptable to acceptable) was not recorded. However, all items seemed to be reliable using this blunt measure of analysis. To increase reliability a more stringent analysis was undertaken on all items where more than 10% of the responses had changed. For these items the responses from the normal controls were separated and compared to the pooled responses from the three groups with learning disabilities. A chi-square (for independence) was used to determine whether the participants with learning disabilities were less likely than the normals to answer consistently. For each item where this pattern occurred a third and final chi-square (goodness of fit) was carried out, but only on the data from the learning disability groups. This analysis was carried out to investigate whether there were any differences in re-test between the three groups with learning disabilities. All items failing to produce consistent responses in the above tests were removed from the final questionnaire. A chi-square was then performed

This analysis only found one question not to be reliable and it was from the 'rape and attitudes towards women' subsection. The question '*if a woman gets drunk at a party and has sex with a man there, she's fair game for anyone else?*' was found not to be reliable on the test re-test ($\chi^2(1)=3.063$ $p=0.080$). Closer inspection of this analysis found that 39% of the individuals with learning disabilities were likely to change their responses to this question. This question was removed. Overall, the test-retest analysis revealed that with the small number of changes in responses to the items, it suggested that the items were easily understood, or participants' cognitions were so strong that they did not change.

5.2.4 Discriminative validity of individual items

An analysis of variance (ANOVA) was performed on the remaining items to determine that each item discriminated between the responses given by sex offenders and non-offenders. It was important to establish that the questions were able to discriminate between sex offenders and non-offenders, as the final QACSO would be utilised as an assessment tool in a clinical setting. Thus, for the remainder of this section analysis was

performed on only the three groups with learning disabilities, as it was felt the normal males might skew the data, as they provided so few socially unacceptable responses.

The data was originally scored as '0' to indicate a socially acceptable response, '1' an ambiguous response and '2' a socially unacceptable response. Scoring responses in this way suggested that the data from the questionnaire could be treated as an interval level of measurement. Such a level of measurement implied that there was an equal distance between each point on the scale. However, this was not the case as the scoring system of 0, 1 and 2 were arbitrary values rather than a score that indicated a level of measurement whereby each score measured an equal amount. Considering this, this thesis aimed to address the problems identified with the scoring system. The data was now scored as follows: '0' indicated socially acceptable response, '1' socially unacceptable and ambiguous responses were treated as missing data. Scoring items in this way recognised that it was a nominal level of measurement and acknowledged that ambiguous responses were too difficult to score as either socially acceptable or unacceptable and were treated as missing data. Such a protocol was adopted as it was felt that it was too difficult to determine whether participants had given ambiguous responses because they had genuinely not known the answer, did not want to answer the question or they had not understood the question. As this information could not be established it was decided that it would be inappropriate to attempt to code these responses as either socially acceptable or unacceptable. This decision accounted for 10.85% of the original data being excluded from the analysis.

Coding responses to items on the QACSO as 'socially acceptable' or 'socially unacceptable' implies that they are either conforming to or not conforming to societal norms. To try to avoid this assumption and the moral implications implied by socially acceptable and socially unacceptable, it might be appropriate to replace them with the terms typical and atypical. However, for the purpose of this thesis the historical terms of 'socially acceptable' and 'socially unacceptable' will continue to be used, as these are the preferred terms of the author of the QACSO (Lindsay, unpublished).

The re-coded data now meant that the dependent variable was the amount of socially unacceptable response that was given to a particular item. A one-way between ANOVA and post hoc tests (Tukey's LSD) were now run on each item to compare the likelihood of

each of the four group's responses being socially unacceptable. Items where the sex offending group failed to score higher than at least one of the non-sex offending groups were removed from the analysis.

According to this procedure a total of 22 items were found not to discriminate. Table 5.00 shows the total number of items that were found not discriminate in each subsection of the QACSO.

Table 5.00 – Total number of items that did not discriminate in each subsection

Subsection	Number of items that did not discriminate
Rape and Attitudes to Women	6
Voyeurism	1
Exhibitionism	4
Dating Abuse	0
Homosexual Assault	4
Offences Against Children	2
Stalking and Sexual Harassment	5

Of the 22 items three discriminated, but not in the predicted fashion. One item from the homosexual assault subsection had non-offenders scoring significantly higher than the sexual offenders ($t(95) = 0.24$ $p = 0.002$). The remaining two items came from the stalking and sexual harassment subsection. On one item non-offenders scored significantly higher than sexual offenders and the non-offenders ($t(96) = 0.49$ $p = 0.001$ and $t(96) = 0.53$ $p = 0.001$, respectively) and on the other item offenders scored significantly higher than non-offenders ($t(86) = 0.33$ $p = 0.01$). These 22 items were removed from the final questionnaire.

5.2.5 Internal Consistency

Corrected item-to-total analysis was performed to test the appropriateness of including each remaining item in the separate scales. This procedure was carried out multiple times with items leading to low correlations being withdrawn and the procedure repeated until one maximised the internal consistency of the set of items. The aim was to achieve levels of internal consistency that were at least as high as published scales intended for use with offenders without intellectual disabilities (e.g. Bumby, 1996).

Bumby has previously used 0.4 for such correlations in his study as a cut-off and a target of greater than 0.8 for the internal consistency co-efficient. Indeed, items with item-to-total correlations of less than 0.4 were normally excluded from the final set of items retained in the questionnaire. Items that approached the 0.4 cut-off were retained, as they were considered to be of clinical value. For example, in the rape and attitudes to women subsection the item 'are women often to blame for the rape taking place?' had an item-to-total correlation of 0.39. When this item was removed from the final set of questions it did not affect the internal consistency-coefficient and it was for this reason that it was felt appropriate to keep this item in. This was also true for the items in the stalking and homosexual assault subsections that did not reach the 0.4 cut-off. Table 5.01 shows that although there were three subsections with items whose item-to-total correlations were only approaching the 0.4 cut-off, they were retained as the internal consistency-coefficient was of a satisfactory level (e.g. ≥ 0.8) and it was felt these items did satisfy the clinical relevance assumption.

Table 5.01 - A summary of the internal consistency scores from each of the final questionnaires (Set A questions)

SCALE	Number of initial questions	Number of questions on final scale	Internal consistency – Coefficient	Smallest item-total correlation
Rape and Sexual Assault	26	11	0.83	0.39
Dating Abuse	10	8	0.86	0.43
Voyeurism	13	8	0.82	0.4
Exhibitionism	13	5	0.82	0.51
Offences Against Children	18	12	0.86	0.44
Stalking	16	10	0.79	0.35
Homosexual Assault	12	4	0.68	0.36

Table 5.01 shows that six of the seven subsections had satisfactory alpha co-efficient of ≥ 0.8 which indicates high internal consistency. The subsection '*homosexual assault*' failed to reach the required alpha level of 0.8. With an alpha level of 0.69 this suggested that this subsection had low internal consistency and may not be assessing the same cognition. It could be assessing homophobia, rather than attitudes towards homosexual assault. Only four items in this subsection were found to have good psychometric properties. Such a result has questioned whether this subsection should be retained in the final QACSO, as there are uncertainties to what it is that these items actually assess.

5.2.6 Discriminative validity of final items in each subsection

Finally, an ANOVA was performed on all remaining questions in each section to test discriminative validity between the four groups. Table 5.02 includes the mean total scores for the number of socially unacceptable responses, the standard deviations for each of the 3 groups with learning disabilities, as well as a summary of the resultant analysis of variance. The three groups did differ in the number of socially unacceptable response given, with the sex offenders being the most likely to provide such answers on all scales.

Table 5.02 - The mean total score for each of the groups with learning disabilities separated by scale

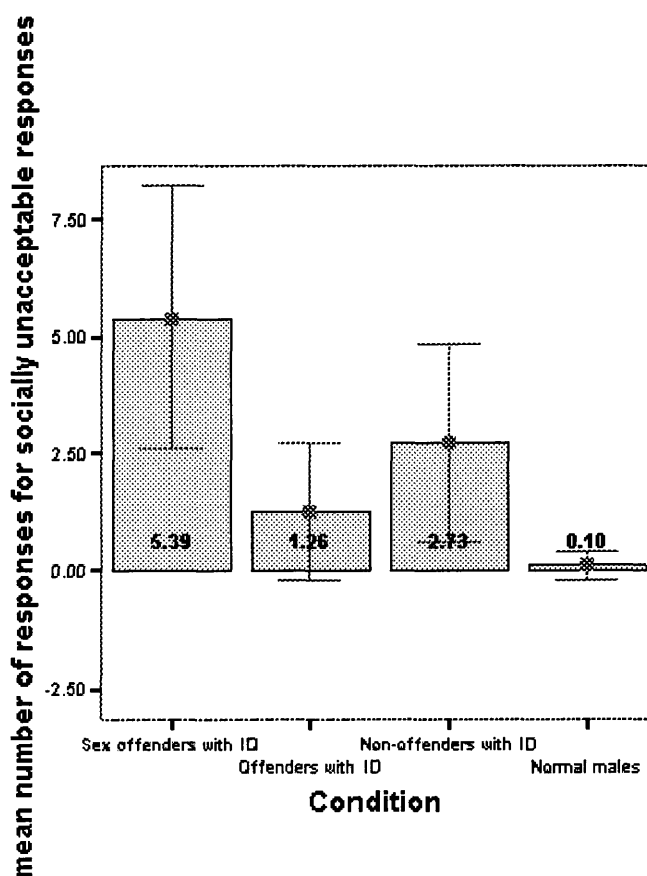
SCALE	Average Total Score for each of the three participant groups.			Main effect of group membership
	Sex offenders	Offenders	Non offenders	
Rape and Sexual Assault	5.39* s.d 2.78	1.26 s.d. 1.46	2.73 s.d. 2.11	p < 0.001
Dating Abuse	4.39* s.d. 2.69	1.29 s.d. 1.38	2.07 s.d. 2.08	p < 0.001
Voyeurism	5.56* s.d. 2.26	2.94 s.d. 1.89	2.27 s.d. 1.57	p < 0.001
Exhibitionism	3.10* s.d. 1.67	0.74 s.d. 1.05	1.83 s.d. 1.49	P < 0.001
Offences Against Children	5.46* s.d. 3.13	1.09 s.d. 1.80	2.17 s.d. 1.84	p < 0.001
Stalking	4.61* s.d. 2.52	1.91 s.d. 2.18	1.90 s.d 1.79	p < 0.001
Homosexual Assault	1.12* s.d. 1.21	0.14 s.d. 0.44	0.60 s.d. 1.00	p < 0.001

N.B. * indicates that this group scored significantly higher than all other groups.

5.2.7 Discriminative Ability

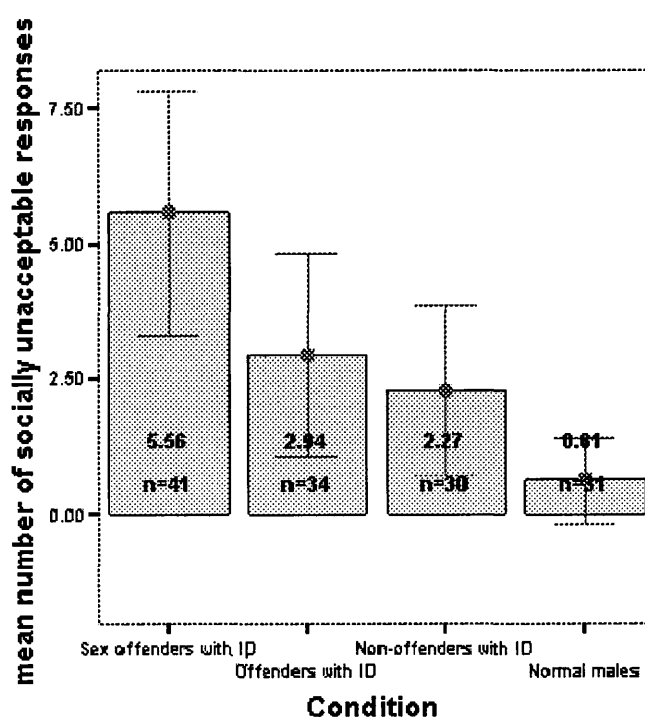
A one-way analysis of variance revealed a significant main effect of Group ($F(3,132) = 49.28$ $p=0.001$), indicating that the groups differed on the number of socially unacceptable responses they gave. Figure 5.04 shows the extent to which the four groups' mean scores varied in this subsection. When a post hoc test (Tukey's LSD) was performed sexual offenders were found to differ significantly from the other three control groups in the number of socially unacceptable responses they gave. Indeed, the mean difference was significant at $p = 0.001$ for all groups.

Figure 5.04 - Final items for Rape and Attitudes to Women Subsection



Similar results were obtained for the 'voyeurism' subsection, as a one-way analysis of variance revealed a significant main effect of group ($F(3,132) = 49.137$ $p=0.001$). It can be seen in Figure 5.05 that the four groups differed in the number of socially unacceptable responses they gave in this subsection. Closer inspection of this data revealed that when a post hoc test (Tukey's LSD) was performed sexual offenders differed significantly from each of the other three control groups. Again, the mean difference was significant at $p = 0.001$ for all groups. However, this analysis also revealed that offenders did not differ significantly from non-offenders ($t(132) = 0.67$ $p = 0.13$).

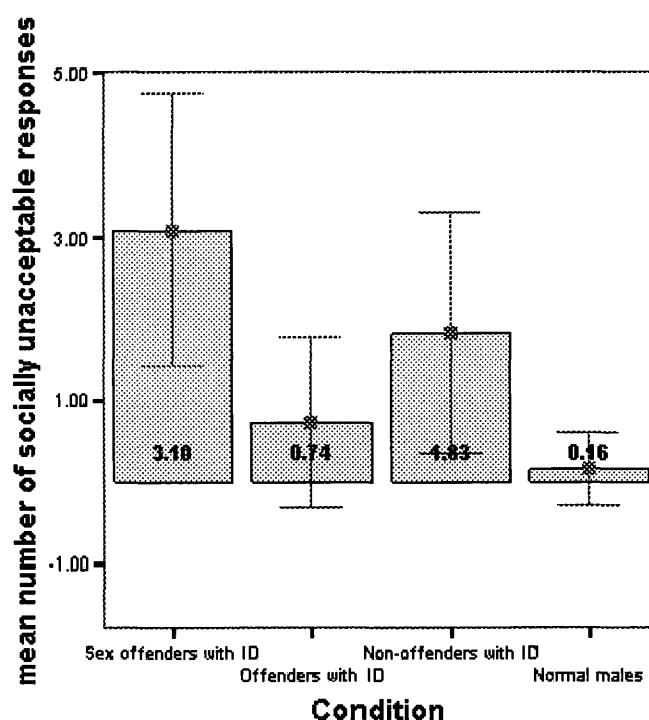
Figure 5.05 - Final Items for Voyeurism Subsection



In the exhibitionism subsection a significant main effect of group was observed when a one-way analysis of variance was performed ($F(3,132) = 36.83$ $p=0.001$). This variation in the number of socially unacceptable responses given by the four groups can be seen in Figure 5.06. The graph in figure 5.06 also shows that there was only a small difference in

the number of socially acceptable responses given by the offenders and normal males. When a post hoc test (Tukey's LSD) was performed on this data, this difference did not reach significance ($t(132) = 0.57$ $p = 0.075$). However, a significant difference was found between the sexual offenders the other three control groups, with the mean difference being significant at $p=0.001$ for all groups.

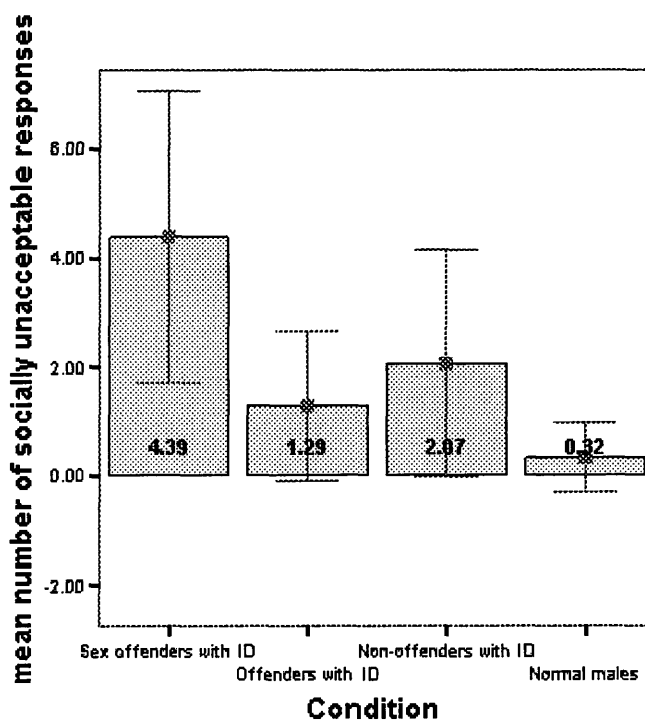
Figure 5.06 - Final Items for Exhibitionism Subsection



Consistent with the previous subsections a significant main effect of group was observed in the dating abuse subsection ($F(3,132) = 29.93$ $p=0.001$). Figure 5.07 shows the variation in socially unacceptable responses given by the four groups. Indeed, this figure also shows that there was not a great difference in the mean number of responses given by the offenders and non-offenders. When a post hoc analysis (Tukey's LSD) was performed on this data, this difference failed to reach significance ($t(132) = 0.77$ $p = 0.112$). However,

the post hoc analysis did find sexual offenders differed significantly from the other three groups on the number of socially unacceptable responses they provided. Again, this mean difference was significant at $p = 0.001$ for all groups.

Figure 5.07 - Final Items for Dating Abuse Subsection



The homosexual assault subsection provided interesting results, as it was found to have low internal consistency, as well as only four of the original 12 items being found to be reliable. Despite these findings, when an analysis of variance was performed a significant main effect of group ($F(3,132) = 10.842$ $p=0.001$) was observed, indicating that the four participant groups varied in the number of socially unacceptable responses they provided (figure 5.08). When this was examined further, by a post hoc analysis (Tukey's LSD), it revealed that sexual offenders differed significantly from the other three groups. Indeed, the mean difference was significant at $p=0.001$ for the offenders and controls, however for the non-offenders it was significant at $p=0.013$.

Figure 5.08 - Final Items for Homosexual Assault Subsection

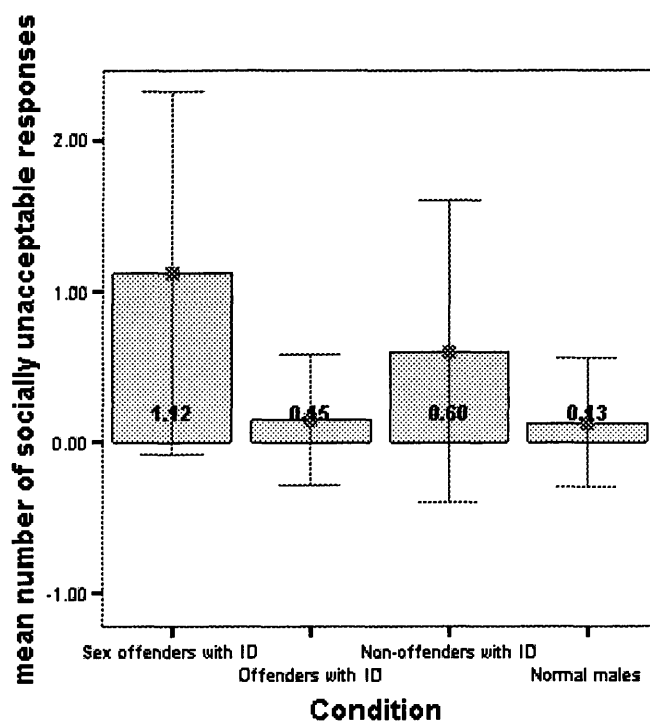
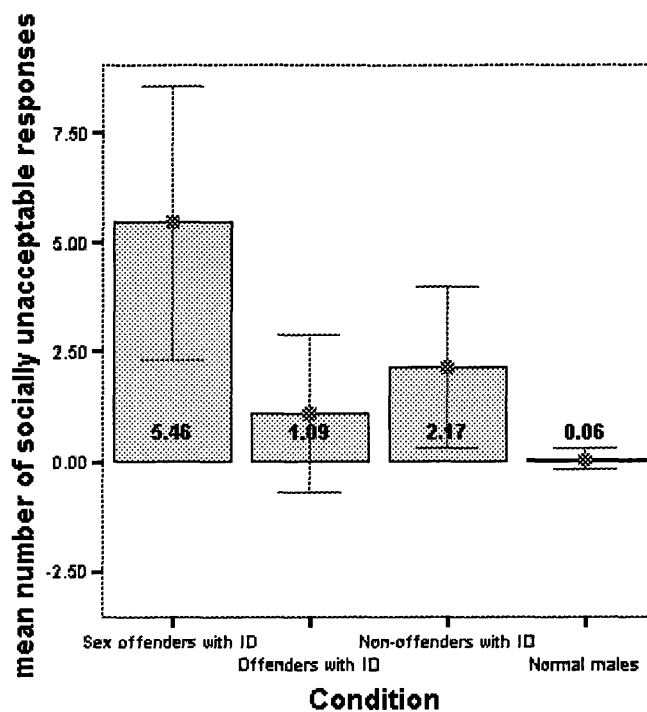
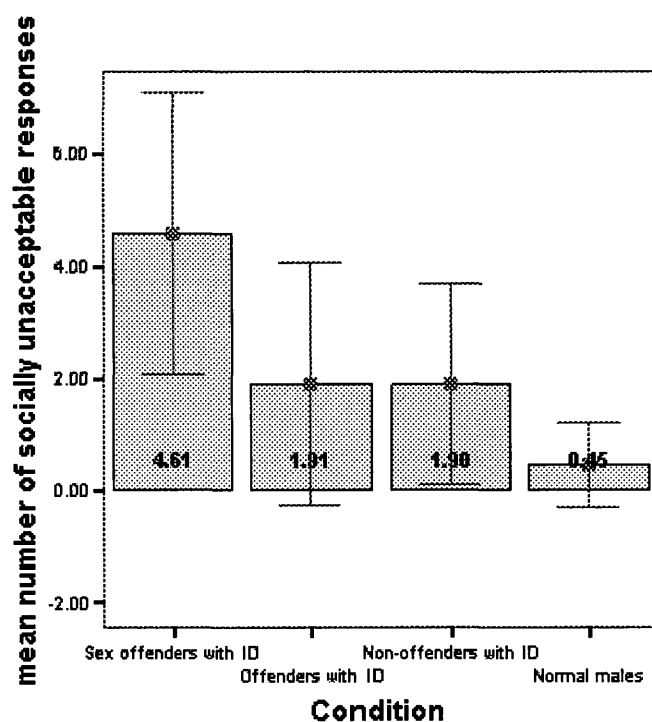


Figure 5.09 shows the extent to which sexual offenders' mean scores for the remaining 12 items in the 'offences against children' subsection varied from the other three groups. Consistent with the previous subsections, the sexual offenders provided the highest number of socially unacceptable responses than the other three control groups. When this data was examined further an ANOVA revealed a significant main effect of group ($F(3,132) = 45.102$ $p < 0.001$). A post hoc analysis (Tukey's LSD) revealed the difference in responses given by the sexual offenders from the other three groups reached significance, with the mean difference being significant at $p = 0.001$ for all groups. This analysis also revealed that the difference in responses given by the offenders and normal males approached significance ($t(132) = 1.02$ $p = 0.055$).

Figure 5.09 - Final Items for Offences Against Children Subsection



Similar results were obtained for the final subsection, as again sexual offenders provided the highest number of socially unacceptable responses. However, figure 5.10 shows that offenders and non-offenders were similar in the number of socially unacceptable response that they gave. When this data was examined further a one way analysis of variance confirmed the variation in responses, as a significant main effect of Group ($F(3,132) = 28.17$ $p=0.001$) was observed. A post hoc analysis (Tukey's LSD) was performed which found that the difference between the sexual offenders' responses from the other three groups reached significance. . Indeed, the mean difference was significant at $p=0.001$ for all groups. The post hoc analysis also revealed that the difference in responses given by the offenders and non-offenders failed to reach significance ($t(132) = 1.18E-02$ $p = 0.981$).

Figure 5.10 - Final Items for Stalking and Sexual Harassment Subsection

From the results discussed above it appears that the remaining items in each subsection have good discriminative ability, with the exception of the homosexual assault subsection. Sexual offenders' mean scores for the remaining items in each of the seven subsections differed significantly from the other three groups, despite the mean scores for some subsections failing to discriminate between the other control groups (e.g. voyeurism – offenders did not differ significantly from non-offenders).

5.2.8 Control group of 'normal males'

In each of the seven subsections of the QACSO, normal males' mean scores of socially unacceptable responses were consistently low, indicating that they were more inclined to give socially acceptable responses. Such low scores provided support for the socially acceptable and unacceptable distinction on these items.

5.2.9 Social Desirability

Normal males were found to favour socially unacceptable responses to four items of the QACSO: ‘some women lead men on,’ ‘if a woman has a big pair of boobs it’s only natural to have a look,’ ‘a woman has to look when a man flashes at her’ and ‘a woman could walk away when a man flashes at her’. Table 5.03 shows the percentage of socially unacceptable responses given for each of the four groups under investigation. Normal males were found to consistently respond in a similar way to the other three groups.

Table 5.03 - Percentage of socially unacceptable response to 4 items of the QACSO

Items	% of socially unacceptable responses given			
	Sex offenders	Offenders	Non-offenders	Control
1. Some women lead men on	87.5	82.35	80.0	87.1
2. If a woman has a big pair of boobs it’s only natural to have a look	82.93	75.76	56.67	61.29
3. A woman has to look when a man flashes at her	87.8	100	93.33	74.19
4. A woman could walk away when a man flashes at her	90.24	93.94	96.67	83.87

A one way analysis of variance was performed on the mean scores of each of the four items that received high numbers of socially unacceptable responses from all four groups. On the first item, no significant difference was found between the four groups ($F(3,124) = 1.19$ $p = 0.315$). Similarly, no significant difference was found between the way the four groups responded to the second item ($F(3,119) = 2.29$ $p = 0.083$). However, this analysis of variance was approaching a significant level. When a post hoc test (Tukey’s LSD) analysis was performed the normal males were found not to differ significantly from the other three groups ($p > 0.108$). For the remaining two items (e.g. item three and four) no

significant difference was found between the four groups ($F(3,123) = 1.34$ $p = 0.266$ and $F(3,131) = 1.22$ $p = 0.304$ respectively). These results indicate that these four items have poor discriminative ability, as the four groups appear to respond to these items in a similar way.

The percentage of the socially unacceptable responses that were given to either all 4, 3, 2, or 1 item/s was calculated for each group. Table 5.04 shows that the controls responded in a similar way to the other three groups. Indeed, there was only a difference of 24.9% between the percentage of socially unacceptable responses given by the controls and sex offenders on all 4 items. The difference between these two groups was even lower for their responses to 3 and 2 of the items (e.g. 11.8% and 7.33% respectively).

Table 5.04 - Percentage of socially unacceptable responses given to 4, 3, 2, and 1 item/s

Group	% of socially unacceptable responses given			
	4 items	3 items	2 items	1 item
Sex offenders	66.85	85.37	97.65	100
Offender	57.58	87.88	96.97	100
Non-offenders	55.17	82.73	100	100
Controls	41.94	74.19	90.32	100

Although these four items were found to have poor psychometric properties, as they were unable to discriminate between the four groups, clinicians may wish to use the as a tentative measure of social desirability. Monitoring participants' responses on these items could give some indication as to whether an individual is trying to respond in a socially acceptable way. However, it could be that these four items were initially scored incorrectly. With controls and sexual offenders agreeing with these four statements this could suggest that these are socially acceptable responses rather than an unacceptable. Before conclusions can be made about whether these items indicate if an individual is trying to respond in a socially acceptable way or require to be re-scored, further analysis is needed. Future research, out with this PhD thesis, may wish to examine whether these

items in the QACSO correlate with Marlowe-Crown Social Desirability Scale (Crown and Marlowe, 1960). This would be consistent with published research (Hogue, 1994) that correlated current assessment measures of cognitive distortions (e.g. Rape Myth Acceptance Scale; Burt 1980 and the Multiphasic Sex Inventory; Nichols and Molinder, 1984) with Marlowe-Crown Social Desirability Scale.

5.2.10 Reading Scores

The questionnaire (A Items) has a Flesch Reading Ease score¹ of 88.21 out of 100 and a Flesch-Kincaid score of 4.46. The Flesch Reading Ease scale rates text on a 100-point scale and the higher the score the easier it is to understand the document. Most standard documents aim for a score between 60 to 70 (D'Alessandro, Kingsley and Johnson-West, 2001), thus with a score of 88.21 the QACSO exceeds this recommendation. Indeed, such a score implies that the QACSO is a readable document that surpasses the recommended score and thus one that is more suitable for use on people who have a learning disability. Table 5.05 shows the Flesch Reading Scores for the A items in each subsection of the QACSO.

Table 5.05 - Flesch Reading Ease Scores for A Items

Subsections	A Items
	Flesch reading ease score
Rape	89.1
Voyeurism	88.4
Exhibitionism	91.32
Dating abuse	91.94
Homosexual assault	88.93
Offences against children	83.1
Stalking	84.7
Overall total	88.21

The Flesch-Kincaid reading scale² rates text on an American grade school system and advocates that standard documents should try to achieve a score of between 7 to 8. D'Alessandro, Kingsley and Johnson-West (2001) also state that materials, such as education material found on the World Wide Web, should be written at an eighth grade level. A Flesch-Kincaid score of 8 would mean that individuals as young as those in the eighth grade (age 13-14 years) of school would understand the text in that document. The QACSO has a Flesch-Kincaid reading score of 4.46, which means that the text will be understood by students in the fourth grade of school (age 9-10 years). Indeed, achieving a score less than the recommended target is beneficial, as it suggests that the QACSO again is likely to be used and understood by individuals with a mild learning disability. Table 5.06 shows the Flesch-Kincaid Scores for the A items in each of the subsections of the QACSO.

Table 5.06 - Flesch-Kincaid Scores for A Items

Subsections	A Items
	Flesch-Kincaid Score
Rape	4.29
Voyeurism	5.04
Exhibitionism	3.72
Dating abuse	4.72
Homosexual assault	3.95
Offences against children	5.02
Stalking	4.51
Overall total	4.46

¹ See appendix 4 for formula to calculate Flesch Reading Ease Score

² See appendix 5 for formula to calculate Flesch-Kincaid Reading Scale

5.2.11 (i) Principal Component Analysis

Analysis of the psychometric properties of the QACSO found that of the original seven subsections, six contained items that were found to be reliable and have good discriminative ability. These items were also found to have reasonably high internal consistencies, suggesting that the items in each subsection assessed the same general cognition. Unfortunately, the subsection 'homosexual assault' failed to reach the required alpha level of ≥ 0.8 (Bumby, 1996). With an alpha level of 0.69 this suggested that this subsection had low internal consistency and may not be assessing the same cognition. It was for this reason that the homosexual assault subsection was excluded from all further analysis. For the remaining six subsections, further analysis was performed to explore the factor structure within each subsection in an attempt to determine the number of core factors that were cohesive and theoretically meaningful.

The six subsections under investigation contained a total of 54 items that had been designed to elicit six clusters of information. However, it was felt appropriate to examine whether these variables were interrelated. Better understanding of the relationship between variables and core factors within each subsection would facilitate clinical psychologists' understanding of the cognitive distortions related to sexual offending that are held by sexual offenders and assist them when trying to develop suitable treatment programmes. Detection of these core factors, within each subsection, would allow clinicians to identify key cognitions that need to be targeted during treatment sessions.

Based on previously published research (Brown, Aman & Havercamp, 2002; McDermott, Martin, Weinrich & Kelly, 1999), it was felt appropriate to perform an exploratory factor analysis on data that had been collected from a population with or without a learning disability and had been scored 0 and 1. Indeed, Brown et al. (2002) successfully performed a factor analysis on data relating to children with an IQ of less than 80 using such a code.

To explore the factor structures within each subsection a principal component analysis was calculated. This statistical technique was applied to each of the six subsections to investigate which variables form coherent subsets that are relatively independent of one another. Squared multiple correlations were used to identify the individual components. In this process the equivalent number of components are identified as variables. The first

component extracted in this process accounts for the largest amount of shared variance by the test. The second extracted components accounts for the next largest amount of variance that is not explained by the first component. The third component extracts the next largest amount of variance and this process is continued until all the variance of the variables is accounted for. As the principle component analysis aims to reduce the number of variables being dealt with, the next stage of the analysis selects components that will either be retained or rejected. Deciding which components to select or reject is determined by the amount of variance each extracted component accounts for. Using a graphical scree plot method developed by Cattell (1966), this method plotted on a graph (see Appendix 10) the amount of variance accounted for by each component (their eigenvalues). This plot shows a break between the steep slope of the initial components and a gentle one of the later components. It is the components that lie before the point at which the eigenvalues seem to level off that are retained. These components were then rotated using a VARIMAX criteria (as recommended by Kaiser, 1959) to identify the empirically higher order variables. It was necessary to rotate these components to ease interpretability.

Based on the scree plot (see Appendix 10), two components from the rape and attitudes towards women subsection were extracted and examined for interpretability. Table 5.07 presents the eigenvalues for the three components extracted and the percentage of variance accounted for by each component. The three components together accounted for 64.26% of the variance, with component 1 accounting for the greatest percentage of variance (43.89%).

Table 5.07 – Eigenvalues and Percentage of Variance Accounted for by the 3 Components

Rape and attitudes to women subsection	Eigenvalue	% of Variance	Cumulative % of Variance
Factor 1 – Mitigation	4.83	43.89	43.89
Factor 2 – Victim blame	1.22	11.12	55.01
Factor 3 – Minimisation	1.02	9.25	64.26

Examination of the full matrix factor loadings for the rape and attitudes towards women subsection (see Appendix 11) and using a loading score of 0.50 or higher as the cut-off for variable inclusion, the analysis indicated the presence of three factors: mitigation, victim blame and minimisation (Table 5.08). These factors were identified independently by two researchers (e.g. the author of this thesis and a clinical psychologist working with sexual offenders). Both raters examined the factors identified in each of the six subsections independently and then agreement was made between the two raters for meaning for these factors.

Table 5.08 - Variables Comprising the Three Components with Variable Loadings as Determined by the Principal Component Analysis

Scale Item	Loading
Factor 1: Mitigation	
Can you show a woman that you love her by forcing her to have sex with you?	0.805
At a party a man sees a woman going in to a bedroom to have sex with another man, would it be okay then for him to force her to have sex?	0.797
If a man rapes a woman is it just a bit of fun?	0.725
Factor 2: Victim Blame	
Could a woman wearing her Sunday best clothes be raped?	0.794
Is it only women who wear tight clothes that can be raped?	0.655
Are women often partly to blame for the rape taking place?	0.639
Do women make too much fuss about sexual assault?	0.593
If the rape goes ahead does that mean she wants it?	0.561
Factor 3: Minimisation	
Do you think that if a woman is raped that it would cause her any harm?	0.827
If a woman was raped do you think that it would take a few weeks or longer to get over it?	0.687
Are women just a load of bitches?	0.587

Selecting 0.50 or higher as salient factor loadings was influenced by a number of issues. Although factor loadings greater than 0.60 are regarded as high, compared to moderately high if they are above 0.30 (Kline, 1994), researchers vary in the cut-off criteria they use. For example, Abel et al. (1989) used 0.30 for criterion when determining whether or not a particular item loaded substantially well, compared to Duncan, Kennedy and Patrick (1995) who utilised 0.40. Considering this research, it was felt appropriate to select 0.50 or higher as the cut-off criteria, as it is neither too strict nor lenient. Kline (1994) warns that setting a cut-off too high can be misleading and unrealistic. Similarly, he argued that it can be unreliable to regard very low factor loadings (e.g. 0.19) as salient (Kline, 1994 pg. 180), as they account for so little variance. Opting for 0.50 and above seems realistic, as it implies that the factor loadings correlate highly with the variable and a reasonable amount of the variable's variance is explained by the factor (e.g. 25%).

Sample size and number of variables also influenced the cut off criteria. A lenient cut off criteria is often set when a large sample, e.g. 1000 and over (Comrey and Lee, 1992) is involved and there are a number of variables in the analysis (Cattell, 1978). Although the sample size (n=136) in this study was not considered to be large, it was sufficiently large enough to warrant a factor analysis being performed (Bryman & Cramer, 1999; Kline, 1994). Similarly, there were at least five participants per variable in each subsection to justify a factor analysis being carried out (Gorsuch, 1983). Although these data satisfied the criteria for carrying out a factor analysis (Bryman & Cramer, 1999; Kline, 1994; Gorsuch, 1983) it was not sufficiently large enough or have enough variables to justify utilising a less stringent cut off criteria.

As mentioned above, using a cut-off ≥ 0.50 the principle component analysis revealed three relatively independent components within the rape and attitudes towards women subsection. The first component, mitigation, included items that assess whether or not the perpetrator tries to make their behaviour less severe by blaming either the victim or another factor such as fun. These items (see table 5.08 for actual items) all focus on how sexual offenders mitigate their responsibility to make their deviant sexual behaviour acceptable. By diminishing personal responsibility it permits sexual offenders to continue with their deviant sexual behaviour without feelings of guilt, anxiety or shame. They mitigate responsibility, not by blaming the victim, but by excusing their behaviour as being a "bit of fun" or a way by which they can express their love for a woman. Mitigation

of responsibility has been found to be a common cognitive distortion held by sexual offenders and researchers have consistently found it to be used to justify, minimise and rationalise a sexual offenders deviant sexual behaviour (Abel et al. 1989; Murphy, 1990).

The second component extracted from the analysis was victim blame and comprised solely of items where the blame was placed on the victim (see table 5.08 for actual items). The items loaded on this component suggest that sexual offenders blame women for the rape taking place due to the type of clothing they were wearing. Dressing in tight clothes indicates that she wants to have sex and if a sexual offender is successful in raping a woman, then she must have wanted it to happen.

Finally, four items loaded on the third component, minimisation. The item 'if the rape goes ahead does that mean she wants it?' loaded on both blame and minimisation. This item was placed only in the victim blame component category rather than the offender's rationale (e.g. minimisation), due to a more logical fit. The remaining three items focused on assessing how sexual offenders minimise the act of rape. Cognitions such as believing that women are bitches, rape will not cause the victim harm and they will get over the sexual assault quickly enable sexual offenders to explain and rationalise their sexual offending behaviour.

5.2.11 (ii) Voyeurism Subsection

In the voyeurism subsection two components were extracted for interpretability (see Appendix 10). Again, using the ≥ 0.50 cut-off criteria for variable inclusion, the analysis identified the presence of 2 components⁴: intent and mitigation (Table 5.09).

⁴ See Appendix 11 for Full Matrix of Factor Loadings for the Voyeurism Subsection

Table 5.09 - Variables Comprising the Two Components with Variable Loadings as Determined by the Principal Component Analysis

Scale Item	Loading
Factor 1: Perpetrator and Victim Intent	
If a woman is wearing a short skirt does it mean she wants men to look up it?	0.878
If a woman has a big pair of boobs is it alright to have a good look?	0.736
Is staring at a woman's body a good way of showing her that you find her attractive?	0.698
Do women who don't close their curtains when they are in their underwear want people to look at them?	0.675
Do women like men to stare at their bodies?	0.605
Factor 2: Mitigation	
Is it okay to stare at a woman if you don't touch her?	0.810
If a woman sees a man staring at her do you think she would be upset about it for a few minutes or longer?	0.807

The items that loaded on component one had high factor loadings, as they exceeded 0.60. These items measure intent, both in relation to the perpetrator and the victim. Indeed, three items (e.g. 'if a woman is wearing a short skirt does it mean she wants men to look up it?', 'do women who don't close their curtains when they are in their underwear want people to look at them?' and 'do women like men to stare at their bodies?') measure the belief that women provoke men to engage in voyeuristic behaviour, compared to two items (e.g. 'if a woman has a big pair of boobs its alright to have a good look?' and 'is staring at a woman's body a good way of showing her that you find her attractive?') that assess the sexual offender's purpose and reason for engaging in this type of behaviour.

Two items loaded on component two and they were found to assess the cognitions sex offenders use to mitigate responsibility for engaging in voyeuristic behaviour. Explanations including the acceptability of looking and not touching and staring at a

woman would not cause her to be upset enables sexual offenders to rationalise and justify their voyeuristic behaviour.

Table 5.10 presents the eigenvalues for the two components from the voyeurism subsection. Investigation of these eigenvalues indicates that intent accounted for 46.86% of the variance and mitigation accounted for 12.93%.

Table 5.10 – Eigenvalues and Percentage of Variance Accounted for by the 2 Components

Voyeurism	Eigenvalue	% of Variance	Cumulative % of Variance
Factor 1 – Intent	3.75	46.86	46.86
Factor 2 - Mitigation	1.03	12.93	59.79

5.2.11 (iii) Exhibitionism Subsection

In the exhibitionism subsection only one component (see Appendix 10) was extracted and investigated for interpretability. Even when the iterations for convergence were changed from the standard 25 to 50, there was still only one component extracted. All items in this subsection loaded on one component⁵ (e.g. mitigation), which accounts for 63.41% of the variance. These items all exceeded the ≥ 0.50 cut-off criteria (Table 5.11).

⁵ See Appendix 11 for Full Matrix of Factor Loadings for Exhibitionism Subsection.

Table 5.11 - Variables Comprising the Component with Variable Loadings as Determined by the Principal Component Analysis

Scale Item	Loading
Factor 1: Mitigation	
Do women think that it is just a bit of fun to be flashed at?	0.864
Do women just pretend to be shocked when they see a penis?	0.829
When a man shows his penis to a woman does it really turn her on?	0.823
Do most women just laugh about being flashed at?	0.754
Is flashing at someone a good way to show women that you want to have sex?	0.696

All items in the exhibitionism subsection measure whether or not a sexual offender tries to make their behaviour less severe by blaming their victim or some other cause (e.g. flashing is fun and women pretend to be shocked). By mitigating responsibility for their actions, it enables sexual offenders to rationalise their behaviour, which permits them to continue with their exhibitionistic behaviour.

5.2.11 (iii) Dating Abuse Subsection

Consistent with the exhibitionism analysis, only one component was extracted in the analysis of the dating abuse subsection (see Appendix 10). Iteration for convergence was also changed in this analysis from the standard 25 to 50; however, both analyses yielded one component. All items loaded on one component⁶ (e.g. female volition/expectations), which accounted for 53.18% of the total variance. The items in this component measure how sexual offenders deny responsibility for their behaviour by displacing blame onto their victim (Table 5.12).

⁶ See Appendix 11 for the Full Matrix Factor Loadings for the Dating Abuse Subsection.

Table 5.12 - Variables Comprising the Two Components with Variable Loadings as Determined by the Principal Component Analysis

Scale Item	Loading
Factor 1: Female Volition/Expectations	
Would a woman think that you found her ugly if you didn't ask her to have sex with you?	0.816
If you don't ask a woman to have sex will she think you don't like her?	0.787
If you ask a girl out for a date should she know that you want to have sex?	0.769
If a girl invites you back to her place for coffee is she really offering to have sex?	0.738
Do you think it's okay to expect sex on the first date?	0.726
Do you think a woman should expect a man to try it on on a date?	0.726
If the girl makes out she does not want to kiss is she playing a game?	0.681
Do you think a woman would get upset if her boyfriend kept trying to encourage her to have sex even though she has already said no?	0.561

The analysis suggests that sexual offenders rationalise their offending behaviour, that is related to dating abuse, by believing that females want sex on the first date, females really want sex when they invite a man in coffee or females will be upset if a man does not try to have sex with them. These items all have the underlying theme that females should know that a man wants to have sex with them when they are on a date.

5.2.11 (v) Offences Against Children Subsection

In the offences against children subsection three components were extracted with eigenvalues greater than 1.00 (see Appendix 10) and examined for interpretability. Table 5.13 presents the eigenvalues for the three components extracted and the percentage of variance accounted for by each component. Together these components accounted for 67.38% of the total variance.

Table 5.13 – Eigenvalues and Percentage of Variance Accounted for by the 3 Components

Offences against children	Eigenvalue	% of Variance	Cumulative % of Variance
Factor 1 – Attraction	5.24	43.68	43.68
Factor 2 – Harm	1.64	13.68	57.36
Factor 3 - Recovery	1.20	10.02	67.38

Varimax rotation yielded three components⁷ independent of one another: attraction, harm and recovery (Table 5.14). Items in component one measured attraction and assessed whether sexual offenders were attracted to children because they get sexually excited by them and enjoy having sex with them. Component two was found to contain four items that measured harm. These items assess whether sexual offenders believe that children can be harmed by people they know, strangers or family members and whether penetrative or non-penetrative sex can hurt them. Finally, component three measured recovery and assessed whether a sexual offender believed that a child would ever get over being sexually abused.

⁷ See Appendix 11 for the Full Matrix Factor Loadings for the Offences Against Children Subsection.

Table 5.14 - Variables Comprising the Three Components with Variable Loadings as Determined by the Principal Component Analysis

Scale Item	Loading
Factor 1: Attraction	
Do children do sexy things so that men will get turned on and want to have sex with them?	0.870
Do children lead men on sexually?	0.865
Can you show you love a child by having sex with them?	0.694
Do some children enjoy having sex with men?	0.535
Factor 2: Harm	
Can children be abused by people they know, as well as strangers?	0.853
Can a child be abused by family members like their father, mother or their uncle?	0.807
Does making a child watch you masturbate do them any harm?	0.767
Do you think sex with children does them harm if the adult is gentle?	0.713
Factor 3: Recovery	
After a few years would a child get over being sexually abused?	0.858
Would a child ever fully get over being sexually being sexually abused or would they be okay in a few weeks or years?	0.760
If a man has sex or masturbates in front of a child is it just a bit of fun?	0.642
If a girl is old enough to have periods is she old enough to have sex?	0.571

5.2.11 (vi) Stalking and Sexual Harassment Subsection

In the final subsection of the QACSO, stalking and sexual harassment, three components were extracted (see Appendix 10) and examined for interpretability. An investigation of the eigenvalues indicated that the three components accounted for 62.66% of the total variance, with component 1 accounting for the greatest percentage of variance (38.06%) (Table 5.15).

Table 5.15 – Eigenvalues and Percentage of Variance Accounted for by the 3 Components

Stalking and sexual harassment	Eigenvalue	% of Variance	Cumulative % of Variance
Factor 1 – Offender’s rationale	3.81	38.06	38.06
Factor 2 – Harm	1.37	13.68	51.74
Factor 3 - Scare	1.09	10.92	62.66

The three independent components⁸ extracted in this subsection were offenders’ rationale, harm and scare (Table 5.16). Six items loaded on component one and assessed an offender’s logic for stalking and sexually harassing females. The two items that loaded on component two had high factor loadings as they exceeded 0.60. These items assessed whether the perpetrators regarded stalking as harmless and fun. Finally, one item loaded on component three and measured whether or not sexual offenders thought stalking would scare a woman.

⁸ See Appendix 11 for Full Matrix of Factor Loadings for Stalking and Sexual Harassment Subsection

Table 5.16 - Variables Comprising the Three Components with Variable Loadings as Determined by the Principal Component Analysis

Scale Item	Loading
Factor 1: Offender's Rationale	
Is following a woman a good way of showing her you would like to have sex with her?	0.860
Do some women like men to follow them?	0.741
If a woman is walking around the town is it okay for a man to follow her?	0.704
Does it make women feel attractive if men follow them?	0.599
If you followed a woman would it turn her on?	0.579
Is following a woman a good way of showing her you like her?	0.573
Factor 2: Harm	
If a man follows a woman is he just having a bit of fun?	0.857
Is there any harm in following women?	0.705
Factor 3: Scare	
Do men follow women because they want to scare them?	0.821

5.2.12 Group Characteristics and Subscale Scores

The data was re-scored to investigate the effect each participant group had on the subscales identified in the principal component analysis of each subsection of the QACSO. An ANOVA was performed on this data. Table 5.17 shows the mean total scores for socially unacceptable responses, the standard deviations for the four participant groups and a summary of the resultant analysis of variance. The four groups differed in the number of socially unacceptable responses given for the subscales of each subsection, with sex offenders being most likely to provide such answers on most subscales. Indeed, sexual offenders provided significantly more socially unacceptable responses on all but two of the subscales (e.g. voyeurism – intent and stalking and sexual harassment – scare).

Table 5.17 – The mean Total Score on all factors for each group

Subscales	Average total score for each of the four participant groups				Main effect of group
	Sex offenders	Offenders	Non-offenders	Controls	
Rape - Mitigation	1.32* s.d. 1.11	0.29 s.d. 0.46	0.47 s.d. 0.86	0.03 s.d. 0.18	p<0.001
Rape – victim blame	2.88* s.d. 1.52	0.85 s.d. 1.05	1.87 s.d. 1.41	0.06 s.d. 0.25	p<0.001
Rape – Minimisation	1.19* s.d. 0.98	0.12 s.d. 0.41	0.40 s.d. 0.72	0.00 s.d. 0.00	p<0.001
Voyeurism - Intent	3.24* s.d. 1.73	1.38 s.d. 1.28	1.00 s.d. 1.11	0.32 s.d. 0.47	p<0.001
Voyeurism – Mitigation	1.44 s.d. 0.74	1.18 s.d. 0.67	0.77 s.d. 0.73	0.22 s.d. 0.56	p=0.101
Exhibitionism - Mitigation	3.10* s.d. 1.67	0.74 s.d. 1.05	1.83 s.d. 1.49	0.16 s.d. 0.45	p<0.001
Dating abuse – female volition/expectations	4.39* s.d. 2.67	1.29 s.d. 1.38	2.06 s.d. 2.08	0.32 s.d. 0.65	p<0.001
Offences against children – Attraction	1.76* s.d. 1.49	0.32 s.d. 0.59	0.57 s.d. 0.97	0.06 s.d. 0.23	p<0.001
Offences against children – harm	1.46* s.d. 1.43	0.38 s.d. 0.85	0.47 s.d. 0.73	0.00 s.d. 0.00	p<0.001
Offences against children – recovery	2.24* s.d. 1.39	0.38 s.d. 0.82	1.13 s.d. 1.17	0.00 s.d. 0.00	p<0.001
Stalking – offender’s rationale	2.61* s.d. 1.84	1.15 s.d. 1.35	0.90 s.d. 1.37	0.35 s.d. 0.75	p<0.001
Stalking – Harm	1.19* s.d. 0.81	0.56 s.d.0.75	0.87 s.d. 0.73	0.00 s.d. 0.00	p<0.001
Stalking – Scare	0.52 s.d. 0.51	0.18 s.d. 0.39	0.11 s.d. 0.32	0.33 s.d. 0.50	p=0.262

NB * indicates that this group scored significantly higher than all other groups.

Italics and bold indicates that these groups scores did not differ significantly.

On the mitigation subscale of the voyeurism subsection sexual offenders did not differ significantly from offenders on the socially unacceptable responses that they provided ($t(132) = 0.26$ $p = 0.101$). However, on the scare subscale of the stalking and sexual harassment subsection it was the normal males who did not differ significantly from the sexual offenders ($t(90) = 0.18$ $p = 0.26$). These findings suggest that clinicians may wish to score these subscales separately, as this will enable them to identify the areas that need

to be addressed during treatment. For examples, on items where sexual offenders do not differ from controls or offenders, this suggests that these are areas that do not need to be challenged during treatment

From the principal component analysis it is clear that both the exhibitionism and dating abuse subsections of the QACSO are unidimensional scales, as items in both scales loaded on only one component (e.g. mitigation and female volition, respectively). The remaining four subsections items either loaded on two or three components, which suggest that these scales may not be unidimensional. However, the components identified (e.g. mitigation, blame, minimisation, intent, female volition, love, harm, recovery, offender's rationale and scare) are not solely independent from one another, as they share a common link. They are all explanations that sexual offenders use to justify and rationalise their sexual offending behaviour. This commonality suggests that the QACSO is a unidimensional scale and is consistent with Abel, Gore, Holland, Camp, Becker and Rathner's (1989) Cognitions Scale which also claimed to be a single factor scale, despite identifying 6 factors.

5.2.13 Discussion

This section aims to explain the current investigation's findings, as well as discuss these results in relation to previous published research.

The current study provides evidence that the QACSO is a valid and reliable measure of cognitive distortions held by sexual offenders with learning disabilities. The remaining items (A items) in each of the seven subsections were found to discriminate sexual offenders with learning disabilities from the other three groups of participants, a finding consistent with a number of researchers (Abel et al. (1989; Stermac and Segal, 1989; Bumby, 1996) and an achievement Burt's Rape Myth Acceptance Scale was not able to attain, as it could not discriminate sexual offenders (rapists) from a control of randomly selected males. Finding sexual offenders to have statistically significant cognitive distortions is useful for furthering the understanding of the etiology of sexually deviant behaviour, as well as developing effective prevention and treatment programmes for sexual offenders. Indeed, researchers believe that these discriminating items (A items) may identify particular maladaptive cognitions that facilitate sexually deviant behaviour

(Stermac and Segal, 1989; Murphy, 1990; Marshall and Eccles, 1991). Being able to identify these distorted cognitions will enable clinicians to identify the maladaptive cognitions that need to be challenged during treatment.

Although this research found the remaining items (A items) of the QACSO to discriminate sexual offenders from the other three participants groups, these items also discriminated non-offenders with learning disabilities from the controls ('normal' males) on 6 of the 7 subsections (e.g. rape, voyeurism, exhibitionism, homosexual assault, offences against children and stalking and sexual harassment). On the dating abuse subsection, the analysis was found to be approaching a significant level for these two participant groups. Despite this finding, the sexual offenders with learning disabilities still held significantly more distorted cognitions than the non-offenders with learning disabilities. However, the finding that non-offenders provide significantly more socially unacceptable responses to items in the QACSO than 'normal' males requires further attention. Despite this finding non-offenders with learning disabilities still scored significantly lower than sexual offenders with learning disabilities.

Rather than only assess attitudes consistent with sexual offending, the QACSO may also measure sexual knowledge. Research suggests that individuals with learning disabilities often have poor sexual knowledge (Charman and Clare, 1992; Wellings, Johnson and Wadsworth, 1994). Indeed, lack of knowledge about what is and is not socially acceptable behaviour may have influenced how they responded to items in the QACSO. However, this does not mean that individuals with poor sexual knowledge or, are not familiar with society's protocols regarding what is considered socially acceptable behaviour, will go on to sexually offend. They may be more at risk of engaging in behaviour that is misinterpreted as sexually deviant behaviour, due to lack of knowledge. For example, Thompson and Brown (1997) suggest that individuals with learning disabilities are unaware about the rules regarding privacy, which can result in them engaging in sexual activities in public. Considering this it may be worthwhile assessing sexual knowledge prior to administration of the QACSO, to ascertain their level of understanding. Obtaining this information may help clinicians establish whether individual's responses on the QACSO are the result of maladaptive cognitions or lack of sexual or social knowledge.

Current research findings suggest that the revised QACSO is a promising clinical and research measure for the assessment and treatment of sexual offenders. It assesses a wide range of sexual attitudes and unlike existing measures does not focus on rape and child molestation (Burt, 1980; Nichols and Molinder, 1984; Abel et al. 1989; Bumby, 1996), as it also assesses voyeurism, dating abuse, exhibitionism and stalking. However, current findings throw into question the reliability of the homosexual assault subsection. Only four items were found to be reliable and discriminate sexual offenders from the other three participant groups. This finding questions whether this subsection measures attitudes toward homosexuality or homophobia. Future research could address this issue by including more participants in their cohort of subjects who have committed a homosexual assault, rather than have a prejudice sample comprising mainly of individuals who consider homosexuality to be wrong or have not committed a homosexual assault. Comparisons could then be made between these participant's scores on items from the homosexual assault subsection.

From the original 108 items of the QACSO, 58 were found to have good psychometric properties (A items). However, 20 items (B items) were found to discriminate and be reliable, although they had low internal consistency. These items have a Flesch Reading Ease score of 89.07 out of 100 and a Flesch-Kincaid reading score of 3.65, which means that individuals aged between 8 to 9 years can understand the text. Twenty-five items had poor psychometric properties and were classed as C items (see Appendix 3 for A, B and C items). They had a Flesch Reading Ease score of 89.18 out of 100 and a Flesch-Kincaid Reading score of 4.36, indicating individuals aged between 9 to 10 years could understand the text. As previously discussed, there were four items (D items) where controls favoured socially unacceptable responses and their responses were consistent with the other three participant groups. This finding highlights that clinicians need to exercise caution with these items, as they may be scored incorrectly or indicate that individuals are trying to provide socially acceptable responses if they reject these items. Finally, one item was omitted completely as it was a repetition of another item. Rather than exclude these items that have been identified to have problems or poor psychometric properties (e.g. B, C and D items), clinicians may wish to retain them for clinical purposes, a practise utilised by Bumby (1996). Retaining these items may provide additional information, as they appear to have good face validity and they may help clinicians when trying to develop suitable

treatment programmes for sexual offenders. However, it is important to keep these items separate and only focus on the A items when trying to assess distorted cognitions.

Another issue concerning scoring relates to the QACSO giving participants the opportunity to answer 'yes,' 'no' or 'don't know' to each item. Although the current analysis recoded the data and treated 'don't know' responses as ambiguous data, it is felt important to provide individuals with the opportunity to answer that they do not know to any item in the QACSO. Using this method of scoring over comes the problems associated with using a Likert Scale on a population with learning disabilities (see chapter 4), as well as preventing them from being forced into a 'yes' or 'no' response, a problem associated with the 4-point Likert Scale utilised in Bumby's RAPE and MOLEST Scales (Bumby, 1996). Individuals may genuinely not know how to answer a specific item, or not fully understand the statement and should therefore be given the opportunity to express a neutral response.

In the principal component analysis the current investigation obtained results consistent with Abel et al's (1989) findings. In the offences against children subsection of the QACSO the principle component analysis extracted 3 components that can be compared with the 6 factors identified in Abel et al's Cognitions Scale (e.g. 'child-adult sex helps the child,' 'children initiate child-adult sex for specific reasons,' 'adults initiate child-adult sex for specific reasons,' 'the child's behaviour shows their desire for child-adult sex,' 'adults can predict when child-adult sex will damage child in the future' and 'child-adult sex is or will be acceptable in society'[pg. 144-145]). Although Abel et al's factors do not have the same labels as the subscales of the offences against children subsection (e.g. attraction, harm and recovery), they do contain similar items. For example, factor 1 of the Cognitions Scales contains items that are consistent with the items contained in component 2 of the offences against children subsection, as both subscales measure harm. Indeed, the items included in factor 1 of the Cognitions Scale include 'sex between a 13 year old (or younger) and an adult, causes the child no emotional problems,' 'an adult fondling a young child or having the child fondle the adult will not cause the child any harm,' 'if child has sex with an adult, the child will look back at the experience as an adult and see it as a positive experience' and 'the only way I could do harm to the child when having sex with her (him) would be to use physical force to get her (him) to have sex with me'; compared to items from the subscale harm of the offences against children that include

‘can children be abused by people they know, as well as strangers?’, ‘can a child be abused by family members like their father, mother or their uncle?’, ‘does making a child watch you masturbate do them any harm?’ and ‘do you think sex with children does them harm if the adult is gentle?’. These items measure whether or not sexual offenders regard sexual interactions with children to be harmful.

Factor 2 extracted from the Cognitions Scale contains items that are similar to those contained in the subscale attraction of the offences against children subsection. For example, factor 2 of the Cognitions Scale contained items that include ‘when a young child has sex with an adult, it helps the child learn how to relate to adults in the future,’ ‘when a young child asks an adult about sex, it means that she (he) wants to see the adult’s sex organs or have sex with the adult’ and ‘if an adult has sex with a young child it prevents the child from having sexual hang-ups in the future’. Indeed, these items relate to attraction, as these are explanations sexual offender may provide to rationalise their deviant behaviour by indicating that they are engaging in this behaviour to help the child. This finding is consistent with the items contained in the subscale attraction of the offences against children subsection that includes ‘do children do sexy things so that men will get turned on and want to have sex with them?’, ‘do children lead men on sexually?’, ‘can you show you love a child by having sex with them?’ and ‘do some children enjoy having sex with men?’.

For the final component (e.g. recovery) identified in the offences against children subsection there was no clear corresponding factor in the Cognitions Scale. Although factor five contained two items (e.g. ‘an adult can tell if having sex with a young child will emotionally damage the child in the future’ and ‘an adult can know just how much sex between him (her) and a child will hurt the child later on’) that could be argued related to the topic of recovery and the effects sexual interactions with a child can have.

Unfortunately, the remaining subscales of the 5 subsections of the QACSO (e.g. rape and attitudes to women, voyeurism, exhibitionism, dating abusing and stalking and sexual harassment) cannot be compared with previously published research, as factor analyses have yet to be carried out on current assessment measures of attitudes towards rape (e.g. Burt’s Rape Myth Acceptance Scale and Bumby’s MOLEST and RAPE Scales). For the

remaining sexual attitudes assessed in the QACSO there are currently no assessment measures that focus on these areas, so comparisons cannot be made.

However, the clinical significance of the components identified in each subsection of the QACSO demand further investigations. Although sexual offenders scored significantly more distorted cognitions than the other three participant groups in all but two of the subscales, it would be interesting to examine whether these subscales can discriminate between different types of sexual offenders (e.g. rapists, exhibitionists, voyeurs, stalkers and child molesters). If future analysis found that different types of sexual offenders held different cognitions, then this would facilitate clinicians when trying to identify the distorted cognitions that need to be challenged in therapy.

Before examining the subscales of the QACSO it would be interesting to establish whether the subsections are able to discriminate different types of sexual offenders. Apart from this providing information to aid clinicians when developing suitable treatment programs it would also offer support for previous research. For example, if the QACSO was able to discriminate child molesters from rapists it would provide further insight into the particular beliefs that may contribute to these different types of sexual offender's deviant sexual behaviour, as well as offer support for a number of research studies (Stermac and Segal, 1989; Abel et al. 1989; Bumby, 1996; Blumenthal, Gudjonsson and Burns, 1999). Establishing whether or not rapists can be discriminated from other types of sexual offenders would contribute to the current literature that has been unable to find significant differences in the cognitions held by rapists, non-rapists and non-sexual offenders (Burt, 1980; Bumby, 1996; Blumenthal et al. 1999). Unfortunately, this research could not be examined by this current investigation, due to the small sample of sexual offenders. With only 41 sexual offenders comprising of mainly of rapists and paedophiles, it was not sufficiently large enough for this type of analysis.

5.2.14 Methodological Issues

In the exhibitionism subsection the item '*do you think that it would take a woman a few days or years to get over being flashed at?*' was found to have poor psychometric properties, as it was unable to discriminate and had low internal consistency. This

finding may have resulted from the terminology used in this item. The term 'years' implies a very long time and could be regarded as the extreme of 'a few days'. Individuals may have felt flashing is not as harmful and sexually deviant as other acts (e.g. rape and child molestation) and feel that individuals may take longer than a few days but less than years to get over being flashed at. The term 'longer' may have been better suited, as this may not elicit such an extreme view of the length of time it will take a person to get over being exposed to.

The voyeurism subsection may also have been affected by the terminology used in some of its items. Although 8 of the original 13 items were found to have good psychometric properties and discriminated sexual offenders from the other three participant groups, offenders with learning disabilities did not differ significantly from non-offenders with learning disabilities on these items. These findings may have been the result of the terminology failing to elicit strong anti-social attitudes. For example, the term 'stare' was used to obtain what was regarded as a socially inappropriate behaviour. Participants may have interpreted this term as 'to look' and regarded this more as part of a 'normal' courtship ritual. To obtain anti-social attitudes in this subsection, it may be worthwhile considering using the term 'peep' or 'spy'.

Problems were also identified with the ambiguity of some of the items, which resulted in difficulties being encountered when trying to score these items as either socially acceptable or unacceptable. For example, there were 5 items identified in separate subsections of the QACSO that asked whether a man raped, flashed, stared, had sex with children or followed a woman to scare them. Four of these items were reliable and discriminated but had low internal consistency (e.g. 'do men rape women to scare them?', 'do men stare at women to scare them?', 'do men flash to scare women?' and 'do men have sex with children to scare them?'), whereas the remaining item 'do men follow women to scare them?' had good psychometric properties. Variations in the psychometric properties of these items may have been the result of these items being ambiguous. For example, if a participant responded 'yes' to these items these answers were scored as socially acceptable responses. However, sexual offenders engage in sexually deviant behaviour for a number of different reasons and may have different motives and intentions. In some cases they may want to scare women and children, however some

sexual offenders may not. Individuals who respond 'no' to these items may not be intent on scaring their victims, but their motives are still equally anti-social and sexually deviant.

Sexual offenders may also be aware that some individuals engage in sexually deviant behaviour to scare women, however the current scoring criteria of the QACSO does not enable them to express this opinion. A possible solution would be to structure these items to take into consideration that all or some sexual offenders engage in sexually deviant behaviour to scare women (i.e. 'do all men/some men rape women to scare them?').

Another problem identified with the QACSO is that the subsections are open to response bias. Examination of the remaining items (A items) of the QACSO found that the majority of these require a 'no' response for a socially acceptable response to be registered. Indeed, responding 'no' to all items in the voyeurism and exhibitionism subsections would yield only socially acceptable responses. However, in the offences against children subsection 8 of the 12 items require a 'no' response for a socially acceptable response to be registered, compared to 9 out of 11 in the rape subsection, 7 out of 8 in the dating abuse subsection and 8 out of 10 in the stalking subsection. As acquiescence response is a problem experienced by individuals with learning disabilities (Clare and Gudjonsson, 1993), it is important to put in place mechanisms that will try to prevent participants from falling into an acquiescent response pattern. Possible solutions include rewording some of the items so that they are reverse scored, including questions that are logically paired with current items to elicit an opposite response, or adding items that stipulate either a correct or incorrect response.

5.2.15 Recommendations for Future Research

Future research may consider replicating the present study to test the reliability and validity of the QACSO further. Replication would involve using a larger sample that defines the different types of sexual offenders (e.g. stalkers, voyeurs, exhibitionists, rapists, child molesters and individuals who commit a homosexual assault) in order to obtain results that will either support or reject the current research's findings, as well as offer insight into whether the QACSO can discriminate different types of sexual offenders. Larger samples would also enable further factor analysis to be undertaken. Indeed a factor

analysis could be performed on the whole questionnaire (A items) to identify themes and beliefs that are common to different types of sexual offenders. This analysis would support or reject the current principle component analysis of the separate subsections of the QACSO, as well as facilitate clinicians when trying to identify the key cognitions that need to be challenged in therapy.

Sexually deviant behaviour is not only restricted to the population with learning disabilities, as it is a pernicious problem that is carried out by individuals who do not have a learning disability (Marshall and Serran, 2000). Future research may wish to examine how individuals without a learning disability score on the QACSO, as it would be interesting to find out if sexual offenders without a learning disability share the same maladaptive cognitions as those who do have a learning disability. This information would further understanding of the distorted cognitions that contribute to sexually deviant behaviour, as well make clinicians aware of whether sexual offenders with or without learning disabilities require the same or different cognitions to be addressed in therapy.

Future research may also wish to consider including items in the QACSO that assess sexual offenders' beliefs pertaining to their own sexual offending behaviour, as this information is believed to offer insight into their future offending behaviour (Murphy, 1990; Hogue, 1994). Adapting the QACSO to include items that assess their attitudes towards their own sexually deviant behaviour may provide valuable information regarding their future offending behaviour, as well as assist clinicians when developing personalised treatment programmes for their clients.

Finally, future researchers may wish to examine the value of the QACSO as a treatment outcome measure. Marshall and Pithers (1994) advocate that paper and pencil measures should be used to assess treatment efficacy, rather than relying on recidivism rates. This is a practice exercised by Bumby (1996) who used both his MOLEST and RAPE Scales to measure treatment efficacy among rapists and child molesters. Administration of Bumby's scales enabled sexual offenders' cognitions to be monitored at three-month intervals, to examine whether the number of distorted cognitions they held decreased. Future researchers may wish to use the QACSO when testing treatment efficacy among sexual offenders with learning disabilities. However, to examine whether it is the treatment that is having the effect on changing the cognitions, rather than sexual offenders learning the

socially acceptable responses, future researchers may wish to consider administering half the items of the QACSO in the first half of the treatment programme followed by the remaining items to assess whether there are any differences.

Sexual offenders may learn the socially acceptable responses to give when they regularly have to complete the QACSO. To try to prevent this from happening the QACSO should be divided into two sections, each comprising 29 items. As all remaining items of the QACSO have all been found to be reliable, valid and successfully discriminate sexual offenders from non-sexual and non-offenders, this should not pose a problem when splitting the questionnaire. However, when splitting the questionnaire researchers should ensure that items still cover the 6 subsections covered by the QACSO (e.g. rape, voyeurism, exhibitionism, dating abuse, offences against children and stalking and sexual harassment). During the first year of treatment sexual offenders should be administered the first section of the QACSO to assess cognitive distortions. Then, in the second year of the treatment programme sexual offenders should be administered the second part of the QACSO. If significant differences are found between the scores on the two parts of the QACSO this may suggest that sexual offenders have learned to give socially acceptable responses, rather than their cognitions changing. However, this proposed research would need to be examined further before conclusions could be drawn (e.g. further assessments over a longer period and utilising different assessment measures to establish whether results could be replicated).

5.2.16 Interim Conclusion

The present study suggested that the QACSO is a reliable and valid measure of cognitive distortions of sexual offenders with learning disabilities. These findings suggest that it is useful in assessing beliefs of sexual offenders prior to, during and following treatment. If future research on the QACSO offers additional support for its utility, this measure may be a promising clinical and research measure for the assessment and treatment of sexual offenders with learning disabilities.

Despite the current research contributing to the current literature that recognises the important role cognitive distortions play in sexual offending behaviour and the need for a

psychometrically robust instrument to assess these cognitions, attention fails to focus on the cognitive processes that generate these cognitions (see chapter 3). Being able to measure these maladaptive cognitions is essential when trying to develop suitable treatment programmes, however it is equally important to establish how these cognitions are generated in order to explain how these cognitions can account for sexually deviant behaviour. This is an area that warrants further investigation and will be addressed in chapter six.

Chapter 6 – Empirical Studies

6.0 Introduction

It is not enough just to be able to assess cognitive distortions to obtain better understanding of why individuals sexually offend. Ward, Hudson, Johnston and Marshall (1997) suggest that it is necessary to examine the cognitive processes that underlie the initiation, maintenance and justification of sexual offending behaviour. However, research to date has been stagnant, focusing primarily on the cognitive content of post-offence cognitions (see chapter 3). Although the content of these cognitions have been recognised as playing an important role in rationalisation of an offence, as well as subsequent re-offending, researchers suggest that information-processing mechanisms are also important before and during the offence cycle (Pithers, 1994; Ward, Hudson and Marshall, 1994). It has been suggested that sexual offenders with learning disabilities have deficits with information processing, as material that is received by their sensory receptors (e.g. ears and eyes) may not be processed as much as normals, or not at all (Langevin and Pope, 1993). Sensory deficits, problems decoding information, or difficulties interpreting and making decisions about information may prevent material reaching the brain unaltered. According to Langevin and Pope, whatever the explanation, individuals with or without a learning disability differ in their ability to process information. Clinicians need to be aware of this difference, as this will facilitate their theoretical and practical ideas when developing suitable treatment programmes (Langevin and Pope, 1993; Ward, Hudson, Johnston and Marshall, 1997). Unfortunately, research examining the cognitive processes or information processing mechanisms utilised by sexual offenders is limited. By reviewing this limited research, this chapter aims to show how current research (within this PhD) has contributed to existing literature that attempts to explain the role information processing plays in sexually deviant behaviour.

6.1.1 Information Processing Studies

Variables that may influence information processing have started to be examined. For example, sexual offenders' ability to process interpersonal cues in interactions between males and a female has been investigated. Lipton, McDonel and McFall (1987)

investigated rapists', violent non-rapists' and non-violent non-rapists' responses to a series of 72 thirty-second videotaped vignettes that depicted heterosexual couples either on a first date or more intimate interactions. Participants were instructed to indicate from a list of 5 affective cues (e.g. romantic, positive, neutral, negative or bad mood) which one was being demonstrated in the vignettes by males and females. Lipton et al (1987) found that rapists were significantly less accurate than the other two groups in interpreting the cues emitted by women in first date interactions. Rapists were also found to be less efficient reading women's cues, as opposed to men's cues, with rapists being more inclined to perceive negative cues as relatively positive reactions.

Malamuth and Brown (1994) obtained similar results when investigating sexually aggressive men's perceptions of women's communications. They compared sexually aggressive males responses to 4 thirty-second videotaped vignettes depicting an interaction between a man and a woman in a bar where the man's advances were systematically varied (e.g. friendly, assertively rejecting, seductive and highly hostile) with the responses of sexually non-aggressive males. Participants rated each interaction on a 9-point Likert Scale (ranging from strongly disagree [-4] to strongly agree [+4], with 0 indicating neither agreeing or disagreeing). Malamuth and Brown found that sexually aggressive males interpreted clear and assertive communications as hostile, and friendly behaviour as seductive. These findings led Malamuth and Brown to conclude that sexually aggressive males were incompetent in decoding women's emotions, as they had particular difficulties interpreting negative cues.

However, caution should be exercised when interpreting these research studies' findings (i.e. Lipton et al. 1987; Malamuth and Brown, 1994), as similar methodological flaws have been identified in both studies. For example, both studies used videotaped vignettes to depict interactions between males and females. Craig (1990) raises concerns over the ecological validity of using videotaped vignettes, as she believes participants respond differently to stimulus presented in this way than they do to real-life situations. Videotaped vignettes also raise ethical concerns. Portraying women in a highly hostile, or seductive manner may reinforce sexual fantasies that sexual offenders hold, or confirm to them that this is what is regarded as 'normal' interactions between men and women. Exposing sexual offenders to this type of stimuli may confirm to them that this type of behaviour is acceptable and it may encourage them to offend. However, the practicalities

of addressing these concerns are difficult. To elicit sexual offenders' responses to sexual stimuli and investigate their ability to interpret interactions between males and females, they need to be exposed to some type of sexual stimuli. Although videotaped vignettes might not achieve the same responses real-life situation would, they might be the most suitable alternative, as ethical restrictions would not permit males and females to act out sexual interactions in front of sexual offenders.

Despite these weaknesses, both studies (i.e. Lipton et al. 1987; Malamuth and Brown, 1994) suggest that sexual offenders have deficits in their ability to interpret a woman's interpersonal cues. This finding offers support for the empathy literature that argues that sexual offenders have deficits in their ability to empathise (see chapter 4). Indeed, deficits decoding women's emotions suggest that sexual offenders have problems with the first stage of the Empathy Model (e.g. emotion recognition) proposed by Marshall, Hudson, Jones and Fernandez (1997). As outlined in chapter 4, this is a four-staged process model that requires individuals to go through all stages for them to be able to empathise. Problems at any one of the stages will result in failure to empathise.

Research into emotion recognition of sexual offenders provides further support for the opinion that they may have deficits with the emotion recognition stage of the Empathy Model. Hudson, Marshall, Wales, McDonald, Bakker and McLean (1993) tested 75 male prisoners and hypothesised that sexual offenders would experience more difficulties recognising emotions including fear, disgust and anger than non-sexual and non-violent offenders. Participants were shown 36 slides depicting male or female facial expressions representing surprise, fear, disgust, anger, happiness and sadness. After looking at each slide participants had to answer a checklist of questions (e.g. 'Did that face show anger, fear, disgust, surprise, happiness or sadness?'). Results indicated that sexual offenders, compared to other inmates, were the least accurate in emotion recognition. Indeed, sexual offenders consistently confused fear with surprise and disgust with anger. Hudson et al (1993) extended this analysis to investigate whether emotion recognition was a problem experienced by child molesters trying to identify the emotions of children and adults. Examining 20 male nonfamilial child molesters and 20 male community controls, Hudson et al. found child molesters were significantly less accurate at recognising emotions in both adults and children, than the community controls. However, no significant difference was found between the accuracy of the child molesters' recognition of emotional states in

either sets of children and adult pictures. This finding may suggest that child molesters' ability to recognise emotions is a general problem, rather than a difficulty restricted to their specific interest group (e.g. children).

6.1.2 Social Information Processing Models

All three studies, outlined above, (Lipton et al. 1983; Hudson et al. 1993; Malamuth and Brown, 1994) are concerned with the first stage of Dodge's (1986) Social Information Processing Model and McFall's (1990) Social Information Processing Model of Social Skills and Social Competence. According to Dodge (1986) a series of information processes influence behavioural responses to social situations. Indeed, the Social Information Processing Model (Dodge, 1986) proposes that there are five sequential steps (e.g. 'encoding the social cues from the environment', 'forming a mental representation and interpretation of these cues', 'searching for the possible behavioural response', 'deciding on a response from those generated' and 'enacting the selected responses') required for behaviour responses to occur. Deficits in any of these processes will result in inappropriate behaviour. Indeed, when the research findings from Lipton et al. (1987) and Malamuth and Brown (1994) research studies are applied to the Social Information Processing Model, it appears that sexual offenders have deficits with the first stage of the model (e.g. encoding social cues from the environment). An inability to accurately interpret the interpersonal cues emitted by women during interactions with males, may lead sexual offenders to demonstrate sexually inappropriate behaviour. Such an explanation is consistent with McFall's account of sexually deviant behaviour.

McFall (1990) proposed a Social Information-Processing Model of Social Skills and Social Competences to explain competent and incompetent behaviour. It is a three-staged model that incorporates decoding skills, decision skills and enactment skills. All stages must be completed for an individual to perform either appropriate or inappropriate behaviour. Figure 6.00 shows a diagrammatical form of McFall's Model.

Figure 6.00 – Schematic outline of Social Information-Processing Model of Social Skills and Social Competence⁹

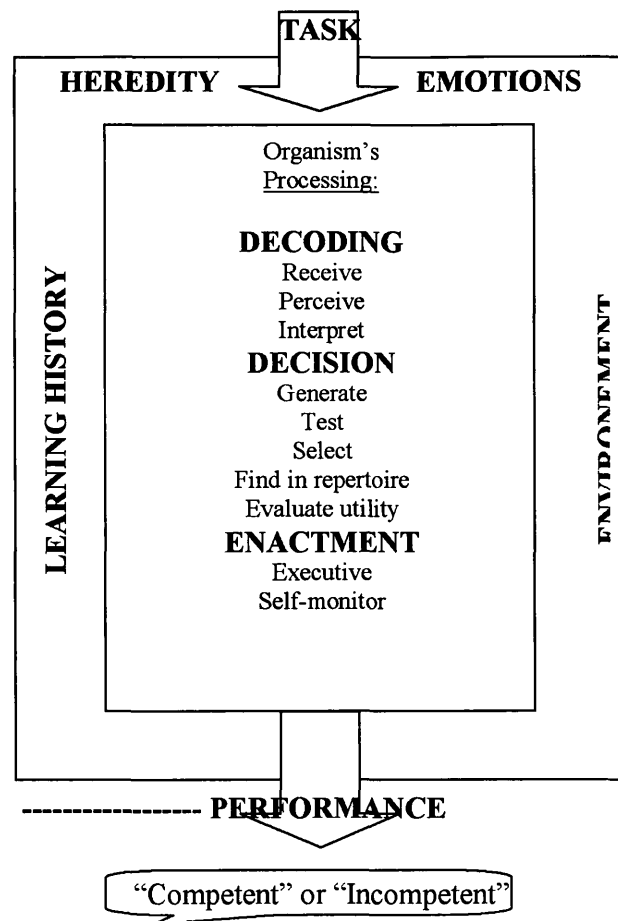


Figure 6.00 illustrates that the model proposes that information is presented to the sensory receptors, where it is received, perceived and interpreted (decoding). This information is then processed to generate a behavioural response (decision), which is influenced by heredity, emotional, learning history and environmental factors. Once the behavioural response has been generated it can then be carried out (enactment). However, while executing the behavioural response, individuals must monitor the impact that the behaviour is having on the environment, as it will be judged as either a competent or incompetent response.

⁹ Schematic outline cited in McFall, (1990) pg. 314.

Both Dodge's and McFall's Models are very similar and can both be applied to explain sexually inappropriate behaviour resulting from sexual offenders misinterpreting interpersonal cues from females. However, these models are largely theoretical. They may provide useful descriptive information about the processes involved that may account for sexually inappropriate behaviour, but they fail to explain why sexual offenders have deficits decoding information or recognising emotions. Although it is vital for clinicians to be aware of the particular deficits sexual offenders have when developing suitable treatment programmes, it would also be beneficial for therapists to have a better understanding of the processes which could account for these deficits. Indeed, Craig (1990) suggests that sexual offenders are selective with the cues that they attend to. When information is received by their sensory receptors they attribute a level of importance to each piece of information. Individuals then select the information that they regard as most important and relevant. Unfortunately, there is no published research, to date, that has examined the way sexual offenders select, attend to and process cues or information. Considering this, research which suggests sexual offenders have deficits decoding interpersonal cues and emotions (Lipton et al. 1987; Abbey and Melby, 1986; Malamuth and Brown, 1994) and Gomez and Hazeldine (1996) who argue that deficits in cognitive abilities (e.g. attention, memory and language) leads to deficiencies in social information processing, it was felt that the area of attention and in particular selective attention needed to be examined. Indeed, if sexual offenders have deficits in their ability to read emotions and identify negative cues, is this the result of selective attention deficits or excessive selective attention ability?

According to Solso (1995), selective attention is '*the mechanism by which certain information is registered and other information is rejected (whether or not the latter enters conscious awareness)*' (cited in Gross, 1996 pp. 265). A number of researchers (Cherry, 1953; Broadbent, 1958; Treisman, 1960) believe that because of the large amount of information that exists in the world, a person needs to be able to select which information to attend to and which to tune out. Indeed, Treisman (1964) proposed a theory to account for the many phenomena associated with selective attention. This theory proposes that incoming stimuli might undergo three different kinds of analysis. The first test analyses the physical properties of the stimuli, with the second task determining the different components of the stimuli. Finally, the third test assigns meaning to the stimulus. However, these three tests are not necessarily carried out on all incoming information, as

some stimuli can be disentangled from one another using only one test of Treisman's Attenuator Model. However, if this test fails to separate the two competing stimuli, processing will continue until they become disentangled from one another. For example, you are at the railway station watching people get off a train, as you wait for your female friend to arrive. According to Treisman's Model you would sort these stimuli out using the first test (i.e. analysis by physical properties e.g. separate stimulus by male or female status). However, it is unlikely that you would be aware of any details about the males (e.g. hair colour or what they were wearing), as you did not process this information because your main focus was on the females. If this first test fails to disentangle the stimulus, the second stage of Treisman's Model would be carried out. For example, still trying to locate your female friend from the others getting off the train might require more than just trying to separate the males from the females. You would need to examine the females further. As the difference between this stimulus is not as clear, you would need to examine the components of the stimuli (e.g. size, hair colour, skin colour and height). However, this does not mean that you completely disregard or ignore the components that are not relevant to your friend, as Treisman's Model states that this information is attenuated (i.e. turned down or suppressed).

Treisman's Model attempts to provide an account of how individuals focus their cognitive processes on a narrow band of sensory stimulation in order to deal with the vast amount of information that they encounter in the environment. Such an account of selective attention is consistent with Craig (1990) who suggests that sexual offenders are selective with the cues they attend to. Rather than attend to all the information sexual offenders encounter, Craig suggests that they filter out irrelevant information, leaving the relevant stimulus for their attention. However, Craig's view is purely theoretical with no empirical data to support it. Indeed, it is an area of research that has received little attention, as there are currently no published studies that have examined how sexual offenders select, attend to, or process information they encounter.

To address this, this chapter presents a series of studies to test the attentional ability of sexual offenders and examine their selective and divided (e.g. a process by which individuals allocate available attentional resources to co-ordinate the performance of more than one task at a time) attention. The first study investigates the average time sexual offenders with learning disabilities spend looking at pictures of people (e.g. women and

children) and objects compared to a control condition of non-offenders with learning disabilities. Previous research findings (Ward, Hudson, Johnston and Marshall, 1997; Malamuth and Brown, 1994; Craig, 1990) have found that sexual offenders have deficits with their ability to choose which information to attend to and process. Indeed, Craig (1990) states sexual offenders misinterpret cues that women give out, as they tend to focus on cues that support their aggressive behaviour. According to Ward et al. (1997), sexual offenders have social information deficits at the first stage of Marshall, Hudson, Jones and Fernandez's (1995) Empathy Model, that predisposes them to misconstrue cues and in particular negative ones. Problems at this stage of the model will have a detrimental impact on the remaining three stages. Research has examined empathy (i.e. facial expressions), but no single study has been designed to investigate the different stages of Marshall et al's (1995) Empathy Model (see chapter 4). However, when Greer, Estupinan and Manguno (2000) reviewed studies that investigated empathy among sexual offenders they found certain studies tested the first stage of the Empathy Model (e.g. Hudson, Marshall, Wales, McDonald, Bakker and McLean, 1993; McLean, 1993), despite this not being their initial aim. As previously discussed, results from these studies found that sexual offenders had deficits in their ability to interpret facial expressions (e.g. fear, anger and surprise). Unfortunately, no published research has examined the fourth stage of the Empathy Model (i.e. response decision). Based on previous research findings that sexual offenders have deficits with their ability to interpret facial expression and Craig's (1990) view that sexual offenders are poor at choosing the appropriate information to focus on, it was felt that sexual offenders might have deficits with the fourth stage of the Empathy Model (Marshall et al. 1995). Indeed, sexual offenders might have deficits in their ability to attend to all the necessary information that will allow them to make decision and thus have deficiencies with their selective attention.

Considering the research outlined above, it appears that sexual offenders might have deficits with their selective attention. To test this hypothesis it is necessary to select appropriate methods to do this. However, as there is currently no published research that has investigated attentional deficits among sexual offenders that can guide research in this area, it is necessary to examine methodologies that are commonly used to test attentional abilities of a 'normal' population. Indeed, selective attention is often investigated using interference tasks. One of the most common interference tasks used to measure selective attention is the Stroop effect (Stroop, 1935). In this task participants are presented with a

list of names of colours that are printed in corresponding coloured ink (e.g. red written in red ink, or blue written in blue ink) and asked to read them aloud. They are then presented with another list of names of colours that are printed in different coloured ink that do not correspond (e.g. red written in blue ink, or yellow written in green ink) and instructed to say the colour of the ink. Participants find it easier to say the colour of the ink when the word and colour correspond than when they do not. When the stimulus material does not correspond, the written word interferes with naming the colour of the ink. The Stroop effect demonstrates the difficulty participants experience when trying to selectively attend to the colour of the ink, while ignoring the word. MacLeod (1991) suggests that this effect results from reading being an automatic process for most adults and is not readily subject to conscious control. Based on this explanation, adults find it difficult to stop themselves from reading and concentrating on the colour of the ink.

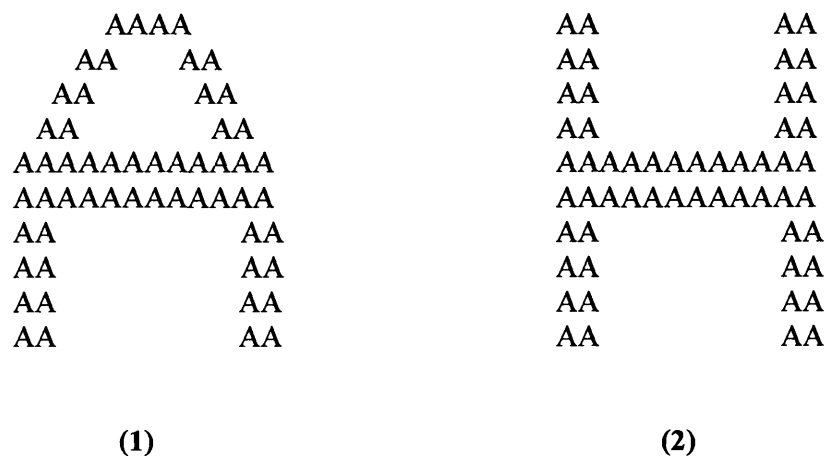
The “Navon task” (Navon, 1977) is another example of an interference task used to investigate both selective and divided attention. In the “Navon task” participants are presented with large letters made up of smaller letters (see figure 6.01) and asked to identify letters at either the local (individual features that comprise the overall shape) or global level (overall shape). Panel 1 of figure 6.01 shows a global H made up of local Hs and panel 2 shows global Hs made up of local Ss.

Figure 6.01 – Navon task Stimulus

HH	HH	SS	SS
HH	HH	SS	SS
HH	HH	SS	SS
HH	HH	SS	SS
HHHHHHHHHHHHHH		SSSSSSSSSSSS	
HHHHHHHHHHHHHH		SSSSSSSSSSSS	
HH	HH	SS	SS
HH	HH	SS	SS
HH	HH	SS	SS
HH	HH	SS	SS
(1)		(2)	

To test selective attention participants are asked to identify either the small (local) or large (global) letters in the presented stimuli. Normal participants are quicker to identify the letters at the global than local level (Navon, 1977), which indicates a Gestalt precedence for processing visual stimulus. Indeed, the Gestalt approach is based on a global and more holistic approach to dealing with visual stimulus in the environment. According to this approach the whole of a form differs from the sum of its individual parts. This finding is also reflected in participants' responses in the divided attention task. Participants are not instructed to attend to either the global or local level, but to identify whether the letter A is present or absent in the stimulus (see figure 6.02). Normal participants are quicker to identify the letter A being present at the global than local level (Navon, 1977), indicating that they might have a natural advantage to process visual stimulus quicker at the global than local level. This finding suggests that they do not have conscious control over the speed at which they process information at either the global or local level.

Figure 6.02 – Divided Attention Stimulus



In both the divided and selective attention tasks, participants are quicker to identify the target letter when both stimulus letters are compatible (e.g. panel 1 of figure 6.02 and 6.02). This results from an absence of any stimulus material interfering with the processing task, as participants do not experience conflicting stimulus when selectively attending to stimulus at either the global or local level in trials where the stimulus is compatible.

Both the Stroop effect and the “Navon task” are examples of indirect tasks that investigate the effects implicit memory can have on an individual’s performance. Indirect tasks investigate individuals’ enhanced performance on tasks, as a result of prior experience, despite not having any conscious awareness of recollecting the prior experience. Indeed, in the Stroop effect participants’ performance is affected by their automatic process to read and in the “Navon task” their precedence to process stimulus at the global level. A number of indirect tasks are used by researchers to investigate whether performance on a task is facilitated by the absence of conscious recollection. For example, word-completion tasks (Tulving, Schacter and Stark, 1982; Jacoby, Toth and Yonelinas, 1993) are often used, where participants are either presented with a list of words (e.g. mercy or sweet) or not. They are then presented with a list of word fragments or word stems (e.g. mer__ or swe__) and asked to complete the word stems with the first word that comes to mind. Participants who are presented with the list of words are more likely to complete the word stems with words that appeared on the list, than participants who did not see the list. Such a finding suggests that the recent exposure to the words influenced the participants’ responses. However, participants’ are often unaware that their performance was enhanced by conscious recollection, as they are unable to recall the list of words when instructed to remember them.

Apart from an individual’s performance being affected by prior experiences, with no conscious recollection of past events, it can also be influenced by conscious recollection of a past event. Direct tasks are used to investigate this form of memory retrieval that involves an individual intentionally recalling or recognising particular information. For example, a task which instructed participants to memorise one, two, three and four letter words and then instructed them to identify whether those sequence of letters were contained in a visual display containing one, two, three or four letters is an example of a direct task. To complete this task, participants need to retrieve information from their memory and compare it with the presented visual stimulus. Indeed, any task that requires a participant to consciously retrieve information from memory is a direct task.

After considering some of the most commonly used methods to investigate attentional abilities of normal individuals, some of these methods have been adopted for use to investigate attention among sexual offenders with learning disabilities. Indeed, in the present research five studies are developed to investigate both the attentional abilities of

sexual offenders with learning disabilities and test whether these methods of investigation are the most appropriate for use on this population.

6.2.0 Empirical Studies

The first study (study 2) is developed to investigate the time sexual offenders spend looking at pictures of people and objects. This task aims to investigate if the type of picture influences the length of time sexual offenders and non-offenders spending viewing the stimulus. This is not a new approach, as viewing time has been used by a number of researchers to examine sexual interest. Indeed, Quinsey and colleagues (Quinsey, Chaplin and Carrigan, 1979; Quinsey, Chaplin and Varney, 1981; Quinsey, Ketsetzis, Earls and Karamanoukian, 1996; Harris, Rice, Quinsey and Chaplin, 1996) have used viewing time to measure sexual interest among rapists, child molesters and non-sexual offenders. Although these studies also utilise phallometric assessments (see chapter 4) to establish the level of sexual interest sexual offenders have to the visual stimulus. In these studies both these measures were found to correlate. More recent research has used viewing time in conjunction with sexual offenders rating level of attractiveness of visual stimulus (Glasgow, 2003). However, study two does not aim to measure the level of sexual interest or attractiveness sexual offenders attributed to the stimulus, as this study is only concerned with establishing whether sexual offenders prefer to look at pictures of people than objects.

Investigating the effects picture stimulus has on sexual offenders' viewing time is motivated by personal clinical observations. Some sexual offenders have been found to keep picture collections of their sexual interest group. Examination of these picture collections has found them to be extremely organised, containing only images of the person (i.e. if a woman was photographed sitting on a chair, most of the chair had been cut away to leave only the image of the woman). Considering this interest that some sexual offenders have for collecting and looking at photographs of woman or children, it was felt appropriate to investigate whether presentation of pictures stimulus of people and objects does affect sexual offenders' viewing time.

To investigate this a direct task is used, where participants are randomly presented with visual picture stimulus of people and objects. Participants view the stimulus pictures for as long or as short a time as they want and when they want a new picture they press a key on a computer keyboard. Using this methodology proposes that sexual offenders' responses might be influenced by their conscious recollection of past events. As participants complete the task, they might recall memories that make them realise that to change a picture that they do not like, or to get a picture they prefer all they have to do is press a button on a keyboard. Conscious recollection of the past might also influence sexual offenders behaviour when completing this task, as the visual stimulus might trigger memories of their sexual offence, or sexual interest group, which might result in them spending longer viewing pictures of people than objects. If conscious recollection of past events influences sexual offenders' future behaviour, this will result in them spending significantly longer viewing pictures of people than objects.

6.2.1 Pilot Study

A sample of 10 pictures of boys, 10 of girls, 20 of women and 40 of objects where normal males do not differ significantly on the time they spend looking at each picture set was needed for study two.

6.2.2 Methodology

The participants for this study were obtained from the University of Abertay and Strathmartine Hospital. Permission for this study and all subsequent studies was obtained from the Tayside Committee on Medical Research Ethics Proposal for Clinical Research (Reference number 147/01).

6.2.3 Description of Participants

Eight males were employed in this pilot study. Four were employed medical staff (e.g. 1 doctor and 3 nurses) and the remaining four were university staff (2 technicians and 2 lecturers). Their mean age was 34.5 years (S.D. = 7.63, range 25-46).

6.2.4 Procedure

Participants were informed that the study would investigate the way in which they completed a task. It was not a memory task and they would not be asked to recall or do any additional tasks after they had completed this one.

Using the Experimental Superlab Software package (Version 1.2 for Windows) participants were randomly presented with 129 stimulus¹⁰ pictures that comprised 21 pictures of boys, 21 girls, 29 females and 58 objects. Stimulus pictures ranged from 8.0cm to 14.0cm in width and 9.0cm to 11.0cm in height. Variations in stimulus size were caused by altered measurements to improve the clarity of the stimulus. Each picture was presented separately in the centre of a computer laptop screen. Participants had to spend as long or as short a time as they wanted looking at each picture. When they wanted a new picture to appear on the screen they had to press the space bar on the keyboard of the laptop. The computer recorded the time each participant spent looking at each picture.

6.2.5 Results for Pilot Study

Forty pictures of objects, 20 of females, 10 of girls and 10 of boys, with similar mean viewing times were selected from the original 129 stimulus pictures. A one way ANOVA was performed on the mean looking time for the four groups of pictures – objects, females, girls and boys and no significant difference was found in the time the ‘normal’ males spent looking at these pictures ($F(3,636) = 0.005$ $p = 1.0$).

¹⁰ See appendix 7 for sample of pictures.

The 10 pictures of boys, 10 girls and 20 females were now grouped together for the purpose of the next study. A sample of the 40 pooled pictures of people could now be compared to the 40 pictures of objects. Table 6.00 shows the mean time 'normal' males spent looking at this sample of 80 pictures, and as a final check an independent sample t-test was performed on this data. No significant difference was found between the time participants spent looking at objects and people ($t(638)=0.11$ $p=0.91$). These pictures were now used in study two.

Table 6.00 – Mean time 'normal' males spent looking at pictures in pilot study

Type of Picture	Mean time looking
People (e.g. boys, girls and women) (n=320)	2755.59ms s.d.1743.90
Objects (n=320)	2770.42ms s.d.1679.56

6.3.0 Study Two

This study aimed to investigate the average time participants spent looking at pictures of objects and people. A direct task was employed, using the stimulus material obtained from the pilot study. It was hypothesised that if conscious recollection of past events influences sexual offenders' future behaviour, this will result in them spending significantly longer viewing pictures of people than objects.

6.3.1 Methodology

The participants for studies 2, 3, 4, 5 and 6 were obtained from the learning disabilities service in Dundee, which include Strathmartine Hospital, Dudhope Adult Resource Centre and the HELM. The sexual offenders who participated in these studies were all currently involved in a cognitive-behavioural treatment programme for sexual offenders, run by a team of Clinical Psychologists in Tayside, Dundee. Permission to approach participants in

all studies was obtained from the Tayside Committee on Medical Research Ethics Proposal for Clinical Research.

6.3.2 Description of Participants

In all thirty-six participants were employed in study two. Based on the Diagnostic and Statistical Manual IV-TR classification of learning disability 24 had a mild learning disability (mean IQ = 63.18, S.D. = 7.06, range 49-76). Their mean age was 37.63 years (S.D. = 12.66, range 18-64). The remaining 12 participants did not have a learning disability.

6.3.3 Sex offenders with learning disabilities

Twelve male sex offenders with learning disabilities made up this group. The mean age of the sex offenders with learning disabilities was 34.83 years (S.D. = 14.68, range 18-61). The mean Full Scale IQ (WAIS-III) was 65.42 (S.D. = 7.44, range 53-76). Participants had no diagnosed psychiatric condition apart from their learning disability. They had either been convicted of perpetrating a sexual offence in the months prior to participating in this study, charged and awaiting a court appearance and/or cautioned by police in connection with sexual offending behaviours but had been diverted from criminal proceedings.

6.3.4 Non-offenders with learning disabilities

Twelve male non-offenders with learning disabilities made up this group. The mean age was 36.25 years (S.D. = 10.55, range 20-49). The mean Full Scale IQ (WAIS-III) was 60.5 (S.D. = 5.84, range 49-70). Participants had no diagnosed psychiatric condition apart from their learning disability. Participants in this group had not committed a criminal offence.

6.3.5 Normal males

Twelve participants in this group with mean age of 30.67 (S.D. = 7.59, range 20-48). Participants in this group did not have a learning disability.

6.3.6 Apparatus

The stimuli were generated by the computer software package Experimental Superlab Software and displayed on a 14inch computer laptop screen. Participants responded to each stimulus by pressing the spacebar on the keyboard of the laptop.

6.3.7 Stimuli

Forty picture stimuli were employed in this study, which comprised 5 pictures of boys, 5 girls, 10 women and 20 objects (see appendix 7 for sample of stimuli). Four picture stimuli were used in the practice trials (e.g. 1 picture of a boy, 1 of a girl, 1 of a woman and 1 of an object). The stimuli pictures of children depicted girls and boys ranging from 4 to 12 years and adult females were illustrated in the stimuli pictures of women. The stimuli pictures of objects depicted inanimate objects (e.g. telephone, chair or book). Stimulus pictures ranged from 8.0cm to 14.0cm in width and 9.0cm to 11.0cm in height. Variations in stimulus size were caused by altered measurements to improve the clarity of the stimulus.

6.3.8 Procedure

Participants were read information sheets (see appendix 6) that outlined the aim of the study. They were informed that their performance on the task would be anonymous and given the opportunity to ask questions. They also received consent forms (see appendix 2) that were either read or given to them for their signature. Age and IQ was obtained from participants and case notes. The controls only gave their age.

Participants were randomly presented the stimulus pictures on the centre of the screen of the laptop. They were instructed to view each stimulus picture for as long or as short a time as they wanted. When they wanted a new stimulus to appear on the screen they had to press the spacebar on the keyboard of the laptop and the computer recorded the time each participant spent looking at each stimulus picture.

The task comprised of two parts. First, participants completed a practice trial that comprised 4 stimulus pictures (e.g. 1 boy, 1 girl, 1 woman and 1 object). Second, they viewed 40 stimulus pictures that the pilot study had found 'normal' males not to spend significantly longer looking at. The task was counterbalanced with 5 pictures of boys, 5 girls, 10 women and 20 objects.

6.3.9 Results for Study Two

6.3.10 Demographic Characteristics of the Sample for all 6 studies

The mean age of participants is presented in table 6.01 for the 6 studies presented in this chapter. No significant difference was found between the ages of the participants in each group, as all had $p > 0.11$. Table 6.01 also shows the mean IQ for the participants with learning disabilities who participated in these studies. No significant difference was found between the IQ of the participants in each group, as all had $p > 0.11$.

Table 6.01 – Mean Age and IQ of each participant group in all 5 studies

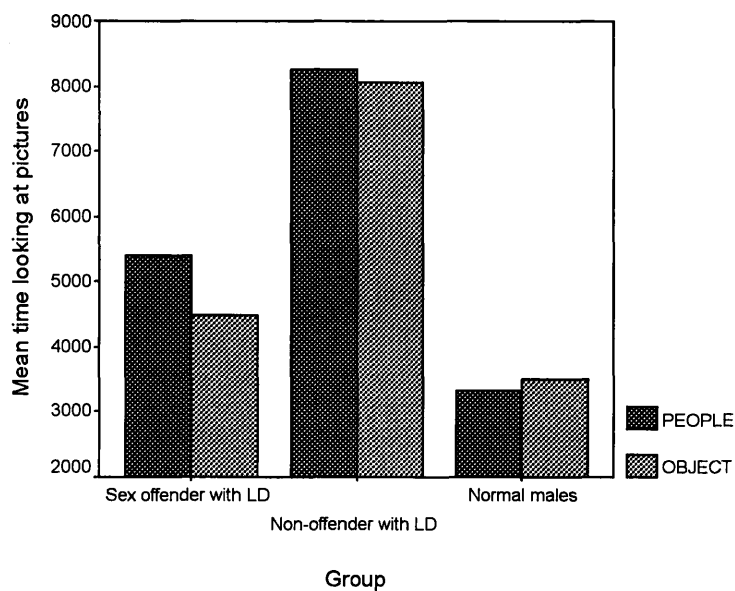
	Mean Age			Mean IQ	
	Sex offenders	Non-offenders	Normal males	Sex offenders	Non-offenders
Study 2 – Viewing time	34.83 s.d.14.68	36.25 s.d.10.55	30.67 s.d.7.60	65.42 s.d.7.44	60.50 s.d.5.84
Study 3 – Visual task	33.70 s.d.12.31	34.70 s.d.9.78		62.50 s.d.6.38	61.88 s.d.4.76
Study 4 – Auditory task	64.60 s.d.6.36	61.60 s.d.7.79		28.50 s.d.10.55	36.4 s.d.10.51
Study 5 – Divided attention task	32.57 s.d.12.73	29.0 s.d.10.58		65.64 s.d.5.31	63.14 s.d.7.37
Study 5 – Selective attention task	31.31 s.d.12.29	30.13 s.d.10.34		65.38 s.d.5.71	63.0 s.d.6.88
Study 6–Attentional bias & Inhibition of return	30.60 s.d.12.38	31.40 s.d.9.61		65.13 s.d.5.83	62.20 s.d.5.04

6.3.11 Analysis Procedure and Results for Study Two

A (2x3) mixed design analysis of variance was performed with a one within subject factor of pictures (people and object) and a one between subjects factor of participant group (sexual offenders, non-offenders and normal males) on the average time the participants spent viewing the picture stimulus. The interaction found between the type of group and type of picture was found not to be significant ($F(2,33)=1.37$ $p=0.27$). There was no significant difference in the amount time spent looking at pictures of people (sex offenders $x = 5.40$ seconds, $s.d.6.38$; non-offenders $x = 8.3$ seconds, $s.d.6.57$; normal males $x = 3.32$ seconds, $s.d.1.59$) or objects (sex offenders $x = 4.49$ seconds, $s.d.4.07$; non-offenders $x = 8.07$ seconds, $s.d.6.41$; normal males $x = 3.50$ seconds, $s.d.1.35$) ($F(1,33)=1.29$ $p=0.26$). Figure 6.1.3 shows that the non-offenders seemed to spend slightly longer looking at the pictures of objects and people than the other two groups. However, this difference just

failed to be significant ($F(2,33)=2.99$ $p=0.06$). It is unlikely this reduction in time resulted from differences in level of IQ of the participant groups, as no significant difference was found between the mean IQ for the two groups with learning disabilities ($t(20) = 1.70$ $p = 0.11$).

Figure 6.1.3 – Mean time spent looking at pictures for all 3 groups



6.3.12 Discussion

No significant interaction was found between the type of group and the type of picture. The non-offenders did take slightly longer to complete the overall task, but the type of picture did not influence the length of time they viewed the pictures. This finding follows a trend observed in Harris, Rice, Quinsey and Chaplin's (1996) research, where non-offenders (e.g. 'normal' males) were found to spend slightly longer looking at pictures than child molesters. Indeed, Harris et al. (1996) reported that non-offenders had a mean viewing time of 3.25 seconds ($SD = 3.04$) per picture, compared to 1.87 seconds ($SD = 0.88$) for child molesters. For the current study non-offenders with learning disabilities had a mean viewing time of 8.26 seconds ($SD = 6.6$) per picture of a person and 8.07 seconds ($SD = 6.4$) for each picture of an object, compared to sexual offenders who spent 5.40

seconds ($SD = 6.4$) and 4.49 seconds ($SD = 1.6$) looking at pictures of people and objects respectively. Sexual offenders may have spent less time viewing pictures, as they wanted to conceal their preference for the pictures of people. This suggests that sexual offenders had been aware that viewing time was being recorded and therefore may have tried to view the pictures quickly. An alternative explanation could be that sexual offenders with learning disabilities may have taken less time to complete the task because they were more experienced than non-offenders with taking part in experimental research.

Sexual offenders did not overtly spend longer looking at the pictures of people than objects and thus the experimental hypothesis was not supported. This result was a surprise, as it failed to support the clinical observation that had been made. As previously discussed, some sexual offenders were found to keep extremely organised collections of pictures of children or women. This observation influenced formulation of the current hypothesis of this study, as it was thought sexual offenders would prefer to look at pictures of people and children, rather than objects. However, failure to obtain significant results may have resulted from the methodology employed. For example, the stimuli used in this study portrayed people in everyday situations (e.g. a woman on the telephone, a boy playing with a football and a girl climbing a wall). Ethical restrictions would not have permitted nude photographs of people, pictures of children being overtly sexual or pornographic material from being used in this study. However, sexual offenders do not need to be exposed to this type of stimulus for them to offend (Quinsey, 2003), so it was felt appropriate to portray people in a way that sexual offenders would be used to seeing women and children when they offend against them. However, Harris et al. (1996) used nude photographs of men, women and children in investigating viewing time among child molesters and 'normal' males. Using this type of stimuli may have influenced their results, as they found child molesters spent significantly longer looking at pictures of children than adults, when compared to a group of 'normal' males. This finding may suggest that sexual offenders need to be presented with extreme pictures of people (e.g. naked pictures) to gain their attention, which results in viewing times that can discriminate them from non-offenders. However, before conclusions can be made about the effects different forms of stimulus can have on sexual and non-offenders' viewing times, these studies need to be replicated.

Another methodological weakness may lie with the instructions given to the participants. They had been instructed to look at the pictures for as long or as short a time as wanted, but this instruction may not have been enough to get them to focus on the pictures. Participants may have thought that they had to complete the task quickly because they wanted the task to end or they thought it was a race. Indeed, Harris and colleagues instructed their participants to look carefully at the photographs, as they would be asked questions later. This may have influenced their result, and again accounted for them obtaining significant results. However, this introduces the element of deception into the study, as they intentionally misled the participants, as they were not asked questions at the end of the study. To address this issue of deception, future researchers should consider asking questions at the end of the study (e.g. can you recall how many pictures of boys you saw? or can you recall the last picture that you saw?). Although these questions are not relevant to the study under investigation, it will prevent participants from thinking that in future studies instructions will not be carried out. Again, before drawing conclusions about viewing time this study needs to be replicated to establish whether the instructions had an effect on the time participants spent looking at the pictures.

Despite failing to find a significant difference between the mean time sexual offenders spent viewing pictures of people than objects, this does not mean that they do not have attentional deficits. The methodological weaknesses discussed above may have affected the results, or the direct task utilised in this study may have been unable to detect a difference. A direct task had been used as it was thought that random presentation of pictures would influence their future behaviour, as sexual offenders would recall their previous behaviour and realise that to get a picture of a person, rather than an object, all that was required was to press a key on a computer keyboard. However, this did not happen. Sexual offenders may have realised that viewing time was being measured and consciously tried to mask their response. Indeed, conscious influence can occur in direct tasks, however they are less likely in indirect tasks. Considering this, study three was developed to investigate attentional ability using an indirect task. As an indirect task involves performance being affected by prior experiences with no conscious recollection of past event, it was felt that this method might detect attentional differences among sexual offenders, as they will be unable to consciously try to mask their responses.

6.4.0 Study Three - Introduction

An indirect task is employed in study three to address some of the weaknesses identified in study two (e.g. direct task failed to detect a difference). As previously discussed, an indirect task is less likely to be affected by conscious influence than a direct task, suggesting that participants are less likely to be aware that the task is trying to distract them. Following this procedure may detect differences, if indeed sexual offenders try to mask their response, in their attentional abilities.

The indirect task again presents participants with pictures of people (e.g. children or women) and objects. While the pictures are presented on the screen of a laptop, a black star appears in one of four locations. Participants are instructed to press a key on a keyboard when they locate the black star. If sexual offenders' performance is affected by prior experience with no conscious recall, they may take longer to locate the star when presented with pictures of people than objects, with no recollection of the pictures they view.

6.4.1 Description of participants

Twenty participants were employed in this study. Based on the Diagnostic and Statistical Manual IV-TR classification of learning disability 20 had a mild learning disability (mean IQ = 62.22, S.D. = 5.57, range 55-73). Their mean age was 30.0 years (S.D. = 10.56, range 20 - 56).

6.4.2 Sex offenders with learning disabilities

Ten male sex offenders with learning disabilities made up this group. The mean age of the sex offenders with learning disabilities was 33.7 years (S.D. = 12.31, range 20-56). The mean Full Scale IQ (WAIS-III) was 62.56 (S.D. = 6.77, range 53-73). Participants had no diagnosed psychiatric condition apart from their learning disability. This group comprised of participants who had either been convicted of perpetrating a sexual offence in the months prior to participating in this study, charged and awaiting a court appearance and/or

cautioned by police in connection with sexual offending behaviours but had been diverted from criminal proceedings. Some of these participants completed study 2, as well as this study and the remaining three studies still to be discussed in this chapter. Although it is better to use participants who are naïve to the studies to reduce confounding variables, the logistics of doing this are problematic. Limited numbers of sexual offenders and non-offenders with learning disabilities means researchers need to use participants who are readily available. To address the problems associated with using some of the same participants, a delay of at least one month was implemented between each study.

6.4.3 Non-offenders with learning disabilities

Ten male non-offenders with learning disabilities made up this group. Their mean age was 34.82 years (S.D. = 9.28, range 20 - 49). The mean Full Scale IQ (WAIS-III) was 61.88 (S.D. = 4.76, range 55-70). Participants had no diagnosed psychiatric condition apart from their learning disability. Participants in this group had not committed a criminal offence.

6.4.4 Apparatus

The stimuli and cognitive processing task were displayed on a 14inch laptop screen using the computer software package Experimental Superlab (Version 1.2 for Windows). Participants responded to each task by pressing one of four colour coded keys on the keyboard of the laptop. All keys on the laptop had been concealed except the letters H, J, N and M, which had been colour coded grey, red, green and blue respectively.

6.4.5 Stimuli

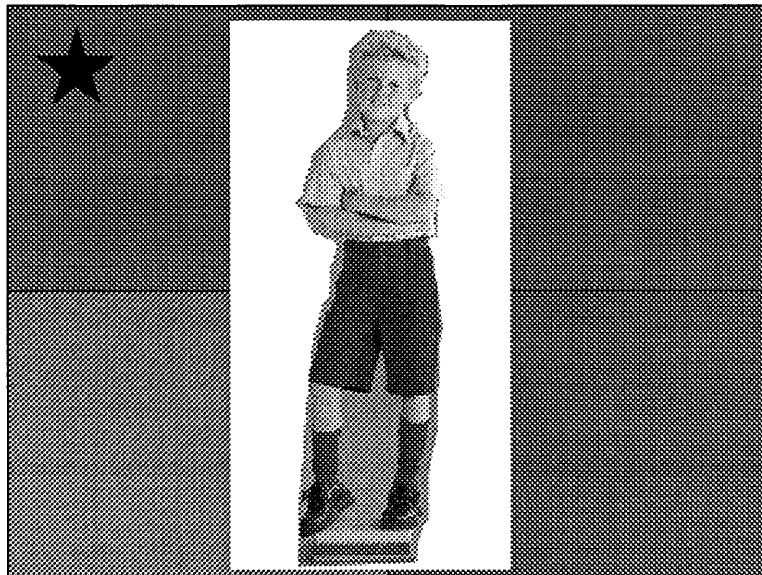
Twenty picture stimuli were employed in this study, which comprised 10 pictures of people (i.e. 5 women, 3 boys and 2 girls) and 10 pictures of objects. A further four picture stimuli (e.g. 1 picture of a woman, boy, girl and object) were used in the practice trials. The stimuli pictures of people depicted adult females, and boys and girls ranging in age 4 to 12 years. Stimulus pictures ranged from 7.5cm to 17.0cm in width and 10.5cm to 17.0cm in

height. Variations in the size of the stimulus pictures were caused by measurements being altered to obtain a clear picture. The black star generated in the cognitive processing task had a diameter of 2cm.

6.4.6 Procedure

Participants were read information sheets (see appendix 6) that outlined the aim of the study. They were informed that their performance on the task would be anonymous and given the opportunity to ask questions. They also received consent forms (see appendix 2) that were either read or given to them for their signature. Age and IQ was obtained from participants and case notes.

Participants were presented with a computer laptop screen that was equally divided into four colour coded boxes. The left hand corner of the screen was grey, the right corner red, the bottom left green and the bottom right blue. The four coloured squares appeared in the screen for 1 second before a stimulus picture of either a person or object also appeared in the centre of the screen for a further 2 seconds. A black star then appeared in either the grey, red, green or blue colour coded squares and remained on the screen until the participants gave their response. Figure 6.04 shows an example of the stimulus material presented to the participants. The study was counterbalanced to ensure that the black star appeared in each box a total of five times.

Figure 6.04 – Example of stimuli in Study Three

Participants were instructed to look at the screen and respond when they saw the star appear on the screen. If the star appeared in the blue box they had to press the corresponding blue key on the computer keyboard. Similarly, if the star appeared in the red box they had to press the corresponding red key; the grey box, the grey key and the green box, the green key. The computer recorded the time it took participants to respond when they saw the star appear.

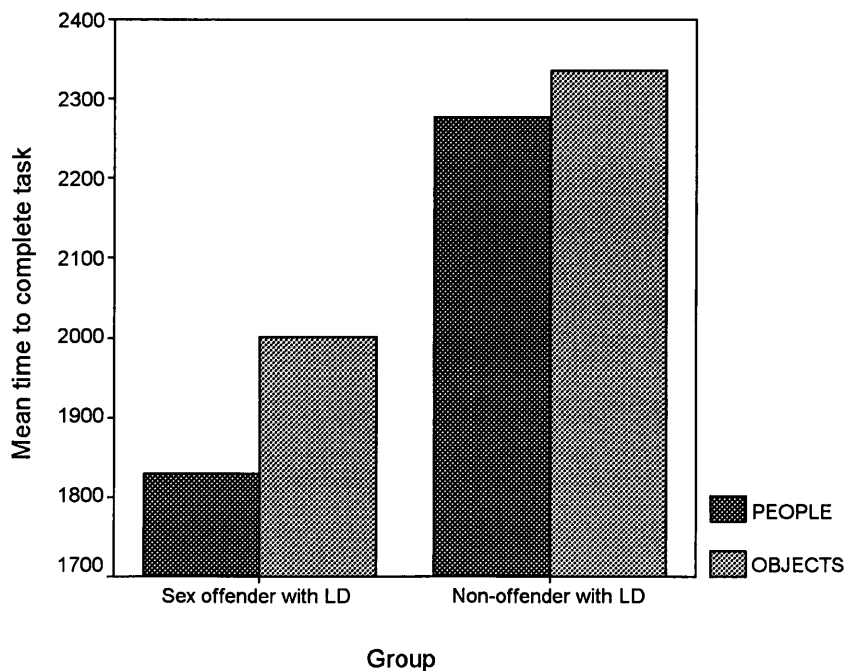
The session was divided into two parts. The first constituted a practice trial that randomly presented stimulus pictures that comprised of 1 woman, 1 girl, 1 boy and 1 object. On these four practice trials the star appeared once in each colour coded box. Once participants completed the practice trials, they commenced the study trials which pseudo randomly presented them 10 stimulus pictures of people (5 women, 3 boys and 2 girls) and 10 objects.

6.4.7 Results for Study Three

6.4.8 Analysis Procedure and Results

A (2x2) mixed ANOVA (participant group [sexual offenders and non-offenders] x picture [people and objects]) was performed on the average time it took sexual offenders and non-offenders to complete the visual task when presented with pictures of objects or people. There was no significant main effect of type of picture ($F(1,18) = 0.07$ $p = 0.80$) or participant group ($F(1,18) = 0.97$ $p = 0.34$) observed. Figure 6.05 shows that the non-offenders (people $x = 2.33$ seconds, $s.d. 9.04$ and objects $x = 2.39$ seconds, $s.d. 1.21$) again took slightly longer to complete the task than the sexual offenders (people $x = 1.99$ seconds, $s.d. 6.40$ and objects $x = 1.98$ seconds, $s.d. 6.10$), but failed to reach significance ($F(1,18) = 0.13$ $p = 0.73$). Again this slight reduction in time is unlikely to be due to the level of IQ of participants in the groups, as the mean IQ of sex offenders did not differ significantly from the non-offenders ($t(16) = 0.23$ $p = 0.82$).

Figure 6.05 – Mean time to complete task for both groups



6.4.9 Discussion

No significant interaction was found between type of group and type of picture. Again the results from this study failed to support the experimental hypothesis. Despite using an indirect task, the sex offenders did not overtly take longer to complete the visual task when presented with pictures of people. Thus, their prior experiences (presentation of the pictures) did not affect their performance.

Consistent with the results in study one, non-offenders took slightly longer to complete the task than sexual offenders. This difference was not found to be significant and was unlikely due to level of IQ, as there was no significant difference found between the two groups of participants.

Failing to obtain significant results, or even data in the predicted direction was again a surprise, as this again did not reflect clinical observations. Both participant groups responded to the task in the same way, indicating that sexual offenders were able to complete the task as well as the control condition. However, these results may have been influenced by methodological weaknesses. For example, each picture only appeared on the screen for 2 seconds before the visual task was presented. This may not have been sufficiently long enough to get the sexual offender's interest and focus on the pictures. Indeed, Glasgow (2003) assessed sexual interest using viewing times by first requesting participants to complete a cognitive processing task before a passive viewing task (i.e. the reverse of the task procedure in study 3). Participants were required to look at pictures of people and rate them for level of attractiveness and when they wanted a new picture to rate they had to press a button. To rate the pictures participants would have had to spend time looking and thinking about them, which could have resulted in them becoming more interested in the pictures and spending longer on the passive viewing task. Glasgow's preliminary research findings are promising, which may suggest that the sequence in which the tasks are presented (e.g. cognitive processing task first, followed by the passive viewing task) might influence the results. Future research, out with this PhD, may wish to examine whether varying the sequence of tasks (i.e. visual task first, followed by viewing task) affects sexual offenders' abilities to complete a visual task.

Problems may also have existed with the stimulus material used in study 3, as they may not have been ecologically valid. Indeed, using still pictures of people may not have been realistic enough for the participants. As previously discussed, a number of researchers (Loftus and Palmer, 1974; Hunter, 1964; Loftus & Zanni, 1975; Craig, 1990) argue that video clips should be used rather than photographs, as these are more ecologically valid. Considering this, it was felt appropriate that the next study should address this issue and use video clips of women and children in everyday situations (e.g. women in a hairdressers and children running and playing) to investigate attentional ability.

6.5.0 Study Four - Introduction

Study four is developed to address some of the weaknesses identified in the previous study. It attempts to deal with the issue of ecological validity by using video clips of people and objects, rather than still photographs. The video clips depict people in everyday situations (e.g. women interacting in a hairdressing salon and children playing), which cannot be regarded as pornographic or overtly sexual. Again this study employs an indirect task to investigate the differential effect visual stimulus can have on an auditory task. Participants monitor a TV screen to view silent video clips of people and objects, while also listening for an audible beep. When they detect the auditory beep they press a key on a computer keyboard. To prevent an acquiescent response, the auditory beeps are emitted randomly.

An auditory task is used for pragmatic reasons, as the indirect task would fail to have the desired effect (i.e. completion of the auditory task affected by the visual stimulus without conscious recollection) if participants have to move their attention from the visual stimulus to complete the task. Considering this and sexual offenders' interest in women and/or children, it is proposed that if their performance is affected by prior experience with no conscious recall, they may take longer to detect the auditory beep when viewing video clips of people than objects.

6.5.1 Description of participants

Twenty participants were employed in this study. Based on the Diagnostic and Statistical Manual IV-R classification of learning disability all had a mild learning disability (mean IQ = 63.60, S.D. = 6.02, range 53-74). Their mean age was 32.45 years (S.D. = 11.56, range 18-48).

6.5.2 Sex offenders with learning disabilities

This group comprised 10 male sexual offenders with learning disabilities. The mean age of this group was 28.5 years (S.D. = 10.55, range 18-47) and the mean Full Scale IQ (WAIS-III) was 64.6 (S.D. = 6.36, range 56-74). Participants had no diagnosed psychiatric condition apart from their learning disability. The inclusion criteria were the same as for studies 1 to 3, with a gap of one month between study 3 and 4.

6.5.3 Non-offenders with learning disabilities

Ten male non-offenders with learning disabilities made up this group. The mean age was 36.40 years (S.D. = 10.51, range 20-49). The mean Full Scale IQ (WAIS-III) was 61.6 (S.D. = 4.79, range 53-70). Participants had no diagnosed psychiatric condition apart from their learning disability. Participants in this group had not committed a criminal offence.

6.5.4 Apparatus

Video clips were viewed on a 14inch television screen. The auditory beeps were generated by the computer software package Experimental Superlab (Version 1.2 for Windows). Participants responded to the audible beeps by pressing the spacebar on the keyboard of the laptop.

6.5.5 Stimulus

The visual stimulus comprised of two 3 minute video clips with no sound. One clip depicted women and children interacting. Ninety seconds of this video clip showed boys and girls playing, with the remaining 90 seconds showing females interacting in a hairdressing salon. The second clip comprised of 3 minutes of inanimate objects (e.g. pictures of goods being sold on a shopping channel). A third video clip was used in the practice trial and comprised a 3 minute wildlife clip. The auditory beep was a single tone that was emitted randomly at a rate between 2000ms and 9000ms.

6.5.6 Procedure

The procedure for providing participants with information about the study and obtaining consent was the same as in the previous studies. Age and IQ was obtained from participants and existing case notes.

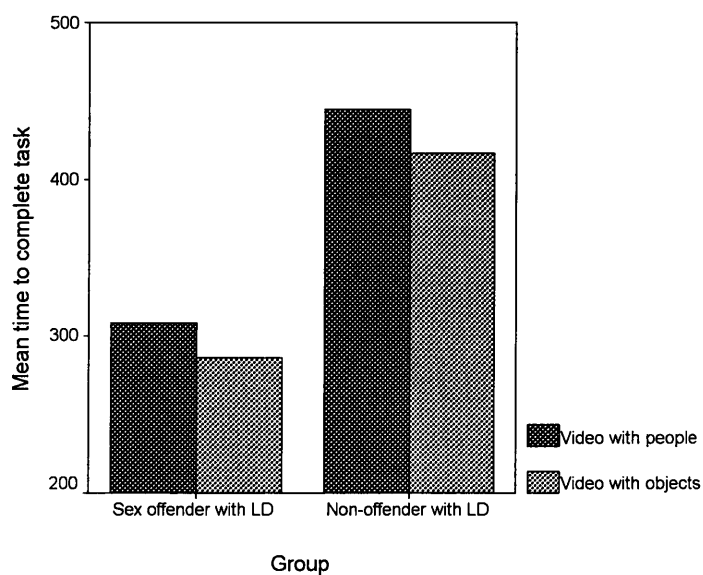
Participants were instructed to place their finger over the spacebar of the keyboard of the laptop while focusing their visual attention on the television screen. While watching the video clips on the television screen participants had to listen for an audible beep. When they heard the beep they had to press the spacebar on the keyboard of the laptop. The single tone beeps were emitted randomly to prevent acquiescent response from occurring. The computer software package recorded the time it took participants to respond to the auditory beep. The experimenter recorded manually the number of auditory beeps that were emitted during each video clip, as the computer software package was unable to do this. Half the participants in each group received the video clip of the people first followed by the video clip of the objects, with the remaining participants presented with the video clips in the reverse order. This counterbalancing was intended to control for practice effects. Again, this session was divided into two parts, with the first comprising of a practice trial (e.g. 3 minute video clip of wildlife animals), followed by the study trial (e.g. video clips of people and objects).

6.5.7 Results for Study Four

6.5.8 Analysis Procedure and Results

A (2x2) mixed design ANOVA (participant group [sexual offenders and non-offenders] x video type [people or object]) was performed on the mean time it took the participants to complete the task. There was no significant main effect of participant group ($F(1,18)=1.92$ $p=0.18$) or type of video clip ($F(1,18)=0.72$ $p=0.41$) observed. Consistent with studies two and three, figure 6.06. shows that non-offenders took slightly longer (people clip $x = 4.44$ seconds, $s.d.2.91$ and object clip $x = 4.17$ seconds, $s.d.2.66$) to complete the task than sexual offenders (people clip $x = 3.07$ seconds, $s.d.1.38$ and object clip $x = 2.86$ seconds, $s.d.1.67$), again this difference was not significant ($F(1,18)=0.01$ $p=0.92$).

Figure 6.06 – Mean time to complete task for both groups



6.5.9 Discussion

The results failed to support the experimental hypothesis, as no significant interaction was found between type of group and type of video clip, despite using more ecologically valid stimulus. This result was consistent with the previous studies (i.e. studies 2 and 3), as sexual offenders were able to complete the auditory task while viewing video clips of

people or objects. Again, this finding indicated that both participant groups responded to the task in the same way, with sexual offenders being able to do as well on the task as the control condition.

Studies two, three and four have investigated sexual offenders' ability to attend to visual stimulus when asked to complete a cognitive processing task. Direct and indirect tasks were used to detect any differential effects conscious or unconscious recollection of past events (e.g. pictures or video clips of people or objects) had on sexual offenders, compared to non-offenders performance on a visual and auditory task. However, results indicate that both participants responded to these tasks in similar ways.

Although the results from these studies failed to support the experimental hypothesis, two interesting points can be inferred from these research findings. First, it was thought that sexual offenders might have been trying to mask their responses to the direct task employed in study 2. To address this concern an indirect task was used in studies 2 and 3, as conscious influence is less likely to occur in indirect tasks than direct tasks. As no differences were observed between the two groups on their performance on the indirect tasks, this might suggest that sexual offenders were not trying to mask their response. Indeed, the effect conscious and unconscious recollection of past events has on performance appears to be the same for both sexual offenders and non-offenders.

The second interesting point raised from these research findings relates to the appropriateness of using direct and indirect task to investigate attentional deficits. Failure to detect any differences between the participant groups in their attentional abilities while completing visual or auditory tasks does not mean that they do not have attentional deficits. It could be that the direct and indirect methods used to investigate the attention abilities were unable to detect differences that might exist. To address this alternative methods need to be explored. For example, the issue of sexual offenders trying to conceal their responses could be investigated further by using stimulus material that is not related to their sexually deviant sexual behaviour. Using methods that have been specifically designed to test certain areas of attention (e.g. divided and selective attention), without relying on stimulus material related to a sexual offender's sexually deviant behaviour, might help to reduce further the likelihood of them being aware of what is being measured (e.g. viewing time or reaction times). Study five attempts to address this concern.

6.6.0 Study Five - Introduction

The method adopted for use in this study was designed by Navon (1977) and has been found to be a reliable and valid measure of divided and selective attention (Bruyer and Scailquin, 2000). Navon (1977) developed the “Navon tasks” to investigate the importance of global processing in perception. Participants were presented with visual stimulus similar to that shown in figure 6.01 (pg. 165). On some trials participants were instructed to identify whether the large letter was an “H” or an “S” and on other trials they had to decide whether the small letters were Hs or Ss. Navon found that the speed at which the participants identified the small letters was greatly slowed when the large letter was different from the small letters. However, detection speed of the large letters was unaffected by the nature of the small letters. As normal individuals were found to be quicker to process information at a global, compared to a local level, this led Navon to conclude that they have precedence of global over local processing. Indeed, Navon (1977) concluded that normal participants demonstrate a “global advantage” effect (e.g. participants are slower to identify and make more errors when identifying letters at the local than at the global level) and a “global interference” effect (e.g. on incompatible conditions, participant’s detection rate of target letters is slower at the local than the global level).

More recently, Plaisted, Swettenham and Rees (1999) adapted the “Navon task” for use on normal and autistic children. Plaisted et al. (1999) aimed to investigate whether these participants groups had precedence of global over local processing. Participants’ divided and selective attentions were tested. In the divided attention task participants were instructed to identify if the letter A was present in the visual stimulus (see figure 6.02, pg. 166) and in the selective attention task they had to identify either a small or large letter. Results for the normal children were consistent with Navon’s research findings, as they were found to be quicker to process information at the global compared to the local level in both the divided and selective attention tasks. However, this was only partially true for the autistic children, as they demonstrated a global precedence in the selective attention task, but not in the divided attention task. Indeed, autistic children were found to process information faster at the local, compared to the global level in the selective attention task.

After considering Navon (1977) and Plaisted et al's (1999) research findings it was felt that the "Navon task" might be an appropriate way to investigate attention among sexual offenders for a number of reasons. First, it is a straightforward task that has been administered to children as young as five years (Plaisted et al. 1999), which suggests that it could be used on individuals' with mild learning disabilities. Second, it is an indirect task that will measure the effects automatic processes have on sexual offenders performance when completing visual tasks. Again, an indirect task is used to avoid conscious influence on sexual offenders' performance. Finally, after considering researcher's claims that sexual offenders have problems selecting the appropriate cues or information to focus on (e.g. Craig, 1990; McFall, 1990) and the view that they may have deficits with the fourth stage of Marshall et al's. (1995) Empathy Model, in that they are unable to attend to all the necessary information that allows them to make a decision, this could suggest that they have problems with global processing. Unable to view the whole picture, sexual offenders may have a precedence of local than global processing, an occurrence that has been observed among autistic children (Plaisted, Swettenham and Rees, 1999). Indeed, research has found individuals who have problems processing information at a global level, fail to demonstrate global advantage and interference effects (Plaisted et al. 1999). Considering these issues, it is hypothesised that sexual offenders will have deficits with their global processing, which results in them demonstrating local, rather than global, advantage and interference effects.

In the "Navon" divided attention task, participants have to identify whether a target letter was present or absent. The target letter can appear at the local level only (incompatible/local conditions), the global level only (incompatible/global conditions), or at both levels (compatible conditions). If a local advantage effect occurs, sexual offenders' responses on incompatible/local trials will be as fast and/or as accurate as their responses on compatible trials, while responses on incompatible/global trials will be slower and less accurate. A local interference effect will result if sexual offenders responding faster and/or more accurately on incompatible/local trials, than on incompatible/global trials.

In the selective attention task, participants are instructed to identify a large letter in the global trial and a small letter in the local trial. In this task the target letter can either be compatible or incompatible. Again a local advantage effect will result from sexual offenders responses being quicker and/or more accurate to smaller than large letters. A

local interference effect will result if sexual offenders responses are faster to a stimulus that is incompatible and/or more accurate while responding to letters that are compatible in the small letter condition.

6.6.1 Study Five

6.6.2 Description of Participants for the Divided Attention and Selective Attention Tasks

Twenty-eight participants were employed in the divided attention task and for the selective attention task thirty-two participants participated. Based on the Diagnostic and Statistical Manual IV-TR classification of learning disability all had a mild learning disability. Participants in the divided attention task had a mean IQ of 64.39 (SD = 6.43, range 49-74) and in the selective attention task participant's mean IQ was 64.19 (SD = 6.34, range 49-74). The mean age for participants in the divided attention and selective attention tasks were 30.79 years (SD = 11.63, range 18-59) and 30.72 years (SD = 11.19, range 18-58) respectively

6.6.3 Sex offenders with learning disabilities

Fourteen male sexual offenders with learning disabilities made up this group in the divided attention task. The mean age of the sexual offenders with learning disabilities was 32.57 years (SD = 12.73, range 18-59). The mean Full Scale IQ (WAIS-III) was 65.64 (SD = 5.31, range 56-74). For the selective attention task, the participants group consisted of sixteen male sexual offenders with learning disabilities. The mean age for this group was 31.31 (SD = 12.29, range 17-58). The mean Full Scale IQ (WAIS-III) was 65.38 (SD = 5.71, range 56-75). The inclusion criteria were the same as for studies 1 to 4, with a gap of one month between study 4 and 5. There was a gap of at least a month between administration of the divided and selective attention tasks.

6.6.4 Non-offenders with learning disabilities

Fourteen male non-offenders with learning disabilities made up this group in the divided attention task. The mean age was 29.0 years (SD = 10.57, range 18-49) and the mean Full Scale IQ (WAIS-III) was 65.38 (SD = 5.71, range 49-74). For the participants in the selective attention task the mean Full Scale IQ (WAIS-III) was 63.0 (SD = 6.88, range 49-74). The mean age was this group was 30.13 years (SD = 10.34, range 18-49). Participants had no diagnosed psychiatric condition apart from their learning disability. Participants in this group had not committed a criminal offence.

6.6.5 Apparatus

The stimuli were generated by the computer software package Experimental Superlab Software (Version 1.2. for Windows) and displayed on a 14inch computer laptop screen. All keys, bar two (i.e. the A and L keys of the keyboard), were blacked out on the keyboard. These two keys were the response keys and were coded (e.g. the A key was coded by a red square and the L key by a red circle). Participants responded to the stimulus by pressing either of these two keys.

6.6.6 Stimulus

Letter stimuli were presented in both the divided and selective attention tasks. The letters A, H, K and X were used in the divided attention task, and in the selective attention task the letters H, S and X were used. Each stimulus comprised a large letter made up of 56 small letters (font size 16)¹¹. In both tasks stimulus letters were presented in the centre of a laptop computer screen.

¹¹ See appendix 8 for example of stimulus material

6.6.7 Procedure

Participants were read information sheets (see appendix 6) that outlined the aim of the study. They were informed that their performance on the task would be anonymous and given the opportunity to ask questions. They also received consent forms (see appendix 2) that were either read or given to them for their signature. Age and IQ was obtained from participants and existing case notes.

To establish if participants could identify the letters that would be used in each task, participants were shown flashcards with examples of the letters (e.g. A, H, K, S and X) and instructed to read aloud the letter that they saw. All participants identified the letters correctly and proceeded to the next stage of the task. Half the participants then received the divided attention task first followed by the selective attention task, with the remaining participants presented with the tasks in the reverse order.

Participants were instructed at the start of the study and during the practice trials which keys they had to press when presented with a particular stimulus. They were instructed to press the red square on their keyboard when the letter A appeared on their screen and when the letter A was absent they had to press the red circle key. Six different stimuli were used in the divided attention task, with three containing the letter A (target present) and three the letter X (target absent) (see appendix 8). Two stimuli were compatible with the large letter being made up of the same small letters (e.g. large letter A made up of small letters As and large letter X made up of small Xs). One stimulus was a large A made up of small Hs and another a large X made up of small Ks. These stimuli were examples of incompatible/global trials. The remaining two stimuli were examples of incompatible/local trials, with one stimulus comprising of a large H made up of small As and the final stimulus a large K made up of small Xs.

The divided attention task was divided into 16 blocks of trials, with half the trials in each block containing the letter A. The first four blocks constituted the practice trials, with each of the 6 stimuli appearing four times. The remaining 12 blocks constituted the study trials, with each of the 6 stimuli appearing 12 times. In both the practice and study trial the stimulus was randomly presented. Each trial was separated by a 1000msec inter-trial

interval, with all stimuli remaining on screen until a response was made. Reaction times and error data was recorded for each trial.

In the selective attention task participants had to identify either the small or large letter in the presented stimulus. Participants pressed the red square key on the laptop keyboard when they identified the letter H and the red circle key when they saw the letter S on their screen. Eight different stimuli were utilised in the selective attention task (see appendix 8 for sample of stimulus material). Two stimuli were compatible, with both the large and small letters agreeing (e.g. a large letter H was made up of small Hs and a large letter S made up of small Ss). A large H was made up of small Ss and a large S was made up of small Hs. These 2 stimuli were examples of incompatible test stimuli. The remaining four stimuli were neutral (e.g. a large X made up of small Hs, a large X made up of small Ss, a large H made up of small Xs and a large S made up of small Xs).

The selective attention task was divided into two parts, with each comprising 12 blocks. In part one of the task, participants were instructed to identify the small letter. If the letter H or S appeared at the local level, participants were instructed to press the red square key or red circle key respectively. In part two of the task, participants were instructed to identify the large letter. If the letter H or S appeared at the global level, they were instructed again to press the red square key or red circle key respectively. Six stimuli were presented in both parts of the selective attention task. Part one consisted of 4 compatible and incompatible stimuli and 2 neutral stimuli (e.g. a large X made up of small Hs and a large X made up of small Ss). The same compatible and incompatible stimuli were presented in part two of the task however, the neutral stimuli differed (e.g. a large H made up of small Xs and a large S made up of small Xs).

Both parts of the task comprised of 4 blocks of practice trials, with each stimulus being presented 4 times. In the remaining 8 test trial blocks for each part of the task, each stimulus was presented 8 times. Each trial was separated by a 1000msec inter-trial interval, with all stimuli remaining on screen until a response was made. Reaction times and error data was recorded for each trial.

In summary, the divided attention task required participants to identify whether the stimulus material contained the letter A and the selective attention task only required them to attend to either the global or local level when identifying the small or large letter.

6.6.8 Results for Study Five

6.6.9 Analysis Procedure and Results for Divided Attention Task

Average reaction times were computed for correct responses to identification of the letter A being present or absent for each participant when those targets appeared at either the local or global level. A (2x2x3) mixed analysis of variance was performed on these data, with one between-subjects factor of Group (sex offenders and non-offenders) and two within-subjects factors of Trial (A present and A absent) and Condition (incompatible/local, incompatible/global and compatible). There was no main effect of Trial ($F(1,26) = 0.19$ $p = 0.67$), indicating that both participant groups took similar times to identify whether the letter A was present or absent. However, there was a main effect of Condition ($F(2,52) = 3.45$ $p = 0.04$), reflecting that participants responded quicker on the compatible trials ($x = 1.40$, $s.d.2.47$), than the incompatible/local ($x = 1.59$ seconds, $s.d.3.64$) or incompatible/global trials ($x = 1.64$ seconds, $s.d.1.70$). A pairwise comparison revealed participants were significantly slower making responses at the global/incompatible level compared to the control condition of target at the compatible level ($t(52) = 245.27$ $p = 0.002$), but slightly slower than at the local/incompatible level, although this was not significant ($t(52) = 193.84$ $p = 0.10$).

There was no main effect of Group ($F(1,26) = 0.92$ $p = 0.35$), indicating that both groups did not differ significantly on the time it took to complete the task. Although, non-offenders ($x = 1.78$ sec [a present] and $x = 1.72$ sec [a absent]) were slightly slower than sexual offenders ($x = 1.35$ sec [a present] and $x = 1.32$ sec [a absent]) to identify whether the target letter was present or absent. This slower completion rate by the non-offenders was unlikely due to the level of IQ of the participants in the two groups, as no significant difference was found between the mean IQ of sexual offenders and non-offenders ($t(26) = 1.03$ $p=0.313$). Most importantly, all two-way and the three-way interactions failed to reach significance, as all had $p>0.13$.

6.6.10 Analysis of Error Data for the Divided Attention Task

Error data was used as a second type of measure to investigate the adequacy of processing information at either the local or global level. The average error scores for each group in each condition were calculated and a mixed analysis of variance performed on these data. The same factors as in the reaction time data analysis were employed in this analysis, which revealed that there was no main effect of Condition ($F(2,52) = 0.89$ $p = 0.42$) or Group ($F(1,26) = 3.48$ $p = 0.07$), however, the mean performance of sex offenders ($x = 0.29$ errors, $s.d.0.17$) and non-offenders ($x = 1.04$ errors, $s.d.0.55$) shows a strong trend towards non-offenders making more errors. There was a main effect of Trial ($F(1,26) = 9.45$ $p = 0.005$), indicating that variations existed in the number of errors participants made when identify whether the letter A was absent or present. Indeed, examination of the mean number of errors made when A was present ($x = 0.91$) or absent ($x = 0.42$), indicated that participants made significantly more errors when A was present. Consistent with the analysis of reaction times, all two-way and the three-way interactions failed to reach significance, as all had $p > 0.15$.

6.6.11 Analysis Procedure and Results for Selective Attention Task

Average reaction times were calculated for the correct responses to the identification of large and small letters in all three conditions (e.g. incompatible, neutral and compatible). A mixed analysis of variance was performed on these data with Group as a between-subjects factor (sex offender and non-offender) and within-subjects factors of Letter size (large and small) and Condition (incompatible, neutral and compatible). There was no main effect of letter size ($F(1,26) = 1.50$ $p = 0.23$), indicating that the size of letter did not affect how long participants took to complete the task. There was a significant main effect of Condition ($F(2,52) = 4.06$ $p = 0.02$), reflecting the fact that participants varied on the time it took to identify the target letter at neutral ($x = 1.86$ seconds, $s.d.6.66$), compatible ($x = 1.76$ seconds, $s.d.6.13$) and incompatible levels ($x = 2.03$ seconds, $s.d.5.01$). A pairwise comparison revealed participants were significantly slower to make responses at the incompatible level than at the compatible level ($t(52) = 264.34$ $p = 0.03$) (e.g. control condition). No significant differences were found between the time participants took to

respond to targets at the incompatible compared to the neutral levels, or the compatible compared to the neutral levels, as both had $p > 0.10$.

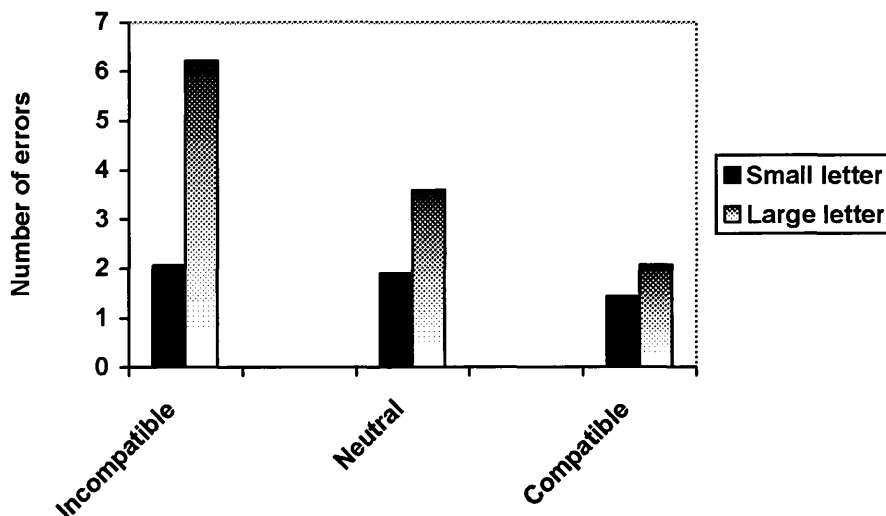
The main effect of group approached significance ($F(1,26) = 4.07$ $p = 0.054$). Despite this findings close proximity to the 0.05 level, it failed to interact with any factor. Indeed, all two-way and the three-way interactions failed to reach significance, as all had $p > 0.34$.

6.6.12 Analysis of error data for the Selective Attention Task

The average scores for each group in each condition were calculated and a mixed analysis of variance was performed on these data. The same factors as in the reaction time data were employed in this analysis, which revealed significant main effects for letter size ($F(1,30) = 11.60$ $p = 0.002$), condition ($F(2,60) = 12.26$ $p = 0.001$) and group ($F(1,30) = 6.25$ $p = 0.018$). Examination of the mean number of errors made by participants revealed that they made significantly more errors identifying the large letter (global) ($x = 3.96$, $s.d. 2.46$) than the small letter (local) ($x = 1.80$, $s.d. 0.91$) in the presented stimuli. As for group, non-offenders made significantly more errors than the sexual offenders ($x = 3.89$, $s.d. 2.38$ and $x = 1.88$, $s.d. 1.24$ respectively). Finally, for condition a pairwise comparison revealed that the mean number of errors participants made differed significantly in each condition, as all had $p < 0.03$.

A significant two-way interaction was observed between letter size and condition ($F(2,60) = 7.68$ $p = 0.001$) (figure 6.07). This significant interaction necessitated an analysis of simple effects, which revealed no significant effect for small letters (local level) ($F(1,31) = 1.82$ $p = 0.19$), but there was a significant effect of condition for the large letters (global level) ($F(1,31) = 4.14$ $p = 0.05$). T-tests indicated that the significant effect was due to participants making significantly more errors when identifying the large letter at the incompatible level, when compared to the compatible ($t(31) = 4.16$ $p = 0.002$) and neutral levels ($t(31) = 2.63$ $p = 0.001$).

Figure 6.07 – Mean number of errors made when identifying small and large letters in all 3 conditions for both participant groups



For the remaining two-way and three-way interactions, no significant interactions were observed between letters and group ($F(1,30) = 0.50$ $p = 0.48$) and condition and group ($F(2,60) = 1.25$ $p = 0.29$). However, the three-way interaction between letters, condition and group approached significance ($F(2,60) = 2.719$ $p = 0.07$).

6.6.13 Discussion

Two procedures (i.e. divided and selective attention tasks) were employed to test sexual offenders and non-offenders with learning disabilities abilities to process information at the global and local levels. In the divided attention task, failure to obtain significant interactions with the groups reaction times, or mean number of errors made with any other factor indicated that sexual offenders ability to process information at the global or local levels did not differ from non-offenders. However, the divided attention task did reveal that participants were found to respond significantly slower at the incompatible/global level compared to the compatible level, with no difference between their response times at

the incompatible/global level compared to the incompatible/local level. This finding shows no evidence for either a global or local advantage effect, indicating that these participants did not respond in a way that is typical of 'normal' individuals (Navon, 1977; Plaisted, Swettenham & Rees, 1999; Roux & Ceccaldi, 2001). Although this finding might indicate that individuals with learning disabilities respond to divided attention tasks differently from individuals without learning disabilities, it fails to account for why some go on to offend and others do not. However, before any conclusions can be made about individuals with learning disabilities performance on divided attention tasks, future research must compare individuals with and without learning disabilities abilities to complete the divided attention task.

In the selective attention task, participants made significantly more errors when identifying letters at the global than local level. This finding is not consistent with how typically 'normal' individuals respond, as they make fewer errors at the global than local level, although it does provide some evidence for a local advantage. However, it does not fulfil the complete criterion for a local advantage effect (e.g. individuals make more errors and are slower to identify letters at the global than local level), as the speed at which participants identified large and small letters did not differ significantly. Although this finding failed to support the experimental hypothesis (e.g. sexual offenders will demonstrate a local advantage effect), it does suggest that individuals with learning disabilities may respond in a different way to 'normal' individuals. Further examination of individuals' ability to process information at the global and local level is needed to acquire further insight into whether they have abnormalities with their global or gestalt processing. Overall, the results obtained in both the divided and selective attention studies indicate that both participant groups had neither an advantage nor disadvantage for processing information at the local level and thus the experimental hypotheses were not supported.

The results obtained in the divided attention task might have been affected by methodological variations from the original "Navon task" (Navon, 1977). In the original task, participants are instructed to indicate whether the letter A is present or absent, but not told to attend to the global or local level. This is done to detect whether participants are naturally more inclined to process information at either a global or local level. Following this procedure prevents participants from being instructed which cues to focus on, as research has found a reaction time advantage to which ever level participants have been

instructed to monitor (Humphrey and Bruce, 1989). Working with a participant group with learning disabilities it was felt appropriate to inform them that the letter A could appear at either the global or local level. Individuals with learning disabilities tend not to have proficient literacy skills and are therefore not as familiar with text as individuals without learning disabilities. Although experimental procedure established whether they could identify the letters, it was felt appropriate to make them aware that the letter A could appear as a large (global) or small (local) letter. This procedure was followed to prevent participants from being confused about the nature of the task, as well as thinking that they only had to respond when the letter A appeared as a small letter and not as a large letter, or vice versa. Providing this information meant that participants were instructed which cues to attend to, which resulted in Craig's (1990) view that sexual offenders have deficits when selecting the appropriate cues to focus on being unable to be tested. However, this task still examined participants' ability to process information at the global and local levels, as examining their reaction times at both levels could still have identified detection of a local advantage in sexual offenders. Considering this methodological issue future research needs to achieve a balance between providing participants with enough information that enables them to successfully complete a task, without instructing them on which cues to focus.

A second methodological variation from the original "Navon task" involved the duration of stimuli prior to participants' responses. In the original study, each stimulus was presented for one second. Considering that much of the literature reviewed in this thesis involved stimulus material being presented on screen and remaining there until a response is given by sexual offenders (e.g. Harris, Rice, Quinsey and Chaplin, 1996; Quinsey, Ketsetskis, Earls and Karamanokian, 1996; Glasgow, 2003; Quinsey, 2003) and the deficits sexual offenders may have selecting cues to focus on (Craig, 1990; McFall, 1990), it was felt appropriate to leave the stimulus material in both the divided and selective attention tasks on screen until participants gave their responses. This would prevent participants from failing to attend to stimulus material before it was removed from the screen and thus obtaining guess responses from the participants. However, to investigate whether this variation affected results this study needs to be repeated. Indeed, after considering the mean time sexual offenders ($x = 1.34$ seconds) and non-offenders ($x = 1.75$ seconds) took to complete the divided attention task, future research may wish to present the stimulus material for 1.3 seconds, as this is just short of the average time it

took sexual offenders to respond to the stimuli. Following the same principle for the selective attention task, stimulus material should also be presented for 1.3 seconds, as sexual offenders took a mean time of 1.37 seconds, compared to 2.39 seconds for non-offenders to complete the task.

Choosing to use the same colour of response keys (e.g. red) and varying the shape of the response key (e.g. red square or red circle) could be regarded as a methodological weakness. Indeed, it might have been easier for people with learning disabilities to differentiate between shapes rather than colour. Considering this, it might have been beneficial to investigate in a pilot study whether people with learning disabilities found it easier to differentiate between colours than shapes. However, based on previously published research (Plaisted, Swettenham and Rees, 1999) that successfully used same colour and different shape response keys on children as young as 5 years, it was felt that this response method would be suitable for use on people with learning disabilities. This response method was also used, as it was easier to establish whether people with learning disabilities could identify shapes than to test for colour blindness. The error scores for both the divided and selective attention tasks were also so low that this indicated that the participants were able to successfully complete the task.

Although the results in this study did not find evidence that sexual offenders differ from non-offenders in their ability to process information at either the local or global level, this does not mean sexual offenders do not have attentional deficits. The methods employed in this study may have been unable to detect any attentional differences due to the methodological flaws outlined above, or failure to focus on attentional processes that might differ in sexual offenders. As there are a number of mechanisms involved in attention (Merrill and Taube, 1996), it suggests that examination of attention in sexual offenders should not be restricted solely to the processes of divided and selective attention. Indeed, two attentional tasks that might contribute to understanding of attentional ability in sexual offenders are attentional bias and inhibition of return. These tasks examine whether more attention to specific cues in the environment (e.g. pictures of people) might result in sexual offenders' performance on a task being affected. Study six was developed to investigate this further.

6.7.0 Study Six - Introduction

Researchers have hypothesised that sexual offenders have deficits with their information processing mechanisms (Langevin, and Pope, 1993; Ward, Hudson, Johnston and Marshall, 1997), suggesting that they may have problems encoding information or selecting the appropriate cues to focus on (Craig, 1990; McFall, 1990). However, the research studies undertaken in this thesis have failed to provide empirical support for these claims, as no significant differences were found between sexual offenders and non-offenders' ability to focus their attention while completing visual or auditory tasks. Similarly, no differences were found with their selective or divided attention. Despite these findings, there is still the possibility that sexual offenders have attentional deficits, however the methods that were employed in the previous studies were unable to detect these problems. This might have resulted from sexual offenders realising that viewing time was being measured, or the tasks that were employed to investigate attention did not address the components of attention that might operate differently from non-offenders.

To date, researchers have been vague with their explanations of attentional deficits, suggesting that problems might exist with attention, memory or perception. Although some take their explanations a stage further to suggest that problems might exist with their ability to encode information (Craig, 1990; McFall, 1990), they fail to address the nature of the mechanisms involved in attention which could account for sexual offenders having problems encoding or selecting information. To address this gap in the research, this thesis attempted to investigate components of attention (e.g. selective and divided attention), but met with little success. However, as there are a number of components involved in the mechanisms of attention (Merrill and Taube, 1996), it is important to consider the effects other components have on the attentional ability of sexual offenders. Indeed, two attentional effects that might contribute to further understanding of the attentional ability of sexual offenders include attentional bias and inhibition of return.

These attentional effects measure the location of spatial ability by investigating the speed at which participants detect a probe in either an attended or unattended visual field. Although these attentional effects have not been investigated among sexual offenders with learning disabilities, they have been tested on anxious individuals to measure their attentional dwell time to threatening stimuli. Indeed, Fox, Russo and Dutton (2002) found

that anxious individuals were more sensitive to the presence of emotional stimuli (e.g. pictures of angry or happy faces) than neutral faces. This finding is consistent with a number of research studies that have found threat related stimuli to affect attentional dwell-time or the ability to disengage attentional resources from threatening stimuli (Taghavi, Neshat-Doost, Moradi, Yule and Dalgleish, 1999; Van Honk, Tuiten, DeHaan, Van den Hout and Stam, 2001; Yiend, and Mathews, 2001). Indeed, these studies have found participants with high trait anxiety to be slower than low trait anxious controls when responding to targets requiring attentional disengagement from threat. This finding suggests that anxious individuals are more attentive to threatening cues in the environment. Considering this finding and research (e.g. Harris, Rice, Quinsey and Chaplin, 1996; Quinsey, Ketsetskis, Earls and Karamanokian, 1996; Quinsey, 2003) that has found child molesters to spend longer viewing pictures of children than adults, when compared to normal males, it seems logical to presume that sexual offenders will be more attentive to their sexual interest group. This presumed increased level of interest in their sexual interest group might result in sexual offenders experiencing problems with attentional disengagement.

This study aimed to investigate attentional dwell time to establish whether sexual offenders experienced a longer delay in disengagement from pictures of people than objects. To test this, participants were presented with pictures of people and objects individually for a short time in one of two locations. A target then appeared in either the same location that the picture appeared (valid trial) or not (invalid trial) and participants were required to respond to it. The target required some element of cognitive processing (i.e. pressing a specific keys on a keyboard if a red square or circle appeared on the screen) rather than simply responding to whether a target appeared or not. This was done to prevent participants from attending to only one side of the screen.

The attentional dwell time task solely investigated differential disengagement of attention by investigating differences in time sexual offenders and non-offenders took to disengage their attention from pictures of people and objects. Indeed, the invalid trials (e.g. the picture and target appear in different locations) provided a direct measure of disengagement of attention from the two types of pictures, by enabling comparisons to be made between the time it took participants to respond to a target after viewing either a picture of a person or object. It was hypothesised that if attentional dwell time increases in

sexual offenders for pictures of people, then they will be slower to detect a target on an invalid trial following pictures of people.

To test the disengagement theory further the inhibition of return paradigm (Posner and Cohen, 1984) was used. This paradigm explains an inhibitory effect that involves the output of an attentional mechanism that biases attention from returning to previously attended location. In this task typical participant's visual attention is inhibited from returning to an area that has already been searched, resulting in the visual system favouring "new" information. Indeed, typical participants take longer to locate a target following a valid cue than an invalid cue. However, this paradigm might be substantially reduced if pictures of people have been effective in holding a sexual offender's visual attention (i.e. increasing dwell time). It was therefore hypothesised that pictures of people will increase sexual offenders dwell time and reduce inhibition of return than pictures of objects.

6.7.1 Description of Participants for Attentional Bias Task and Inhibition of Return Task

Fifteen participants were employed in both tasks. Based on the Diagnostic and Statistical Manual IV-TR classification of learning disability all had a mild learning disability. Participants had a mean IQ of 63.67 (SD = 5.56, range 53 – 75). The mean age of the participants was 31.0 years (SD = 10.89, range 17 – 58).

6.7.2 Sex offenders with learning disabilities

Fifteen male sexual offenders with learning disabilities made up this group in both the attentional bias and inhibition of return tasks. The mean age of the sexual offenders with learning disabilities was 30.6 years (SD = 12.38, range 17 – 58). The mean Full Scale IQ (WAIS-III) was 65.13 (SD = 5.83, range 56 – 75). The inclusion criteria were the same as for studies 1 to 5, with a gap of one month between study 5 and 6. There was a gap of at least a month between administration of the attentional bias and inhibition of return tasks.

6.7.3 Non-offenders with learning disabilities

This group consisted of fourteen non-offenders with learning disabilities. The mean age was 31.4 years ($SD = 9.61$, range 19 – 49) and the Full Scale IQ (WAIS-III) was 62.20 ($SD = 5.05$, range 53 – 72). Participants had no diagnosed psychiatric condition apart from their learning disability and had not committed a criminal offence.

6.7.4 Apparatus

The stimuli were generated by the computer software package Experimental Superlab Software (Version 1.2 for Windows) and displayed on a 14inch computer laptop screen. All keys, bar two (i.e. the A and L keys of the keyboard), were blacked out on the keyboard. These two keys were the response keys and were coded (i.e. the A was coded by a red square and the L key by a red circle). The response keys were reversed for half the trials in both tasks (e.g. the letter A was now coded by a red circle and the letter L by a red square). This counterbalancing was intended to deal with practice effects.

6.7.5 Stimuli

Picture stimuli were presented in both the attentional bias and inhibition of return tasks. One hundred and forty picture stimuli were presented in both tasks and comprised 70 pictures of people and 70 of objects. The stimuli pictures of people in both tasks depicted adult females, and boys and girls ranging in age 4 to 12 years. Each stimuli picture was 6.5cm in height and 4.5cm in width. The target stimuli participants had to categorise was either a red square with a diameter of 2cm, or a red circle with a diameter of 2cm. Pictures and cue targets were presented inside 2 boxes measuring 8.5cm wide and 12cm in height. These boxes were positioned at either side of a central fixation point, which constituted a black cross¹².

¹² See appendix 9 for diagram to illustrate example of trial set up

6.7.6 Procedure

Informing participants about the aim of the study, the issue of anonymity and the collection of age and IQ followed the same procedure as the previous studies. Participants completed the attentional bias task first and three weeks later completed the inhibition of return task.

Participants were instructed at the start of the study and during the practice trials which keys they had to press when presented with particular stimuli. They were instructed to press the red square on a standard computer keyboard when they saw a red square appearing on the screen and the red circle key when they saw a red circle on the screen. These response assignments were reversed for half the participants in both tasks.

In the attentional bias task, participants were presented with a screen that consisted of two boxes and a central fixation point (i.e. black cross). This remained on the screen for 1000ms before a picture of a person or object was presented in the upper half of either the right or left box for 250ms. The picture was then blanked out and 50ms later the target (i.e. red square or circle) appeared in lower half of either the right or left box and remained on the screen until the participant responded to the target. There was also an intertrial interval of 500ms.

Each participant completed 20 practice trials followed by 140 experimental trials in the attentional bias task. In the practice trials an equal number of 10 pictures of people, objects and target were presented. Thirty of the experimental trials were invalid, with the target appearing in the same box as the picture. The remaining 90 were invalid, as the target appeared in the opposite box from the picture. In each of the invalid trials, 15 pictures of people (i.e. 5 boys, 5 girls and 5 women) and 15 objects were presented. For the invalid trials, 90 pictures were presented (e.g. 45 pictures of people [15 boys, 15 girls and 15 women] and 45 objects). Each target appeared equally often in each condition of the experiment. The trials were randomly presented, with participants being instructed to focus on the fixation point and respond quickly when they saw the target.

The sequence of events within each trial of the inhibition of return task differed from the attentional bias task. Participants were presented with a screen that again had two boxes

positioned at either side of a fixation point. This screen was presented for 800ms before a picture of a person or object was presented on the screen for 960ms. The picture was then blanked out and 200ms later a darkened fixation point was presented on the screen for 300ms. The original fixation point then replaced this slide for 160ms, before the target (i.e. red square or circle) appeared. The target remained on the screen until the participant responded to it. Between each trial there was a 500ms interval¹³.

Participants completed 20 trials and 140 experimental trials in this task. Half the experimental trials consisted invalid trials, with the remainder being valid trials. Thirty pictures of people (e.g. 10 girls, 10 boys and 10 women) and objects were presented in the invalid trials, with another thirty pictures of people and objects being presented in the valid trials. These trials were randomly presented, with the target appearing equally in each condition of the experiment. Consistent with the attentional bias task, participants were instructed to focus on the fixation point and respond as quickly as possible to the target.

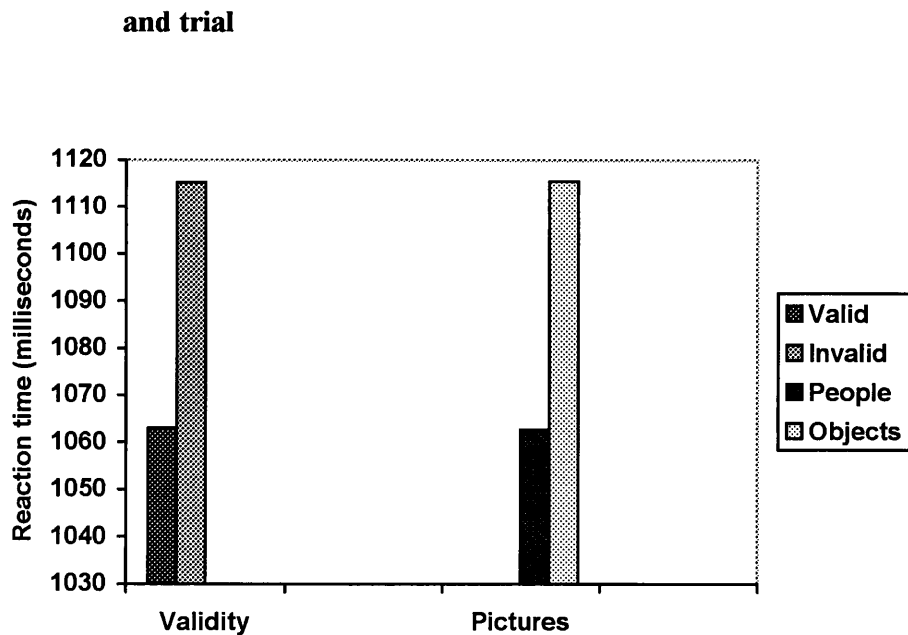
6.7.7 Results for Study Six

6.7.8 Analysis Procedure and Results for Attentional Bias Task

Mean reaction times were computed for the correct responses to the task, with incorrect responses being eliminated. A (2x2x2) mixed analysis of variance was performed on these data, with one between-subjects factor of Group (sexual offenders and non-offenders) and two within-subjects factors of Cue Validity (valid and invalid) and Pictures (people and objects). No significant main effect of group ($F(1,28) = 0.04$ $p = 0.85$) was observed. However, there was a significant main effect of cue validity ($F(1,28) = 15.43$ $p = 0.001$) and pictures ($F(1,28) = 16.24$ $p = 0.001$). This indicated that participants were slower to identify the target on invalid trials, as well as being slower when pictures of objects were presented (figure 6.08). However, these two factors did not interact ($F(1,28) = 0.07$ $p = 0.87$).

¹³ See appendix 9 for diagram to illustrate example of trial set up for inhibition of return task.

Figure 6.08 - Mean reaction times for both groups of participants on factors condition



For the remaining two-way and three-way interaction, they failed to reach significance, as all had $p > 0.149$.

6.7.9 Analysis Procedure and Results for Inhibition of Return Task

Mean reaction times were computed for the correct responses to the tasks, with incorrect responses being eliminated. The same factors as in the attentional bias analysis were employed in this analysis. This analysis found no main effect of group ($F(1,28) = 3.21$ $p = 0.084$) or pictures ($F(1,28) = 0.38$ $p = 0.54$), indicating that the type of group or picture did not affect the time it took participants to complete the task. There was also no main effect of cue validity ($F(1,28) = 1.30$ $p = 0.26$) observed. Consistent with the attentional bias analysis, all two and three way interactions failed to reach significance, as all had $p > 0.80$.

When the mean time participants took to complete the inhibition of return task was examined, sexual offenders were found to be slightly slower ($x = 1.23\text{sec}$) than non-offenders ($x = 0.99\text{sec}$). Although this difference failed to reach significance, it did contradict the trend that has been observed in all previous studies of this thesis (i.e. non-

offenders being slower than sexual offenders to complete tasks). However, consistent with the previous studies, this slight reduction in time is unlikely to be due to level of IQ of participants in the groups, as there was no significant difference found between these two groups ($t(28) = 1.47$ $p = 0.15$).

6.7.10 Discussion

Attentional dwell time was not found to increase in sexual offenders when viewing pictures of people and did not result in them being slower to detect targets on invalid trials following those pictures. Failure to obtain this significant interaction resulted in the experimental hypothesis not being supported. However, participants were significantly faster to respond to targets that appeared in valid compared to invalid locations. Although this difference did not differ between the two participant groups, this finding is consistent with how typical participants respond to this task (Fox, Russo and Dutton, 2002). By observing this trend in participants with learning disabilities, it provides justification for employing the attentional bias task on this participant group, as they appear to process the task in a similar way to individuals without learning disabilities.

A significant main effect of picture was also found in the attentional bias task. Both participant groups were found to be slower to respond to the target when a picture of an object compared to a person was viewed. Apart from this difference not differing between the two participant groups, this trend also failed to follow the predicted pattern (i.e. pictures of people would increase dwell time compared to pictures of objects). Despite observing this difference, this factor failed to significantly interact with any other factor.

In the inhibition of return task pictures of people, compared to objects, did not increase sexual offenders' dwell time and did not reduce their inhibition of return. Indeed, no significant main effects were observed, as well as no significant interaction. These findings resulted in the experimental hypothesis failing to be supported. Unlike the attentional bias task, the results in this task failed to observe a significant difference between participants ability to locate targets following a valid or invalid cue. Typical individuals normally take longer to locate a target following a valid cue than an invalid cue (Fox, Russo, and Dutton, 2002). The time participants took to detect a target on

invalid and valid cues in this study were extremely similar (e.g. mean time on valid trials 1114.30msecs and 1103.64msec on invalid trials). Although this difference was marginal, as well as not significant, it did follow the trend of typical individuals' responses. This finding suggests that individuals with learning disabilities process this task in a similar fashion to participants without learning disabilities, which again implies that this task is suitable for use on a population with learning disabilities.

An interesting finding that can be inferred from the results in both studies relates to the participant groups under investigation processing the tasks in a similar way to typical individuals. This finding suggests that sexual offenders and non-offenders were able to select the appropriate information to focus on, which allowed them to complete the task. Such a finding fails to provide support for Craig's (1990) claim that sexual offenders have deficits in their ability to select the appropriate cues to attend to.

Despite these tasks finding participants with learning disabilities to process them in a similar way as participants without learning disabilities, they again fail to explain why some individuals engage in sexually deviant behaviour and others do not. Similarly, failing to observe any differences in the way sexual offenders process these tasks from non-offenders fails to offer clear insight into the attentional deficits sexual offenders might or might not have. Indeed, sexual offenders may not have attentional deficits with either of these tasks, or the methods used to investigate were unable to detect any differences. However, before concluding sexual offenders do not have attentional deficits it is important to address methodological issues that could have influenced the results in these studies. For example, the stimulus material utilised in these studies may not have been explicit enough to catch the sexual offenders' attention, as the stimulus pictures of people depicted women and children in everyday situations. This was done to reflect how sexual offenders would normally see their victims. Previous studies that have used pictures or vignettes to investigate viewing time (Harris, Rice, Quinsey and Chaplin, 1996; Quinsey, Ketsetskis, Earls and Karamanokian, 1996; Quinsey, 2003), or cognitive distortions (Stermac and Segal, 1989) have portrayed women and children sexually (i.e. naked, being sexually provocative, or sexually assaulted). Using these types of images of women and children may have elicited a greater sexual response and caught their attention, resulting sexual offenders viewing these pictures longer (Harris, Rice, Quinsey and Chaplin, 1996). Although it would be interesting to examine whether these types of images would cause

sexual offenders to have problems disengaging from this stimulus material, or reducing their inhibition of return, ethical restrictions in Britain would not permit this type of stimulus material to be used.

Apart from this specific methodological concerns relating to the attentional bias and inhibition of return tasks, a number of general confounding variables (i.e. sexual offenders receiving treatment, lower QACSO scores, or denial of responsibility of their crime) have been identified that could have affected the results in these two tasks, as well as the previous four studies in this chapter.

6.7.11 General Discussion

Studies to date have attempted to investigate sexual offenders ability to focus their attention while completing an auditory or visual task, their divided and selective attention, and their disengagement of attention. Although these studies have failed to demonstrate that sexual offenders differ significantly from non-offenders in the way they process these tasks, this does not mean that sexual offenders do not have attentional deficits. Indeed, sexual offenders being involved in treatment could have affected the results in these five attentional studies. All the sexual offenders who participated in these studies were currently involved in a cognitive behavioural treatment programme specifically designed for the treatment of sexual offenders. The length of time participants had been receiving treatment varied, with some just starting a 3-year treatment programme, some in the middle of their three-year programme and others nearing the end of their three-year programme. One participant had been involved in treatment for 10 years, with others returning for treatment after re-offending. Despite the variations in length of time participants had received treatment, they were all subjected to the same treatment programme regime. During their treatment sessions their cognitive distortions are challenged, they are educated about socially appropriate and inappropriate behaviours, and receive sex education. Receiving this type of treatment might have influenced how they responded to the attentional tasks and thus affected the results. However, this confounding variable of treatment could not be controlled for, for a number of reasons. For example, ethical restrictions prevent participants from being denied treatment. It would have been unethical to prevent newly convicted sexual offenders from commencing a treatment

programme, or suspending treatment for those sexual offenders who were already receiving therapy until they had completed the series of attentional studies. Also, as there is not an indefinite number of sexual offenders with learning disabilities, the logistics of carrying out research on this participant group dictates that researchers study those who are readily available.

Another issue connected to the effects of treatment and how it could have affected the results, relates to the changes in QACSO scores for the sexual offenders. Before sexual offenders received treatment, they completed the QACSO at their initial assessment. They were then assessed on the QACSO once they had completed all the attention tasks. A significant difference was observed in these 2 sets of QACSO scores ($t(22) = 8.38$ $p = 0.001$). Indeed, they provided significantly fewer socially unacceptable responses when they completed the QACSO at the end of the attention tasks, compared to their scores before treatment started. Although there was a reduction in the number of socially unacceptable responses they provided, they still gave significantly more than normal males in study 1 ($t(40) = 3.18$ $p = 0.003$). This finding implies that sexual offenders still had significantly more distorted cognitions than normal males, suggesting that they were a suitable population to investigate attentional deficits on. However, as previously discussed in chapter 5, it is unclear what a reduction in QACSO scores really means. It might result from treatment changing cognitive distortions to socially acceptable responses, or sexual offenders learning to give socially acceptable responses. Whatever the reason, these changes were a confounding variable and could have affected the results in the attentional studies, as sexual offenders receiving treatment might have responded to these tasks differently from individuals not receiving treatment.

The issue of denial could also have affected the results of these studies. According to Lakey (1994) there are different levels of denial (e.g. denial of offence, denial of intent, denial of responsibility, denial of harm and denial of typical state). Sexual offenders may demonstrate all, or some of these levels of denial. Indeed, many sexual offenders with learning disabilities often deny that the offence occurred, even when they have been tried and convicted (Lindsay, Olley, Jack, Morrison & Smith, 1998; Lindsay & Smith, 1998). Some sexual offenders accept that the offence occurred, but argue that their intent was misconstrued. Indeed, they often proclaim that they were trying to control their victims and this behaviour was misinterpreted as a sexual act. Others often deny responsibility for

their sexual offences, by placing the blame on their victims. Rather than take responsibility for their actions they often argue that the victim encouraged them by acting sexually provocatively, enjoying the sexual contact, or by the clothes they were wearing (Lindsay, Olley, Jack, Morrison & Smith, 1998; Lindsay & Smith, 1998). However, some sexual offenders accept that the offence happened, take responsibility for it, but deny that they intended to harm their victim. Finally, some accept that the offence occurred, but shift the blame to their victims and attribute their behaviour to a temporary aberration of mental state (Kennedy and Grubin, 1992).

Unfortunately, the studies investigating attentional deficits failed to establish at what level of denial each sexual offender was at. As outlined above, sexual offenders varied in the length of time they had been receiving treatment, which suggests that individuals just commencing treatment might be at a different level of denial compared to someone nearing the end of their therapy programme. Also, individuals who admit to their crime might be more open to the assessment and therapeutic process and prepared to take responsibility for their deviant sexual behaviour. This acceptance might result in sexual offenders providing an accurate account of their distorted cognitions, or responding to attention tasks naturally. Individuals who deny their crime might be more inclined to self-monitor their responses to ensure that they provide socially acceptable responses, or conceal their true interest in pictures of women or children. Indeed, Scully and Marolla (1983) investigated a group of rapists who admitted to their crime and a group who did not. Both groups were asked to describe the sexual assaults that they had committed. When their descriptions were compared, Scully and Marolla found that the group who did not admit to their crime described their offence with stereotypes that vindicated themselves and placed the blame on their victim. These results were interpreted to suggest that rapists are aware of culturally and socially acceptable beliefs about sexual behaviour; however, the beliefs they possess are based upon flawed conceptions. Considering these issues suggests that denial was another confounding variable for these research studies. However, the logistics of controlling for this is difficult, due to the limited number of sexual offenders with learning disabilities and the ethical issues, previously discussed, concerning denial of treatment.

An interesting trend that was observed in all but one attentional tasks, was non-offenders being slower to complete the tasks compared to sexual offenders. Results indicated that it

did not matter the nature of the tasks, on average non-offenders took longer to complete the tasks. Although these differences were not found to be significant, it is unlikely that these differences were the result of level of IQ, as no significant differences were found between the two groups (see actual results of attention studies for data). However, it is important to highlight that although there was no significant difference observed between the IQ scores of the sex offenders and non-offenders with learning disabilities, the sex offenders mean IQ was consistently higher than the non-offenders in all five information-processing studies. This difference in mean IQ could have affected the results and future studies should attempt to control for this. However, to achieve this will be difficult due to the limited availability of people with learning disabilities. To identify whether IQ did affect these results future research (out with this PhD) needs to examine the IQ profile of the two groups. Examination of participants verbal and performance IQ scores, rather than just their full scale IQ score may offer insight into whether their IQ score did affect their results on these tasks. For example, if the sexual offenders were found to score higher on performance IQ than the non-offenders, this might account for why the sexual offenders were generally faster to complete the information processing tasks than the non-offenders. This area needs to be examined further.

The difference between the rate at which the sex offenders and non-offenders took to complete the task was unlikely the result of sexual offenders being more impulsive, as this was not reflected in an increase of errors made by this group. Indeed, non-offenders made significantly more errors in the selective task compared to the sexual offenders, with a similar trend being observed in the divided attention, although not significant. This finding is consistent with the impulsivity literature that hypothesises that sexual offenders with learning disabilities are not impulsive (Parry and Lindsay, 2003). However, this difference might simply have resulted from sexual offenders being more experienced at taking part in experimental research studies compared to the non-offenders. With non-offenders being consistently slower to complete the majority of tasks, it questions the suitability of using this group as a control. Future researchers may wish to consider using an alternative comparison group. Indeed, a more suitable comparison group might be non-offenders without learning disabilities (i.e. normal males), as they might complete the tasks at a similar pace as the sexual offenders with learning disabilities.

Involving the same participants in all attention studies might have affected the results. Good methodological practice advocates testing participants who are naïve to the task to prevent practice effects or participants working out what the experiment is measuring. Limited availability of sexual offenders and non-offenders with learning disabilities meant that it was impossible to test different participants in all studies. However, attempts were made to address this problem by ensuring that there was at least a months gap between the administration of each task.

6.7.12 Recommendations for Future Research

The methodological weaknesses identified with the studies into attention could be addressed using a flicker paradigm to induce change blindness (Simons and Levin, 1997). This paradigm presents participants with two identical visual scenes that are continuously and cyclically being presented on a monitor. A visual change exists with one of the visual scenes (e.g. a person's piece of clothing is changed, or the object is removed from the picture). Participants are required to indicate when they identify the change in the visual scene, with the computer recording how long it takes them to do so. This measurement is referred to as the change-detection latency (i.e. the time it takes participants to respond from the time the change occurred). Research has found that often participants are unable to detect these feature changes. Indeed, Levin and Simons (1997) found that two-thirds of participants tested, failed to notice that the central actor of a video clip had been changed. More recently, this paradigm has been used to investigate information processing biases in social users of alcohol and cannabis (Jones, Jones, Blundell and Bruce, 2002). This research found individuals who had higher levels of social substance use were quicker to detect the visual substance-related change, compared to the visual substance-neutral change. This finding raises a particular possibility concerning the effects sexual related stimulus could have on sexual offenders, compared to non-offenders. For example, if social users of alcohol, or cannabis have biased information processing mechanisms towards substance-related changes, could it be that sexual offenders would follow a similar trend when presented with sexual-related changes (e.g. feature of a child or woman changes, i.e. hair colour), compared no non-sexual related changes (e.g. feature of a building changes i.e. colour of the door).

Using this paradigm might provide further insight into the information processing mechanisms of sexual offenders, as well as addressing some of the methodological weaknesses previously highlighted with the attention tasks. For example, this paradigm requires participant's to focus their attention of the visual stimulus in order to detect a visual change. Indeed, this task requires participants to cognitively process the visual stimulus that might result in their performance (i.e. reaction time to identify a change in stimulus) being affected by prior experience (i.e. pictures of people) with no conscious recollection of past events. Considering this, sexual offenders' performance on the change blindness paradigm might be affected in one of two ways. First, they might follow the trend previously outlined above (e.g. sexual offenders quicker to identify sexual-related changes, compared to non-sexual related changes), or the demands of the task might result in them becoming so focused on the pictures of women and children that it takes them longer to disengage from the stimulus material to complete the task.

6.7.13 Summary

A number of studies have been developed to investigate sexual offenders' ability to focus their attention, as well as examine specific mechanisms of attention (e.g. divided and selective attention, inhibition of return and attentional bias). Unfortunately, they have failed to offer support for the claims that sexual offenders have deficits with their information processing mechanisms and in particular problems selecting the appropriate cues to focus on. This does not mean that sexual offenders do not have attentional deficits. Indeed, the methodological weaknesses identified with these studies, or the methods utilised might have been unable to detect any attentional deficits that sexual offenders have. Before concluding that sexual offenders do not have attentional deficits, further research is needed in this area. Replication of these studies to addresses the methodological flaws (e.g. using alternative control group i.e. normal males), or testing new paradigms (i.e. flicker paradigm), might offer further insight into whether any attentional deficits can be identified among sexual offenders.

Chapter 7 – Conclusions

7.0 Summary of Introductory Chapters

Chapter one defined learning disability by referring to key definitions that have been put forward by organisations that deal with individuals with learning disabilities (e.g. the American Association on Mental Retardation, American Psychiatric Association and the World Health Organisation). These organisations provide classification systems that provide frameworks that subdivide learning disability. However, problems were identified in chapter one with these classifications systems, as they appear to have difficulty trying to fix a ‘borderline’ between those who can and cannot be classed as having a learning disability. Although out of all the classification systems reviewed in this chapter, DSM-IV-TR appeared to be the most flexible and conscious of the problems associated with the ‘cut-off’ criteria. Indeed, DSM-IV-TR addressed these problems by incorporating a borderline intellectual functioning category (IQ 70 – 84). By including this category DSM-IV-TR recognises that strict cut-off criteria does not acknowledge that an individual with an IQ of 70 (i.e. normal functioning according to ICD-10) may require similar help and assistance to someone with an IQ of 69 (i.e. mild learning disability according to DSM-IV-TR and ICD-10 classifications).

Chapter two highlighted that sexual offending is a serious social problem, with a number of these crimes being committed by individuals with learning disabilities. Indeed, research suggests that individuals with learning disabilities are over represented within the criminal justice system (Gross, 1984; Hayes, 1991). However, chapter two highlighted that the issue of prevalence of individuals with learning disabilities within the criminal justice system is not straightforward. Variation in assessment instruments used to measure learning disability (Gudjonsson, Clare, Rutter and Pearse, 1993; Hayes, 1997; Winter, Holland and Collins, 1997), varying environments in which psychometry is undertaken (Gudjonsson, Clare and Cross, 1992) and diversion of individuals with learning disabilities away from the criminal justice system have all contributed to varying prevalence rates (Mason and Murphy, 2002a). Despite these problems associated with prevalence, this thesis has highlighted that sexual offending by individuals with learning disabilities presents a problem for society. This has driven researchers to focus on developing theories that try to explain the etiology of sexually deviant behaviour. Despite single (e.g.

psychodynamic, feminist, biological and psychological explanations) and multifactor models (e.g. Wolf's (1984) Multifactor Model and Finkelhor's (1984) Multifactor Model) being developed to account for sexually deviant behaviour, they have failed to fully account for why individuals sexually offend. Chapter one recognised that until an all encompassing theory that is able to account for sexually deviant behaviour is developed, researchers have focused their attention on specific aspects that they believe to play an important role in sexually deviant behaviour (e.g. empathy [Marshall, Hudson, Jones and Fernandez, 1995; Burke, 2001] and cognitive distortions [Stermac and Segal, 1989; Bumby, 1996; Ward, Hudson, Johnston and Marshall, 1997]). Indeed, chapter three focused on the role cognitive distortions play in sexual offending behaviour, while chapter four addressed the difficulties encountered when trying to assess cognitive distortions among sexual offenders.

Chapter three identified that research to date has primarily focused on the cognitive content of distorted cognitions (Abel Gore, Holland, Camp, Becker and Rathner, 1989; Stermac and Segal, 1989; Bumby, 1996), but has failed to address the cognitive processes that generate these cognitions (Ward, Hudson, Johnston and Marshall, 1997). According to Bumby (1996), the content of the cognitive distortions enable sexual offenders to justify and rationalise their sexual offending behaviour. Research has found that cognitive distortions differ between sexual offenders, non-sexual offenders and non-offenders (Abel et al. 1986; Stermac and Segal, 1989; Hayashino, Wurtele and Klebe, 1995). This finding has driven researchers to focus on developing assessment measures of cognitive distortions that have good psychometric properties (Burt, 1980; Abel et al, 1989; Bumby, 1996), as researchers believe that it is vitally important to identify the cognitive distortions that need to be addressed in treatment in order to try to prevent sexual offenders from re-offending (Marshall, 1996, 1999). However, a number of problems exist with current assessment measures. For example, chapter four identified that they fail to address a wide range of sexual attitudes, as they focus primarily on rape and child molestation (Burt, 1980; Bumby, 1996) and do not address stalking, dating abuse, voyeurism or exhibitionism. They measure sexual attitudes using a Likert Scale, which Lindsay (2001) argues might be conceptually too difficult for individuals with learning disabilities to do. Some measures are unable to discriminate sexual offenders from a control of normal males (e.g. Rape Myth Acceptance Scale; Burt, 1980). Finally, some scales are open to social

desirability (e.g. the Cognitions Scale; Abel et al. 1989). To address these weaknesses, study one of this thesis was developed.

7.1.1 Summary of Findings for Study One

Study one represented an initial investigation into the reliability and validity of an assessment instrument developed for suitability of use for measuring cognitive distortions among sexual offenders with learning disabilities. A 108-item questionnaire was developed to address weaknesses identified with current assessment instruments (e.g. method of scoring and limited range of sexual attitudes assessed). The new measure (i.e. the QACSO) utilised a “yes,” “no” or “don’t know” method of scoring, giving participants the opportunity to take a neutral stance, rather than force them into either a yes or no response which a four-point Likert Scale does (i.e. Bumby’s RAPE and MOLEST Scales, Bumby, 1996). It also addressed a wide range of sexual attitudes including: “rape and attitudes towards women,” “voyeurism,” “exhibitionism,” “dating abuse,” “homosexual assault,” “offences against children” and “stalking and sexual harassment,” which previous measures have failed to do (i.e. Abel and Becker’s Cognition Scale, Burt’s Rape Myth Acceptance Scale and Bumby’s RAPE and MOLEST Scales).

The QACSO was tested on four groups (e.g. sexual offenders with learning disabilities, non-sexual offenders with learning disabilities, non-offenders with learning disabilities and ‘normal’ males) and analysed for its reliability and ability to discriminate between sexual offenders, compared to three groups of controls. Fifty-eight items were found to have good psychometric properties, although the analysis revealed concerns with the homosexual assault subsection. From the original 12 items in this subsection, only 4 were found to be reliable and discriminative. These items had poor internal consistency, suggesting that it was unclear whether this subsection assessed attitudes towards homosexuality, or homophobia.

Overall, analysis of the QACSO has found it to be a reliable and valid measure of cognitive distortions held by sexual offenders with learning disabilities. Findings indicate that this measure will play a potentially influential role for future clinical practice within the field of sexual offending with learning disabilities, as it will facilitate understanding of

the etiology of sexually deviant behaviour and aid the development of effective treatment programmes.

7.1.2 Contributions of the QACSO in the Assessment of Cognitive Distortions

Data from study 1 revealed that sexual offenders held significantly more distorted cognitions relating to socially inappropriate sexual behaviour, compared to the three control groups. This finding is consistent with previous research that has examined the discriminative ability of current assessment tools on sexual and non-offenders without learning disabilities (e.g. Bumby's RAPE and MOLEST Scales (1996); Abel and Becker's Cognitions Scale (Abel et al. 1989). Further analysis of the data in study 1 revealed 54 items to have good psychometric properties that elicited 6 clusters of information relating to attitudes consistent with sexual offending. A principle component analysis on these items examined the relationship between variables and core factors within each of the 6 clusters of information (i.e. the 6 subsections of the QACSO) and found the QACSO to be a unidimensional scale.

Valuable clinical information was obtained from the principle component analysis. The components identified in each of the 6 subsections enable clinicians to identify the specific areas that need to be addressed and challenged during treatment. It provides clinicians with a detailed assessment of the distorted cognitions sexual offenders hold to justify and rationalise their sexually deviant behaviour. However, the analysis also revealed that there were two components, identified in separate subscales, where sexual offenders did not differ from controls (refer to pg. 145 for actual data). This finding suggests that these are areas where sexual offenders' and non-offenders' cognitions do not differ and therefore might not need to be challenged during treatment.

Examination of the data for study 1 also revealed four items (refer to pg. 128 for actual items) that could be used as a potential measure of social desirability. Controls consistently provided socially unacceptable responses to these items and thus responded in a similar way to sexual offenders. This is an important finding, as a number of current measures (e.g. the Rape Myth Acceptance Scale and the Cognitions Scale) have been criticised for being transparent, which can encourage participants to present themselves in

a positive and socially acceptable manner (Murphy, 1990). Although these 4 items of the QACSO might be used as a warning to clinicians that sexual offenders might be trying to respond in a socially acceptable way, they cannot claim to be a direct measure of social desirability. Further analysis is needed on these items to see how well they correlate with the Marlow-Crown Social Desirability Scale (Crown and Marlowe, 1960).

Essentially, the QACSO has provided clinicians with an alternative assessment tool to assess cognitive distortions among sexual offenders. It is a reliable and valid assessment tool that can be successfully administered to individuals with learning disabilities. It also enables clinicians to identify the distorted cognitions that need to be addressed in treatment, as well as indicate whether sexual offenders are trying to respond in a socially acceptable manner. The QACSO also provides clinicians with a measure for treatment outcome. Sexual offenders scores on the QACSO can be monitored throughout the therapeutic process, to track whether there are any changes in the socially unacceptable responses that they provide. However, as previously discussed in chapter 5, further research is needed to ascertain exactly what a change in QACSO score means. For example, research needs to investigate whether a reduction in QACSO score results from sexual offenders' distorted cognitions changing from socially unacceptable to socially acceptable responses, or whether they learn to give the socially acceptable responses.

Despite the contributions the QACSO has made to both existing literature and the clinical field, it does not address the cognitive processes that generate distorted cognitions. As it is as equally important to establish how cognitions are generated, in order to explain sexually deviant behaviour, chapter 6 outlined a series of five studies that were developed to investigate this area.

7.1.3 Summary of Research Findings Investigating Attention Deficits

It is necessary to examine the cognitive processes (i.e. attention) that underlie the initiation, maintenance and justification of sexual deviant behaviour, as this will result in better understanding of the cognitive processes that underlie behaviour at all stages of the offence chain and facilitate clinicians' theoretical and practical ideas when developing suitable treatment programmes. A series of five studies were examined that investigated

the attentional ability of sexual offenders with learning disabilities, compared to a control group of non-offenders with learning disabilities.

Study two employed a direct task to investigate whether conscious recollection of past events influenced the average time sexual offenders spent viewing pictures of people compared to objects. Results found sexual offenders did not overtly spend longer viewing pictures of people than objects. Indeed, sexual offenders viewing times were comparable with the control group of non-offenders. Failure to obtain differences in the viewing time sexual offenders spent looking at the picture stimulus might have resulted from them realising that viewing time was being measured and thus they tried to mask their responses. To address this concern the remaining four studies employed indirect tasks, as they were less susceptible to conscious influence because they were less likely to make participants aware that the tasks were trying to distract them.

Studies three and four investigated sexual offenders' ability to complete a visual or auditory task, while viewing stimulus pictures of people or objects. It was expected that if sexual offenders' ability to complete a visual or auditory task were affected by prior experience with no conscious recall, they would take longer to complete the tasks when presented with stimulus pictures of people, compared to objects. Consistent with the results in study one, sexual offenders did not take significantly longer to complete the tasks when presented with pictures of people than objects. Again, sexual offenders were able to respond to these tasks in the same way as the controls. Failure to obtain significant differences in sexual offenders' ability to complete these tasks does not mean that sexual offenders do not have attentional deficits. Indeed, chapter six highlighted that the methods employed might not have been able to detect attentional deficits. To address this alternative experimental paradigms were employed in studies five and six to investigate attentional deficits.

Studies five and six chose not to use stimulus material related to the sexual offender's sexual deviant behaviour. This was done to further reduce the likelihood of sexual offenders' trying to mask their responses. Study five employed an indirect task (i.e. the "Navon task;" Navon, 1977) especially designed to investigate selective and divided attention. These tasks were employed to investigate sexual offenders' ability to process information at the global level. Based on chapter six highlighting that sexual offenders

have problems selecting the appropriate cues to focus on (Craig, 1990; McFall, 1990) and the assumption that they might have deficits with the fourth stage of Marshall, Hudson, Jones, and Fernandez's, (1995) Empathy Model, as they are unable to attend to all the necessary information that allows them to make a decision, study six investigated their ability to process information at the global level (e.g. the whole picture). Sexual offenders' ability to process information at the global level in the divided task did not differ from non-sexual offenders. Indeed, both groups of participants did not show a preference for processing information at either the global or local level. However, in the selective attention task participants made significantly more errors at the global compared to the local level. Chapter six highlighted that this finding was not consistent with how normal individuals typically respond to this task, indicating that further examination of individuals with learning disabilities ability to process information at the global and local level is required.

Finally, study 6 investigated attention using two attentional task that might detect components of sexual offenders' attention that operate differently from non-offenders, that the previous four studies have failed to do. Again these tasks were indirect, with the first investigating attentional dwell time. This study solely investigated differential disengagement of attention by investigating differences in time sexual offenders and non-offenders took to disengage their attention from pictures of people and objects. The second task tested the disengagement theory further using the inhibition of return paradigm. Results found that attentional dwell time did not increase in sexual offenders when viewing pictures of people, compared to objects. Similarly, in the inhibition of return task, pictures of people compared to objects did not increase dwell time and reduce inhibition of return. Both tasks did find participants to respond in a similar way to normal participants. (Fox, Russo and Dutton, 2002).

The results obtained in studies two to six do not enable conclusions to be drawn that sexual offenders do not have attentional deficits. However, these findings do necessitate a discussion on what contributions this research has made to further understanding of sexual offenders' cognitive processes (i.e. attention).

7.1.4 Contributions of Attentional Deficits to the Underlying Cognitive Processes of Cognitive Distortions

Data from studies two to six found that the attentional abilities of sexual offenders with learning disabilities did not differ from non-offenders with learning disabilities. Indeed, in all but the selective and divided attention tasks, participants were found to process the tasks in a similar way to normal participants. This finding offered support for the appropriateness of these tasks that were administered to individuals with learning disabilities. However, failure to detect differences between the attentional abilities of these two participant groups might have resulted from these tasks not being sensitive enough to detect any differences, or not focusing on the appropriate mechanisms of attention which sexual offender might possess deficits with. Whatever the reason, studies two to six represent an initial investigation into the attentional abilities of sexual offenders. By carrying out extensive literature reviews on the limited material available on information processing of sexual offenders and general information processing material (e.g. direct and indirect tasks) I have logically tried to select appropriate methods that were suitable for use on this population in order to try to detect attentional differences. Failure to detect differences with these methods provides useful information for future researchers, as it provides a starting point from which they can develop this area of research by employing alternative tasks.

Apart from this contribution to future research, there were essentially three important findings from studies two to six. First, non-offenders took on average longer to complete the tasks than sexual offenders. Although this difference was generally not significant, it questioned the suitability of using this participant group as a control. Sexual offenders might be more “streetwise” than non-offenders, as well as more experienced with taking part in experimental research. Considering this, future research might wish to consider using ‘normal’ males as a control, as they might provide a better comparison group to the sexual offenders.

Second, the results from these studies were a surprise, as they did not reflect clinical observations. Personal observations of sexual offenders have found them to be extremely focused when dealing with stimulus material of women or children. Indeed, as discussed in chapter six, some sexual offenders have been found to collect pictures of women or

children. Examination of these collections found them to be extremely organised and contained only the image of the person (e.g. if the sexual offender was only interested in women, the pictures would only contain women, with everything else in the picture having been cut away i.e. pictures of men or children). Clinical observation of sexual offenders with female members of staff have also revealed some sexual offenders to be so focused on specific parts of the female's anatomy that they are oblivious to what is going on around them, or to the fact they are being observed. With this level of focused attention, it was hypothesised that they would be more interested in pictures of people than objects, which would result in them having problems completing tasks when presented with pictures of people. However, this was not reflected in the data.

Finally, results from these studies question the value of the Information Processing Models that have been developed by McFall (1990) and Dodge (1990). As outlined in chapter six, both models propose that deficits at any of the stages of the model will result in inappropriate behaviour. Closer inspection of these models revealed that the first stage of both models requires participants to decode information that is presented to the sensory receptors. Failure to do this will result in inappropriate behaviour. However, studies two to six failed to demonstrate that sexual offenders have deficits with the areas of attention examined, as they were able to successfully process cognitive tasks in the same way as a control group of non-offenders. Such a finding does not offer support for these two models and questions the value of theoretical models that fail to provide any empirical data to support their claims. For a model to have any value it needs to be supported with empirical data that clearly demonstrates how it can be applied to account for problems decoding information that is presented to the sensory receptors. Future researchers may wish to consider what contributions theoretical models, without empirical support, can make to furthering understanding of sexual offenders' information-processing abilities.

Failure to obtain data that supports clinical observations and researchers claims that sexual offenders have deficits with their information-processing (McFall, 1990; Langevin and Pope, 1993), highlight that this is a complex area to investigate, as there is currently no existing framework to guide this area of research. With the large number of different components involved in the mechanisms of attention (Merrill and Taube, 1996) and researchers failing to be specific with which areas of attention sexual offenders might have deficits with, this results in researchers having to make their own interpretations of what

areas of information processing they think researchers (i.e. McFall, 1990; Langevin and Pope, 1993) were referring to. However, the studies contained herein have made a preliminary attempt to logically identify areas of information processing (i.e. attention) that might differ in sexual offenders and developed empirical studies to test them. Although they have failed to indicate that sexual offenders have deficits with their attentional abilities, this could mean one of two things. First, they do not have attentional deficits, or the tasks utilised were unable to detect the deficits.

It is important to continue investigating attentional abilities of sexual offenders, as I still believe that they have attentional deficits. The results in studies two to six did not reflect how sexual offenders present in a clinical setting. As previously discussed, personal clinical observations have found them to be extremely focused when collecting pictures of women or children and viewing female members of staff. Indeed, the level of interest and attention sexual offenders give to these tasks seems to be unaffected by either the situation they are in (e.g. group therapy session), or risk of their behaviour being detected or observed by staff members. Considering these observations, I believe that sexual offenders attentional abilities do differ, but the problem appears to exist with finding the appropriate paradigm that will detect these differences.

7.1.5 Future Research

Developing the QACSO is a valuable contribution to clinical practice within the field of sexual offending with learning disabilities. However, to develop the value of the contribution the development of this new measure has made, further research is needed. Two key areas need to be explored further. Replication of this data with a larger sample that defines the different types of sexual offenders (e.g. rapists, child molesters, stalkers, exhibitionists and voyeurs) would provide data that would either support or reject the current research's findings. This data would establish whether the QACSO is able to discriminate between different types of sexual offenders. A larger sample would also enable a principle component analysis to be performed on the whole questionnaire, rather than each subsection. This analysis would identify common themes and beliefs that might be specific to different types of sexual offenders, aiding clinicians when they are identifying the areas that need to be addressed in treatment.

Further research is also needed to examine the clinical potential of the QACSO as a treatment outcome measure. As cognitive distortions are believed to play a pivotal role in the maintenance of sexually deviant behaviour (Abel et al. 1989; Stermac and Segal, 1989), it suggests that clinicians need to monitor if these distorted cognitions change during therapy. Although the QACSO would be able to do this, as previously discussed, it is unclear what a change in QACSO score means. Indeed, to establish whether a change in QACSO score is the result of the cognition changing or sexual offenders' learning to give socially acceptable responses, sexual offenders could be tested using alternative measures of cognitive distortions (e.g. Bumby's RAPE and MOLEST Scales). If their distorted cognitions have changed, they should provide socially acceptable responses on these two measures. However, as these two measures are not suitable for use on individual with learning disabilities (see chapter 4) future research might wish to consider dividing the QACSO into two sections and administering them at different stages of their treatment (refer to pg. 154-155 for more detail). If participants' cognitions have changed, they should score low on both sections of the QACSO.

For future studies investigating attentional ability of sexual offenders, researchers may wish to consider using an alternative control (i.e. 'normal males'), as non-offenders were found to be slower, although not significantly, than sexual offenders when completing the attention tasks. This finding suggested that non-offenders might not have been the most suitable control group.

As there is currently no existing framework to guide research to investigate the attentional ability of sexual offenders, future research might be based on a process of logical elimination. Considering this, chapter six outlined a rationale for using a flicker paradigm to induce change blindness (Simon and Levin, 1997), in order to measure attentional ability. Using this paradigm might prevent participants from working out what is being examined and force them to focus on the stimulus material related to their sexually deviant behaviour in order to complete the task. Indeed, this task might succeed where the previous attention studies failed, as it might be more sensitive to measuring attentional differences.

7.1.6 Negative Priming

Another paradigm researchers might wish to consider using is negative priming. This occurs when subjects are presented a series of trials in which they must select a target from an array of two or more stimuli. A prime display is presented that contains, for example, one target and one non-target followed by a probe display that also contains one target and one non-target. Negative priming is observed when a non-target in the prime display becomes a target in the probe display. Indeed, when negative priming effects of individuals with or without an intellectual disability were compared, it was found that the individuals with a learning disability did not or could not use inhibitory mechanisms of attention to assist their selecting a target letter from the displays (Cha and Merrill, 1994; Merrill and Taube, 1996). This research indicates that negative priming can be observed in individuals with learning disabilities, suggesting that it would be an appropriate method to test attentional abilities of sexual offenders. Considering this and the attention studies contained herein, it seems a logical progression to investigate negative priming among sexual offenders.

Research (Cha and Merrill, 1984; Merrill and Taube, 1996) has found that individuals with learning disabilities do not suppress responding to the distractor to facilitate their performance. However, it is not clear whether they were unable to, or chose not to suppress responding to the distractor. Using an alternative method (i.e. negative priming) to investigate sexual offenders ability to attend to cues, might provide additional insight into whether sexual offenders can or cannot select information to focus on. The findings obtained from this research will provide further insight into whether sexual offenders have attentional deficits or not.

A final point that can be made about studies two to six relates to them utilising small sample sizes. Although this was a problem unable to be avoided, due to the limited availability of sexual offenders and non-offenders with learning disabilities, it highlights one of the problems encountered when investigating this population. Indeed, small sample size creates problems with statistical power and increases the likelihood of making a type two error. However, as previously stated this problem is difficult to address when there are limited numbers of suitable participants.

Finally, although studies two to six can only ever be tentative at best when trying to account for attentional deficits, it is hoped that they represent a starting point which further research can add to.

7.1.7 Final Summary

The QACSO has been found to be a reliable and valid measure of cognitive distortions and is suitable for use on individuals with learning disabilities. It appears to be a useful instrument for assessing sexual beliefs prior to, during and following treatment of sexual offenders. However, future research on the QACSO will hopefully offer additional support for its utility, resulting in this instrument being a promising clinical and research instrument for the assessment and treatment of sexual offenders.

The series of studies contained herein represent initial empirical investigations into the attentional deficits of sexual offenders with learning disabilities. Although they fail to identify any specific attentional deficits, they highlight the complexity of this area of research. Data from these studies provide a starting point for which future studies can add. By addressing the methodological weaknesses identified and testing new paradigms, this will hopefully develop understanding of the information processing mechanisms of sexual offenders and the role these mechanisms play in the initiation, maintenance and justification of sexually deviant behaviour.

Research to date has primarily focused on the cognitive content of distorted cognitions (Abel et al. 1989; Stermac and Segal, 1989; Blumenthal, Gudjonsson and Burns, 1999). However, to facilitate understanding of why individuals sexually offend it is necessary to examine the cognitive processes that underlie the initiation, maintenance and justification of sexual offending behaviour. Indeed, research suggest that information-processing mechanisms before and during the offence cycle are vital and could help explain why individuals sexually offend, or develop distorted cognitions (Pithers, 1990; Ward, Hudson and Marshall, 1994). Some researchers propose that sexual offenders with learning disabilities have deficits with information processing and suggest that they might have problems decoding information that is presented to their sensory receptors (Langevin and Pope, 1993). Indeed, two Social Information Processing Models have been developed to

try to explain how information presented to the sensory receptors can be misinterpreted and result in inappropriate behaviour (i.e. Dodge's (1986) Social Information Processing Model and McFall's (1990) Social Information-Processing Model of Social Skills and Social Competencies). However, both these models are largely theoretical.

Although researchers propose that sexual offenders have deficits with information processing (Langevin and Pope, 1993), their ability to decode information (Lipton, McDonel and McFall, 1987), or select the appropriate cues to focus on (Craig, 1990), researchers fail to identify whether these problems result from deficits with attention, perception or memory. However, considering Craig's claims that sexual offenders have deficits selecting the cues to focus on, this was interpreted to suggest that they might have attentional deficits. To test this five studies investigated sexual offenders ability to focus their attention on visual stimulus while completing a task, their selective and divided attention and the effects dwell time had on their attentional bias and inhibition of return.

- Abbey, A., & Melby, C. (1986) The effects of nonverbal cues on gender differences in perceptions of sexual intent. *Sex Roles* 15, 283-298.
- Abel, G.G., Barlow, D.H., Blanchard, E.B., & Guild, D. (1977) The components of rapists' sexual arousal. *Archives of General Psychiatry* 34, 895-903.
- Abel, G.G., & Blanchard, E.B. (1974) The role of fantasy in the treatment of sexual deviation. *Archives of General Psychiatry* 30, 467-475.
- Abel, G.G., Blanchard, E.B., & Becker, J.V. (1978) An integrated treatment program for rapists. In R.T. Rada (ed.), *Clinical Aspects of the Rapist*. New York: Grune & Stratton.
- Abel, G.G., Gore, D.K., Holland, C.L., Camp, N., Becker, J.V., & Rathner, J. (1989) The measurement of the cognitive distortions of child molesters. *Annals of Sex Research* 3, 135-153.
- 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 (1995) *Diagnostic and Statistical Manual of Mental Disorders (Fourth Revision)*. Washington D.C.: American Psychiatric Association.
- Ammons, R.B., & Ammons, C.H. (1962) The Quick Test: A provisional manual. Cited in Birmingham, L., Mason, D., Grubin, D. (1996) Prevalence of mental disorder in remand prisoners: consecutive case study. *British Medical Journal* 313, 152-154.
- Aromaki, A.S., Lindman, R.E., & Eriksson, C.J.P. (1999) Testosterone, aggressiveness and antisocial personality. *Aggressive Behaviour* 25,2, 113-123.
- Bandura, A. (1977) *Social Learning Theory*. New York: Prentice Hall.

- Barbaree, H.E., Marshall, W.L., & Lanthier, R.D. (1979) Deviant sexual arousal in rapists. *Behaviour Research and Therapy* 17, 215-222.
- Barmann, B.C., & Murrey, W.J. (1981) Suppression of inappropriate sexual behaviour by facial screening. *Behaviour Therapy* 12, 730-735.
- Barron, P., Hassiotis, A., & Banes, J. (2002) Offenders with intellectual disability: the size of the problem and therapeutic outcomes. *Journal of Intellectual Disability Research* 46, 454-456.
- Baumeister, R.F. (1991) Escaping the self. Cited in Ward, T., Hudson, S.M., & Marshall, W.L. (1995) Cognitive distortions and affective deficits in sex offenders: A cognitive deconstructionist interpretation. *Sexual Abuse: A Journal of Research and Treatment* 7, 67-83.
- Becker, J.V., and Murphy, W.D. (1998) What we know and do not know about assessing and treating sex offenders. *Psychology, Public Policy and Law* 4, 116-137.
- Birmingham, L., Mason, D., Grubin, D. (1996) Prevalence of mental disorder in remand prisoners: consecutive case study. *British Medical Journal* 313, 152-154.
- Blumenthal, S., Gudjonsson, G., & Burns, J. (1999) Cognitive distortions and blame attribution in sex offenders against adults and children. *Child Abuse and Neglect* 23, 129-143.
- Bodna, B. (1984) "*Finding the way: the criminal justice system and the person with intellectual disability.*" Melbourne, Vic: Office of Public Advocate.
- Bowler, C., & Collacott, R.A. (1993) Crossdressing in men with learning disabilities. *British Journal of Psychiatry* 163, 566-568.
- Briggs, F., & Hawkins, R.M.F. (1996) A comparison of the 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.

- British Psychological Society (BPS) (2001) *Learning Disability: Definitions and Contexts*. Professional Affairs Board of the British Psychological Society, Leicester.
- Broadbent, D. (1958) *Perception and communication*. Oxford: Pergamon.
- Brown, E.C., Aman, M.G., & Havercamp, S.M. (2002) Factor analysis and norms for parent ratings on the Aberrant Behavior Checklist-Community for young people in special education. *Research in Developmental Disabilities* 23, 45-60.
- Brown, B.S., & Courtless, T.F. (1971) *The mentally retarded offender*. Department of Health Education and Welfare Publication No. 72-90-39, US Government Printing Office, Washington, DC.
- Bruyer, R., & Scailquin, J.C. (2000) Effects of ageing on the generation of mental images. *Experimental Ageing Research* 26, 337-351.
- Bumby, K.M. (1996) Assessing the cognitive distortions of child molesters and rapists: Development and validation of the MOLEST and RAPE Scales. *Sexual Abuse: A Journal of Research and Treatment* 8, 37-54.
- Burke, D.M. (2001) Empathy in sexually offending and nonoffending adolescent males. *Journal of Interpersonal Violence* 16, 222-233.
- Burt, M.R. (1980) Cultural myths and supports for rape. *Journal of Personality and Social Psychology* 38, 217-230.
- Canter, D., Hughes, D., & Kirby, S. (1998) Paedophilia: Pathology, criminality, or both? The development of a multivariate model of offence behaviour in child sexual abuse. *Journal of Forensic Psychiatry* 9, 532-555.
- Caparulo, F. (1991) Identifying the developmentally disabled sex offender. *Sexuality and Disability* 9, 311-322.

- Cha, K.H., & Merrill, E.C. (1994) Facilitation and inhibition effects in visual selective attention processes of persons with and without mental retardation. *American Journal of Mental Retardation* 98, 594-600.
- Charman, T. and Clare, I. (1992) Education about the laws and social rules relating to sexual behaviour. *Mental Handicap* 20, 74-80.
- Cherry, E.C. (1953) Some experiments on the recognition of speech with one and two ears. *Journal of the Acoustical Society of America*, 25, 975-979.
- Chesterman, P., & Sahota, K. (1998) Mentally ill sex offenders in a regional secure unit. I: Psychopathology and motivation. *Journal of Forensic Psychiatry* 9, 150-160.
- Choplan, B.E., McCain, M.L., Carbonell, J.L., & Hagen, R.L. (1985) Empathy: Review of available measures. *Journal of Personality and Social Psychology* 48, 635-653.
- Clare, I.C.H., & Gudjonsson, G.H. (1993) Interrogative suggestibility, confabulation, and acquiescence in people with mild learning disabilities (mental handicap): Implications for reliability during police interrogation. *British Journal of Clinical Psychology* 32, 295-301.
- Clare, I.C.H., & Gudjonsson, G.H. (1995) The vulnerability of suspects with intellectual disabilities during police interviews: a review and experimental study of decision-making. *Mental Handicap Research* 8, 110-128.
- Cohen, M.L., Garofolo, R., Boucher, R., & Seghorn, T. (1971) Cited in C.R. Hollin & K. Howells (eds). (1997) *Clinical approaches to sex offenders and their victims*. (pg.41) Wiley.
- Coid, J.W. (1988) Mentally abnormal prisoners on remand: I – Rejected or accepted by the NHS? *British Medical Journal* 296, 1779-1782.
- Constantine, N.J. (2004) Female adolescent perpetrators versus non-perpetrators: A comparative study of personality factors/traits and psychopathological variables. *Dissertation Abstracts International: Section B: The Science and Engineering* 64, 3570

- Cooper, A.J. (1995) Review of the role anti-libidinal drugs in the treatment of sex offenders with mental retardation. *Mental Retardation* 33, 42-48.
- Corbett, J.A., & Pond, D.A. (1979) *Epilepsy and behavioural disorders in the mental handicap* (Ed). P. Snaith & F.E. James, pp. 37-44. Headley Bros: Ashford.
- Covell, C.N., & Scalora, M.J. (2002) Empathic deficits in sexual offenders: An integration of affective, social and cognitive constructs. *Aggression and Violent Behavior* 7, 251-270.
- Craig, M.E. (1990) Coercive sexuality in dating relationships: A situational model. *Clinical Psychology Review* 10, 395-423.
- Cross, D.G., and Sharpley, C.F. (1982) Measure of empathy with Hogan Empathy Scale. *Psychological Reports* 50, 62.
- Crowne, D. and Marlowe, D. (1960) A new scale of social desirability independent of psychopathology. *Journal of Consulting Psychology* 24, 349-354.
- Davis, M.H. (1983) Measuring individual differences in empathy: Evidence for a multidimensional approach. *Journal of Personality and Social Psychology* 44, 113-126.
- Day, K. (1988) A hospital-based treatment for male mentally handicapped offenders. *British Journal of Psychiatry* 165, 630-639.
- Day, K. (1993) Crime and mental retardation. In K. Howells and C.R. Hollin (Eds) *Clinical Approaches to the Mentally Disordered Offenders*. Chichester: Wiley.
- Day, K. (1994) Male mentally handicapped sex offenders. *British Journal of Psychiatry* 165, 630-639.
- D'Alessandro, D.M., Kingsley, P., & Johnson-West, J. (2001) The readability of paediatric patient education materials on the World Wide Web. *Archives of Paediatrics and Adolescent Medicine* 155, 807-812.

- D.H.S.S. (1983) *Mental Health Act*, London: H.M.S.O.
- Dobash, R.P., Dobash, R.E., & Gutteridge, S. (1986) *The Imprisonment of Women*. Oxford: Blackwell.
- Dodge, K.A. (1986) A social information processing model of social competence in children. In M. Perlmutter (Ed.). *The Minnesota Symposium on Child Psychology* (Vol. 18, pp. 71-125). Hillsdale, NJ: Erlbaum.
- Dolan, M., Anderson, I.M., & Deakin, J.W.F. (2001) Relationship between 5-HT function and impulsivity and aggression in male offenders with personality disorders. *British Journal of Psychiatry* 178, 352-359.
- Duncan, R.D., Kennedy, W.A., & Patrick, C.J. (1995) 4-Factor model of recidivism in male juvenile-offenders. *Journal of Consulting Child Psychology* 24, 250-257.
- Earls, C.M., & Castonguay, L.G. (1989) The treatment of a bisexual pedophile using olfactory aversion: A single case study experimental design with a multiple baseline across behaviors. *Behavior Therapy* 20, 137-146.
- Eccles, A., Marshall, W.L., & Barbaree, H.E. (1994) Differentiating rapists and non-offenders using the rape index. *Behavior Research and Therapy* 32, 539-546.
- Elliott, C.D., Murray, D.J., & Pearson, L.S. (1983) *British Ability Scales*. NFER-Nelson: Windsor.
- Ellis, A. (1970) *The essence of rational psychotherapy: A comprehensive approach to treatment*. New York: Institute for Rational Living.
- Fazel, S., Hope, T., O'Donnell, I., and Jacoby, R. (2002) Psychiatric, demographic and personality characteristics of the elderly sex offenders. *Psychological Medicine* 32, 2, 219-226.

- Finkelhor, D. (1984) *Child Sexual Abuse: New Theory and Research*, New York: Free Press.
- Fisher, D., Beech, A., & Browne, A. (1999) Comparison of sex offenders to nonoffenders on selected psychological measures. *International Journal of Offender Therapy and Comparative Criminology* 43, 473-491.
- Fiske, S.T., & Taylor, S.E. (1991) Social Cognition. Cited in Johnston, L., & Ward, T. (1996) Social cognition and sexual offending: A theoretical framework. *Sexual Abuse: A Journal of Research and Treatment* 8, 55-80.
- Flesch, R. (1948) A New Readability Yardstick. *Journal of Applied Psychology* 32, 221-233.
- Folstein, M.F., Folstein, S.E., & McHugh, P.R. (1975) Mini-Mental State method for grading the cognitive state of patients for the clinician. *Journal of Psychiatric Research* 12, 189-198.
- Fox, E., Russo, R., & Dutton, K. (2002) Attentional bias for threat: Evidence for delayed disengagement from emotional faces. *Cognition and Emotion* 16, 355-379.
- Freedman, M., Leach, L., Kaplan, E., Winocur, G., Shulman, K.L., & Denis, D. (1994) Clock drawing: A neuropsychological analysis. Cited in Mason, J., & Murphy, G.H. (2002b) People with an intellectual disability in the criminal justice system: developing an assessment tool for measuring prevalence. *British Journal of Clinical Psychology* 41, 315-320.
- Frenken, J. (2003) Trends in sex offender treatment in Europe. Paper presented at *Multi-Agency Interventions for Sexual and Violent Offenders*, Dundee, Scotland.
- Freund, K. (1963) A laboratory method for diagnosing predominance of homo- or hetero-erotic interest in the male. *Behavior Research and Therapy* 1, 85-93.

- Freund, K. (1967a) Erotic preference in pedophilia. *Behavior Research and Therapy* 5, 339-348.
- Freund, K. (1967b) Diagnosing homo- or heterosexuality and erotic age-preference by means of a psychophysiological test. *Behavior Research and Therapy* 5, 209-228.
- Freund, K., & Blanchard, R. (1989) Phallometric diagnosis of pedophilia. *Journal of Consulting and Clinical Psychology* 57, 1-6.
- Freund, K., and Seto, M.C. (1998) Preferential rape in the theory of courtship disorder. *Archives of Sexual Behavior* 27, 433-443.
- Frith, U. (1989) *Autism: explaining the enigma*. Oxford: Blackwell.
- Furby, L., Weinrott, M.R., & Blackshaw, L. (1989). Sex offender recidivism: A review. *Psychological Bulletin* 105, 3-30.
- Gillis, J.R. (1991) The rapist as a sexually deviant offender. Cited in Vanhouche, W., & Vertommen, H. (1999) Assessing cognitive distortions in sex offenders: A review of commonly used versus recently developed instruments. *Psychologica Belgica* 39, 163-187.
- Glasgow, D.V., Osborne, A., & Croxen, J. (2003) An assessment tool for investigating paedophile sexual interest using viewing time: an application of single case methodology. *British Journal of Learning Disabilities* 31, 96-102.
- Glaser, W., & Deane, K. (1999) Normalisation in an abnormal world: a study of prisoners with intellectual disability. *Intellectual Journal of Offender Therapy and Comparative Criminology* 43, 338-356.
- Goldberg, D. (1981) *General Health Questionnaire*. NFER-Nelson Publishing Company Ltd.
- Golden, C.J., Hammeke, T.A., & Purisch, A.D. (1980) *Manual for Luria-Nebraska Neuropsychological Test Battery*. Los Angeles: Western Psychological Services.

- Gomez, R., & Hazeldine, P. (1996) Social information processing in mild mentally retarded children. *Research in Developmental Disabilities* 17, 217-227.
- Goring, C. (1913) The English Convict. Cited in Lund, J. (1990) Mentally retarded offenders in Denmark. *British Journal of Psychiatry* 156, 726-731.
- Greer, J.H., Estupinan, L.A., & Manguno-Mire, G.M. (2000) Empathy, social skills, and other relevant cognitive processes in rapists and child molesters. *Aggression and Violent Behavior* 5, 99-126.
- Griffiths, S.D.M., Quinsey, V.L., & Hingsburger, D. (1989) *Changing inappropriate sexual behaviour: a community based approach for persons with developmental disabilities*. Baltimore: Paul Brookes Publishing.
- Groth, A.N., Burgess, A., & Holstrom, L.L. (1977) Rape: Power, anger and sexuality. *American Journal of Psychiatry* 134, 1239-1243.
- Groth, A.N., Hobson, T.S. (1982) Cited in C.R. Hollin & K. Howells (eds). (1997) *Clinical approaches to sex offenders and their victims*. (pg. 44-45) Wiley.
- Gross, G. (1984). *Activities of a Developmental Disabilities Adult Offender Project*. Olympia WA: Washington State Developmental Disabilities Planning Council.
- Grubin, D. (1997). Predictors of risk in serious sex offenders. *British Journal of Psychiatry*, 178, 17-21.
- Grubin, D. (1998). Actuarial and clinical assessment of risk in sex offenders. *Journal of Interpersonal Violence* 14, 331-343.
- Gudjonsson, G.H. (1987). A parallel form of the Gudjonsson Suggestibility Scale cited in Winter, N., Holland, A.J., & Collins, S. (1997) Factors predisposing to suspected offending by adults with self-reported learning disabilities. *Psychological Medicine* 27, 595-607.

- Gudjonsson, G.H. (1993) Confession evidence, psychological vulnerability and expert testimony. *Journal of Community and Applied Social Psychology* 3, 117-129.
- Gudjonsson, G.H., Clare, I.C.H., & Cross, P. (1992) The revised PACE 'Notice to Detained Persons': How easy is it to understand? *Journal of Forensic Science Society* 32, 289-299.
- Gudjonsson, G., Clare, I.C.H., Rutter, S., & Pearse, J. (1993) *Persons at risk during interviews in police custody: the identification of vulnerabilities*. The Royal Commission of Criminal Justice, Research Study No. 12. HSMO: London.
- Happé, F.G.E. (1996) Studying weak central coherence at low levels: Children with autism do not succumb to visual illusions. A research note. *Journal of Child Psychology and Psychiatry* 37, 873-877.
- Harris, G.T., Rice, M.E., Quinsey, V.L. & Chaplin, T.C. (1996) Viewing time as a measure of sexual interest among child molesters and normal heterosexual men. *Behavior Research and Therapy* 34, 389-394.
- Hayashino, D.S., Wurtele, S.K., & Klebe, K.J. (1995) Child molesters: An examination of cognitive factors. *Journal of Interpersonal Violence* 10, 106-116.
- Hayes, S. (1991) Recent research on offenders with learning disabilities. *Tizard Learning Disability Review* 1, 7-15.
- Hayes, S. (1993) *People with an intellectual disability and the criminal justice system: Appearances before Local Courts*. Research Report 4, Sydney: N.S.W. Law Reform Commission.
- Hayes, S. (1996) *People with an intellectual disability and the criminal justice system: two rural courts*. Research Report 5, NSW Law Reform Commission, Sydney.
- Hayes, S. (1997) Prevalence of intellectual disability in local courts. *Journal of Intellectual Developmental and Disability* 22, 71-85.

- Hayes, S., & McIlwain, D. (1988) *The prevalence of intellectual disability in the New South Wales prison population: an empirical study*. Canberra: Criminology Research Council.
- Herman, J.L. (1990) Sex offenders: A feminist perspective. In W.L. Marshall, D.R. Laws and H.E. Barbaree. (Eds) (1990). *Handbook of Sexual Assault: Issues, Theories and Treatment of the Offender*, Plenum.
- Hodgins, S. (1992) Mental disorder, intellectual deficiency and crime: evidence from a birth cohort. *Archives of General Psychiatry* 49, 476-83.
- Hogan, R. (1969) Development of an empathy scale. Cited in Marshall, W.L., Hudson, S.M., Jones, R., & Fernandez, Y.M. (1995) Empathy in sex offenders. *Clinical Psychology Review* 15, 99-113.
- Hogue, T.E. (1994) Sex offence information questionnaire: assessment of sexual offenders' perceptions of responsibility, empathy and control. *Issues in Criminological and Legal Psychology* 21, 68-75.
- Holland, T., Clare, I.C.H., & 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, 6-20.
- Home Office (1992) *Reed Report*. London: HMSO.
- Home Office (1994) *Criminal Justice and Public Order Act 1994*. London: HMSO
- Hoppe, C.M., and Singer, R.D. (1976) Over controlled hostility, empathy, and egocentric balance in violent and non-violent psychiatric offenders. *Psychological Reports* 39, 1303-1308.

- Horley, J., & Quinsy, V.L. (1994) Assessing the cognitions of child molesters: Use of the semantic differential with incarcerated offenders. *The Journal of Sex Research* 31, 171-178.
- Hucker, S., Langevin, R., Dickey, R., Handy, L., Chambers, J., & Wright, S. (1988) Cerebral damage and dysfunction in sexually aggressive men. *Annals of Sex Research* 1, 32-48.
- Hudson, S.M., Marshall, W.L., Wales, D., McDonald, E., Bakker, L & McLean, A. (1993) Emotion recognition in sex offenders. *Annals of Sex Research* 6, 199-211
- Hudson, S.M. and Ward, T. (2000) Adolescent sexual offenders: Assessment and treatment. In C.R. Hollin (Ed). (2000) *Handbook of Offender Assessment and Treatment*, Wiley.
- Hudson, S.M. & Ward, T. (2000) Interpersonal competency in sex offenders. *Behavior Modification* 24, 494-527.
- Humphrey, G.W., & Bruce, V. (1989) Visual object recognition. In G.W. Humphreys & V. Bruce (Eds.), *Visual Cognition*. Pg.88-101 London: Erlbaum.
- Hunter, I (1964) *Memory (revised ed.)*. Harmondsworth., Middlesex: Penguin.
- Jacoby, L.L., Toth, J.P., & Yonelinas, A.P. (1993) Separating conscious and unconscious influences of memory: Measuring recollection. *Journal of Experimental Psychology: General* 122, 13-154.
- Johnston, S.J., & Halstead, S. (2000) Forensic issues in intellectual disability. *Current Opinion in Psychiatry* 13, 475-480.
- Johnston, L., & Hewstone, M. (1992) Cognitive models of stereotype change (3): Subtyping and the perceived typicality of disconfirming group members. Cited in Johnston, L., & Ward, T. (1996) Social cognition and sexual offending: A theoretical framework. *Sexual Abuse: A Journal of Research and Treatment* 8, 55-80.

- Johnston, L., & Ward, T. (1996) Social cognition and sexual offending: A theoretical framework. *Sexual Abuse: A Journal of Research and Treatment* 8, 55-80.
- Jones, R. (1994) *Mental Health Act Manual*. (Fourth ed.). London: Sweet & Maxwell.
- Jones, B.C., Jones, B.T., Blundell, L., & Bruce, G. (2002) Social users of alcohol and cannabis who detect substance-related changes in a change blindness paradigm report higher levels of use than those detecting substance-neutral changes. *Psychopharmacology* 165, 93-96.
- Kaiser, H.F. (1958) 'The varimax criterion for analytic rotation in factor analysis'. *Psychometrika*, 23, 187-200.
- Kalmar, D.A., and Sternberg, R.J. (1988) Theory knitting: An integrative approach to theory development. *Philosophical Psychology* 1, 153-170.
- Kaufman, A.S., & Kaufman, N.L. (1990) *Kaufman Brief Intelligence Test Manual*. Circle Pines, Minnesota: American Guidance Service.
- Kazdin, A.E. (1978) History of behaviour modification: Experimental foundations of contemporary research. Cited in Marshall, W.L. (1999) Current status of North American assessment and treatment programs of sexual offenders. *Journal of Interpersonal Violence* 14, 221-239.
- Kennedy, H., & Grubin, D. (1992) Patterns of denial in sex offenders. *Psychological Medicine* 22, 191-196.
- Klimecki, M.R., Jenkinson, J. & Wilson, L. (1994) A study of recidivism among offenders with an intellectual disability. *Australia and New Zealand Journal of Developmental Disabilities* 19, 209-219.
- Lakey, J. (1994) The profile and treatment of male adolescent sex offenders. *Adolescence* 29, 755-761.

- Lalumière, M.L. & Quinsey, V.L. (1994) The discriminability of rapists from non-sex offenders using phallometric measures. *Criminal Justice and Behavior* 21, 150-175.
- Langevin, R., & Pope, S. (1993) Working with learning disabled sex offenders. *Annals of Sex Research* 6, 149-160.
- Langevin, R., Wright, P., & Handy, L. (1988) Empathy, assertiveness, and defensiveness among sex offenders. *Annals of Sex Research* 1, 533-547.
- Lanyon, R.L. (1991) Theories of sex offending. C.R. Hollin & K. Howells (eds). (1997). *Clinical approaches to sex offenders and their victims*. Wiley. (35-54).
- Laws, D.R. (1989) *Relapse prevention with sexual offenders*. New York: Guilford.
- Laws, D.R., & Marshall, W.L. (1991) *Relapse prevention with sex offenders*. New York: Guilford.
- Leong, G.B., & Silva, J.A. (1999) Revisiting arson from an outpatient forensic perspective. *Journal of Forensic Science* 44, 558-563.
- Levin, D.T., & Simons, D.J. (1997) Failure to detect changes in attended objects in motion pictures. *Psychonomic Bulletin and Review* 4, 501-506.
- Lindsey, R.E., Carlozzi, A.F., & Eells, G.T. (2001) Differences in the dispositional empathy of juvenile sex offenders, non-sex-offending delinquent juveniles, and nondelinquent juveniles. *Journal of Interpersonal Violence* 16, 510-522.
- Lindsay, W.R. (unpublished transcript). Questionnaire on Attitudes Consistent with Sex Offences (QACSO).
- Lindsay, W.R. (2001) 'What makes men offend?' paper presented at Advanced Study Day on Assessment and Treatment of Offenders with Intellectual Disabilities, Edinburgh.

- Lindsay, W.R., Carson, D., & Whitefield, E. (2000) Development of a questionnaire on attitudes consistent with sex offending for men with intellectual disabilities. *Journal of Intellectual Disability Research* 44, 368
- Lindsay, W.R., & Holland, A. (2000) Changing services for offenders with intellectual disabilities. *Journal of Intellectual Disability Research* 44, 367-368.
- Lindsay, W.R., Law, J., Quinn, K., Smart, N., & Smith, A.H.W. (2001) A comparison of physical and sexual abused: Histories of sexual and non sexual offenders with intellectual disability. *Child Abuse and Neglect* 25, 989-995.
- Lindsay, W.R., Marshall, I., Neilson, C., Quinn, K., & Smith, A. (1998a) The treatment of men with a learning disability convicted of exhibitionism. *Research in Developmental Disabilities* 19, 295-316.
- Lindsay, W.R., & Macleod, F. (2001) A review of forensic learning disability research. *The British Journal of Forensic Practice* 3, 4-10.
- Lindsay, W.R., Neilson, C., Morrison, F., & Smith, A. (1998b) The treatment of six men with a learning disability convicted of sex offences with children. *Journal of Clinical Psychology* 37, 83-98.
- Lindsay, W.R., Olley, S., Jack, C., Morrison, F., & Smith, A. (1998) The treatment of two stalkers with intellectual disabilities using a cognitive approach. *Journal of Applied Research in Intellectual Disabilities* 11, 333-344.
- Lindsay, W.R., & Smith, A.H.W. (1998) Responses to treatment for sex offenders with intellectual disability: a comparison of men with 1- and 2-year probation sentences. *Journal of Intellectual Disability Research* 42, 346-353.
- Lindsay, W.R., Smith, A.H.W., Quinn, K., Anderson, A., Smith, A., Allan, R., & Law, J. (in press, 2004) Women with intellectual disability who have offended: Characteristics and outcome. *Journal of Intellectual Disability Research*.

- Lipton, D.N., McDonel, E.C., & McFall, R.M. (1987) Heterosocial perception in rapists. *Journal of Consulting and Clinical Psychology* 55, 17-21.
- Loftus, E.F., & Palmer, J.C. (1974) Reconstruction of automobile deconstruction: An example of interaction between language and memory. *Journal of Verbal Learning and Verbal Behaviour* 13, 585-589.
- Loftus, E.F., & Zanni, G. (1975) Eyewitness testimony: The influence of wording of a question. *Bulletin of the Psychonomic Society* 5, 86-88.
- Lund, J. (1990) Mentally retarded offenders in Denmark. *British Journal of Psychiatry* 156, 726-731.
- Lyall, I., Holland, A.J., & Collins, S. (1995) Offending by adults with learning disabilities: identifying need in one health district. *Mental Handicap Research* 8, 99-102.
- MacLeod, C. (1991) Half a century of research on the Stroop effect: An integrative review. *Psychological Bulletin* 109, 163-203.
- McCarthy, M., & Thompson, D. (1997) A prevalence of sexual abuse of adults with intellectual disabilities referred for sex education. *Journal of Applied Research in Intellectual Disabilities* 10, 105-124.
- McFall, R.M. (1990) The enhancement of social skills. An Information-Processing Analysis. In W.L. Marshall, D.R. Laws, & H.E. Barbaree (Eds), *Handbook of sexual assault: Issues, theories and treatment of the offender* (pp. 311-330). New York: Plenum.
- Madan, A. (1996) *Women, Prisons and Psychiatry. Mental Disorders Behind Bars*. Oxford: Butterworth-Heinemann.
- Malamuth, N.M., & Brown, L.M. (1994) Sexually aggressive men's perceptions of women's communications: Testing three explanations. *Journal of Personality and Social Psychology* 64, 699-712.

- Malamuth, N.M., Sockloskie, R., Koss, M.P., & Tanaka, J. (1991) The characteristics of aggressors against women: Testing a model using a national sample of college students. *Journal of Consulting and Clinical Psychology* 59, 670-681.
- Malamuth, N.M., & Thornhill, N.W. (1994) Hostile masculinity, sexual aggression and gender-biased domineeringness in conversations. *Aggressive Behavior* 20, 185-193.
- Manocha, K.F., & Mezey, G. (1998) British adolescents who sexually abuse: a descriptive study. *The Journal of Forensic Psychiatry* 3, 588-608.
- Marolla, J., & Scully, D. (1986) Attitudes towards women, violence and rape: A comparison of convicted rapists and other felons. *Deviant Behavior* 7, 337-355.
- Marshall, W.L. (1996) Assessment, treatment, and theorizing about sex offenders. Developments during the past twenty years and future directions. *Criminal Justice and Behavior* 23, 162-199.
- Marshall, W.L. (1999) Current status of North American assessment and treatment programs of sexual offenders. *Journal of Interpersonal Violence* 14, 221-239.
- Marshall, W.L. & Eccles, A. (1991) Issues in clinical practice with sex offenders. *Journal of Interpersonal Violence* 6, 68-93.
- Marshall, W.L., & Fernandez, Y.M. (2000) Phallometric testing with sexual offenders: Limits to its value. *Clinical Psychology Review* 20, 807-822.
- Marshall, W.L., & Fernandez, Y.M. (2003) Sexual preferences – Are they useful in the assessment and treatment of sexual offenders? *Aggression and Violent Behavior* 8, 131-143.
- Marshall, W.L., & Fernandez, Y.M., Lightbody, S., & O'Sullivan, C. (1994) The assessment of person-specific empathy deficits in child molesters. *Clinical Psychology Review* 11, 171-184

- Marshall, W.L., Hudson, S.M., Jones, R., & Fernandez, Y.M. (1995) Empathy in sex offenders. *Clinical Psychology Review* 15, 2, 99-113.
- Marshall, W.L., Jones, R., Ward, T., Johnston, P., & Barbaree, H.E. (1991) Treatment outcome with sex offenders. *Clinical Psychology Review* 11, 465 – 485.
- Marshall, W.L., Laws, D.R., & Barbaree, H.E. (1990) Issues in sexual assault. In W.L. Marshall, D.R. Laws, & H.E. Barbaree (Eds), *Handbook of sexual assault: Issues, theories and treatment of the offender* (pp. 331-342). New York: Plenum.
- Marshall, W.L., Payne, K., Barbaree, H.E., & Eccles, A. (1991) Exhibitionists: Sexual preferences for exposing. *Behavior Research and Therapy* 29, 37-40.
- Marshall, W.L., & Pithers, W.D. (1994) A reconsideration of treatment outcome with sex offenders. *Criminal Justice and Behavior* 21, 10-27.
- Marshall, W.L., & Serran, G.A. (2000) Current issues in the assessment and treatment of sexual offenders. *Clinical Psychology and Psychotherapy* 7, 85-96.
- Mason, J., & Murphy, G.H. (2002a) People with intellectual disabilities on probation: an initial study. *Journal of Community and Applied Social Psychology* 12, 44-55.
- Mason, J., & Murphy, G.H. (2002b) People with an intellectual disability in the criminal justice system: developing an assessment tool for measuring prevalence. *British Journal of Clinical Psychology* 41, 315-320.
- Mason, J., & Murphy, G.H. (2002c) Intellectual disability amongst people on probation: prevalence and outcome. *Journal of Intellectual Disability Research* 46, 230-238.
- Mehrabian, A., & Epstein, N. (1972) A measure of emotional empathy. Cited in Marshall, W.L., Hudson, S.M., Jones, R., & Fernandez, Y.M. (1995). Empathy in sex offenders. *Clinical Psychology Review* 15, 99-113.

- Merrill, E.C., & Taube, M. (1996) Negative priming and mental retardation: The processing of distractor information. *American Journal on Mental Retardation* 101, 63-71.
- Mitchell, L. (1987). In A. Craft (Ed). *Sexuality and Mental Handicap: Issues and Perspective*. London: Costello.
- Moore, B.S. (1990) The origins and development of empathy. *Motivation and Emotion* 14, 75-80.
- Moss, S.C., Goldberg, D.P., Simpson, N., Patel, P., Rowe, S., Posser, H., & Ibbotson, B. (1993) Psychiatric Assessment Schedule Modified for use in Adults with Developmental Disabilities (PAS-ADD) ICD-10 Version cited in Winter, N., Holland, A.J., & Collins, S. (1997) Factors predisposing to suspected offending by adults with self-reported learning disabilities. *Psychological Medicine* 27, 595-607.
- Moss-Morris, R., & Petrie, K.J. (1997) Cognitive distortions of somatic experiences: revision and validation of a measure. *Journal of Psychosomatic Research* 43, 293-306.
- Murphy, G.H., & Clare, I.C.H. (1991) M.I.E.T.S. II: Psychological assessment and treatment, outcome for clients, and service effectiveness. *Mental Handicap Research* 4, 180-206.
- Murphy, G.H., & Clare, I.C.H. (1998) People with learning disabilities amongst men on remand in prison. *Mental Handicap Research* 8, 81-91.
- Murphy, G.H., Harnett, H., & Holland, A.J. (1995) A survey of intellectual disabilities amongst men on remand in prison. *Mental Handicap Research* 8, 81-98.
- Murphy, G.H., & Mason, J. (1999) People with learning disabilities who offend. In *Psychiatric and Behavioural Disorders in Developmental Disabilities and Mental Retardation* (ed. N. Bouras), pp. 226-245. Cambridge University Press, Cambridge.

- Murphy, W.D. (1990) Assessment and modification of cognitive distortions in sex offenders. In W.L. Marshall, D.R. Laws, & H.E. Barbaree (Eds), *Handbook of sexual assault: Issues, theories and treatment of the offender* (pp. 331-342). New York: Plenum.
- Murphy, W.D., Krisak, J., Stalgaitis, S & Anderson, K. (1984) The use of penile tumescence measures with incarcerated rapists: further validity issue. *Archives of General Psychiatry* 13, 545-554.
- Navon, D. (1977) Forest before trees: The precedence of global features in visual perception. *Cognitive Psychology* 9, 353-342.
- Neale, M.D. (1978) *Neale analysis of reading ability*, 2nd Ed. Macmillan Education Ltd.: London.
- Neidigh, L., & Krop, H. (1992) Cognitive distortions among child sexual offenders. *Journal of Sex Education and Therapy* 18, 208-215.
- Nichols, H.R., & Molinder, I. (1984) *Manual for the Multiphasic Sex Inventory*. Tacoma, WA: *Crime and Victim Psychology Specialists*.
- Parry, K., & Lindsay, W.R. (2003) Impulsiveness as a factor in sexual offending by people with mild learning disability. *Journal of Intellectual Disability Research* 47, 483-487.
- Phillips, L., Tiggermann, M., & Wade, T. (1997) Comparison of cognitive style in bulimia nervosa and depression. *Behavior Research and Therapy* 35, 939-948.
- Pithers, W.D. (1994) Process evaluation of a group therapy component designed to enhance sex offenders' empathy for sexual abuse survivors. *Behavior Research and Therapy* 32, 565-570.
- Plaisted, K., Swettenham, J., & Rees, L. (1999) Children with autism show local precedence in a divided attention task and global precedence in a selective attention task. *Journal of Child Psychology and Psychiatry* 40, 733-742.

- Posner, M.I., & Cohen, Y. (1984) Components of visual orienting. In H. Bouma & D. Bowhuia (Eds.), *Attention and Performance X* (pg. 531-556). Hove, UK: Lawrence Erlbaum Associates Ltd.
- Proulx, J., Aubut, J., McKibben, A., & Côté, M. (1994) Penile responses of rapists and nonrapists to rape stimuli involving physical violence or humiliation. *Archives of General Psychiatry* 23, 295-310.
- Quinsey, V.L. (1986) Men who have sex with children. In D.N. Weistub (Ed.) *Law and Mental Health: International Perspectives* (pp. 140-172). Elmsford, NY: Pergamon.
- Quinsey, V.L. (2003) Estimating the likelihood of sexual and violent re-offending. Paper presented at *Multi-Agency Interventions for Sexual and Violent Offenders*, Dundee, Scotland.
- Quinsey, V.L., Chaplin, T.C., & Carrigan, W.F. (1979) Sexual preference among incestuous and non-incestuous child molesters. *Behavior Therapy* 10, 562-656.
- Quinsey, V.L., Chaplin, T.C., & Upfold, D. (1984) Sexual arousal to nonsexual violence and sadomasochistic themes using rapists and non-sex offenders. *Journal of Consulting and Clinical Psychology* 52, 651-657.
- Quinsey, V.L., Chaplin, T.C., & Varney, G. (1981) A comparison of rapists' and non-sex offenders' sexual preferences for mutually consenting sex, rape and physical abuse of women. *Behavioral Assessment* 3, 127-135.
- Quinsey, V.L., Harris, G.T., Rice, M.E., & Cormier, C.A. (1998) *Violent Offenders: Appraising and Management* (1st Ed).
- Quinsey, V.L., Ketsetzis, M., Earls, C., & Karamanoukian, A. (1996) Viewing time as a measure of sexual interest. *Ethology and Sociobiology* 17, 341-354.

- Quinsey, V.L., & Marshall, W.L. (1983) Procedures for reducing sexual arousal: An evaluation review. In J.G. Greer & I.R. Stuart (Eds.), *The sexual aggressor: current perspective on treatment* (pp. 267-289). New York: Van Nostrand Reinhold.
- Quinsey, V.L., Steinman, C.M., Bergersen, S.G., & Holmes, J. (1975) Penile circumference, skin conductance, and ranking response of child molesters and 'normals' to sexual and nonsexual visual stimuli. *Behavior Therapy* 6, 213-219.
- Rada, R.T. (1978). *Clinical aspects of the Rapist*. New York: Grune & Stratton.
- Rada, R.T., Laws, R.D., & Kellner, R. (1976) Plasma testosterone levels in the rapist.
- Redmond, A.C. (1978) Sexual disorders. In G.U. Balis, L. Wurmser, E. McDaniel & R.G. Grenell (Eds). *Clinical psychopathology*. 459 - 484 Boston: Butterworths.
- Rice, M.E., Chaplin, T.C., Harris, G.T., & Coutts, J. (1994) Empathy for the victim and sexual arousal among rapists and nonrapists. *Journal of Interpersonal Violence* 9, 435-449.
- Roux, F., & Ceccaldi, M. (2001) Does aging affect the allocation of visual attention in global and local information processing? *Brain and Cognition* 47, 383-396.
- Roys, D.T. (1997) Empirical and theoretical consideration of empathy in sex offenders. *International Journal of Offender Therapy and Comparative Criminology* 41, 53-64.
- Ryan, G. (1997) Sexually abusive youth: Defining the population. In G. Ryan & S. Lane (Eds). *Juvenile sexual offending: Causes, consequences, and correction* (p.p.3-9). San Francisco, CA: Jossey-Bass.
- Sahota, K., & Chesterman, P. (1998) Sexual offending in the context of mental illness. *Journal of Forensic Psychiatry* 9, 267-280.
- Schwartz, B. (1984) *Psychology of learning and behaviour* (2nd ed.). New York: Norton.

- Scorzelli, J.F., & Reinke-Scorzelli, M. (1979) Mentally retarded offenders: a follow-up study. *Rehabilitation Counselling Bulletin* September, 70-73.
- Scott, R.L., & Tetreault, L.A. (1987) Attitudes of rapists and other violent offenders towards women. *The Journal of Social Psychology* 127, 375-380.
- Scully, D., & Marolla, J. (1983) Incarcerated rapists: Exploring a sociological model. *National Rape Centre, Institute of Mental Health*.
- Segal, Z.V., & Stermac, L.E. (1984) The role of cognitive distortions in sexual assault. In W.L. Marshall, D.R. Laws, & H.E. Barbaree (Eds), *Handbook of sexual assault: Issues, theories and treatment of the offender* (pp. 161-174). New York: Plenum.
- Seghorn, T.K., & Ball, C.J. (2000) Assessment of sexual deviance in adults with developmental disabilities. *Mental Health Aspects of Developmental Disabilities* 3, 47-53.
- Sherman, S.J., Judd, C.M., & Park, B. (1989) Social Cognition. Cited in Johnston, L., & Ward, T. (1996) Social cognition and sexual offending: A theoretical framework. *Sexual Abuse: A Journal of Research and Treatment* 8, 55-80, pg. 56.
- Simons, D.J., & Levin, DT. (1997) Change blindness. *Trends in Cognitive Science* 1, 261-267.
- Solso, R.L. (1995) Cognitive psychology. Cited in R. Gross (1996) *Psychology. The Science of the mind and behaviour*. (3rd ed.) Hodder and Stoughton.
- Sparrow, S.S., Balla, D.A., & Cicchetti, D.V. (1984) *Vinlands Adaptive Behaviour Scales: Survey Form*. Circle Pines: American Guidance Service.
- Stermac, L.E., and Segal, Z.V. (1989) Adult sexual contact with children: An examination of cognitive factors. *Behavior Therapy* 20, 573-584.
- Stroop, J.R. (1935) Studies of interference in serial verbal reactions. *Journal of Experimental Psychology* 18, 624-643.

- Swanson, C.K., & Garwick, G.B. (1990) Treatment for low functioning sex offenders: Group therapy and interagency co-ordination. *Mental Retardation* 28, 155-161.
- Taghavi, M.R., Neshat-Doost, H.T., Moradi, A.R., Yule, W., & Dalglish, T. (1999) Biases in visual attention in children and adolescents with clinical anxiety and mixed anxiety – depression. *Journal of Abnormal Child Psychology* 27, 215-223.
- Taylor, J. (2000) Northgate sex offender project. *Journal of Intellectual Disability Research* 44, 1140.
- Thibaut, F., Kuhn, J.M., Cordier, B., & Petit, M. (1998) Hormonal treatment of sex offenders. *Encephale-Revue de Psychiatrie Clinique Biologique et Therapeutique* 24, 132-137.
- Thompson, D. (1997) Profiling the sexually abusive behaviour of men with intellectual disabilities. *Journal of Applied Research in Intellectual Disabilities* 10, 125-139.
- Thompson, D., & 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.
- Treisman, A.M. (1960) Contextual cues in selective listening. *Quarterly Journal of Experimental Psychology* 12, 242-248.
- Treisman, A.M. (1964) Verbal cues, language, and meaning in selective attention. *American Journal of Psychology* 77, 206-219.
- Tulving, E., Schacter, D.L., & Stark, H.A. (1982) Priming effects in word-fragment completion are independent of recognition of memory. *Journal of Experimental Psychology: Learning, Memory and Cognition* 17, 595-617.
- Turk, D.C., & Rudy, T.E. (1986) Assessment of cognitive factors in chronic pain: a worthwhile enterprise? *Journal of Consulting Clinical Psychology* 6, 760-768.

- Van Honk, J., Tuiten, A., DeHaan, E., Van den Hout, M., & Stam, H. (2001) Attentional biases for angry faces: Relationships to trait anger and anxiety. *Cognition and Emotion* 15, 279-297.
- Vanhouche, W., & Vertommen, H. (1999) Assessing cognitive distortions in sex offenders: A review of commonly used versus recently developed instruments. *Psychologica Belgica* 39, 163-187.
- Walker, N., & Biles, D. (1986) *Australian prisoners 1986*. Canberra: Australian Institute of Criminology.
- Walker, N., & McCabe, S. (1973) *Crime and insanity in England*. University Press: Edinburgh.
- Ward, T. (2000) Sexual offenders' cognitive distortions as implicit theories. *Aggression and Violent Behavior* 5, 491-507.
- Ward, T., Fon, C., Hudson, S.M., & McCormack, J. (1998) A descriptive model of dysfunctional cognitions in child molesters. *Journal of Interpersonal Violence* 13, 1, 129-155.
- Ward, T., & Hudson, M. (1998) The construction and development of theory in the sexual offending area: A metatheoretical framework. *Sexual Abuse: A Journal of Research and Treatment* 10, 47-63.
- Ward, T., Hudson, S.T., & Keenan, T.R. (2000) The assessment and treatment of sexual offenders against children. In Hollin, C.R. (Ed). (2000). *Handbook of Offender Assessment and Treatment* (pp. 349-361). John Wiley & Sons Ltd.
- Ward, T., Hudson, S.M., Johnston, L., & Marshall, W.L. (1997) Cognitive distortions in sex offenders: An integrative review. *Clinical Psychology Review* 17, 479-507.

- Ward, T., Hudson, S.M., & Marshall, W.L. (1995) Cognitive distortions and affective deficits in sex offenders: A cognitive deconstructionist interpretation. *Sexual Abuse: A Journal of Research and Treatment* 7, 67-83.
- Ward, T., & Keenan, T. (1999) Child molesters' implicit theories. *Journal of Interpersonal Violence* 14, 8, 821-838.
- Ward, T., Keenan, T., & Hudson, S.M. (2000) Understanding cognitive, affective, and intimacy deficits in sexual offenders: A developmental perspective. *Aggression and Violent Behavior* 5, 41-62.
- Ward, T., Louden, K., Hudson, S.M., & Marshall, W.L. (1995) A descriptive model of the offense chain for child molesters. *Journal of Interpersonal Violence* 10, 452-472.
- Ward, T., McCormack, J., Hudson, S.M., & Polaschek, D. (1997) Rapes: Assessment and Treatment. In D.R. Laws, & W. O'Donohue (Eds.), *Sexual deviance: Theory, assessment and treatment* (pp. 356-393). New York: Guilford Press.
- Wechsler, D. (1981) *Wechsler Adult Intelligence Scale – Revised*. New York: The Psychological Corporation.
- Wellings, J.F., Johnson, A.M., & Wadsworth, J. (1994) *Sexual Behaviour in Britain: The National Survey of Sexual Attitudes and Lifestyles*. London: Penguin.
- Williams, L.M., & Finkelhor, D. (1990) The characteristics of incestuous fathers. In W.L. Marshall, D.R. Laws & H.E. Barbaree, (Eds). *Handbook of Sexual Assault: Issues, Theories and Treatment of the Offender* (pp. 231-255). New York: Plenum.
- Winter, N., Holland, A.J., & Collins, S. (1997) Factors predisposing to suspected offending by adults with self-reported learning disabilities. *Psychological Medicine* 27, 595-607.
- Wolf, S.C. (1984) 'A multifactor model of deviant sexuality'. Cited in T. Morrison, M. Erooga, and R.C. Beckett (Eds). (1994). *Sexual offending against children: Assessment and treatment of male abusers*. Routledge, p. 18-20.

World Health Organisation (1993) *The ICD-10 Classification of Mental and Behavioural Disorders: Diagnostic Criteria for Research*. Geneva: World Health Organisation.

Yiend, J., & Mathews, A.M. (2001) Anxiety and attention to threatening pictures. *Quarterly Journal of Experimental Psychology* 54A, 665-681

Appendix 1

Information Sheets for Study 1

Participant Information Sheet sent to normal males

Dear Participant,

I am conducting a project to try to understand men's attitudes towards sex offences. The questionnaire covers a number of attitudes. We would like to know whether you agree or disagree with the attitudes. The information I gather will help me to understand how sex offenders differ from non-sex offenders. The questionnaire will help to identify risk and prevent future offending. It will also be helpful in assessing appropriate placements and treatment of sexual offenders with learning disabilities. All the questionnaires have been developed for using with people who have learning disabilities hence most of the questions will seem straightforward.

To develop the overall questionnaire the following four groups of people will be asked to participate:


1. People with learning disabilities who have sexually offended.
2. People with learning disabilities who have committed other types of offences.
3. People with learning disabilities who have not offended.
4. People without learning disabilities who have not sexually offended.

If you decided to take part in this project, please could you **complete one of the enclosed questionnaires and return it in one of the addressed envelopes provided** as soon as possible. You should **then complete the second questionnaire four weeks later and return it in the other addressed envelope**. By completing and returning both questionnaires you are giving your consent to take part in this project.

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.

If you would like to discuss the project in more detail or have concerns please contact:

**Professor William R. Lindsay
Clinical Psychology Department
1 Edward Street
Dundee DD1 5NS**



Participant Information Sheets for Sexual Offenders with Learning Disabilities

(Read to participants with mild learning disabilities who have sexually offended).


The project aims to develop an understanding of thoughts which you might have that may increase your chances of sexually offending.

You will be asked some questions about the thoughts you have about women, men and children. You will also be asked some questions about your offence and about yourself. These questions will also help me to develop the questionnaire. In four weeks time you will be asked some of the same questions again.

You have to answer the questions as part of your treatment program, however at anytime you can request that your responses are not used as part of this project. Participation in this study is entirely voluntary, and you are free to refuse to take part or to withdraw from this study at any time without having to give a reason.

If you would like to discuss the project further please contact:

**Professor William R. Lindsay
Clinical Psychology Department
1 Edward Street
Dundee DD1 5NS**



Participant Information Sheets for Non-Sexual Offenders with Learning Disabilities

(Read by or to control participants with mild learning disabilities who have not sexually offended but have committed other types of offences).

I am conducting a project to try to understand what men think about sex offences. I need to ask men like yourself, who have not offended sexually to get an idea of what normal thoughts are. Once we know this we can look at what offenders thoughts are before and after help.

The main aim of this project is to develop a questionnaire which will help people who have sexually offended.

If you decide to take part in the project, you will be asked some questions about the thoughts you have about women, men and children. You will also be asked a few questions about yourself which will help me to develop the questionnaire. In four weeks time you will be asked some of the same questions again.

All information will be confidential, that is there will be no names on the questionnaires. At anytime you can ask that your answers are not used in the project. Participation in this study is entirely voluntary, and you are free to refuse to take part or to withdraw from this study at any time without having to give a reason.

If you have any questions you can contact me:

**Professor William R. Lindsay
Clinical Psychology Department
1 Edward Street
Dundee DD1 5NS**



Participant Information Sheets for Non-Offenders with Learning Disabilities

(Read by or to control participants with mild learning disabilities who have not sexually offended or not offended at all).

I am conducting a project to try to understand what men think about sex offences. I need to ask men like yourself, who have not offended sexually to get an idea of what normal thoughts are. Once we know this we can look at what offenders thoughts are before and after help.

The main aim of this project is to develop a questionnaire which will help people who have sexually offended.

If you decide to take part in the project, you will be asked some questions about the thoughts you have about women, men and children. You will also be asked a few questions about yourself which will help me to develop the questionnaire. In four weeks time you will be asked some of the same questions again.

All information will be confidential, that is there will be no names on the questionnaires. At anytime you can ask that your answers are not used in the project. Participation in this study is entirely voluntary, and you are free to refuse to take part or to withdraw from this study at any time without having to give a reason.

If you have any questions you can contact me:

**Professor William R. Lindsay
Clinical Psychology Department
1 Edward Street
Dundee DD1 5NS**

Appendix 2

Participant Consent Form

Have you had the project information sheet read out to you? Yes/No

Have you been able to ask questions about the project? Yes/No

Have you had satisfactory answers to all your questions? Yes/No

Have you had enough information about the project? Yes/No

Do you understand that taking part in the project is voluntary
(you decided if you want to, you can say no?) Yes/No

Do you understand that if you say yes, you can change your mind?

-at any time Yes/No

-and you do not have to have a reason for changing your mind Yes/No

-and this won't affect your right to have medical and/or
psychological help in the future Yes/No

I agree to take part in the project

Signature.....

Date.....

Appendix 3

Questionnaire on Attitudes Consistent with Sex Offences – Version 1

Name: _____

Date: _____

Tester: _____

Other information: _____

Topic One: Rape and attitudes to women

Directions:

1. Ask the question.
2. If the response is inappropriate or not full enough (must include words or variants of the words that are underlined) then give the answer below and repeat the question – continue in this manner until you are given an appropriate response.

Question:

- “What does it mean to rape a woman?”

Appropriate response:

- When someone is forced by another person to have sexual intercourse (sex).
- If responds by saying – when a man forces (makes) a woman to have sex with him or when a man makes a woman have sex even when she says no. If says no then say that they can and repeat the original question to be answered in full.

No	Question	Scoring					
		Yes	DK	No	Yes	DK	No
1a	Is it possible for any woman to be raped?				2	1	0
b	Is it only women who wear tight clothes that can be raped?	2	1	0			
c	Could a woman wearing her Sunday best clothes be raped?	2	1	0			
2a	Do you think that women who go around braless or in tight clothes want to have sex?	2	1	0			
b	Is she asking for it?	2	1	0			

		Yes	DK	No	Yes	DK	No
3a	Do you think that a woman can stop a man from raping her if she wanted to?	2	1	0			
b	Could a woman stop a man from raping her by shouting or fighting him off of her?				2	1	0
c	If the rape goes ahead does that mean that she wants it?	2	1	0			
4a	Are women often partly to blame for the rape taking place?				2	1	0
b	Do some women lead men on?				2	1	0
5a	If a woman gets drunk at a party and has sex with a man there, is she fair game for anyone else?	2	1	0			
b	At a party a man sees a woman going into a bedroom to have sex with another man, would it be okay then for him to force her to have sex?				2	1	0
6	Are women just a load of bitches?	2	1	0			
7a	Can women who have had sex with a lot of men still be raped?	2	1	0			
b	Is she asking for it?	2	1	0			
8	Do women lie about being raped?				2	1	0
9a	Should a man stop touching and kissing a woman when she asks him to, even if he wants to carry on?				2	1	0
b	If a woman lets a man touch and kiss her and then suddenly says she wants him to stop, is it okay for him to keep going?	2	1	0			

		Yes	DK	No	Yes	DK	No
10a	Can you show a woman that you love her by forcing her to have sex with you?	2	1	0			
b	Is it okay to force a woman to have sex?				2	1	0
11	If a man rapes a woman is it just a bit of fun?				2	1	0
12a	Do men rape women to scare or frighten them?				2	1	0
b	Do men rape women to gain power over them?	2	1	0			
13	Do women make too much fuss about sexual assault?	2	1	0			
14	Do you think that if a woman is raped that it would cause her any harm?	2	1	0			
		walks	DK	longer			
15	If a woman was raped do you think that it would take a few weeks or longer to get over it?	2	1	0			
		2	1	0	2	1	0
Total Frequency							
Total Score							

Topic Two: Voyeurism

No	Question	Scoring					
		Yes	DK	No	Yes	DK	No
1	Do women who don't close their curtains when they are in their underwear want people to look at them?				2	1	0
2a	Do women like men to stare at their bodies?				2	1	0
b	Does it make them feel attractive?				2	1	0

		Yes	DK	No	Yes	DK	No
3a	If a woman has a big pair of boobs is it only natural to have a good look?				2	1	0
b	Is it right to have a good look?	2	1	0			
4	If a woman is wearing a short skirt does it mean that she wants men to look up it?	2	1	0			
5	Do some women make up stories about men looking through curtains at them?				2	1	0
6	Is staring at a woman's body a good way of showing her that you find her attractive?	2	1	0			
7	Do men stare at women to scare them?				2	1	0
8	If a man stares at a woman is he just having a bit of fun?	2	1	0			
9a	Is it okay to stare at a woman if you don't touch her?				2	1	0
b	Is there any harm in staring at a woman?	2	1	0			
					Few min	DK	longer
10	If a woman sees a man staring at her do you think that she would only be upset about it for a few minutes or longer?				2	1	0
		2	1	0	2	1	0
Total Frequency							
Total Score							

Topic Three: Exhibitionism

Directions:

1. Ask the question.
2. If the response is inappropriate or not full enough (must include words or variants of the word that are underlined) then give the answer below and repeat the question – continue in this manner until you are given an appropriate response.

Question:

- “What does it mean to flash?”

Appropriate response:

- When a man shows (exposes) his private parts (penis) in public. Accept any appropriate or colloquial wording.

No	Question	Scoring					
		Yes	DK	No	Yes	DK	No
1a	Do you think a woman has to look when a man flashes at her?				2	1	0
b	Could a woman walk away when a man flashes at her?				2	1	0
2a	If a woman looks at a flasher is it her fault?	2	1	0			
b	Is it the man's fault if a woman looks at him when he flashes?	2	1	0			
3a	Do women just pretend to be shocked when they see a penis?	2	1	0			
b	When a man shows his penis to a woman does it really turn her on?	2	1	0			
4a	Do most women laugh about being flashed at?	2	1	0			
b	Do women think that it is a bit of fun?	2	1	0			
5	Is flashing at someone a good way to show women that you want to have sex?	2	1	0			
6a	Do men flash to scare women?	2	1	0			

b	Do men enjoy scaring women by flashing at them?	2	1	0			
7	Do you think that a woman would be harmed by a man flashing at her?	2	1	0			
					Few days	DK	longer
8	Do you think that it would take a woman years or a few days to get over being flashed at?	2	1	0	2	1	0
		2	1	0	2	1	0
Total Frequency							
Total Score							

Topic Four: Dating Abuse

No	Question	Scoring					
		Yes	DK	No	Yes	DK	No
1	Is it okay to kiss in public, on the street?	2	1	0			
2	Do you think a woman should expect a man to try it on on a date?	2	1	0			
3	If you ask a girl out for a date should she know that you want to have sex?	2	1	0			
4	If a girl invites you back to her place for a coffee is she really offering to have sex?	2	1	0			
5a	Do you think it's okay to expect sex on the first date?				2	1	0
b	If you are on the first date is it okay to expect the girl to have sex with you?	2	1	0			
6	If a girl makes out that she does not want to kiss is she playing a game?	2	1	0			
7a	Would a woman think that you found her ugly if you didn't ask her to have sex with you?	2	1	0			

b	If you don't ask a woman to have sex will she think you don't like her?	2	1	0			
8	Do you think a woman would get upset if her boyfriend kept trying to encourage her to have sex even though she has already said no?				2	1	0
		2	1	0	2	1	0
Total Frequency							
Total Score							

Topic Five: Homosexual assault

Directions:

1. Ask the question.
2. If the response is inappropriate or not full enough (must include word or variants of the words that are underlined) then give the answer below and repeat the question – continue in this manner until you are given an appropriate response.

Question:

- “What does it mean to be homosexual / gay?”

Appropriate response:

- When a man or woman is sexually attracted to members of the same sex. Also accept – when a man is attracted or has sex with another man.

Question:

- What would it mean to rape a man?

Appropriate response:

- When a man forces (makes) another man to have sex with him.

No	Question	Scoring					
		Yes	DK	No	Yes	DK	No
1	Is it okay for men to have sex together?				2	1	0
2	If a man approached you for sex would you hit him or tell someone?				2	1	0
3	If a man does want to have sex can he be forced to by another man?	2	1	0			
4a	If a man does not try to fight his way out of a rape does he want to have sex?	2	1	0			
b	Could a man stop another man from raping him?				2	1	0

5	Do men just say that they were raped because they are ashamed of being gay?	2	1	0			
6	If a man forced another man to have sex, would that be a good way of showing that he found him attractive?	2	1	0			
7a	Would a man rape another man to scare him?	2	1	0			
b	Would a man rape another man to get power over him?	2	1	0			
8	If a man tries to force another man or boy to have sex is he just having a bit of fun?	2	1	0			
9	If a man is raped by another man does it cause him harm?	2	1	0			
		Few weeks	DK	longer			
10	Would it take a man a few weeks or longer to get over being raped by another man?	2	1	0			
		2	1	0	2	1	0
Total Frequency							
Total Score							

Topic Six: Offences against children

Directions:

1. Ask the question.
2. If the response is inappropriate or not in full enough (must include words or variants of the words that are underlined) then give the answer below and repeat the question – continue in this manner until you are given an appropriate response.

A. Question:

- “What does it mean to masturbate?”

Appropriate response:

- When a person feels sexy (turned on) they may play with their private parts. Also accept – when a man plays with his penis or any other appropriate colloquial response.

B. Question:

- “What does it mean to have a period?”

Appropriate response:

- When girls are between approximately 11 – 13 years of age, each month blood from their womb comes out through their vagina (between their legs etc). If does not state age, frequency or where the blood comes from then ask. If unable to answer then give the correct answer and ask the question again.

C. Question:

- “What does it mean to sexually abuse a child?”

Appropriate response:

- When a child is touched or kissed inappropriately; made to have sexual intercourse or any other kind of sex. Accept any of the underlined answers and any other appropriate colloquial response.

No	Question	Scoring					
		Yes	DK	No	Yes	DK	No
1	Do some children enjoy having sex with adults?	2	1	0			
2	Do children make up stories about being sexually abused?	2	1	0			
		Yes	DK	No	Yes	DK	No
3a	Do children lead adults on sexually?	2	1	0			
b	Do children do sexy things so that men will get turned on and want to have sex with them?	2	1	0			
4	Is it wrong to force a child to have sex?				2	1	0
5a	Can children be abused by people they know, as well as strangers?	2	1	0			
b	Can a child be abused by family members like their father, their mother or their uncle?	2	1	0			
6	Can you show you love a child by having sex with them?	2	1	0			
7	Do adults have sex with children to scare them?				2	1	0
8	If a man has sex or masturbates in front of a child is it just a bit of fun?	2	1	0			
9	If a girl is old enough to have periods is she old enough to have sex?	2	1	0			

10a	Can a ten year old decide whether to have sex or not?	2	1	0				
b	If a child was 10 years old would they be able to decide to have sex with a man?				2	1	0	
11a	Do you think sex with children does harm if the adult is gentle?	2	1	0				
b	If the man is gentle would sex cause harm to the child?	2	1	0				
12	Does making a child watch you masturbate do them any harm?	2	1	0				
13a	After a few years would a child get over being sexually abused?	2	1	0				
		few weeks	DK	longer				
b	Would a child ever fully get over being sexually abused or would they be okay in a few weeks or years?	2	1	0				
		2	1	0	2	1	0	
Total Frequency								
Total Score								

Topic Seven: Stalking and sexual harassment

No	Question	Scoring					
		Yes	DK	No	Yes	DK	No
1	Is following a woman a good way to show her you like her?	2	1	0			
2	Do some women make up stories about men following them?	2	1	0			
3a	Do men follow women because they want to scare them?	2	1	0			

b	Do men follow women because they think they have power over them?	2	1	0			
4a	Do some women like men to follow them?	2	1	0			
b	Does it make them feel attractive?	2	1	0			
5	Is it okay to follow women as long as you don't touch them?	2	1	0			
6	Is there any harm in following women?	2	1	0			
7	If a woman is wearing a short skirt and no bra does she want a man to follow her?	2	1	0			
8	Could a woman stop a man from following her if she wanted to?	2	1	0			
9	Is following a woman a good way of showing her you would like to have sex with her?	2	1	0			
10	If a woman is walking around the town is it okay for a man to follow her?	2	1	0			
11	If a man follows a woman is he just having a bit of fun?	2	1	0			
12	If you followed a woman would it turn her on?	2	1	0			
13	Would a woman get upset if she saw a man following her?	2	1	0			
		Days	Dk	weeks longer			
14	If she got upset how long would it take for her to get over it – a couple of days, a few weeks / longer?	2	1	0			
		2	1	0	2	1	0
Total Frequency							
Total Score							

Questionnaire on Attitudes Consistent with Sex Offences – Version 2

Questionnaire on attitudes consistent with sex offences

Age: _____ Education: Number of years at college/university _____

Directions:

Answer the following questions by ticking a box. Tick one box for each question. There is no correct answer.

Topic One: Rape and attitudes to women

No	Questions	Response		
		Yes	Don't know	No
1a	Is it possible for any woman to be raped?			
b	Is it only women who wear tight clothes that can be raped?			
c	Could a woman wearing her Sunday best clothes be raped?			
2a	Do you think that women who go around braless or in tight clothes want to have sex?			
b	Is she asking for it?			
3a	Do you think that a woman can stop a man from raping her if she wanted to?			
b	Could a woman stop a man from raping her by shouting or fighting him off of her?			
c	If the rape goes ahead does that mean that she wants it?			
4 a	Are women often partly to blame for the rape taking place?			
b	Do some women lead mean on?			
5a	If a woman gets drunk at a party and has sex with a man there, is she fair game for anyone else?			
b	At a party a man sees a woman going into a bedroom to have sex with another man, would it be okay then for him to force her to have sex?			
6	Are women just a load of bitches?			
7a	Can women who have had sex with a lot of men still be raped?			
b	Is she asking for it?			
8	Do women lie about being raped?			
9a.	Should a man stop touching and kissing a woman when she asks him to, even if he wants to carry on?			
b	If a woman lets a man touch and kiss her and then suddenly says she wants him to stop, is it okay for him to keep going?			
10a	Can you show a woman that you love her by forcing her to have sex with you?			
b	Is it okay to force a woman to have sex?			
11	If a man rapes a woman is it just a bit of fun?			
12a	Do men rape women to scare or frighten them?			
b	Do men rape women to gain power over them?			
13	Do women make too much fuss about sexual assault?			
14	Do you think that if a woman is raped that it would cause her any harm?			

15	If a woman was raped do you think that it would take a few weeks or longer to get over it?	Weeks	Don't know	Longer

Topic Two: Voyeurism

No	Questions	Response		
		Yes	Don't know	No
1	Do women who don't close their curtains when they are in their underwear want people to look at them?			
2a	Do women like men to stare at their bodies?			
b	Does it make them feel attractive?			
3a	If a woman has a big pair of boobs is it only natural to have a good look?			
b	Is it right to have a good look?			
4	If a woman is wearing a short skirt does it mean that she wants men to look up it?			
5	Do some women make up stories about men looking through curtains at them?			
6	Is staring at a woman's body a good way of showing her that you find her attractive?			
7	Do men stare at women to scare them?			
8	If a man stares at a woman is he just having a bit of fun?			
9a	Is it okay to stare at a woman if you don't touch her?			
b	Is there any harm in staring at a woman?			
10	If a woman sees a man staring at her do you think that she would only be upset about it for a few minutes or longer?	Few minutes	Don't know	Longer

Topic Three: Exhibitionism

No	Questions	Response		
		Yes	Don't know	No
1a	Do you think a woman has to look when a man flashes at her?			
b	Could a woman walk away when a man flashes at her?			
2a	If a woman looks at a flasher is it her fault?			
b	Is it the man's fault if a woman looks at him when he flashes?			
3a	Do women just pretend to be shocked when they see a penis?			
b	When a man shows his penis to a woman does it really turn her on?			
4a	Do most women laugh about being flashed at?			
b	Do women think that it is a bit of fun?			
5	Is flashing at someone a good way to show women that you want to have sex?			
6a	Do men flash to scare women?			
b	Do men enjoy scaring women by flashing at them?			

7	Do you think that a woman would be harmed by a man flashing at her?			
8	Do you think that it would take a woman years or a few days to get over being flashed at?	Few days	Don't know	Years

Topic Four: Dating abuse

No	Questions	Response		
		Yes	Don't know	No
1	Is it okay to kiss in public, on the street?			
2	Do you think a woman should expect a man to try it on on a date?			
3	If you ask a girl out for a date should she know that you want to have sex?			
4	If a girl invites you back to her place for a coffee is she really offering to have sex?			
5a	Do you think it's okay to expect sex on the first date?			
b	If you are on the first date is it okay to expect the girl to have sex with you?			
6	If a girl makes out that she does not want to kiss is she playing a game?			
7a	Would a woman think that you found her ugly, if you didn't ask her to have sex with you?			
b	If you don't ask a woman to have sex will she think you don't like her?			
8	Do you think a woman would get upset if her boyfriend kept trying to encourage her to have sex even though she has already said no?			

Topic Five: Homosexual assault

No	Questions	Response		
		Yes	Don't know	No
1	Is it okay for men to have sex together?			
		Tell him you're not gay	Don't know	Hit him
2	If a man approached you for sex would you hit him or tell him you are not gay?			
		Yes	Don't know	No
3	If a man does not want to have sex can he be forced to by another man?			
4a	If a man does not try to fight his way out of a rape does he want to have sex?			
b	Could a man stop another man from raping him?			
5	Do men just say that they were raped because they are ashamed of being gay?			
6	If a man forced another man to have sex, would this be a good way of showing him that he found him attractive?			
7a	Would a man rape another man to scare him?			
b	Would a man rape another man to get power over him?			
8	If a man tries to force another man or boy to have sex is he just having a bit of fun?			

9	If a man is raped by another man, does it cause him harm?			
10	Would it take a man a few weeks or longer to get over being raped by another man?	Few weeks	Don't know	Longer

Topic Six: Offences against children

No	Questions	Response		
		Yes	Don't know	No
1	Do some children enjoy having sex with men?			
2	Do some children make up stories about being sexually abused?			
3a	Do children lead men on sexually?			
b	Do children do sexy things so that men will get turned on and want to have sex with them?			
4	Is it wrong to force a child to have sex?			
5a	Can children be abused by people they know, as well as strangers?			
b	Can a child be abused by family members like their father, their mother or their uncle?			
6	Can you show you love a child by having sex with them?			
7	Do men have sex with children to scare them?			
8	If a man has sex or masturbates in front of a child is it just a bit of fun?			
9	If a girl is old enough to have periods is she old enough to have sex?			
10a	Can a ten year old decide whether to have sex or not?			
b	If a child was 10 years old would they be able to decide to have sex with a man?			
11a	Do you think sex with children does harm if the adult is gentle?			
b	If the man is gentle would sex cause harm to the child?			
12	Does making a child watch you masturbate do them any harm?			
13a	After a few years would a child get over being sexually abused?			
b	Would a child ever fully get over being sexually abused or would they be okay in a few weeks or years?	Few weeks/ years	Don't know	No

Topic Seven: Stalking and sexual harassment

No	Questions	Response		
		Yes	Don't know	No
1	Is following a woman a good way of showing her you like her?			
2	Do some women make up stories about men following them?			
3a	Do men follow women because they want to scare them?			

b	Do men follow women because they think they have power over them?			
4a	Do some women like men to follow them?			
b	Does it make them feel attractive?			
5	Is it okay to follow women as long as you don't touch them?			
		Yes	Don't know	No
6	Is there any harm in following women?			
7	If a woman is wearing a short skirt and no bra does she want a man to follow her?			
8	Could a woman stop a man from following her if she wanted to?			
9	Is following a woman a good way of showing her you would like to have sex with her?			
10	If a woman is walking around the town is it okay for a man to follow her?			
11	If a man follows a woman is he just having a bit of fun?			
12	If you followed a woman would it turn her on?			
13	Would a woman get upset if she saw a man following her?			
		Couple of days	Don't know	Few weeks/ longer
14	If she got upset how long would it take for her to get over it – a couple of days, a few weeks / longer?			

Questionnaire on Attitudes Consistent with Sex Offences – A, B and C Items

Name: _____
 Date: _____
 Tester: _____
 Date of second assessment: _____
 Other information: _____

Topic One: Rape and attitudes to women

Directions:

3. Ask the question.
4. If the response is inappropriate or not full enough (must include words or variants of the words that are underlined) then give the answer below and repeat the question – continue in this manner until you are given an appropriate response.

Question:

- “What does it mean to rape a woman?”

Appropriate response:

- When someone is forced by another person to have sexual intercourse (sex).
- If responds by saying – when a man forces (makes) a woman to have sex with him or when a man makes a woman have sex even when she says no. If says no then say that they can and repeat the original question to be answered in full.

No	Question	Scoring	
		A Items	
		Yes	No
1.	Is it only women who wear tight clothes that can be raped?	1	0
2.	Could a woman wearing her Sunday best clothes be raped?	0	1
3.	If the rape goes ahead does that mean that she wants it?	1	0
4.	Are women often partly to blame for the rape taking place?	1	0
5.	At a party a man sees a woman going into a bedroom to have sex with another man, would it be okay then for him to force her to have sex?	1	0
6.	Are women just a load of bitches?	1	0

No	Question	Scoring	
		A Items	
		Yes	No
7.	Can you show a woman that you love her by forcing her to have sex with you?	1	0
8.	If a man rapes a woman is it just a bit of fun?	1	0
9.	Do women make too much fuss about sexual assault?	1	0
10.	Do you think that if a woman is raped that it would cause her any harm?	0	1
11.	If a woman was raped do you think that it would take a few weeks or longer to get over it?	weeks	longer
		1	0

Total Score for A Items in Topic One	
---	--

No	Question	Scoring	
		B Items	
		Yes	No
1.	Do you think that women who go around braless or in tight clothes want to have sex?	1	0
2.	Can women who have had sex with a lot of men still be raped?	0	1
3.	Should a man stop touching and kissing a woman when she asks him to, even if he wants to carry on?	0	1
4.	If a woman lets a man touch and kiss her and then suddenly says she wants him to stop, is it okay for him to keep going?	1	0
5.	Do men rape women to scare or frighten them?	0	1
6.	Do men rape women to gain power over them?	0	1

Total Score for B Items in Topic One	
---	--

No	Question	Scoring	
		C Items	
		Yes	No
1.	Is it possible for any woman to be raped?	0	1
2.	If a woman goes around braless or in tight clothes, is she asking to be raped?	1	0
3.	Do you think that a woman can stop a man from raping her if she wanted to?	1	0
4.	Could a woman stop a man from raping her by shouting or fighting him off of her?	1	0
5.	If a woman gets drunk at a party and has sex with a man there, is she fair game for anyone else?	1	0
6.	If a woman has had sex with a lot of men, is she asking to be raped?	1	0
7.	Do women lie about being raped?	1	0
8.	Is it okay to force a woman to have sex?	1	0

Topic Two: Voyeurism

No	Question	Scoring	
		A Items	
		Yes	No
1.	Do women who don't close their curtains when they are in their underwear want people to look at them?	1	0
2.	Do women like men to stare at their bodies?	1	0
3.	If a woman has a big pair of boobs is it alright to have a good look?	1	0
4.	If a woman is wearing a short skirt does it mean that she wants men to look up it?	1	0

No	Question	Scoring	
		A Items	
5.	Is staring at a woman's body a good way of showing her that you find her attractive?	1	0
6.	If a man stares at a woman is he just having a bit of fun?	1	0
7.	Is it okay to stare at a woman if you don't touch her?	1	0
8.	If a woman sees a man staring at her do you think that she would be upset about it for a few minutes or longer?	1	0

Total Score for A Items in Topic Two	
---	--

No	Question	Scoring	
		B Items	
		Yes	No
1.	Do men stare at women to scare them?	0	1

Total Score for B Items in Topic Two	
---	--

No	Question	Scoring	
		C Items	
		Yes	No
1.	Do women feel attractive when men stare at their bodies?	1	0

Topic Three: Exhibitionism

Directions:

3. Ask the question.
4. If the response is inappropriate or not full enough (must include words or variants of the word that are underlined) then give the answer below and repeat the question – continue in this manner until you are given an appropriate response.

Question:

- “What does it mean to flash?”

Appropriate response:

- When a man shows (exposes) his private parts (penis) in public. Accept any appropriate or colloquial wording.

No	Question	Scoring	
		A Items	
		Yes	No
1.	Do women just pretend to be shocked when they see a penis?	1	0
2.	When a man shows his penis to a woman does it really turn her on?	1	0
3.	Do most women laugh about being flashed at?	1	0
4.	Do women think that it is just a bit of fun to be flashed at?	1	0
5.	Is flashing at someone a good way to show women that you want to have sex?	1	0

Total Score for A Items in Topic Three	
---	--

No	Question	Scoring	
		B Items	
		Yes	No
1.	If a woman looks at a flasher is it her fault?	1	0
2.	Do men flash to scare women?	0	1
3.	Do men enjoy scaring women by flashing at them?	0	1
4.	Do you think that a woman would be harmed by a man flashing at her?	0	1

Total Score for B Items in Topic Three	
---	--

No	Question	Scoring	
		C Items	
		Yes	No
1.	Is it the man's fault if a woman looks at him when he flashes?	0	1
2.	Do you think that it would take a woman years or a few days to get over being flashed at?	Few days 1	Longer 0

Topic Four: Dating Abuse

No	Question	Scoring	
		A Items	
		Yes	No
1.	Do you think a woman should expect a man to try it on on a date?	1	0
2.	If you ask a girl out for a date should she know that you want to have sex?	1	0
3.	If a girl invites you back to her place for coffee is she really offering to have sex?	1	0
4.	Do you think it's okay to expect sex on the first date?	1	0
5.	If the girl makes out that she does not want to kiss is she playing a game?	1	0
6.	Would a woman think that you found her ugly if you didn't ask her to have sex with you?	1	0
7.	If you don't ask a woman to have sex will she think you don't like her?	1	0
8.	Do you think a woman would get upset if her boyfriend kept trying to encourage her to have sex even though she has already said no?	0	1

Total Score for A Items in Topic Four	
--	--

No	Question	Scoring	
		B Items	
		Yes	No
1.	Is it okay to kiss in public, on the street?	0	1

Total Score for B Items in Topic Four	
--	--

No	Question	Scoring	
		C Items	
		Yes	No
1.	If you are on the first date is it okay to expect the girl to have sex with you?	1	0

Topic Five: Homosexual assault

Directions:

3. Ask the question.
4. If the response is inappropriate or not full enough (must include word or variants of the words that are underlined) then give the answer below and repeat the question – continue in this manner until you are given an appropriate response.

Question:

- “What does it mean to be homosexual / gay?”

Appropriate response:

- When a man or woman is sexually attracted to members of the same sex. Also accept – when a man is attracted or has sex with another man.

Question:

- What would it mean to rape a man?

Appropriate response:

- When a man forces (makes) another man to have sex with him.

No	Question	Scoring	
		A Items	
		Yes	No
1.	Would a man rape another man to scare him?	0	1
2.	Would a man rape another man to get power over him?	0	1
3.	If a man is raped by another man does it cause him harm?	0	1
4.	Would it take a man a few weeks or longer to get over being raped by another man?	Few weeks 1	Longer 0

Total Score for A Items in Topic Five	
--	--

No	Question	Scoring	
		B Items	
		Yes	No
1.	Is it okay for men to have sex together?	0	1
2.	Do men just say that they were raped because they are ashamed of being gay?	1	0
3.	If a man forced another man to have sex, would this be a good way of showing him that he found him attractive?	1	0
4.	If a man tried to force another man or boy to have sex is he just having a bit of fun?	1	0

Total Score for B Items in Topic Five	
--	--

No	Question	Scoring	
		C Items	
		Tell him you're not gay	Hit him
1.	If a man approached you for sex would you hit him or tell him you are not gay?	0	1
2.	If a man does not want to have sex can he be forced to by another man?	Yes 0	No 1
3.	If a man does not try to fight his way out of a rape does he want to have sex?	1	0
4.	Could a man stop another man from raping him?	1	0

Topic Six: Offences against children

Directions:

3. Ask the question.
4. If the response is inappropriate or not in full enough (must include words or variants of the words that are underlined) then give the answer below and repeat the question – continue in this manner until you are given an appropriate response.

A. Question:

- “What does it mean to masturbate?”

Appropriate response:

- When a person feels sexy (turned on) they may play with their private parts. Also accept – when a man plays with his penis or any other appropriate colloquial response.

B. Question:

- “What does it mean to have a period?”

Appropriate response:

- When girls are between approximately 11 – 13 years of age, each month blood from their womb comes out through their vagina (between their legs etc). If does not state age, frequency or where the blood comes from then ask. If unable to answer then give the correct answer and ask the question again.

C. Question:

- “What does it mean to sexually abuse a child?”

Appropriate response:

- When a child is touched or kissed inappropriately; made to have sexual intercourse or any other kind of sex. Accept any of the underlined answers and any other appropriate colloquial response.

No	Question	Scoring	
		Yes	No
1.	Do some children enjoy having sex with men?	1	0
2.	Do children lead men on sexually?	1	0
3.	Do children do sexy things so that men will get turned on and want to have sex with them?	1	0
4.	Can children be abused by people they know, as well as strangers?	0	1
5.	Can a child be abused by family members like their father, their mother or their uncle?	0	1
6.	Can you show you love a child by having sex with them?	1	0
7.	If a man has sex or masturbates in front of a child is it just a bit of fun?	1	0
8.	If a girl is old enough to have periods is she old enough to have sex?	1	0
9.	Do you think sex with children does them harm if the adult is gentle?	0	1

No	Question	Scoring	
		A Items	
		Yes	No
10.	Does making a child watch you masturbate do them any harm?	0	1
11.	After a few years would a child get over being sexually abused?	1	0
12.	Would a child ever fully get over being sexually abused or would they be okay in a few weeks or years?	Few weeks/years	1
		1	0

Total Score for Items A in Topic Six	
---	--

No	Question	Scoring	
		B Items	
		Yes	No
1.	Do some children make up stories about being sexually abused?	1	0
2.	Do men have sex with children to scare them?	0	1
3.	Can a ten year old decide whether to have sex or not?	1	0

Total Score for Items B in Topic Six	
---	--

No	Question	Scoring	
		C Items	
		Yes	No
1.	Is it wrong to force a child to have sex?	0	1
2.	If a child was 10 years old would they be able to decide to have sex with a man?	1	0
3.	If a man is gentle would sex cause harm to the child?	0	1

Topic Seven: Stalking and sexual harassment

No	Question	Scoring	
		A Items	
		Yes	No
1.	Is following a woman a good way of showing her you like her?	1	0
2.	Do men follow women because they want to scare them?	0	1
3.	Do some women like men to follow them?	1	0
4.	Does it make women feel attractive if men follow them?	1	0
5.	Is there any harm in following women?	0	1
6.	If a woman is wearing a short skirt and no bra does she want a man to follow her?	1	0
7.	Is following a woman a good way of showing her you would like to have sex with her?	1	0
8.	If a woman is walking around the town is it okay for a man to follow her?	1	0
9.	If a man follows a woman is he just having a bit of fun?	1	0
10.	If you followed a women would it turn her on?	1	0

Total Score for A Items in Topic Seven	
---	--

No	Question	Scoring	
		B Items	
		Yes	No
1.	Do men follow women because they think they have power over them?	0	1

Total Score for B Items in Topic Seven	
---	--

No	Question	Scoring	
		C Items	
		Yes	No
1.	Do some women make up stories about men following them?	1	0
2.	Is it okay to follow women as long as you don't touch them?	1	0
3.	Could a woman stop a man from following her if she wanted to?	1	0
4.	Would a woman get upset if she saw a man following her?	0	1
5.	If a woman got upset because a man followed her, how long would it take her to get over it – a couple of days, few weeks / longer?	Couple of days	Few weeks/ longer
		1	0

Topic Eight: Social Desirability

No	Question	Scoring	
		Yes	No
1.	Do some women lead men on?	1	0
2.	If a woman has a big pair of boobs is it only natural to have a good look?	1	0
3.	Do some women make up stories about men looking through curtains at them?	1	0
4.	Do you think a woman has to look when a man flashes at her?	0	1
5.	Could a woman walk away when a man flashes at her?	1	0

Total Score for Social desirability	
--	--

Appendix 4**Formula to calculate Flesch Reading Ease score**

The formula stated by Flesch (1948) reads:

$$\text{R.E. (reading ease)} = 206.835 - (1.015 \times \text{ASL}) - (84.6 \times \text{ASW})$$

(Where ASL = average sentence length i.e. the number of words divided by the number of sentences. ASW = average number of syllables per word i.e. the number of syllables divided by the number of words).

Appendix 5

Formula to calculate Flesch-Kincaid Reading scale

The formula stated by Flesch (1948) reads:

$$(0.39 \times \text{ASL}) = (11.8 \times \text{ASW}) - 15.59$$

(Where ASL = average sentence length i.e. the number of words divided by the number of sentences. ASW = average number of syllables per word i.e. the number of syllables divided by the number of words).

Appendix 6

Information Sheet for Studies Two, Three, Four, Five and Six

Participant Information Sheet for Non-Offenders with Learning Disabilities

(Read by or to control participants with mild learning disabilities who have not sexually offended or not offended at all).

I am conducting a project to try to understand how men who have sexually offended pay attention when asked to complete visual or auditory tasks. I need to ask men like yourself, who have not sexually offended, to get an idea of how normal males pay attention to these tasks.

The main aim of this project is to identify whether sexual offenders attend to tasks differently from non-offenders. Better understanding of sexual offenders' attentional abilities will help people who have sexually offended.

If you decide to take part in the project, you will be asked to complete four visual tasks and one auditory task. There will be a gap of at least one month between each task.

All information will be confidential, that is there will be no names on the auditory or visual tasks. At anytime you can ask that your responses to the tasks not be used in the project. Participation in this study is entirely voluntary, and you are free to refuse to take part or to withdraw from this study at any time without having to give a reason.

If you have any questions you can contact me:

Elaine Whitefield
Clinical Psychology Department
1 Edward Street
Dundee DD1 5NS

Participant Information Sheet for Sexual Offenders with Learning Disabilities

(Read by or to participants with mild learning disabilities who have sexually offended).

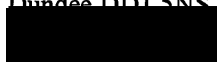
This project aims to develop an understanding of the attentional abilities of sexual offenders. The main aim of this project is to identify how you pay attention to visual and auditory tasks. Better understanding of how you pay attention to tasks might help us understand why you offend and to develop suitable treatments to help you.

If you decide to take part in the project, you will be asked to complete four visual tasks and one auditory task. There will be a gap of at least one month between each task.

All information will be confidential, that is there will be no names on the auditory or visual tasks. At anytime you can ask that your responses to the tasks not be used in the project. Participation in this study is entirely voluntary, and you are free to refuse to take part or to withdraw from this study at any time without having to give a reason.

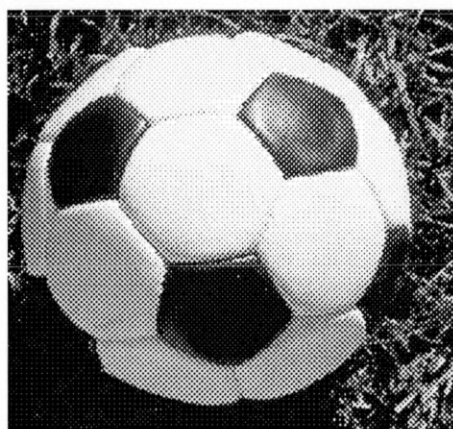
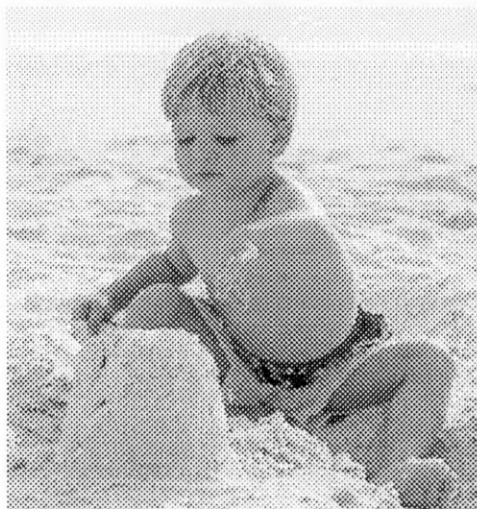
If you have any questions you can contact me:

Elaine Whitefield
Clinical Psychology Department
1 Edward Street
Dundee, DD1 5NS



Appendix 7

Sample of Pictures for Pilot Study and Studies Two and Three



Appendix 8

Divided Attention Stimulus

```

      AAAA
     AA  AA
    AA   AA
   AA    AA
  AAAAAAAAAA
  AAAAAAAAAA
 AA      AA
 AA      AA
 AA      AA
 AA      AA
  
```

1

```

    XX      XX
   XX      XX
  XX       XX
 XX        XX
  XXXX
  XXXX
   XX   XX
  XX    XX
 XX     XX
 XX      XX
  
```

2

```

      HHHH
     HH  HH
    HH   HH
   HH    HH
  HHHHHHHHHHHH
  HHHHHHHHHHHH
 HH      HH
 HH      HH
 HH      HH
 HH      HH
  
```

3

```

    KK      KK
   KK      KK
  KK       KK
 KK        KK
  KKKK
  KKKK
   KK   KK
  KK    KK
 KK     KK
 KK      KK
  
```

4

```

    AA      AA
   AA      AA
  AA       AA
 AA        AA
 AAAAAAAAAA
 AAAAAAAAAA
 AA      AA
 AA      AA
 AA      AA
 AA      AA
  
```

5

```

    XX      XXX
   XX      XXX
  XX       XXX
 XX        XXX
  XXXX
  XXXX
   XX   XXX
  XX    XXX
 XX     XXX
 XX      XXX
  
```

6

Stimulus 1, 3 and 5 are target present trials and stimulus 2, 4 and 6 are target absent trials.

Selective Attention Stimulus

```

HH      HH
HH      HH
HH      HH
HH      HH
HHHHHHHHHHHH
HHHHHHHHHHHH
HH      HH
HH      HH
HH      HH
HH      HH
    
```

```

      SSSS
     SS  SS
    SS   SSS
     SSS
      SSS
       SSS
        SSS
       SSS  SS
      SS   SS
       SSSS
    
```

```

SS      SS
SS      SS
SS      SS
SS      SS
SSSSSSSSSS
SSSSSSSSSS
SS      SS
SS      SS
SS      SS
SS      SS
    
```

```

      HHHH
     HH  HH
    HH   HHH
     HHH
      HHH
       HHH
        HHH
       HH  HH
      HH   HH
       HHHH
    
```

```

HH      HH
HH      HH
  HH    HH
   HH   HH
    HHHH
   HHHH
  HH    HH
  HH    HH
  HH    HH
  HH    HH
    
```

```

SS      SS
SS      SS
SS      SS
  SS    SS
   SSSS
  SSSS
  SS    SS
  SS    SS
  SS    SS
  SS    SS
    
```

```

XX      XX
XX      XX
XX      XX
XX      XX
XXXXXXXXXXXX
XXXXXXXXXXXX
XX      XX
XX      XX
XX      XX
XX      XX
XX      XX
    
```

```

      XXXX
     XX  XX
    XX   XXX
     XXX
      XXX
       XXX
        XXX
       XX  XX
      XXX  XX
       XX  XX
        XXXX
    
```

Appendix - 9

Diagram of valid trial in attentional bias task

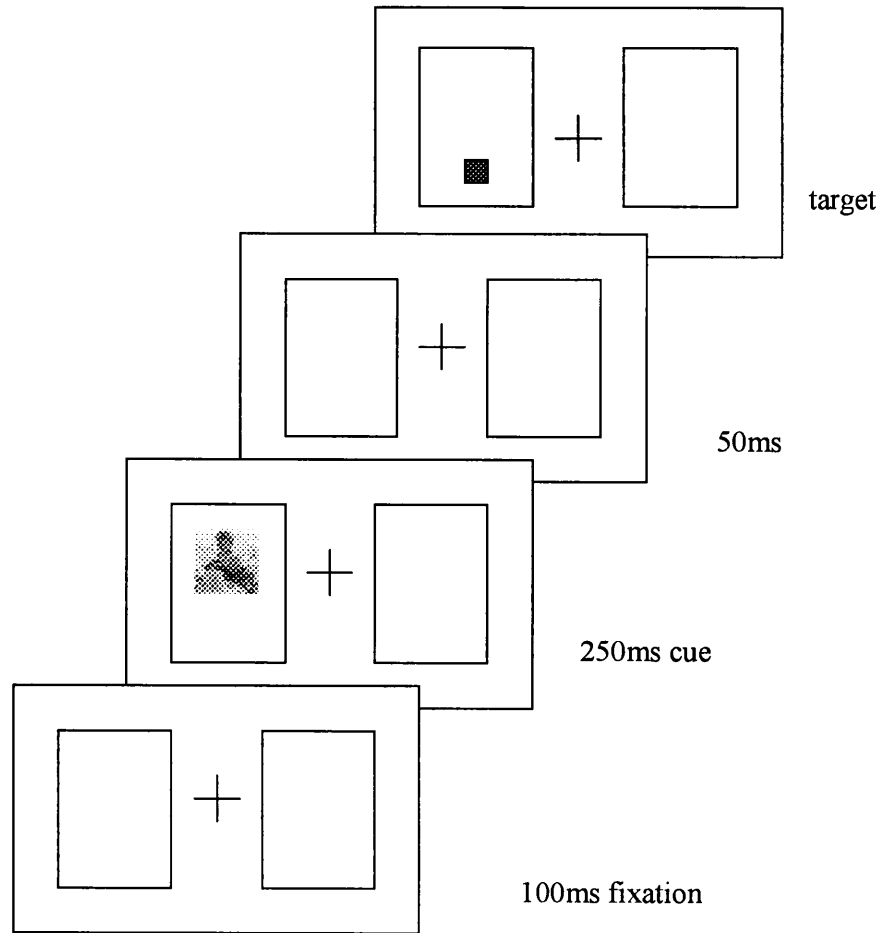
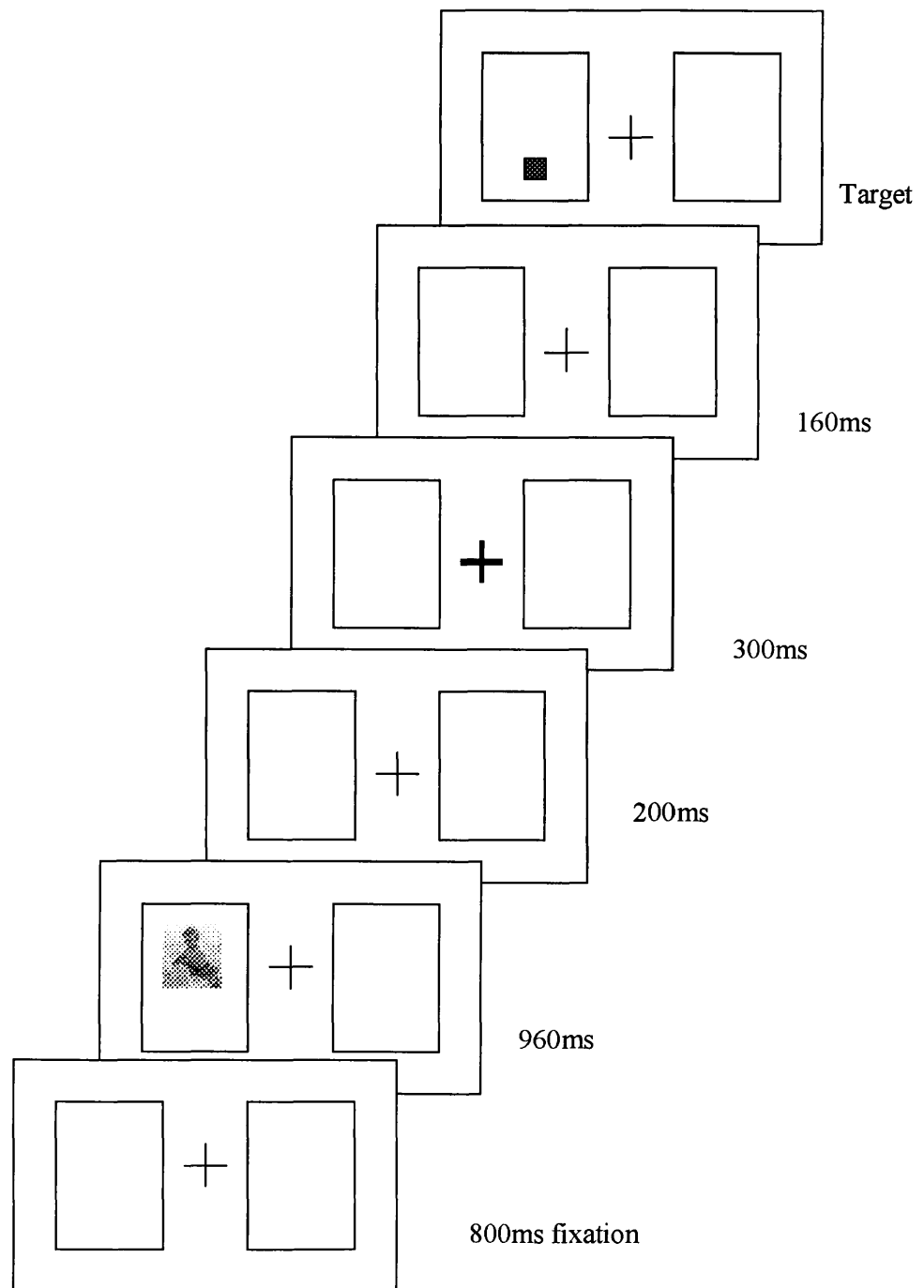


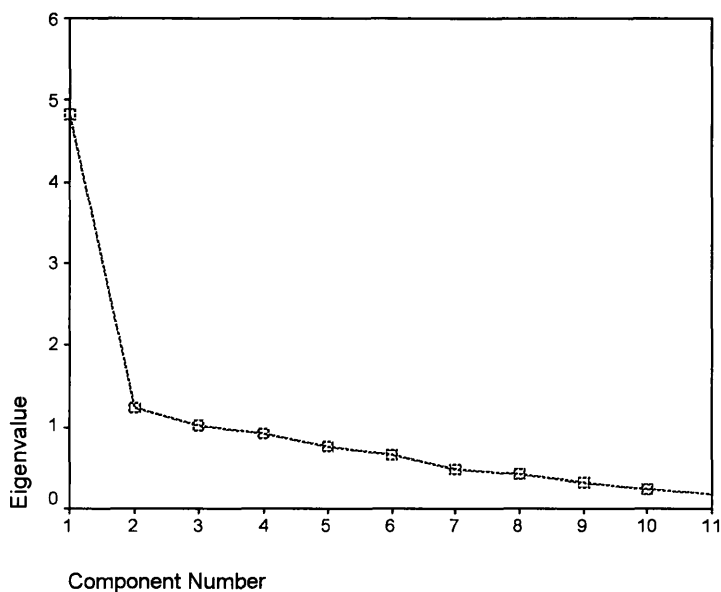
Diagram of valid trial in inhibition of return task



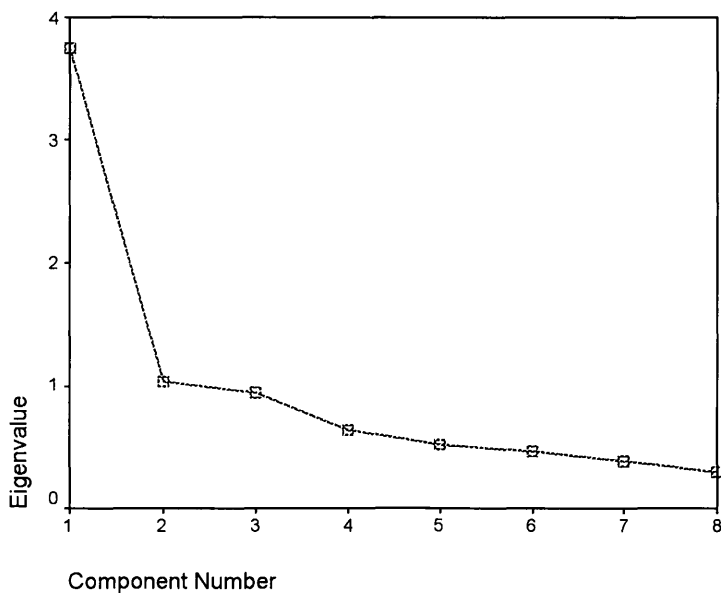
Appendix 10

Scree Plot for Each Subsection of the QACSO

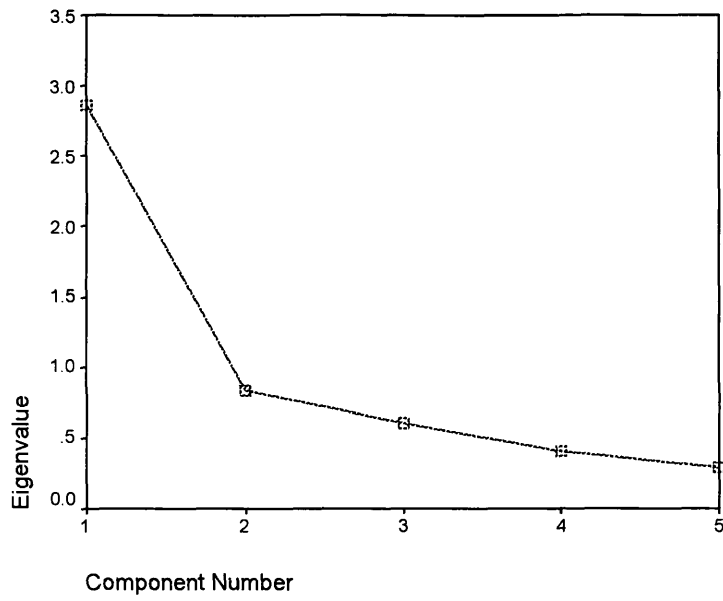
Scree Plot for Rape and Attitudes to Women Subsection



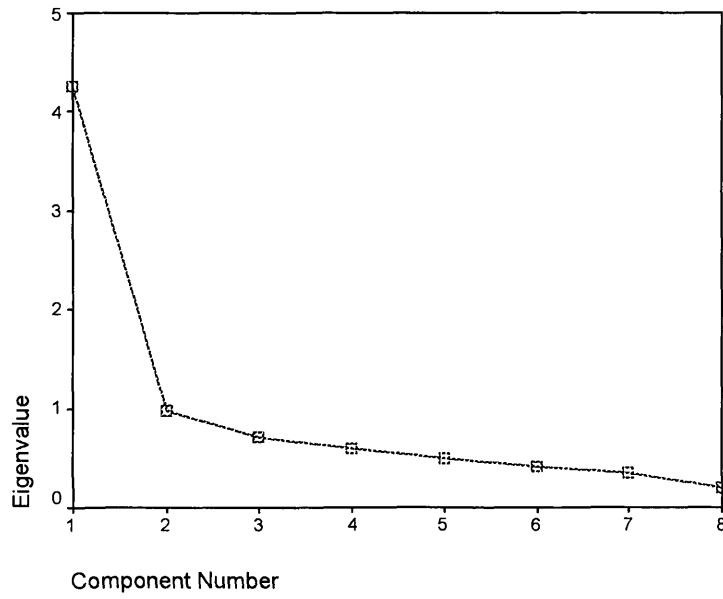
Scree Plot for Voyeurism Subsection



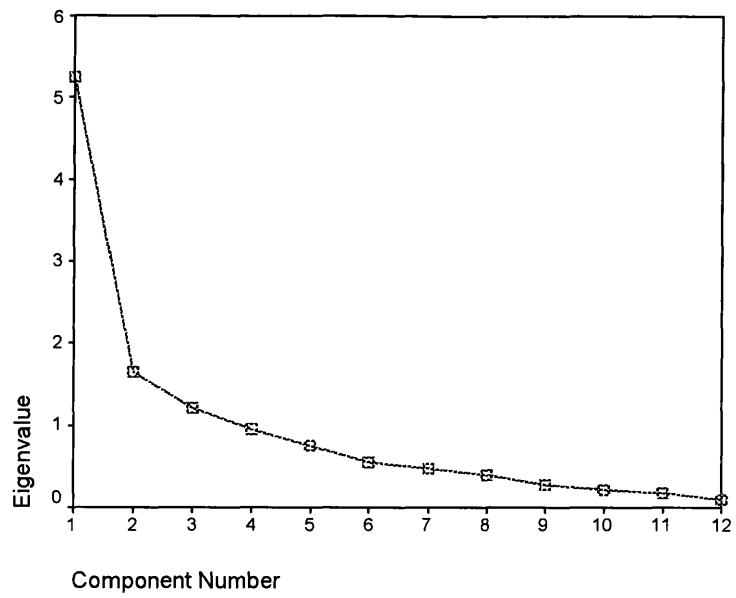
Scree Plot for Exhibitionism Subsection



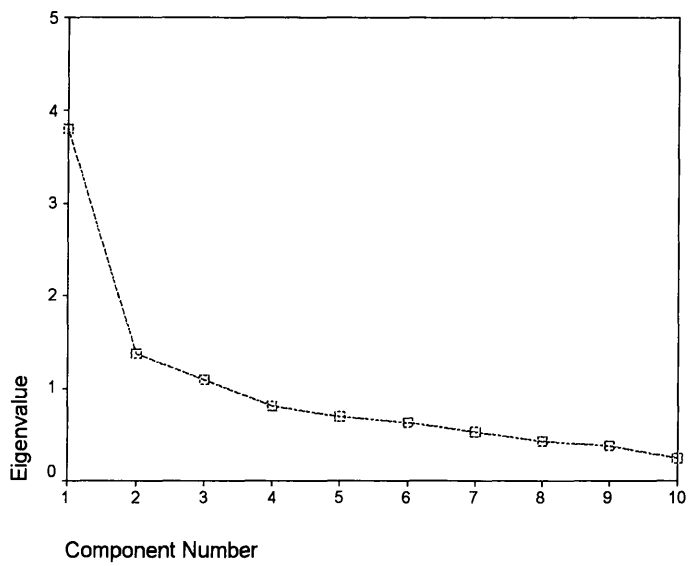
Scree Plot for Dating Abuse Subsection



Scree Plot for Offences Against Children Subsection



Scree Plot for Stalking and Sexual Harassment



Appendix 11

Full Factor Matrix Loading for Each Subsection of the QACSO

Full Matrix of Factor Loading for Rape and Attitude to Women Subsection

Scale Item	Factor		
	1	2	3
Is it only women who wear tight clothes that can be raped?	2.672-E02	0.655	0.352
Could a women wearing her Sunday best clothes be raped?	0.165	0.794	-3.69E-02
If the rape goes ahead does that mean she wants it?	0.441	0.561	0.509
Are women often partly to blame for the rape taking place?	0.125	0.639	0.176
At a party a man sees a woman going into a bedroom to have sex with another man, would it be okay then for him to force her to have sex?	0.797	8.360E-02	0.284
Are women just a load of bitches?	0.374	0.202	0.587
Can you show a woman that you love her by forcing her to have sex with you?	0.805	0.135	8.360E-02
If a man rapes a women is it just a bit of fun?	0.725	0.373	0.246
Do women make to much fuss about sexual assault?	0.415	0.593	0.229
Do you think that if a woman is raped that it would cause her any harm?	-5.47E-02	0.269	0.827
If a woman was raped do you think that it would take a few weeks or longer to get over it?	0.388	3.845E-02	0.687

Full Matrix of Factor Loading for Voyeurism Subsection

Scale Item	Factor	
	1	2
Do women who don't close their curtains when they are in their underwear want people to look at them?	0.675	0.309
Do women like men to stare at their bodies?	0.605	0.373
If a woman has a big pair of boobs is it alright to have a good look?	0.736	0.225
If a woman is wearing a short skirt does it mean that she wants men to look up it?	0.878	-5.84E-02
Is staring at a woman's body a good way of showing her that you find her attractive?	0.698	0.330
If a man stares at a woman is he just having a bit of fun?	0.467	0.420
Is it okay to stare at a woman if you don't touch her?	0.149	0.810
If a woman sees a man staring at her do you think she would be upset about it for a few minutes or longer?	0.201	0.807

Full Matrix of Factor Loading for Exhibitionism Subsection

Scale Item	Factor
	1
Do women just pretend to be shocked when they see a penis?	0.829
When a man shows his penis to a woman does it really turn her on?	0.823
Do most women just laugh about being flashed at?	0.758
Do women think that it is just a bit of fun to be flashed at?	0.864
Is flashing at someone a good way to show women that you want to have sex?	0.693

Full Matrix of Factor Loading for Dating Abuse Subsection

Scale Item	Factor 1
Do you think a woman should expect a man to try it on on a date?	0.726
If you ask w girl out for a date should she know that you want to have sex?	0.769
If a girl invites you back to her place for coffee is she really offering to have sex?	0.738
Do you think it's okay to expect sex on the first date?	0.726
If the girl makes out she does not want to kiss is she playing a game?	0.681
Would a woman think that you found her ugly if you didn't ask her to have sex with you?	0.816
If you don't ask a woman to have sex will she think you don't like her?	0.787
Do you think a woman would get upset if her boyfriend kept trying to encourage her to have sex even though she has already said no?	0.561

Full Matrix of Factor Loading for Offences Against Children Subsection

Scale Item	Factor		
	1	2	3
Do some children enjoy having sex with men?	0.535	0.220	0.385
Do children lead men on sexually?	0.865	0.181	0.117
Do children do sexy things so that men will get turned on and want to have sex with them?	0.870	0.112	8.049E-02
Can children be abused by people they know, as well as strangers?	-6.39E-02	0.853	0.278
Can a child be abused by family members like their father, their mother or their uncle?	1.941E-02	0.807	0.155
Can you show you love a child by having sex with them?	0.694	4.505E-02	0.396
If a man has sex or masturbates in front of a child is it just a bit of fun?	0.468	0.290	0.642
If a girl is old enough to have periods is she old enough to have sex?	0.237	0.263	0.571
Do you think sex with children does them harm if the adult is gentle?	0.303	0.713	0.102
Does making a child watch you masturbate do them any harm?	0.362	0.767	0.234
After a few years would a child get over being sexually abused?	0.102	0.125	0.858
Would a child ever fully get over being sexually abused or would they be okay in a few weeks or years?	0.128	0.168	0.760

Full Matrix of Factor Loading for Stalking and Sexual Harassment Subsection

Scale Item	Factor		
	1	2	3
Is following a woman a good way of showing her you like her?	0.573	0.419	0.237
Do men follow women because they want to scare them?	9.575E-02	7.679E-02	0.821
Do some women like men to follow them?	0.741	-3.35E-02	0.212
Does it make women feel attractive if men follow them?	0.599	0.335	0.187
Is there any harm in following women?	-1.09E-02	0.705	0.402
If a woman is wearing a short skirt and no bra does she want a man to follow her?	0.347	0.276	0.564
Is following a woman a good way of showing her you would like to have sex with her?	0.860	7.182E-02	-7.92E-02
If a woman is walking around the town is it okay to for a man to follow her?	0.704	5.031E-02	0.287
If a man follows a woman is he just having a bit of fun?	0.140	0.857	1.429E-02
If you followed a woman would it turn her on?	0.579	0.447	-0.345

Appendix 12

Source Tables of the Analysis of Variance.

Study 1

Rape and Attitudes to Women Subsection

SOURCE: grand mean

N	MEAN	SD	SE
136	2.5662	2.8381	0.2434

SOURCE:

	N	MEAN	SD	SE
sex offender	41	5.3902	2.7828	0.4346
offender	34	1.2647	1.4628	0.2509
non-offender	30	2.7333	2.1162	0.3864
normal males	31	9.677E-02	0.3005	5.398E-02

FACTOR: groups data
 LEVELS : 4 136
 TYPE : WITHIN DATA

SOURCE	SS	df	MS	F	p
Rape	574.454	3	191.485	49.276	0.001
	512.950	132	3.886		

Voyeurism Subsection

SOURCE: grand mean

N	MEAN	SD	SE
136	3.0515	2.5454	0.2183

SOURCE:

	N	MEAN	SD	SE
sex offender	41	5.5610	2.2589	0.3528
offender	34	2.9412	1.8900	0.3241
non-offender	30	2.2667	1.5742	0.2874
normal males	31	0.6129	0.8032	0.1443

FACTOR: group data
 LEVELS : 4 136
 TYPE : WITHIN DATA

SOURCE	SS	df	MS	F	p
Voyeurism	461.438	3	153.813	49.137	0.001
	413.201	132	3.130		

Exhibitionism Subsection

SOURCE:	grand mean			
	N	MEAN	SD	SE
	136	1.5588	1.7246	.01479

SOURCE:				
	N	MEAN	SD	SE
sex offender	41	3.0976	1.6704	0.2609
offender	34	0.7353	1.0534	0.1807
non-offender	30	1.8333	1.4875	0.2716
normal males	31	0.1613	0.4544	8.161E-02

FACTOR:	group	data
LEVELS :	4	136
TYPE :	WITHIN	DATA

SOURCE	SS	df	MS	F	p
Exhibitionism	182.942	3	60.981	36.825	0.001
	218.588	132	1.656		

Dating Abuse Subsection

SOURCE:	grand mean			
	N	MEAN	SD	SE
	136	2.1765	2.4732	0.2121

SOURCE:				
	N	MEAN	SD	SE
sex offender	41	4.3902	2.6914	0.4203
offender	34	1.2941	1.3823	0.2371
non-offender	30	2.0667	2.0833	0.3804
normal males	31	0.3226	0.6525	0.1172

FACTOR:	group	data
LEVELS :	4	136
TYPE :	WITHIN	DATA

SOURCE	SS	df	MS	F	p
Dating abuse	334.309	3	111.436	29.931	0.001
	491.456	132	3.723		

Homosexual Assault Subsection

SOURCE: grand mean

N	MEAN	SD	SE
136	0.5368	0.9577	8.212E-02

SOURCE:

	N	MEAN	SD	SE
sex offender	41	1.1220	1.2082	0.1887
offender	34	0.1471	0.4357	7.472E-02
non-offender	30	0.6000	1.0034	0.1832
normal males	31	0.1290	0.4275	7.679E-02

FACTOR:

	group	data
LEVELS :	4	136
TYPE :	WITHIN	DATA

SOURCE	SS	df	MS	F	p
Homosexual	24.477	3	8.159	10.842	0.001
	99.339	132	0.753		

Offences Against Children Subsection

SOURCE: grand mean

N	MEAN	SD	SE
136	2.4118	2.9975	0.2570

SOURCE:

	N	MEAN	SD	SE
sex offender	41	5.4634	3.1313	0.4890
offender	34	1.0882	1.7984	0.3084
non-offender	30	2.1667	1.8399	0.3359
normal males	31	6.452E-02	0.2497	4.485E-02

FACTOR:

	group	data
LEVELS :	4	136
TYPE :	WITHIN	DATA

SOURCE	SS	df	MS	F	p
Children	613.973	3	204.658	45.102	0.001
	598.968	132	4.538		

Stalking and Sexual Harassment Subsection

SOURCE: grand mean

N	MEAN	SD	SE
136	2.3897	2.5156	0.2157

SOURCE:

	N	MEAN	SD	SE
sex offender	41	4.6098	2.5187	0.3934
offender	34	1.9118	2.1793	0.3738
non-offender	30	1.9000	1.7879	0.3264
normal males	31	0.4516	0.7676	0.1379

FACTOR: group data
 LEVELS : 4 136
 TYPE : WITHIN DATA

SOURCE	SS	df	MS	F	p
Stalking	333.477	3	111.159	28.170	0.001
	520.869	132	3.946		

Pilot Study.

SOURCE: grand mean

Pictures	N	MEAN	SD	SE
	640	2763.0031	1710.70660	67.62162

SOURCE: pictures

Pictures	N	MEAN	SD	SE
boys	80	2750.8250	2119.19683	236.93341
girls	80	2764.3250	1763.67945	197.18536
objects	320	2770.4188	1679.55682	93.89008
women	160	2753.6000	1524.65431	120.53451

FACTOR: pictures DATA
 LEVELS : 4 640
 TYPE : WITHIN DATA

SOURCE	SS	df	MS	F	p
Pictures	43748.606	3	14582.869	0.005	1.000
within	1.87E+09	636	2940252.6		

Experiment Two.

3X2 Analysis of Variance

SOURCE:				
	Group	N	MEAN	SD
Pictures of people	sex offenders	12	5401.3583	6383.5214
	non-offenders	12	8259.8100	6574.1320
	normal males	12	3324.1083	1593.1867
Pictures of objects	sex offenders	12	4488.0133	4073.1383
	non-offenders	12	8071.1425	6412.1640
	normal males	12	3496.8250	1346.4087

FACTOR:	group	pictures	subjects
LEVELS :	3	2	36
TYPE :	BETWEEN	WITHIN	subjects

SOURCE	SS	df	MS	F	p
Pictures	1727181.5	1	1727181.5	1.291	0.264
error	44163477	33	1338287.2		
Group	1.41E+08	2	70674871	2.986	0.064
error	7.81E+08	33	23668510		
picture*group	3670571.9	2	1835285.9	1.371	0.268
error	44163477	33	1338287.2		

Experiment Three.**2X2 Analysis of Variance**

SOURCE:

	Group	N	MEAN	SD
Pictures of people	sex offenders	10	1993.3934	639.53124
	non-offenders	10	2325.4867	904.44444
Pictures of objects	sex offenders	10	1982.7000	609.87213
	non-offenders	10	2391.5533	1212.1841

FACTOR:	group	pictures	subjects
LEVELS :	2	2	20
TYPE :	BETWEEN	WITHIN	subjects

SOURCE	SS	df	MS	F	p
Pictures	7665.495	1	7665.495	0.067	0.799
error	2073618.3	18	115201.02		
Group	686252.33	1	686252.33	0.967	0.338
error	12770785	18	709488.08		
picture*group	14730.267	1	14730.26	0.128	0.725
error	2073618.3	18	115201.02		

Experiment Four.

2X2 Analysis of Variance

SOURCE:				
	Group	N	MEAN	SD
Video clips of people	sex offenders	10	307.8316	137.5899
	non-offenders	10	444.4228	291.0931
Video clips of objects	sex offenders	10	286.2811	166.8368
	non-offenders	10	416.7089	266.0198

FACTOR:	group	video clips	subjects
LEVELS :	2	2	20
TYPE :	BETWEEN	WITHIN	subjects

SOURCE	SS	df	MS	F	p
Videos	6067.428	1	6067.428	0.720	0.407
error	151583.72	18	8421.318		
Group	89123.960	1	89123.960	1.923	0.183
error	834410.48	18	46356.138		
videos*group	94.971	1	94.971	0.011	0.917
error	151583.72	18	8421.318		

Experiment Five.

2X2X3 Analysis of Variance

SOURCE: Divided Attention Task

	Group	N	MEAN	SD
Trial (A present)				
Condition – compatible	sex offenders	14	1099.2799	426.11147
	non-offenders	14	1543.2055	1391.67191
Condition – incompatible/ local	sex offenders	14	1355.9263	535.65199
	non-offenders	14	2037.1557	2551.35946
Condition – incompatible/ global	sex offenders	14	1590.9529	1540.51793
	non-offenders	14	1767.3698	1540.51791
Trial (A absent)				
Condition – compatible	sex offenders	14	1300.6612	581.00331
	non-offenders	14	1649.7221	1323.85007
Condition – incompatible/ local	sex offenders	14	1241.7392	451.07235
	non-offenders	14	1733.4254	1362.42767
Condition – incompatible/ global	sex offenders	14	1425.5346	459.61356
	non-offenders	14	1790.0744	1465.09810

FACTOR:	group	trial	condition	subjects
LEVELS :	2	2	3	28
TYPE :	BETWEEN	WITHIN	WITHIN	SUBJECTS

SOURCE	SS	df	MS	F	p
Group	7331730.883	1	400805962.5	0.917	0.347
error	207821883.3	26	7993149.357		
Trial	74519.799	1	74519.799	0.187	0.669
error	10386470.05	26	399479.617		
group*trial	10815.944	1	10815.944	0.027	0.871
error	10386470.05	26	399479.617		
Condition	1873668.202	2	936834.101	3.453	0.39
error	14107343.28	52	271295.063		
condition*group	708443.212	2	354221.606	1.306	0.280
error	14107343.28	52	271295.063		
trial*condition	939861.856	2	469930.928	2.137	0.128
error	11433048.27	52	219866.313		
trial*condition*group	270290.376	2	135145.188	0.615	0.545
error	11433048.27	52	219866.313		

Experiment Five (cont).

2X2X3 Analysis of Variance

SOURCE: Divided Attention Error Data

	Group	N	MEAN	SD
Trial (A present)				
Condition – compatible	sex offenders	14	0.2857	0.61125
	non-offenders	14	0.8571	1.83375
Condition – incompatible/ local	sex offenders	14	0.3571	0.84190
	non-offenders	14	1.3571	2.64886
Condition – incompatible/ global	sex offenders	14	0.5714	0.93761
	non-offenders	14	2.0000	2.90087
Trial (A absent)				
Condition – compatible	sex offenders	14	0.2143	0.57893
	non-offenders	14	0.7143	1.58980
Condition – incompatible/ local	sex offenders	14	0.0714	0.26726
	non-offenders	14	0.7143	1.13873
Condition – incompatible/ global	sex offenders	14	0.2143	0.57893
	non-offenders	14	0.5714	1.22250

FACTOR:	group	trial	condition	subjects
LEVELS :	2	2	3	28
TYPE :	BETWEEN	WITHIN	WITHIN	SUBJECTS

SOURCE	SS	df	MS	F	p
Group	23.625	1	23.625	3.479	0.073
error	176.536	26	6.790		
Trial	10.006	1	10.006	9.448	0.005
error	27.536	26	1.059		
group*trial	2.625	1	2.625	2.479	0.127
error	27.536	26	1.059		
Condition	3.000	2	1.500	0.886	0.418
error	88.000	52	1.692		
condition*group	1.000	2	0.500	0.295	0.745
error	88.000	52	1.692		
trial*condition	4.333	2	2.167	1.972	0.149
error	57.143	52	1.099		
trial*condition*group	1.857	2	0.929	0.845	0.435
error	57.143	52	1.099		

Experiment Five (cont).

2X2X3 Analysis of Variance

SOURCE: Selective Attention Task

	Group	N	MEAN	SD
Trial (Small letter)				
Condition – compatible	sex offenders	15	1173.3984	409.33800
	non-offenders	13	2216.3875	1935.87606
Condition – incompatible	sex offenders	15	1520.2997	900.23351
	non-offenders	13	2429.5398	2231.85510
Condition – neutral	sex offenders	15	1278.4763	447.06291
	non-offenders	13	2263.7862	1825.51877
Trial (Large Letter)				
Condition – compatible	sex offenders	15	1296.9270	882.82169
	non-offenders	13	2361.8365	1676.04661
Condition – incompatible	sex offenders	15	1673.1667	994.99447
	non-offenders	13	2482.9087	1880.98033
Condition – neutral	sex offenders	15	1303.8063	666.08969
	non-offenders	13	2582.1354	1887.20409

FACTOR:	group	trial	condition	subjects
LEVELS :	2	2	3	28
TYPE :	BETWEEN	WITHIN	WITHIN	SUBJECTS

SOURCE	SS	df	MS	F	p
Group	43056036.83	1	43056036.834	4.070	0.054
error	275020020.1	26	10577693.083		
Trial	778357.948	1	778357.948	1.499	0.232
error	13500765.48	26	519260.211		
group*trial	53874.583	1	53874.583	0.104	0.750
error	13500765.48	26	519260.211		
Condition	1998113.137	2	999056.569	4.059	0.023
error	12797839.76	52	246112.303		
condition*group	548045.410	2	274022.705	1.113	0.336
error	12797839.76	52	246112.303		
trial*condition	32972.988	2	16486.494	0.088	0.916
error	9794917.350	52	188363.795		
trial*condition*group	281248.855	2	140624.428	0.747	0.479
error	9794917.350	52	188363.795		

Experiment Five (cont).

2X2X3 Analysis of Variance

SOURCE: Selective Attention Error Data

	Group	N	MEAN	SD
Trial (Small Letter)				
Condition – compatible	sex offenders	16	0.5000	1.09545
	non-offenders	16	2.3750	2.87228
Condition – incompatible	sex offenders	16	1.4375	2.33720
	non-offenders	16	2.6875	3.19831
Condition –neutral	sex offenders	16	1.1250	2.18708
	non-offenders	16	2.6875	3.60959
Trial (Large Letter)				
Condition – compatible	sex offenders	16	1.7500	4.13924
	non-offenders	16	2.3750	2.68017
Condition – incompatible	sex offenders	16	4.0625	5.75579
	non-offenders	16	8.3750	5.90903
Condition – neutral	sex offenders	16	2.3750	3.11716
	non-offenders	16	4.8125	3.60035

FACTOR:	group	trial	condition	subjects
LEVELS :	2	2	3	32
TYPE :	BETWEEN	WITHIN	WITHIN	SUBJECTS

SOURCE	SS	df	MS	F	p
Group	194.005	1	194.005	6.251	0.018
error	931.073	30	31.036		
Trial	223.172	1	223.172	11.603	0.002
error	577.031	30	19.234		
group*trial	9.630	1	9.630	0.501	0.485
error	577.031	30	19.234		
Condition	184.510	2	92.255	12.263	0.000
error	451.396	60	7.523		
condition*group	18.760	2	9.380	1.247	0.295
error	451.396	60	7.523		
trial*condition	105.031	2	52.516	7.677	0.001
error	410.438	60	6.841		
trial*condition*group	37.198	2	18.599	2.719	0.074
error	410.4	60	6.841		

Experiment Six.

2X2X2 Analysis of Variance

SOURCE: Attentional Bias

	Group	N	MEAN	SD
Cue Validity (Invalid)				
Pictures – people	sex offenders	15	1081.3460	503.934168
	non-offenders	15	1092.0349	472.641146
Pictures – objects	sex offenders	15	1136.5705	498.083800
	non-offenders	15	1150.9431	488.003770
Cue Validity (Valid)				
Pictures – people	sex offenders	15	1010.8908	459.353793
	non-offenders	15	1066.3588	422.609778
Pictures – objects	sex offenders	15	1063.0247	479.993462
	non-offenders	15	1111.6418	488.226731

FACTOR:	group	cue validity	pictures	subjects
LEVELS :	2	2	2	30
TYPE :	BETWEEN	WITHIN	WITHIN	SUBJECTS

SOURCE	SS	df	MS	F	p
Group	31272.840	1	31272.840	159.331	0.853
error	25013583.98	28	893342.285		
Validity	81885.083	1	81885.083	15.431	0.001
error	148582.097	28	5306.503		
group*validity	11708.860	1	11708.860	2.207	0.149
error	148582.097	28	5306.503		
Pictures	83912.355	1	83913.355	16.237	0.000
error	144702.389	28	5167.942		
pictures*group	18.809	1	18.809	0.004	0.952
error	144702.389	28	5167.942		
validity*pictures	523.903	2	523.903	0.073	0.789
error	144702.389	28	5167.942		
validity*pictures*group	208.088	2	208.088	0.029	0.866
error	144702.389	28	5167.942		

Experiment Six (cont).**2X2X2 Analysis of Variance**

SOURCE: Inhibition of Return

	Group	N	MEAN	SD
Cue Validity (Invalid)				
Pictures – people	sex offenders	15	1240.3715	440.140162
	non-offenders	15	972.24901	307.263076
Pictures – objects	sex offenders	15	1223.2258	444.578144
	non-offenders	15	970.79825	300.986096
Cue Validity (Valid)				
Pictures – people	sex offenders	15	1213.8186	416.794138
	non-offenders	15	988.01723	292.020706
Pictures – objects	sex offenders	15	1239.9970	433.602356
	non-offenders	15	1015.3709	324.281906

FACTOR:	group	cue validity	pictures	subjects
LEVELS :	2	2	2	30
TYPE :	BETWEEN	WITHIN	WITHIN	SUBJECTS

SOURCE	SS	df	MS	F	p
Group	1768072.304	1	1768072.304	3.205	0.084
error	15446225.86	28	551650.924		
Validity	4810.023	1	4810.023	1.303	0.263
error	103382.804	28	3692.243		
group*validity	9243.382	1	9243.382	2.503	0.125
error	103382.804	28	3692.243		
Pictures	2276.658	1	2276.658	0.382	0.542
error	167057.330	28	5966.333		
pictures*group	527.957	1	527.957	0.088	0.768
error	167057.330	28	5966.333		
validity*pictures	9779.112	1	9779.112	3.303	0.080
error	82887.283	28	2960.260		
validity*pictures*group	309.406	1	390.406	0.132	0.719
error	82887.283	28	2960.260		