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‘Hard to Reach’ Young People: The Role of Service Organisation and Mentalization-Based Treatments

Paul Gelston

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Thesis Declaration Form

I confirm that the work presented in this thesis is my own. Where information has been derived from other sources, I can confirm that this has been indicated in the thesis.

Signature:

Name: **Paul Gelston**

Date: **15/06/2015**

Overview

This thesis considers the difficulties engaging young people in local social and psychological services relevant to their needs, with a particular focus on those who are labelled as 'hard to reach'. It comprises three parts, which reflect the different elements to this issue.

Part 1 is a literature review which considers a particular subgroup of those labelled 'hard to reach', young people with emerging personality disorder symptoms and diagnoses. It examines the different services that exist to target and treat this population, with a focus not on treatment models *per se*, but instead on the service context and organisation that guides the particular interventions. Common features of the services guiding these treatments are discussed, including where there are areas for future research to consider.

Part 2 is an empirical research paper that evaluates different services existing to target young people labelled as 'hard to reach'. It considers Adolescent Mentalization-Based Integrative Treatment and compares this approach to two groups; those with similar difficulties but receiving alternative outreach services, and healthy control participants. Fifty young people were involved, and they were assessed for differences in mentalization skills, attachment, empathy and therapeutic relationship. Findings from the investigation, as well as implications for research and clinical practice are discussed.

Part 3 is a critical appraisal of the process of conducting this literature review and empirical paper. It discusses personal interests in this area, as well as conceptual and methodological issues and areas for future consideration.

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Part One: Literature Review

Treatments for Young People with Personality Disorders: The Importance of Service Context and Organisation

Abstract

Introduction: Adolescent personality disorder is an area of growing interest for researchers, with a specific focus on considering which psychological interventions work best. Little research exists to consider the importance of service and treatment context, and how they influence outcomes in adolescents with personality disorder features and diagnoses. **Aims:** Consider different treatment contexts in emerging personality disorder services, and how context as opposed to treatment model, may influence outcomes in this patient group. **Method:** Studies were identified using a systematic search of online databases, PsychINFO, MEDLINE and Web of Science, and from existing reviews. Studies included in the review were quality rated using an adapted version of the Downs and Black (1998) checklist. **Results:** A total of 14 studies met the full inclusion criteria and were included in the review. These were classified into four main categories based on the service context delivered: combined individual and group outpatient treatments, combined individual and group inpatient treatments, early intervention services and group outpatient treatments. The studies differed in terms of psychological model, study design and methodological rigour. Some studies reported significant improvements following intervention, with the most robust evidence coming from service contexts offering a combination of individual and group-based interventions, delivered in outpatient and inpatient settings. **Conclusions:** The studies provide evidence for different psychological treatments for adolescents with personality disorders. Further research is required for emerging personality disorder, with greater focus on service contexts, rather than individual treatment models *per se*.

Introduction

Emergence of personality disorder in adolescence

Adolescence has long been considered a time of physical, psychological, behavioural and emotional instability (Bleiberg, Rossouw & Fonagy, 2012). Writers as early as *Socrates* characterised adolescents as those who demonstrate "contempt for authority", "contradict their parents" and "tyrannise their teachers". Adolescent development can typically involve a myriad of difficult experiences such as impulsivity, identity confusion and unstable interpersonal relationships (Erikson, 1968; McCarthy, 2000). Disorder of personality in adolescence is therefore a complex, problematic issue and it is difficult to distinguish personality pathology from typical development impermanence and instability (Sarkar & Adshead, 2012).

These features of the developing adolescent also characterise patients with personality disorders, particularly borderline personality disorder (BPD) (Kernberg, 1975; Linehan, 1993; Paris, 1993). Despite these similarities, there is emerging evidence for the notion of personality disorder development during adolescence. Masterson (1972) and Kernberg (1975, 1978) were some of the earliest proponents of the notion of disordered personalities in adolescents. For example, Masterson (1972, 1976) conceptualised BPD by considering Bowlby's attachment theory, Mahler's views on separation-individuation and Kernberg's object relations theories of the psychic structure. Masterson discussed the dilemma faced by the developing child when striving for independence – the child can gain some independence but risk losing her mother's love, or retain the maternal love and lose independence, a dilemma Masterson viewed as the core issue in borderline individuals (see Akhtar, 1992).

Later research supported this view of emerging personality disorder in adolescence. For example, Bernstein, Choen, Velez, Schwab-Stone, Siever and Shinsato (1993) studied a clinical sample of children and adolescents and found a 31% prevalence rate for personality disorders, the most common being obsessive-compulsive personality disorder. In another study of adolescent inpatients, 61% were found to have a Cluster B personality disorder, most often BPD. Shiner (2009) also found that maladaptive personality traits such as impulsivity and internalised emotional dysregulation may be present in childhood and adolescence in relation to DSM-IV clusters.

Coinciding with these developments, *The Diagnostic and Statistical Manual of Mental Disorders* (5th ed.; *DSM–5*; American Psychiatric Association, 2013) permits diagnosis of personality disorders in adolescence if the symptoms persistently interfere with the individual's functioning for one year or longer. Criteria for BPD diagnosis reflect those of the adult disorder. According to the DSM V, the diagnosis of BPD in adulthood occurs when the individual experiences "a pervasive pattern of instability of interpersonal relationships, self-image, affect, and marked impulsivity, beginning by early adulthood and presenting in a variety of contexts". These individuals may also experience identity disturbance, recurrent suicidal behaviour, fear of abandonment, feelings of emptiness or severe dissociative symptoms (Bondurant, Greenfield & Man Tse, 2004).

Critical perspectives of the notion of adolescent personality disorder claim that diagnoses are labelling, stigmatising and that personality is not stable across early life and therefore diagnosis is inappropriate (Bleiberg, 1994). Despite this, there is increasing evidence and support for the view that a proportion of adolescents display distinct features separate from their peers and similar to that of adult personality disorder.

Plasticity of personality – can it be changed?

Personality traits and disorders have long been assumed to be relatively stable in their course from early adulthood into later life. This widespread perspective, although challenged by more recent research, fuelled the inaccurate belief that personality and personality disorders are stable, cannot be changed and are therefore 'untreatable' (Chanen, McCutcheon, Jovev, Jackson & McGorry, 2007). In addition to this, some mental health professionals claim that personality continues to evolve throughout adolescence, leading to reluctance to diagnose personality disorders in this age group (Allertz & van Voorst, 2007; Miller, Muehlenkamp & Jacobson, 2008). These complex issues result in underdiagnoses and lack of provision in personality disorder services in general, and particularly in younger populations (Farrand, Booth, Gilbert & Lankshear, 2009).

An example of such research highlighting the stability of personality traits comes from Caspi, Harrington, Milne, Amell, Theodore and Moffitt (2003), who assessed the predictive validity of temperament over 23 years and found links between childhood temperament and adult personality traits. For example, confident and shy children had significantly different positive emotionality scores in later life (Caspi *et al.*, 2003). Skodol, Johnson, Cohen, Sneed and Crawford (2007) investigated the stability of personality disorder from adolescence through middle adulthood. They found that individuals with personality disorders had significantly poorer functioning at 33 years, suggesting that maladaptive personality features have long-term, persistent impacts on functioning (Skodol *et al.*, 2007). These findings support the perspective that personality is relatively stable and constant, even across early years in life. Studies like these fuel the perception that personality traits and disorders are unchangeable and potentially untreatable, leading to reluctance to diagnose.

On the other hand, some researchers argue that personality traits are relatively fluid and changeable across the early stages of life, adding hope to the perspective that personality can change and be treated. Lewis (2001) emphasised the importance of life changes and role transitions in personality development and discussed how personality is fluid and changeable, particularly in environments and developmental periods characterised by social, cognitive and physical changes. A review by Caspi, Roberts and Shiner (2005) considered the multiple perspectives of the personality stability argument. They claimed that personality traits are changeable, particularly in the earlier phases of life. Caspi *et al.* (2005) added that most personality change occurs in young adulthood, not adolescence, and that the exact causes of such changes remain relatively unknown. For some personality traits, change occurs after young adulthood, highlighting the prolonged plasticity of personality. Overall, evidence supports the notion of a life-span developmental view of changeable personality traits (Caspi *et al.*, 2005).

Under-diagnosis of emerging personality disorder

In comparison to adult personality disorders, adolescent populations have received much less interest and research, leading to lack of diagnoses and provision for this group (Bleiberg, 2001). Early research by Morey and Ochoa (1989) examined healthcare professionals' adherence to clinical diagnostic criteria of personality disorders in an adult population and found inconsistencies in clinical diagnoses and diagnoses derived from the DSM-III in 72% of cases. For example, the percentage of patients meeting DSM-III criteria for schizotypal personality disorder was over seven times greater than the number of clinical diagnoses. This demonstrates a significant reluctance from clinicians to offer personality disorder diagnoses, even when patients appear to meet the symptomatic criteria for such disorders.

Al-Alem and Omar (2008) considered the lack of diagnoses and claim that the DSM classification system leads to major heterogeneity in diagnoses in both adult and adolescent populations because diagnoses depend on five out of a possible nine symptoms. These symptoms can be similar to other psychological disorders (e.g. anxiety) and can lead to underdiagnoses of BPD. Biskin (2013) adds to this, claiming there is too much focus on co-morbid conditions in those with personality disorder symptoms, meaning the personality disorder is ignored and therefore under-diagnosed.

Increasing debate and interest in emerging personality disorder

Over recent years there has been increasing interest in emerging personality disorder in young people, although the issue is immersed in debate. Controversy surrounding diagnosis of personality disorder in adolescence includes a variety of different factors. Firstly, critics discuss the impact of diagnosis on the adolescent (Chanen *et al.*, 2007). Labels become persistent, even permanent, and stay with the person long after symptoms have ended, explaining why some healthcare professionals prefer to avoid diagnosing young people (Silk, 2008). Secondly, some claim that childhood and adolescence is a time of very fluid developmental processes, meaning disorders of personality in adolescence may be quite likely to change (Bleiberg, 1994).

This builds on the work of Shapiro (1990), who claimed that the variability of development through adolescent life is not accounted for by a diagnosis designed for adults and therefore applying such diagnoses to young people is unreasonable. A third issue comes from Miller, Muehlenkamp and Jacobson (2008), who claimed that referring to BPD as a disorder of adolescence has generally been avoided because some symptoms of the disorder may fall within a range of typical adolescent behaviours. They added that there are few guidelines on how to differentiate typical behavioural and

emotional disruption in adolescence from pathological conditions, but stated that this is the case for many DSM-IV diagnoses.

Supporting this view, some claim that BPD diagnosis is not stable across adolescence. For example, in a sample of 70 hospitalised adolescents, Mattanah, Becker, Levy, Edell and McGlashan (1995) found poor construct validity and diagnostic stability in a variety of DSM-III-R disorders, with personality disorder diagnoses appearing to be the least stable over time. Other studies consistently report that most adolescents with a BPD diagnosis will not maintain this over a 1-3 year follow-up (see Bondurant *et al.*, 2004). However other research has shown that BPD diagnosis is unstable in adult populations too (Skodol, 2005; Zanarini, 2008).

Contradicting this perspective, some research has shown borderline adolescents to be quite distinct from their peers. For example, Faulker, Grapentine and Francis (1999) found that adolescent girls with BPD showed distinct behaviours different from those without a BPD diagnosis. Westen, Shedler, Durrett, Glass and Martens (2003) discovered that adolescent personality disorder resembled that in adults and was diagnosable in adolescents aged 14-18 years old, although the DSM-IV criteria tended to over-diagnose antisocial and avoidant personality disorders in their adolescent sample. Winograd, Cohen and Chen (2008) found that borderline symptoms in adolescence were associated with adult borderline symptoms, BPD diagnosis, and a need for services up to 20 years later. In addition to this, Miller *et al.* (2008) argued that borderline personality disorder diagnosis in adolescence has good reliability and validity over time. These findings support the early work of Robins (1966) who found that one-third of children with conduct disorder met the criteria for antisocial personality by 18 years old, demonstrating the longevity of some presentations.

Supporting this view, Chanen, Jackson, McGorry, Allot, Clarkson and Pan Yuen (2004) examined the stability of categorical and dimensional personality disorder in an adolescent population across two years. They found that 74% of their sample still met the criteria for personality disorder at two year follow-up, with 100% endurance in categorical personality disorder in those receiving inpatient care.

These findings show clear evidence for the notion that stability of personality disorder is high in older adolescents, similar to that of young adults, justifying diagnosis and early intervention in this age group (Chanen *et al.*, 2004). Miller *et al.* (2008) argued that there is a subgroup of adolescents whose diagnosis remains stable over time, and a less severe subgroup that move in and out of the diagnosis. Whilst it in undeniable that there is a wealth of debate surrounding the issue, there appears to be an increasing body of research and growing interest in emerging personality disorder in adolescents.

Management of emerging personality disorder

There is a large body of empirical literature examining treatment of personality disorders in adulthood (Bateman & Fonagy, 2004, 2006; Linehan, 1993; Paris, 1993), but managing these difficulties in younger populations is still relatively under-researched. Guilé, Greenfield, Breton, Cohen and Labelle (2005) reviewed treatments for borderline adolescents experiencing suicidal ideation and found no between-groups differences in psychiatric symptoms, suicide re-attempts and inpatient re-admission. They concluded that more studies are need to examine treatments for emerging personality disorder. Feenstra (2012) claims that little is known about effective interventions for adolescent personality disorders, and ignorance and resistance from clinicians when diagnosing personality disorders in younger populations adds to this problem. Bleiberg (2001) offers an excellent summary of some of the causes and types of personality disorders in

children and adolescents, whilst presenting a treatment approach that entails creating a secure therapeutic base, forming a therapeutic alliance and enhancing reflective functioning within the young patient.

Biskin (2013) reviewed treatments for adolescents diagnosed with BPD and found a number of specialised psychological treatments being utilised, namely Dialectical Behaviour Therapy (DBT), Emotion Regulation Training (ERT), Cognitive Analytic Therapy (CAT) and Mentalization-Based Treatments (MBT). Biskin found that the area was very under-researched; there were no randomised controlled trials of DBT in adolescents and ERT research demonstrated that it was not superior to treatment as usual. MBT was only researched in one study in self-harming adolescents and CAT led to more rapid recovery but showed little difference at follow-up. Biskin's review shows that while there are some treatments for adolescents with personality disorders, the research area is very under-developed. It remains unclear how this group of young people should be managed or treated, which is what this review shall consider.

The current review

The purpose of the current review is to summarise and critically examine services that exist to support those with emerging personality disorders. Its aim is to consider services that exist to support these young people, but the focus will not be on treatments alone, but rather the service context that guides the intervention. The service context, in this case, refers to the way in which services are organised and delivered, rather than treatment approaches *per se*. The review will also consider the effectiveness of these services, which treatments work best, as well as how contextual factors in service delivery can determine outcomes for these young people. The following questions will be addressed in this literature review:

1. What contexts work best for services treating emerging personality disorder in adolescent populations?

2. What are the common features of services that support adolescents with personality disorder symptoms and diagnoses?

3. What treatment outcomes can be expected for adolescents with emerging personality disorders?

Method

Inclusion and Exclusion Criteria

Inclusion criteria entailed:

Participants:

- Adolescent/young adult populations (sample with mean age of <25 years old).
- Experiencing personality disorder symptoms or with a diagnosis of personality disorder in adolescence.
- Recruited from clinical settings only (e.g. hospital or outpatient settings).

Interventions:

- One or more session(s) of any initiative aimed at improving personality disorder symptoms in youth. "Initiative" as a term was operationalised to include any form of intervention, service context, treatment approach or programme.

- One or more session(s) of established psychological treatment (e.g. CBT) routinely delivered, provided that the study considered initiatives to improve symptoms in emerging personality disordered populations.

Comparison:

- Any comparative intervention (if used) that aimed to improve personality disorder symptoms in youth.

Outcome measures:

- Any validated or non-validated (e.g. number of appointments attended) outcome measure of improved functioning/reduction in symptomatology.

Design of Studies:

- Any type of quantitative or qualitative primary research study.

- A sample size of N>2 in each study sample.

Scope of Studies:

- Published between January 2000 and August 2014.
- English language.
- Peer reviewed journal articles.

Exclusion criteria included:

- Adult- or child-only population studies.
- Non-primary research, including reviews, meta-analyses, discussions, case studies and surveys.
- Studies in which the treatments were non-psychological in isolation (e.g. pharmacological treatment with no psychological treatment).
- Studies that reported findings from previous publications.
- Descriptive studies on personality disorders, including those that only or primarily describe features, presentation, incidence or aetiology of adolescent personality disorder.

Literature Search

Four main search strategies were adopted for the review. Firstly, a broad search was carried out on the Cochrane Database of Systemic Reviews to identify any existing reviews in this area. No reviews were discovered. Secondly, three databases were searched from January 2000 to August 2014, namely *PsychInfo*, *Medline* and *Web of Science*. There were three main areas within the search, 1) 'adolescent', 'youth', 'young people',

‘teenager’, ‘juvenile’; 2) ‘treatment’, ‘intervention’, ‘initiative’, ‘programme’; 3) ‘emerging personality disorder’, ‘adolescent personality disorder’ and ‘youth personality disorder’. See Table 1 for more information. Findings from the three search strings were then combined and limited to the dates stated above. Only papers published in peer-reviewed journals, written in English language and involving human participants were considered for inclusion.

Table 1: Electronic Search Terms

Search Term Category	Terms Applied
Condition/Problem	Emerging Personality Disorder/Adolescent Personality Disorder/Youth Personality Disorder
Group	Adolescent/Youth/Young People/Teen*/Juvenile
Comparison	Compar*/Control Group/Treatment As Usual
Outcome	Treat*/Therap*/Intervention/Efficacy/Symptom*/Effectiv*

Study Selection

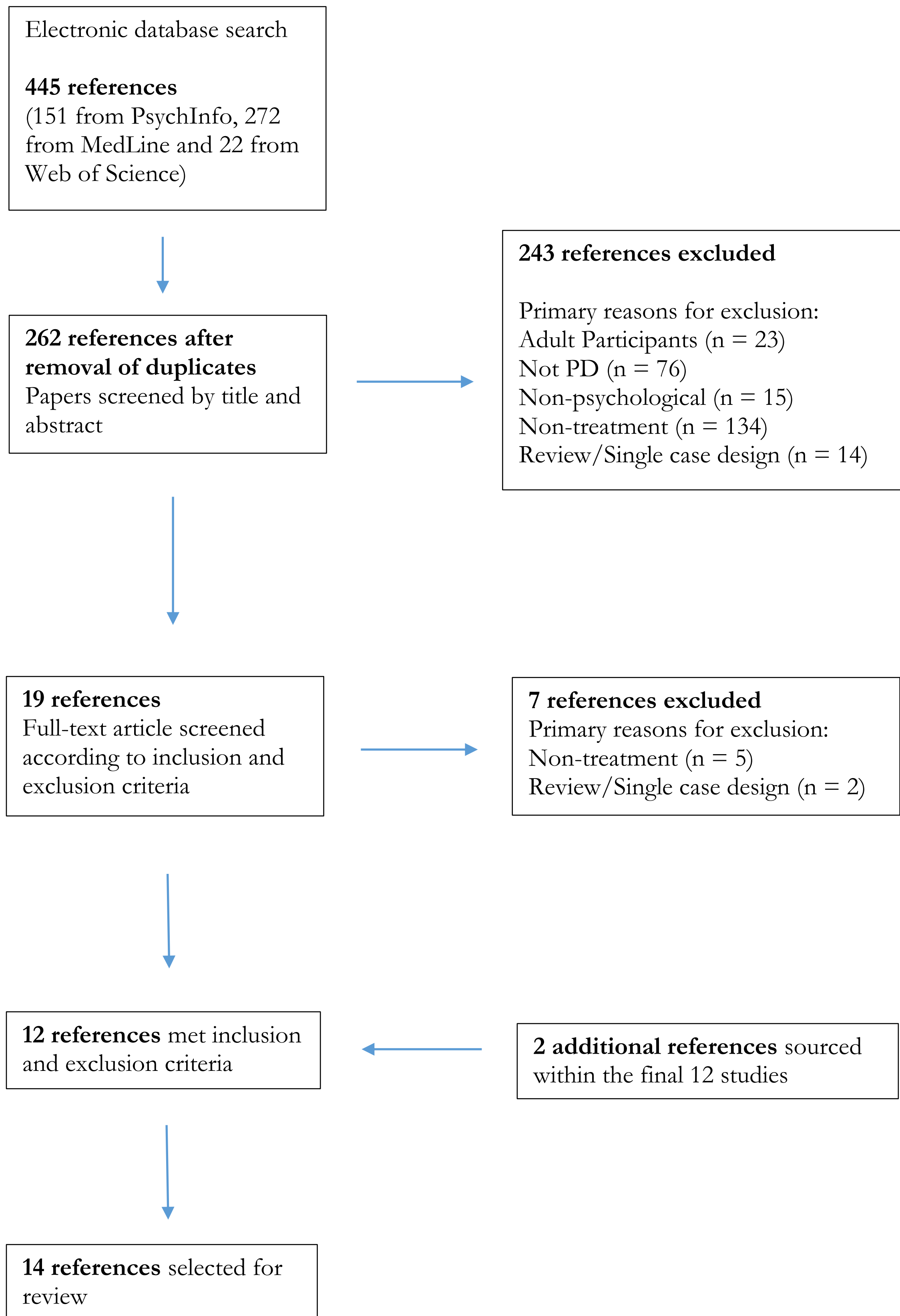
The study selection process is highlighted in Figure 1. A total of 445 studies were returned from the search of electronic databases; this reduced to 262 studies when 183 duplicates were removed. Initially, these results were screened by scanning the titles and reading abstracts to identify relevant papers. This resulted in the exclusion of 243 papers, leaving 19 relevant studies. The full-text articles of the remaining 19 studies were read and examined in consideration of the inclusion and exclusion criteria, leading to a further 7 papers being excluded. Two additional papers were sourced from the remaining 12 papers, leading to a final total of 14 studies. The research team discussed any studies where eligibility was unclear. The majority of studies were excluded at this

early stage because they did not consider treatment as part of the investigation's area of interest. Other reasons for exclusion are shown in Figure 1.

Data Extraction

Data were extracted for each of the studies included in the review. These data included author, date, journal, title of study, design, sample size, participant characteristics, details of intervention, follow-up, statistical techniques used for analysis, and summary of outcome. Due to the range of services being considered for review, the main outcome variables are reported for ease of comparison, rather than specific measures used.

Figure 1. The process of study selection and primary reasons for reference exclusion



Assessment of Methodological Quality

Assessing the validity of studies is an essential part of conducting systemic reviews of literature (Oxman & Guyatt, 1998). Studies included in the review were assessed using the Downs and Black (1998) 'Checklist for Measuring Quality', later updated by Cahill, Barkham and Stiles (2010). The Cahill *et al.* (2010) checklist was used in this review because it was devised to be applicable to practice-based evidence. This version of the checklist was considered more suitable given that the majority of research in emerging personality disorder is relatively underdeveloped and contains small sample sizes as opposed to large-scale trials. This checklist is completed by individuals interested in critically appraising research studies for quality and applicability to public health and was found to have high internal consistency as well as good test-retest and inter-rater reliability (Downs & Black, 1998). The checklist comprises 32 items assessing various quality criteria. Studies are scored on each item; a score of one is provided if the study meets said criterion and a score of zero if they do not (or if impossible to determine). Any ambiguity about the scoring of items was discussed within the research team. The checklist provides an overall score and five separate quality indicators: (1) reporting; (2) external validity; (3) internal reliability; (4) internal validity – confounding (selection bias); (5) power. Studies can then be compared on these domains.

Synthesis

Following the quality assessment, a synthesis of the studies was carried out. The studies were classified according to four main types of treatment context, and information about each study was provided, including treatment intervention, theoretical underpinnings, study design, patient characteristics, outcome variables and overall results.

Results

Categorisation of Results

Studies were categorised based on the treatment contexts that were described, as shown in Table 2. The focus was on the service context in which the treatments were offered, in comparison to the majority of previous reviews that focused on the specific treatment approach or model *per se*. The purpose of this categorisation was to provide a summary of the treatment context rather than to provide a full description of the study or treatment itself.

Table 2: Service and treatment context

Treatment Context	Description	Number of Studies
Combined Individual and Group Outpatient Treatments	Service contexts that offered a combination of individual and group-based treatments in an outpatient setting	5
Combined Individual and Group Inpatient Treatments	Service contexts that offered a combination of individual and group-based treatments in an inpatient setting	3
Early Intervention Treatments	Contexts that involved intensive, multimodal treatments at the earliest possible intervention point	3
Outpatient Group Treatments	Treatment contexts that offered only group-based interventions in outpatient settings	3

Table 3 describes the extrinsic features of the interventions, such as the format in which they are delivered and the number of sessions per intervention. Table 4

provides a detailed summary of the 12 studies, categorised by the service context in which the interventions were delivered.

Table 3. Extrinsic features of interventions

Feature of Study	Number of Studies
Format of Intervention	
Individual only	1
Group only	3
Individual and Group (patient only)	5
Individual and Group (patient & family)	5
Intended duration	
Up to 20 sessions	2
20-30 sessions	3
30-40 sessions	1
60 or more sessions	7

*Intended duration of therapy was unclear for the study by Farrand *et al.* (2012)

Table 4: Description of Individual Studies

Author (date)	Intervention	Theoretical underpinnings	Delivered by	Design and assessment points	Sample	Outcome variables	Results
Treatment Context: Combined Individual and Group Outpatient Treatments							
Fleischhaker et al. (2011)	**Dialectical Behaviour Therapy for Adolescents (DBT-A)** Manualized, 16-week, behavioural treatment focused on behavioural change, acceptance & mindfulness, adapted for a 16-24 week outpatient treatment. Includes individual and family therapy and a multifamily skills training group.	Based on DBT-A (Rathus & Miller, 2002), who adapted DBT for adolescents and found reductions in suicidal ideation, psychiatric symptoms and borderline personality symptoms.	Specific therapist characteristics unspecified	Clinical pilot study; pre-comparison, post-comparison and 1-year follow-up	12 young people, 83% of which met 5 or more DSM-IV criteria for BPD.	Borderline Personality Symptoms; Parasuicidal Behaviours; Psychosocial Adjustment; Quality of Life	Significant reductions in non-suicidal self-injurious behaviours between pre-comparison scores and 1 year follow-up (d = 0.92), There was also a reduced severity of illness (d = 3.40) and a reduced need for treatment (d = 1.54) for patients from pre-therapy to 1-year follow-up.
Hjalmarsson et al. (2008)	**Dialectical Behaviour Therapy (DBT)** Treatment focussed on behavioural change, acceptance & mindfulness, consisting of 1hr of individual therapy and 3 hrs of skills	Based on treatment protocol by Linehan (1993a, 1993b). Robins, Schmidt III and Linehan (2004) claim that some people with BPD do not have skills to	22 therapists of various backgrounds: 2 physicians, 3 psychologists, 8 nurses, 8 mental health assistants and 1	Clinical pilot study: assessment at pre-treatment, 6 months and 12 months	27 female patients aged 15-40 years and meeting 5 out of 9 criteria on the SCID-II. 73% were < 18	Affective Disturbance; Symptoms of BPD; Psychological Problems; Parasuicidal Behaviours	Significant improvements in global functioning (p<.001), depression (p<.05) and borderline subscales (p<.01); statistically significant differences in some symptom

	training in group sessions each week.	create a life worth living due to internal emotional vulnerability and invalidating environments.	occupational therapist		years old.		scales and significant decreases in the number of parasuicidal behaviours (*p*<.01)
Rathus and Miller (2002)	**Dialectical Behaviour Therapy (DBT)** 12 weeks of twice-weekly sessions, both individual and family skills training. Adapted for adolescents with the following modifications: therapy shortened to 12 weeks, parents included in skills training group, parents and family included in individual sessions where necessary, reduction in the number of skills taught.	Based on Linehan's (1993a) biosocial theory that BPD stems from poor affect regulation. DBT views parasuicidal behaviours as maladaptive attempts at problem-solving, with the problem being unbearable emotional distress.	5 therapists; Clinical Psychologists and pre-doctoral Psychology interns	Quasi-experimental design: pre- and post-treatment assessments	111 young people admitted to an outpatient depression and suicide prevention program. 88% had a BPD diagnosis in the intervention group.	Suicidality and Depression; General Psychiatric Symptoms; Borderline Personality Characteristics; Psychiatric Hospitalisations; Suicide Attempts; Treatment Completion Rate	Within the DBT group, there were significant reductions in suicidal ideation (*p*=.026), number of symptoms (*p*=.006) & borderline personality characteristics (*p*=.009). There were no significant differences between the two groups in the number of suicide attempts made.
Sugar and Berkovitz (2011)	Assessed the usefulness of psychoanalytic psychotherapy for BPD. Each participant received psychoanalytically-oriented individual and group therapy ranging	Based on the evidence base that psychotherapy is effective for treating damaging experiences from childhood. Also discusses lack of	One Psychoanalytic Psychotherapist	Observational Study; follow-up after 15-30 years	3 female adolescents aged 14-18 years who met *DSM-III* criteria for BPD	Descriptive outcomes reported	All participants were functioning well in adulthood despite some psychopathology. All had completed the developmental tasks of adolescence and met

	from 2-10 years in length and were contacted in adulthood 15-30 years later.	long-term follow up in this area.					criteria for being in remission.
Uliaszek et al. (2014)	Examined the feasibility of a multifamily dialectical behaviour therapy (DBT) skills group as an addition to treatment as usual in reducing symptoms and problem behaviours in adolescents. Skills consisted of 16 weekly sessions of modules in mindfulness, distress tolerance, emotion regulation, interpersonal effectiveness and walking the middle path.	Based on growing evidence-base for DBT for borderline symptoms and family therapy for helping the larger family system. The multifamily DBT skills group is drawn from Miller *et al.*'s (2007) adaptation of the standard skills training format used with adults.	4 trained clinical psychology graduate students trained and practicing DBT at individual and group level	Pilot Study; pre-treatment and post-treatment assessment	13 adolescents aged 13-17 years seeking treatment for borderline and externalising pathology. 16 caregivers also took part.	Borderline and Antisocial Personality Symptoms; Caregiver-reported Adolescent symptoms; Adolescent self-reported symptoms; Caregiver self-reported symptoms	There were significant reductions in borderline PD symptoms (d = 1.30) and antisocial PD symptoms (d = 0.96). Carers reported significant decreases in all symptoms experienced by adolescents. The decreases in symptoms reported by adolescents were not significant. There were decreases in self-reported symptoms by caregivers but these were not significant.
Treatment Context: Combined Individual and Group Inpatient Treatments							
Feenstra *et al.* (2014)	**Inpatient Psychotherapy for Adolescents (IPA)** An intensive treatment programme including group and individual psychotherapy and a	Inpatient Psychotherapy has been shown to be effective for adults with BPD (Barktak *et al.*, 2010). Previous research	Various healthcare professionals	Cross-sectional design; assessments at baseline and 12 months after	109 adolescents aged 14-19 years with severe and complex personality	Symptom Severity; Personality Functioning; Quality of Life	Improvements in relation to symptom severity (d = 0.65), personality functioning (d = 0.49 – 0.97) and quality of life (d = 0.58). Higher levels of

	therapeutic community. Basic techniques include helping the young person to explore dysfunctional behavioural patterns and defence mechanisms.	implied the importance of self-criticism and type of PD for treatment.		start of treatment	pathology		self-criticism predicted less improvement; type of PD was not important for outcome.
Laurenssen *et al.* (2013)	**Mentalization-Based Treatment** Inpatient mentalization-based treatment to improve mentalizing capacity, comprising group and individual psychotherapy sessions, art therapy, writing therapy and mentalizing cognitive therapy, as well as family therapy sessions.	Similar to the 'partial hospitalisation' program described by Bateman and Fonagy (2004), utilising integrated individual and group-based psychotherapy within a flexible, consistent hospital program.	Trained MBT psychotherapists	Uncontrolled trial; assessment at start of treatment and at 12 months	11 female patients aged 14-18 years and meeting two-nine DSM-IV criteria for BPD	Symptomatic Distress; Severity of Personality Problems; Quality of Life	Significant reductions in symptomatic distress (d =1.46), improvements in personality function and quality of life (d = 1.11)
Werbart *et al.* (2011)	**Therapeutic Community** A highly specialised and intensive treatment approach combining milieu therapy and inpatient long-term psychodynamic psychotherapy (PP). Patients attended two PP	Research suggests that a combination of psychoanalytically-oriented treatment and partial hospitalisation are more successful than TAU for patients with	Various healthcare professionals	Quasi-experimental design; assessment at intake, termination and 2-year follow-up	56 young adults with personality disorders. Mean age = 24.3 years.	Patient-rated Outcome, Expert-rated Outcome, Recovery Style	Reliable Change Index showed good outcomes for 92% of patients at follow-up. Largest effect sizes were on three Expert-rated Outcomes; however only one of these measures showed significant

	sessions and one group therapy session per week.	personality disorders in psychiatric care, and yet few studies assess the impact on young adults.					improvements between termination and follow-up ($p<.001$).
Treatment Context: Early Intervention Services							
Chanen *et al.* (2008)	**Cognitive Analytic Therapy** 24 weekly sessions of individual, integrated psychotherapy combining psychoanalytic object relations theory and cognitive psychology to explore patterns of relationships for patients. Compared to standardised good clinical care (SGCC).	**Cognitive Analytic Therapy** Developed by Ryle and Kerr (2002), CAT integrates elements of psychoanalytic object relations theory and cognitive psychology. Increasingly used with complex disorders such as BPD.	3 Clinical Psychologists	2-group RCT; assessed at baseline, 6 months, 12 months and 24 months	86 patients aged 15-18 years old who fulfilled two – nine criteria for BPD; 78 completed follow-up data	Psychopathology; Parasuicidal behaviour; Global functioning	No significant differences in the outcomes of the two treatment groups at 24 months (0.88*SD* for GCC and 1.02*SD* for CAT). Rate of improvement was faster for CAT in externalising and internalising pathologies and general functioning.
Chanen *et al.* (2009)	**Helping Young People Early (HYPE) program** HYPE is a specialised, early intervention service for BPD in adolescents and includes case management, family engagement, psychoeducation and	Based on previous research by Chanen *et al.* (2008) showing effectiveness of CAT and GCC within the HYPE clinic. Small differences between the two treatments implied an underlying	3 Clinical Psychologists	Quasi-experimental design; assessments at baseline, 6 months, 12 months and 24 months	110 young people aged 15-18 years who met 2-9 *DSM-IV* criteria for BPD	Borderline Psychopathology; General Psychopathology (Internalizing/ Externalising Behaviours); Parasuicidal behaviour; Global	All three treatment groups improved over the 2 year period, with CAT proving most effective (1.07*SD*) compared to GCC (0.84*SD*) and H-TAU (0.64*SD*). No significant differences

	psychiatric care. This study compared CAT and GCC in the HYPE setting in comparison to historical treatment as usual (H-TAU).	benefit of HYPE (Chanen *et al.*, 2008).				Functioning	were found between the two treatment groups on all 4 outcome measures.
Farrand *et al.* (2009)	**ICEBREAK** Community-based early intervention service for young adults aged 16-25 with personality disorder. Adopts an indicated prevention strategy targeting young people showing signs and symptoms of personality disorder. The frequency of appointments is unclear, but are supplemented by a 24-hour out-of-hours on-call service.	Based on the current evidence base concerning early intervention (Chanen *et al.*, 2008), with a focus on strong therapeutic relationships, case management, assertive community treatment and risk assessment.	9 clinicians; Team Leader, 6 Case Managers, General Practitioner and Clinical Psychologist	Observational Study; follow-up for 12 months after first contact	183 first-contact patients with precursor signs and symptoms preceding borderline personality disorder; 70% were aged 16-20 years	Emotional and Behavioural Difficulties; Patient Characteristics Associated with Engagement and Drop-out	Drop-out was most likely amongst patients aged 21-25, from higher socio-economic groups and during months 3-5 of service use. Interestingly, patients who reported leaving school before the final year, coming from the most deprived areas and reporting the most difficulties were least likely to drop-out.
Treatment Context: Outpatient Group Treatments							
Renner *et al.* (2013)	**Short-term group schema cognitive-behavioural therapy (SCBT-g)** 18 weekly sessions and	SCBT-g is more structured and protocolised than the group model of schema therapy by	Two certified schema therapists, both of whom had 8 years'	Pilot Study; assessments carried out pre-, mid- and post-	28 outpatients aged 18-29 (*M*=22.5) who were recruited from a	Global Symptomatic Distress, Stability of EMS, Coping Responses and	Global symptomatic distress decreased substantially from pre- to post-treatment (*d* = 0.81). There were

	two additional booster sessions, with an emphasis on the cognitive and behavioural elements and techniques of schema therapy. Patients were also allowed to consult a healthcare professional for social, financial or work/ school-related problems once every 3 weeks for 30 minutes.	Farrell and Shaw (1990). It also places more emphasis on psychoeducation, cognitive techniques and early maladaptive schemas (EMS). This version may be more suitable for young adults because their core EMS may not have fully formed and may therefore be more amenable to change.	experience of schema therapy.	treatment	specialised secondary care service. All had Cluster-B and Cluster-C personality disorders or features.	Schema Modes	significant decreases in EMS (*d* = 0.88) and dysfunctional coping responses (*d* = 0.98) from pre- to post-treatment. There was also a small increase in adaptive schema modes (*d* = 0.40) across the two time points.
Schuppert *et al.* (2009)	**Emotion Regulation Group Training** 17-session adjunctive group program for adolescences with BPD symptoms, aiming to improve internal locus of control. Two booster sessions at 6 and 12 weeks post-treatment	Adapted from the Systems Training for Emotional Predictability and Problem Solving (STEPPS) developed by Bartels, Crotty and Blum (1997) for emotional dysregulation in BPD.	Various mental health professionals	Randomised Controlled Pilot Study; assessment at baseline, post-treatment and 6 month follow-up	43 youth aged 14-19 years who met varying levels of DSM-IV criteria for BPD	Borderline Personality Symptoms; Locus of Control, Internalizing & Externalising Behaviours	Equal reductions in BPD symptoms over time, but there were significant increases in internal locus of control in ERT + TAU group ($p<.01$).

Schuppert *et al.* (2012)	**Emotional Regulation Training (ERT)** Manual-based group training to improve sense of control over intense emotions by improving cognitive, social and behaviour coping skills. 17 weekly sessions and two booster sessions at 6 and 12 weeks. ERT + TAU compared to TAU alone.	Based on CBT (cognitive restructuring, chain analysis, homework forms) and elements of DBT (psycho-education on emotion regulation and mindfulness-based relaxation exercises)	13 therapists; 10 held a Master's degree and 3 held a Batchelor's degree; all had experience in therapy with adolescents with borderline features	2-group RCT; assessed at baseline, end of treatment and 6 month follow up	109 adolescents aged 14-19 years old who had met at least two BPD criteria	Severity of Borderline Symptoms; General Psychopathology; Emotional Dysregulation; Quality of Life	No significant differences between the treatment and control group on any measures. The two groups showed improvement from baseline to after intervention on all measures except quality of life (ERT + TAU d= 0.29 – 0.67; TAU d= 0.37 – 0.49).

Overall Study Quality

Table 5 provides a summary of the methodological characteristics of the studies in relation to the type of design and length of follow-up. Table 6 highlights the scores for each study after being quality tested using the Cahill *et al.* (2010) checklist. It is important to note that the scoring for items within the checklist are not evenly distributed, meaning there are different total scores for each item. This is highlighted in Table 6.

Table 5: Methodological Characteristics of Studies

Design feature	Number of Studies
Design type	
Randomised control trial	2
Quasi-experimental design	3
Uncontrolled trial	1
Pilot study	5
Cross-sectional design	3
Total length of follow-up after intervention	
< 6 months	4
6 months	1
12 months	5
24 months	3
Over 24 months	1

Table 6: Quality Ratings of the Studies

Study	Reporting (total = 11)	External validity (total=11)	Internal reliability (total= 5)	Internal validity - confounding (total=5)	TOTAL SCORE (total=32)
Treatment Context: Combined Individual and Group Outpatient Treatments					
Rathus and Miller (2002)	10	9	4	3	**26**
Hjalmarsson *et al.* (2008)	9	9	4	2	**24**
Fleischhaker *et al.* (2011)	8	7	4	1	**20**
Uliaszek *et al.* (2014)	9	8	4	1	**22**
Sugar and Berkovitz (2012)	4	7	3	1	**15**
Treatment Context: Combined Individual and Group Inpatient Treatments					
Werbart *et al.* (2011)	10	9	4	2	**25**
Laurenssen *et al.* (2013)	8	9	4	2	**23**
Feenstra *et al.* (2014)	9	8	4	1	**22**
Treatment Context: Early Intervention Services					
Chanen *et al.* (2008)	10	8	5	4	**27**
Chanen *et al.* (2009)	10	8	5	4	**27**
Farrand *et al.* (2009)	6	8	3	2	**19**
Treatment Context: Outpatient Group Treatments					
Schuppert *et al.* (2009)	10	8	5	4	**27**
Schuppert *et al.* (2012)	9	9	5	4	**27**
Renner *et al.* (2013)	9	9	4	2	**24**

Overall the general quality of the studies was high. Some of the main weaknesses of the studies were that many did not consider the adverse events from the interventions under investigation. The vast majority of studies did not have patients with heterogeneous characteristics or presenting problems, although this could be due to the specialised nature of adolescent personality disorder research. Most of the studies

in this review did not contain a comparison group as part of their investigation, which affected several of the specific items and subsequently the overall quality ratings for the studies.

Reporting scores for the majority of the studies were relatively high. Some studies score 10 out of a possible 11 on this item (Chanen *et al.*, 2008; 2009; Rathus & Miller, 2002). All of the studies considered and clearly described the main outcomes to be measured, client characteristics, descriptions of the interventions and the main findings of the study. Nearly all failed to consider the potential negative impact of the interventions being investigated. *External validity* scores were generally quite high, given that the studies were all carried out in hospital or clinic settings. In all studies, the participants were representative of the entire populations they were recruited from and were referred through usual clinic routes. As mentioned, the vast majority had very homogenous groups, reducing the external validity scores for some studies.

Internal reliability assesses how well the studies deliver and measure their interventions without bias. The majority of studies used appropriate statistical tests and used valid and reliable outcome measures. One study used a very small sample (n = 3) and little statistical analysis, but appeared to discuss the findings with minimal bias (Sugar & Berkovitz, 2012). Most of the studies failed to use a comparison group, meaning their internal reliability scores fell on an item in this subtest.

Internal validity – confounding examines the impact of confounding factors and the risk of selection bias. There were high levels of variability in the scores due to the different study designs of RCTs and uncontrolled trials. The uncontrolled studies did not fully consider the role of confounding variables or factors that may have influenced the findings beyond the intervention itself. Additionally, most of the studies investigated

an intervention using a treatment group with no control or comparison group. Some studies reported difficulties with attrition and drop-out, potentially biasing the results. However, only half of the studies considered this issue and used intention-to-treat criteria. Many of the studies only scored 1 out of a possible 5 on this criterion (Fleischhaker *et al.*, 2011; Sugar & Berkovitz, 2012)

Combined Individual and Group Outpatient Treatments

Five of the fourteen studies evaluated treatments that combined individual and group-based interventions in an outpatient setting (Fleischhaker *et al.*, 2011; Hjalmarsson *et al.*, 2008; Rathus & Miller, 2002; Sugar & Berkovitz, 2011; Uliaszek *et al.*, 2014). These interventions aimed to treat borderline symptoms and associated difficulties such as suicidal and self-injurious behaviours using individual therapy, group and multifamily skills training for patients and family members.

Four of these studies offered this combined approach using Dialectical Behaviour Therapy (DBT; Linehan, 1993) or a similar version of this approach, adapted for the specific population within the study. The methodological quality of these studies was relatively high, reflected by good scores on the *Cahill et al.* checklist. DBT is a form of cognitive behavioural therapy (CBT) and is described as an evidence-based outpatient psychotherapy for adults with borderline personality disorder who present as chronically suicidal (Linehan, Cochran & Kehrer, 2001). It argues that these individuals lack the skills to create a life worth living due to an interaction of internal emotional instability and invalidating environments (Hjalmarsson *et al.*, 1993). Its core components include emotion regulation, distress tolerance, and interpersonal effectiveness and mindfulness. Importantly for this review, its treatment context entails individual outpatient psychotherapy, skills training groups, telephone consultation and consultation meetings

for therapists. The four studies mentioned offered an adapted version of this approach, tailored to the needs of adolescents. The main adaptations involved offering family therapy as needed and multifamily skills training groups in an outpatient setting, in addition to the treatment components offered as part of DBT. In some cases the length of treatment was altered to consider difficulties with engagement and drop-out in youth populations.

Of the four studies, one was a quasi-experimental design investigating DBT for adolescents (DBT-A; Rathus & Miller, 2002). The remaining three were clinical pilot studies, investigating the effects of further, specialised adaptations of this approach. All found some support for the intervention and treatment context. The study by Rathus and Miller (2002) offered the strongest evidence based on its design. They compared a DBT group who received 12 weeks of twice weekly therapy consisting of individual therapy and multifamily skills training groups to a treatment as usual (TAU) group who received 12 weeks of twice weekly supportive-psychodynamic individual therapy plus weekly family therapy sessions. They found that within the DBT group, there were fewer psychiatric hospitalisations during treatment and a higher treatment completion rate compared to the TAU group. The DBT group had reductions in suicidal ideation, symptomology and borderline personality characteristics. However there were no significant differences between the two groups in relation to the number of suicide attempts made during the treatment (Rathus & Miller, 2002).

The three pilot studies (Fleischhaker *et al.*, 2011; Hjalmarsson *et al.*, 2008; Uliaszek *et al.*, 2014) also had promising results. Hjalmarsson *et al.* (2008) applied adapted DBT to a group of female patients and found improvements in global functioning, as well as significant improvements in depression and borderline subscales over the course of treatment. Patients also exhibited reductions in parasuicidal behaviours from pre- to

post-treatment. They argued that the low drop-out rate in their study highlighted the acceptability of DBT for adolescents (Hjalmarsson *et al.*, 2008). Fleischhaker *et al.* (2011) treated 12 adolescents with adapted DBT and found decreases in DSM-IV diagnoses, borderline symptoms and reductions in self-injurious behaviours and suicide attempts up to one year post-treatment. Additionally, Uliaszek *et al.* (2014) evaluated multifamily DBT and found reductions in borderline and antisocial personality symptoms. Interestingly, there were significant decreases in caregiver-reported adolescent internalizing and externalizing behaviours, but not from the perspective of the adolescent (Uliaszek *et al.*, 2014).

In another study, Sugar and Berkovitz (2011) investigated the long-term outcome of psychodynamic psychotherapy in three female adolescents diagnosed with BPD. These patients were contacted 15-30 years after their therapeutic interventions to assess their views on therapy and the long-term outcomes. All three had completed the developmental tasks of adolescence, had met requirements for being in remission and had fulfilling adult lives despite having some form of psychopathology (Sugar & Berkovitz, 2011). However, the methodological quality of this study was relatively poor, reflected by a low score on the *Cahill et al.* checklist, meaning it is difficult to draw substantial conclusions from this study. These mixed but overwhelmingly positive findings highlight the long-term benefits of combined individual and group-based interventions in an outpatient setting for adolescents with personality disorders.

Combined Individual and Group Inpatient Treatments

Three of the 14 studies assessed the benefits of a treatment context that combined individual and group treatments, with patients being supported by intensive, inpatient care (Feenstra *et al.*, 2014; Laurenssen *et al.*, 2013; Werbart *et al.*, 2011). All of

these studies scored highly on the *Cahill et al.* checklist, reflecting a high level of methodological quality.

Werbart *et al.* (2011) investigated the benefits of a Swedish therapeutic community for young people with personality disorders. The treatment incorporated milieu therapy and inpatient long-term psychodynamic psychotherapy, with patients attending twice-weekly individual psychotherapy sessions and weekly group therapy sessions. Patient residency ranged from 2 to 60 months, with average psychotherapy duration of 30 months, or approximately 200 sessions. At the group level, patients moved from high symptom severity to lower levels within the functional spectrum at treatment termination and at 2-year follow-up. On the Global Severity Index (GSI), 42.9% of patients showed reliable change from dysfunctional to functional at treatment termination, and 78.6% demonstrated this change at follow-up. The largest effect sizes were on three expert-rated measures, but only one showed significant improvements between termination and follow-up.

Laurenssen *et al.* (2013) carried out a pilot study to investigate an adaptation of inpatient mentalization-based treatment for adolescents (MBT-A). This comprised of four weekly group psychotherapy sessions, one individual psychotherapy session, art therapy, writing therapy and mentalizing cognitive therapy. Additionally, psychiatric consultations, social work and individual coaching by psychosocial nurses were available and a family therapy session was included in the treatment every three weeks. The overall treatment context incorporated these various components and entailed patients staying at the inpatient ward five days per week and going home at weekends. The researchers found reductions in borderline symptoms, and improvements in personality functioning and quality of life at 12 months post-treatment, with medium to large effect sizes. Importantly, the authors discussed difficulties with the feasibility of inpatient

MBT-A. They reported high levels of arousal in the adolescents and treatment team involved in the study, leading to difficulties with staff absence and turnover rates. Laurenssen *et al.* (2013) concluded that services should consider an outpatient variant of MBT-A and are currently researching the benefits of this.

A similar study was carried out by Feenstra *et al.* (2014) who investigated the effectiveness of inpatient psychotherapy for adolescents (IPA). IPA is described as an intensive treatment programme incorporating group dynamic and milieu therapeutic approaches, similar to a therapeutic community approach. The basic technique involves helping the adolescents discover dysfunctional behaviour patterns and defence mechanisms in the here and now. The therapeutic community setting exists to provide a secure environment to explore new, adaptive behaviours (Feenstra *et al.*, 2014). In this study, adolescents attended individual psychotherapy once per week and group psychotherapy sessions three times per week. Psychomotor therapy and creative therapy were also offered four times per week. Psychiatric and social work consultations were provided as needed and family therapy was included in the treatment approach every 2-3 weeks. The findings indicated that one year after start of treatment, there were improvements in symptom severity, personality functioning and quality of life, irrespective of type of personality disorder. However, Feenstra *et al.* (2014) mentioned that the overall progress of the adolescents was modest, due to a large group within the sample who did not change or showed only minor improvements.

Early Intervention Services

Three studies considered the effectiveness of early intervention services for adolescences with personality disorders (Chanen *et al.*, 2008; Chanen *et al.*, 2009; Farrand *et al.*, 2009). The studies by Chanen *et al.* (2008, 2009) had the highest methodological

quality scores in the review, meaning they may offer reliable conclusions for the research area. Early intervention services are designed to intervene at the earliest possible point in time following onset of particular personality disorder symptoms and contain a variety of components discussed in detail below.

Chanen *et al.* (2008) conducted an RCT to compare the effectiveness of CAT and manualised good clinical care (GCC) in addition to a comprehensive model of care. This is known as the Helping Young People Early (HYPE) clinic, and is a specialised early intervention programme designed for adolescents with borderline personality disorder and operates within a government-funded mental health service for young people aged 15-18 years (Chanen *et al.*, 2008). The HYPE model of care incorporates numerous components within the treatment context including rigorous diagnosis of BPD, assertive case management integrated with the delivery of psychotherapy, engagement of family members, psychiatric care for the treatment of co-morbid mental health problems, crisis team and inpatient care if needed, access for patients to activity group programmes, individual and group supervision of staff and a quality assurance programme (Chanen *et al.*, 2009).

Chanen *et al.* (2008) compared patients who received CAT and GCC in addition to HYPE and the effects on psychopathology, parasuicidal behaviours and global functioning, but found no significant differences between the two groups at 24 month follow-up. However, the rate of improvement was faster for the CAT group. Interestingly, all participants were involved in the comprehensive treatment context and demonstrated significant and clinically substantial improvements.

To extend these findings further, Chanen *et al.* (2009) carried out a quasi-experimental design to compare CAT and GCC delivered within the HYPE model of

care to a historical treatment as usual (H-TAU) group. At 24 month follow-up, the CAT within HYPE group showed significantly faster standardised improvements in internalising and externalising behaviours in comparison to H-TAU. The GCC within HYPE group showed faster improvement rates in global functioning in comparison to the H-TAU group. All three groups demonstrated improvements over the 24 months, with the CAT group proving to have the highest medium improvement rates. The authors concluded that the common elements of the HYPE model of care, namely the treatment context within which it is delivered, may be equally or more important than a particular brand of psychotherapy (Chanen *et al.*, 2009), highlighting the importance of service context rather than particular therapies *per se*.

In another study, Farrand *et al.* (2009) studied the factors associated with engagement and drop-out in adolescents receiving input from a community-based early intervention service for personality disordered adolescents. They discovered some interesting trends, including that drop-out was more likely in those aged 21-25, individuals from higher socioeconomic groups and during the months 3-5 of service use. However, the methodological quality of this study appeared much lower than other studies within this category, demonstrated in Table 6. Although this study does not provide support for early intervention services, it does highlight some interesting issues related to engagement and drop-out that could be useful considerations for treatment context and delivery.

Outpatient Group Treatments

Three studies within the 14 considered treatment of borderline symptoms using group therapy in an outpatient setting (Renner *et al.*, 2013; Schuppert *et al.*, 2009; Schuppert *et al.*, 2012). Two studies involved the use of emotion regulation training

(ERT) in a randomised controlled pilot study and an RCT respectively. ERT is an adaptation of the Systems Training for Emotional Predictability and Problem Solving (STEPPS) with elements of skills training from DBT and CBT added (Schuppert *et al.*, 2009). The main goal of the group treatment was to promote alternative ways of coping with psychological vulnerability, daily stressors and affective vulnerability. It involved 17 weekly sessions and two booster sessions at 6 and 12 weeks post-treatment.

Schuppert *et al.* (2009) compared two groups, ERT plus TAU and a TAU-alone group who received individual psychotherapy, system-based therapy and inpatient psychiatric care. The study found no significant differences between the groups. Both groups showed equal reductions in BPD symptoms over time but the ERT plus TAU group demonstrated increased locus of control in relation to their emotions. The researchers reported high attrition rates, highlighting that group treatments alone may be unsuitable for adolescents with personality disorders in terms of engagement and drop-out.

In another study, Schuppert *et al.* (2012) conducted an RCT to compare ERT plus TAU to TAU-alone. The ERT and TAU treatments were similar to the previous study by Schuppert *et al.* (2009). It was discovered that independent of treatment condition, both groups improved equally in relation to BPD symptoms, general psychopathology and quality of life. There were no significant differences between the groups on any measurement.

Renner *et al.* (2013) studied the effects of short-term group schema cognitive-behavioural therapy (SCBT-g) involving 18 weekly sessions and two booster sessions. Unlike Schuppert *et al.* (2009, 2012) there was no control group, but they found significant improvements in global symptomatic distress from pre- to post-treatment in

their sample. Additionally, there were decreases in EMS and dysfunctional coping responses from pre- to post-treatment.

These findings highlight some benefits of outpatient group therapy, although it is unclear if this treatment effect differs from other interventions. It is possible that the treatment context of outpatient group therapy alone may not be sufficient for adolescents with personality disorder symptoms. There appear to be difficulties with engagement and drop-out, as well as limited results showing treatment superiority of group therapy alone over individual psychotherapy in this population.

Discussion

Summary of the main findings

The aim of this review was to consider services that support adolescents with personality disorders. The focus was not intended to be on interventions *per se*, but instead the service and treatment contexts that appear to be most effective. Over 200 studies were identified as potentially relevant following a search of the literature, but only 14 met the full inclusion criteria. This may have been because there is extensive research investigating personality disorders in adults, and yet there are few studies researching adolescent or young adult populations.

The 14 studies included in this review considered a range of treatment contexts and evaluated various psychotherapeutic models. Treatment contexts were classified into four main types based on the overall service context in which the interventions were delivered; combined individual and group outpatient treatments, combined individual and group inpatient treatments, early intervention services and outpatient group treatments. The most common service context combined individual and group

based interventions, delivered in an outpatient setting. The majority of the studies discussed treatment contexts offering intensive treatment packages, combining individual and group-based interventions involving young people and their families. All treatments included a minimum of 19 sessions.

Overall the studies offered evidence for psychological interventions for personality disordered adolescents. The majority of the studies found improvements in personality function and quality of life and reductions in symptomatic behaviours such as deliberate self-harm and suicide attempts. The various factors influencing these experiences differed based on the service contexts provided by the interventions. The limitations of the studies included in this review relate to the design of the studies; the majority were either quasi-experimental or pilot studies whereas only two were RCTs. Further limitations will be discussed later in the review.

As mentioned, the highest number of studies investigated treatment contexts utilising a combination of individual and group-based interventions, delivered in an outpatient setting. These five studies incorporated interventions for patients on an individual and group therapy basis and included family members in some of the work. Four of these studies found significant improvements in personality function and quality of life over the course of treatments and at 1-year follow-up. The remaining study in this category demonstrated long-term positive effects of this approach but did not have a large enough sample size to carry out statistical analyses on the data. On the Cahill *et al.* checklist, these studies had relatively high levels of quality. Their lowest scores were on the *internal reliability-confounding* domain, primarily due to the absence of comparison groups and insufficient consideration of confounding factors.

Three studies considered contexts combining individual and group-based treatments, offered in an inpatient setting. Werbart *et al.* (2011) found significant improvements on a group level from intake to follow-up, but expert ratings showed large effect sizes whereas patient ratings did not. Laurenssen *et al.* (2013) and Feenstra *et al.* (2014) found significant reductions in symptomatic distress and severity, and improved personality functioning and quality of life. However, Laurenssen *et al.* (2013) reported difficulties with staff absence and turnover rates; they recommended delivering treatments in the context of an outpatient rather than inpatient setting to reduce arousal levels in staff and patients. These three studies scored quite highly on the Cahill *et al.* checklist, but had low *internal reliability-confounding* scores. This was largely due to the absence of a comparison group, meaning the results may have been influenced by confounding variables.

Three studies evaluated early intervention services, designed to intervene at the earliest possible opportunity following onset of personality disorder symptoms. Two of these papers (Chanen *et al.*, 2008; Chanen *et al.*, 2009) compared specific treatments within a specialised, intensive treatment context known as HYPE, offering intervention on a broad range of domains. In both studies the authors found no significant differences between the treatment groups (CAT, GCC or TAU), with all patients improving similarly over a 2-year follow-up period, suggesting an underlying benefit of the HYPE service context and approach. The remaining study (Farrand *et al.*, 2009) was observational by design and reported 12 month follow-up and characteristics associated with drop-out and engagement, highlighting important factors for adolescent services.

In the final domain, outpatient group treatments, two studies evaluated the effectiveness of group emotion regulation training delivered in an outpatient context. These studies were both RCTs and scored highly on the Cahill *et al.* checklist, but found

no significant differences between the treatment and control groups on the majority of measures, with locus of control being the only exception. Another study (Renner *et al.*, 2013) found significant improvements in symptomatic distress using group schema cognitive-behavioural therapy, but the absence of a control group made it difficult to compare the treatment approach.

These results support the more popular treatment contexts within adolescent personality disorder services, such as a combined individual and group treatment approach, in both inpatient and outpatient contexts. The findings from Chanen *et al.* (2008, 2009) highlight a particular benefit of the HYPE approach, which combines case management, family engagement, psychoeducation and psychiatric care in addition to individual and group treatments. However, the HYPE approach recommended CAT as a treatment model within the service context provided, but found no significant differences between CAT and other treatments, except a faster rate of improvement. The studies by Chanen *et al.* (2008, 2009) compared CAT to GCC and H-TAU but found similar improvements across all treatments. The results demonstrated an overarching context-effect, irrespective of the specific treatment approach offered, suggesting that this context may be of particular benefit to young people with personality disorder features.

Methodological considerations

The main methodological difficulty in this review was the extent to which the different treatment contexts could be considered for comparison. The studies in the review employed a wide range of specific psychological treatment approaches, ranging from CAT to MBT. Although the studies were relatively straightforward to categorise based on treatment context, it was difficult to consider the extent to which the

treatment context had an influence that outweighs the specific psychological approach. For example, in the most popular service context, combined individual and group outpatient, four out of the five studies in this domain employed an adapted version of DBT. The studies found significant improvements in a range of outcomes but it is difficult to attribute these improvements to the treatment context, when the adapted DBT approach is clearly a common factor within the studies. Another methodological issue was the lack of inclusion of a comparison or control group in quite a number of studies. Over half of the studies reviewed had a treatment group but no comparison group. This reduced the internal and external validity of the studies, meaning it was difficult to generalise the findings to the treatment context under investigation, or to other settings and populations. Another weakness within the majority of the studies was limited power. Many of the studies did not carry out a power analysis and some had very small sample sizes. This is a product of the specificity of this area; however without adequate sample sizes, studies can risk missing significant effects where they actually exist, or making Type II errors. This may have been the case in some of the studies in this review.

Limitations of the review

There are some potential sources of bias in the review process, given that it focussed on published studies and English-language manuscripts; consideration of other studies may have produced different findings. Furthermore, the data published in the studies within the review varied considerably, which made comparisons relatively difficult.

In addition to this, there are also some limitations to the Cahill *et al.* (2010) checklist used in this review. Although it successfully highlights strengths and

weaknesses in research papers and enables comparison of studies, its use has some disadvantages. Firstly, the items within the four domains on the checklist are not distributed evenly, meaning it is difficult to interpret overall scores and they should not be used as comparable measures between studies. A higher overall score does not necessary imply that a study has higher quality than one with a lower overall score. It may simply be the case that the study scores highly on the *Reporting* item, but not on the *External Validity* item. Secondly, the use of the checklist has low reliability given that it was used by one researcher without an independent assessment by another.

Research implications

First and foremost, the limited number of studies in each category of this review and in the review overall highlights the need for more extensive research in this area. The field of adolescent personality disorder appears relatively unexplored, including research investigating the treatment and service contexts that appear to work best for this patient group. Additionally, many of the sample sizes are relatively small. More studies are needed with larger sample sizes, which would enable more complex analysis of data and provide robust information about the types of treatments and services that help emerging personality disorder. Additionally, the low quality of some studies should be considered in future research, particularly with the inclusion of comparison groups, to provide more meaningful findings.

Further research is also needed into the specific benefits of interventions. This review has highlighted that there are beneficial outcomes for several treatment contexts, such as a combined individual and group-based outpatient setting. However, the majority of the studies included in this review incorporated a range of different, multimodal treatment interventions as part of the service context. It would be useful to

consider which elements of service contexts were deemed more helpful by service users and their families, which would enable inclusion of these precise elements in service planning and delivery, as well as future research.

Theoretical and clinical implications

The findings from this review clearly indicate which service contexts prove most beneficial to the treatment of young people with personality disorder symptoms and diagnoses. Contexts offering combined individual and group-based interventions, delivered in both inpatient and outpatient settings, appear to have the best outcomes. For example, several studies included treatments ranging from DBT, MBT and IPA, with very different theoretical and practical components. However, the overarching similarity of these studies was the service context offering a range and combination of individual and group-based treatments to patients and family members. This was especially the case in studies by Chanen *et al.* (2008, 2009), where the service context was most important, irrespective of specific treatments on offer. This combined approach, irrespective of treatment type, appears to be highly effective in reducing personality disorder symptoms in individuals with these difficulties. Evidently these individual treatments appear effective on their own, but it appears that treatment context needs to be an important consideration in service delivery too.

The review also highlights treatment contexts that do not produce positive outcomes, including service contexts that offer group-based treatments only. These findings provide useful considerations for future theoretical perspectives on treating personality disorder in young people, highlighting important issues of consideration in future service planning and delivery.

Given the small number of studies, as well as the sample sizes in many of these studies, the review not only shows that the area is underdeveloped, but that diagnosis and treatment of adolescent personality disorder needs further consideration in everyday practice. The reluctance and stigma around diagnosis and intervention of personality disorder in youth needs replaced with rigorous, early diagnosis to facilitate effective, early treatment intervention incorporating a range of approaches that appear to work best for this population.

As the evidence base in this area continues to grow and expand, policy guidelines will be needed to facilitate the practical delivery of these interventions and service contexts that are most effective. Further work could consider how findings from individual studies, as well as reviews similar to this, can be used flexibly to inform and improve clinical practice.

Conclusions

This review is one of the first to consider treatments for adolescent personality disorder with a focus on service and treatment context, as opposed to specific interventions *per se*. It has highlighted themes in service delivery that appear consistent across a range of treatment approaches, and has considered the range of services that exist to support people with emerging personality disorders. It has highlighted the importance of service and treatment context, rather than the traditional interest of what treatment model works best. Future theory and clinical practice should now shift from focussing on specific psychological treatments to a consideration of treatment context in service planning and delivery.

References

Akhtar, S. (1992). *Broken structures: Severe personality disorders and their treatment*. Northvale, NJ: Aronson.

Al-Alem, L., and Omar, H. A. (2008). Borderline personality disorder: an overview of history, diagnosis and treatment in adolescents. *International Journal of Adolescent Medicine & Health*, *20*, 395–404.

Allertz, A., & van Voorst, G. (2007). Personality disorders from the perspective of child and adolescent psychiatry. In B. van Luyn, S. Akhtar, & W. J. Livesley (Eds.), *Severe personality disorders: Everyday issues in clinical practice* (pp. 79-92). New York: Cambridge University Press.

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th Ed.). Arlington, VA: American Psychiatric Publishing.

Bateman, A. W., & Fonagy, P. (2004). *Psychotherapy for borderline personality disorder: Mentalization based treatment.* Oxford: Oxford University Press.

Bateman, A. W., & Fonagy, P. (2006). *Mentalization-based treatment for borderline personality disorder: A practical guide.* Oxford University Press, Oxford.

Berstein, D. P., Cohen, P., Velez, C. N., Schwab-Stone, M., Siever, L., & Shinsato, L. (1993). Prevalence and stability of the DSM-III-R personality disorders in a community-based survey of adolescents. *American Journal of Psychiatry*, *150*, 1237-1243.

Biskin, R. (2013). Treatment of borderline personality disorder in youth. *Journal of the Canadian Academy of Child and Adolescent Psychiatry*, *22*, 230–234.

Bleiberg, E. (1994). Borderline disorders in children and adolescents: The concept, the diagnosis, and the controversies. *Bulletin of the Menninger Clinic*, *58*(2), 169−196.

Bleiberg, E. (2001). *Treating personality disorders in children and adolescents: a relational approach*. New York: Guilford Press.

Bleiberg, E., Rossouw, T., & Fonagy, P. (2012). Adolescent breakdown and emerging personality disorder. In A. Bateman & P. Fonagy (Eds.), *Handbook of mentalizing in mental health practice* (pp. 463-509). Arlington, VA, US: American Psychiatric Publishing, Inc.

Bondurant H., Greenfield B., & Man Tse, S. (2004). Construct validity of the adolescent borderline personality disorder: A review. *Canadian Child and Adolescent Psychiatry Review*, *13*(3), 53-57.

Cahill, J. L., Barkham, M., Stiles, W. B. (2010). Systematic review of practice-based research on psychological therapies in routine clinic settings. *British Journal of Clinical Psychology*, *49*, 421-453.

Caspi, A., Harrington, H., Milne, B., Amell, J. W., Theodore, R. F., & Moffitt, T. E. (2003). Children's behavioural styles at age 3 are linked to their adult personality traits at age 26. *Journal of Personality*, *71*(4), 495-513.

Caspi, A., Roberts, B. W., & Shiner, R. L. (2005). Personality development: Stability and change. *Annual Review of Psychology*, *56*, 453-484.

Chanen, A. M., Jackson, H. J., McCutcheon, L., Dudgeon, P., Jovev, M., Yuen, H. P., Weinstein, C., McDougall, E., Clarkson, V., Germano, D., Nistico, H., & McGorry, P. D. (2008). Early intervention for adolescents with borderline personality disorder using Cognitive Analytic Therapy: a randomised controlled trial. *British Journal of Psychiatry*, *193*(6), 477-484.

Chanen, A. M., Jackson, H. J., McGorry, P. D., Allot, K. A., Clarkson, V., & Pan Yuen, H. (2004). Two-year stability of personality disorder in older adolescent outpatients. *Journal of Personality Disorders*, *18*(6), 526-541.

Chanen, A. M., Jovev, M., McCutcheon, L. K., Jackson, H. J., & McGorry, P. D. (2008). Borderline personality disorder in young people and the prospects for prevention and early intervention. *Current Psychiatry Reviews*, *4*, 48-57.

Chanen, A. M., McCutcheon, L., Germano, D., Nistico, H., Jackson, H. J., & McGorry, P. D. (2009). The HYPE Clinic: An early intervention service for borderline personality disorder. *Journal of Psychiatric Practice*, *15*(3), 163-172.

Chanen, A. M., McCutcheon, L.K., Jovev, M., Jackson, H. J., & McGorry, P. (2007). Prevention and early intervention for borderline personality disorder. *Medical Journal of Australia*, *187*(7), S18-S21.

Downs, S. H., & Black, N. (1998). The feasibility of creating a checklist for the assessment of the methodological quality both of randomised and non-randomised studies of health care interventions. *Journal of Epidemiology & Community Health*, *52*, 377-384.

Erikson, E. H. (1968). *Identity, youth and crisis*. New York: Norton

Farrand, P., Booth, N., Gilbert, T., & Lankshear, G. (2009). Engagement and early termination of contact with a community-based early intervention service for personality disorder in young adults. *Early Intervention in Psychiatry*, *3*(3), 204-212.

Faulkner, C. J., Grapentine, W. L., & Francis, G. (1999). A behavioral comparison of female adolescent inpatients with and without borderline personality disorder. *Comprehensive Psychiatry*, *40*, 429-433.

Feenstra, D. (2012). Personality disorders in adolescents: prevalence, burden, assessment and treatment. Retrieved from: http://www.deviersprong.nl/files/Nieuws/Feenstra_PROEFSCHRIFT_zonderdankwoord.pdf.

Feenstra, D.J., Laurenssen, E.M.P., Hutsebaut, J., Verheul, R., & Busschbach, J.J.V. (2014). Predictors of treatment outcome of Inpatient Psychotherapy for Adolescents (IPA) with personality pathology. *Personality and Mental Health, 8*, 102-114.

Fleischhaker, C., Bohme, R., Sixt, B., Bruck, C., Schneider, C., & Schulz, E. (2011). Dialectical Behavioral Therapy for Adolescents (DBT-A): A clinical trial for patients with suicidal and self-injurious behavior and borderline symptoms with a one-year follow-up. *Child and Adolescent Psychiatry and Mental Health*, *5*(1), 3. doi: 10.1186/1753-2000-5-3.

Guile, J. M., Greenfield, B., Breton, J. J., Cohen, D., & Labelle, R. (2005). Is psychotherapy effective for borderline adolescents? *Clinical Neuropsychiatry*, *2*(5), 277-282.

Hjalmarsson, E., Kaver, A., Perseius, K., Cederberg, K., & Ghaderi, A. (2008). Dialectical Behaviour Therapy for borderline personality disorder among adolescents and young adults: Pilot study, extending the research findings in new settings and cultures. *Clinical Psychologist*, *12*(1), 18-29.

Kernberg, O. (1975). *Borderline conditions and pathological narcissism.* New York: Aronson.

Kernberg, O. (1978). The diagnosis of borderline conditions in adolescence. *Adolescent Psychiatry*, *6*, 298-319.

Laurenssen, E. M. P., Hutsebaut, J., Feenstra, D. J., Bales, D. L., Noom, M. J., Busschbach, J. J. V., Verheul, R., & Luyten, P. (2014). Feasibility of Mentalization-Based Treatment for adolescents with borderline symptoms: A pilot study. *Psychotherapy*, *51*, 159-166.

Lewis, M. (2001). Issues in the study of personality development. *Psychological Inquiry*, *12*(2), 67-83.

Linehan, *M. (1993). Cognitive–behavioural treatment of borderline personality disorder.* New York: Guilford Press.

Linehan, M. M., Cochran, B. N., & Kehrer, C. A. (2001). Dialectical behavior therapy for borderline personality disorder. In D. H. Barlow (Eds.), *Clinical handbook of psychological disorders: A step-by-step treatment manual* (pp. 470-522). New York: The Guilford Press.

Masterson, J. F. (1972). *Treatment of the borderline adolescent: A developmental approach*. New York: Wiley-Interscience.

Masterson, J. F. (1976). *Psychotherapy of the borderline adult: A developmental approach*. New York: Brunner/Mazel.

Mattanah, J. J. F., Becker, D. F., Levy, K. N., Edell, W. S., & McGlashan, T. H. (1995). Diagnostic stability in adolescents followed up 2 years after hospitalization. *American Journal of Psychiatry*, *152*, 889-894.

McCarthy, J. B. (2000). *Adolescent development and psychopathology*. Oxford, UK: University Press of America.

Miller A. L., Muehlenkamp J. J., & Jacobson C. M. (2008). Fact or fiction: Diagnosing borderline personality disorder in adolescents. *Clinical Psychology Review*, *28*, 969-981.

Morey, L. C., & Ochoa, E. S. (1989). An investigation of adherence to diagnostic criteria: Clinical diagnosis of the DSM-III personality disorders. *Journal of Personality Disorders*, *3*(3), 180-192.

Oxman, A. D., & Guyatt, G. H., (1991). Validation of an index of the quality of review articles. *Journal of Clinical Epidemiology*, *44*, 1271-1278.

Paris, J. (1993). Personality disorders: a biopsychosocial model. *Journal of Personality Disorders*, *7*, 255-264.

Rathus, J. H., & Miller, A. L. (2002). Dialectical behaviour therapy adapted for suicidal adolescents. *Suicide and Life-Threatening Behaviour*, *32*, 146-157.

Renner, F., van Goor, M., Huibers, M., Arntz, A., Butz, B., & Bernstein, D. (2013). Short-term group schema cognitive-behavioral therapy for young adults with

personality disorders and personality disorder features: associations with changes in symptomatic distress, schemas, schema modes and coping styles. *Behavioural Research and Therapy*, *51*(8), 487-92.

Robins, L. N. (1966). *Deviant children grown up: A sociological and psychiatric study of sociopathic personality*. Baltimore, MD: Williams and Wilkins.

Sarkar, J., & Adshead, G. (2012). *Clinical topics in personality disorder*. London, Gaskell.

Schuppert, H. M., Giesen-Bloo, J., van Gemert, T. G., Wiersma, H. M., Minderaa, R. B., Emmelkamp, P. M. G., & Nauta, M. H. (2009). Effectiveness of an emotion regulation group training for adolescents – a randomized controlled pilot study. *Clinical Psychology and Psychotherapy*, *16*, 467-478.

Schuppert, H. M., Timmerman, M. E., Bloo, J., van Gemert, T. G., Wiersema, H. M., Minderaa, R. B., Emmelkemp, P. M. G., & Nauta, M. H. (2012). Emotion regulation training for adolescents with borderline personality disorder traits: A randomized controlled trial. *Journal of the American Academy of Child and Adolescent Psychiatry*, *51*(12), 1314-1323.

Shapiro, T. (1990). Debate forum – resolved: Borderline personality disorder exists in children under twelve. *Journal of the American Academy of Child and Adolescent Psychiatry*, *29*, 478–483.

Shiner, R. L. (2009). The development of personality disorders: Perspectives from normal personality development in childhood and adolescence. *Development and Psychopathology, 21,* 715-734.

Silk, K. (2008). Personality disorder in adolescence: The diagnosis that dare not speak its name. *Personality and Mental Health*, *2*(1), 46-48.

Skodol, A. E. (2005). Longitudinal course and outcome of personality disorders. *Psychiatric Clinics of North America*, *31*, 495-503.

Skodol, A. E., Johnson, J. G., Cohen, P., Sneed, J. R., & Crawford, T. N. (2007). Personality disorder and impaired functioning from adolescence to adulthood. *British Journal of Psychiatry*, *190*, 415-420.

Sugar, M., & Berkovitz, I. H. (2011b). Treatment outcome of three female adolescents with borderline personality disorder. *Adolescent Psychiatry*, *1*, 6-19. doi: 10.2174/2210676611101010006.

Uliaszek, A. A., Wilson, S., Mayberry, M., Cox, K. S., & Maslar, M. (2013). A pilot intervention of multifamily dialectical behavior group therapy in a treatment-seeking adolescent population: Effects on teens and their family members. *The Family Journal, 22*, 206-215. doi:10.1177/1066480713513554.

Werbart, A., Forsström, D., & Jeanneau, M. (2012). Long-term outcomes of psychodynamic residential treatment for severely disturbed young adults: A naturalistic study at a Swedish therapeutic community. *Nordic Journal of Psychiatry, 66,* 367-375. doi:10.3109/08039488.2012.654508.

Westen, D., Shedler, J., Durrett, C., Glass, S., & Martens, A. (2003). Personality diagnosis in adolescence: DSM–IV Axis II diagnoses and an empirically derived alternative. *American Journal of Psychiatry*, *160*, 952–966.

Winograd, G., Cohen, P., & Chen, H. (2008). Adolescent borderline symptoms in the community: prognosis for functioning over 20 years. *Journal of Clinical Psychiatry*, *68*(2), 297-306.

Zanarini, M. C. (2008). Reasons for change in borderline personality disorder (and other Axis II Disorders). *Psychiatric Clinics of North America*, *31*, 505-515.

Part Two: Empirical Paper

Adolescent Mentalization-Based Integrative Treatment (AMBIT): The Impact on Young People's Mentalization Skills, Empathy and Attachments

Abstract

Background: There are limited services currently available to engage and treat adolescents who are 'hard to reach'. One approach, known as Adolescent Mentalization-Based Integrative Treatment (AMBIT), offers a new perspective that aims to guide the entire service context adopted by staff, as well as endorsing a mentalization-based component to working with the young people. However, to date, there has been inadequate research evaluating this new approach.

Aim: To evaluate the effectiveness of AMBIT, with a focus on the impact on the adolescents using such services. This included examining their mentalization skills, attachments, levels of empathy and therapeutic relationships.

Method: A total of 50 young people participated and completed measures examining mentalization ability, as well as their attachment types, levels of empathy and therapeutic relationships. Three main samples were employed; those receiving AMBIT intervention, young people receiving alternative treatments for similar difficulties and healthy controls.

Results: In relation to overall mentalization skills, healthy controls had significantly higher scores than the alternative treatment group, but there were no significant differences in healthy controls and the AMBIT group on this measure. The AMBIT group had higher levels of *self* mentalization scores than those receiving alternative treatments, although the results only approached significance. *Self* mentalization skills were also positively correlated with stronger therapeutic relationships with staff. There were no significant differences in overall attachment and overall empathy scores between the three groups. However, when the findings were analysed as two groups,

adolescents receiving services had significantly higher levels of cognitive empathy than healthy controls, suggesting a beneficial impact of receiving such input.

Conclusions: AMBIT proved advantageous for some young people in relation to *self* mentalization skills, which was linked to improved therapeutic relationships. Future research should focus on difficulties engaging young people in psychological research in the hope of generating larger sample sizes. This should improve the sensitivity of research and highlight important issues for practice with youth populations.

Introduction

There are limited services available for 'hard to reach' young people, which refers to those who are typically on the margins of, or disengaged from what is normally available publically, including educational, social, and other services, activities and constructive pursuits (Pomerantz, Hughes & Thompson, 2007). This can include those with, for example, emerging personality disorders, substance misuse difficulties or family breakdown during adolescent years. Whilst there are guidelines available regarding particular treatment approaches that appear to work best for specific difficulties in adolescence, there is increasing recognition that service context and organisation is equally imperative during intervention planning, delivery and implementation.

One of the most recent approaches recognising this, Adolescent Mentalization-Based Integrative Therapy (AMBIT), considers mentalization as a treatment approach for adolescents but goes further, to guide the entire treatment context for clinicians and services helping these young people. This study is encouraged by the growing demand for AMBIT training both in the UK and across the world in recent years, because despite its increasing popularity and application to young people, there has been limited research assessing the impact of AMBIT. There is a growing need for an evaluation of AMBIT to examine the objectives and outcomes of the approach, which this paper aims to consider.

Adolescent Mentalization-Based Integrative Treatment (AMBIT)

AMBIT is a new form of treatment that extends the use of mentalization-based interventions to adolescent service users by addressing service and contextual issues, as well as suggesting a treatment approach. Rather than simply utilising mentalization as a

specific treatment for patients, AMBIT uses mentalization as an overarching framework to guide the entire team approach and to enhance network functioning when working with young people. It integrates various therapeutic practices derived from many evidence-based aspects of intervention, such as encouraging teams to develop their own individualised online manuals, identifying specific keyworkers working with the adolescent rather than an entire team, and making direct attempts to address relationship breakdown between different services and modalities that exist to support the young people (Bevington *et al.*, 2013).

Mentalization is central to AMBIT and guides the entire treatment context. The main approach contains eight components designed to structure working practices and to scaffold support for times when professional anxiety may hinder the ability to deliver the required interventions (Bevington *et al.*, 2013). These eight components include the adolescent having an individual keyworker relationship with one member of the AMBIT team, this keyworker being well-connected to the rest of their team, respect for practice and expertise within local services and the use of evidence-based practice. In addition to this, the keyworker is responsible for network integration and intervenes in multiple domains. Finally, supporting existing relationships and the use of clinical governance are included in the eight 'stance' components. This stance enhances four key components of practice, with mentalizing as the core to the entire AMBIT approach (see Figure 1 for more information – Bevington & Fuggle, 2012).

The AMBIT approach encompasses all three forms of relationships within the therapeutic system using a mentalization perspective, namely the client-practitioner, practitioner-practitioner and practitioner-service relationships. The aim is to increase clinicians' understanding of the subjective experience of the young person and their co-workers (i.e. to mentalize), as well as considering the perspectives of other local

agencies. The practice of explicit mentalization, known as 'thinking together', is employed by staff in peer and team supervision to encourage clinicians' capacity to mentalize both their own individual experience and that of the young person (Bevington *et al.*, 2013).

Additionally, the AMBIT model fosters a sense of containment for clinicians due to the shift in approach from the traditional entire team supporting the adolescent to an environment where the team operates around the keyworker involved with the young person. This working environment can not only enhance individual clinicians' sense of containment, but also safety, subsequently benefitting the entire team, and hopefully, the young person (Bevington *et al.*, 2013). AMBIT as a treatment approach is beginning to be introduced quite successfully, resulting in a high level of demand for training in the UK and more widely. However, an empirical evaluation of AMBIT has yet to be carried out to determine the effectiveness of this approach.

Figure 1: AMBIT Components of Practice (Bevington & Fuggle, 2012)

Mentalization

As mentioned, mentalization is the guiding framework supporting the AMBIT approach. The term 'mentalization' describes a type of imaginative mental activity about oneself or others that enables human behaviour to be perceived and interpreted in terms of intentional mental states (for example, needs, desires, feelings and beliefs). It is a predominantly preconscious mental activity, occurring without intention or thought, and constitutes a largely intuitive emotional reaction (Bateman & Fonagy, 2004; 2012).

Understanding the behaviour of others in relation to their underlying thoughts and feelings is viewed as one of the most significant developmental processes and is rooted in secure attachment relationships (Bateman, Ryle, Fonagy & Kerr, 2007; Fonagy, Gergely, Jurist & Target, 2002). Early attachment relationships facilitate development of the self and it is argued that this development depends on the caregiver's ability to effectively mirror the experience of the infant (Bateman & Fonagy, 2012). For example, if an infant is in distress, the caregiver must recognise the distress and reflect or mirror this acknowledgement back to the infant. It is essential that this mirroring is 'marked' or slightly distorted to enable the infant to experience the caregiver's display as his/her own experience, rather than that of the caregiver (Bateman *et al.*, 2007). It is the quality of this mirroring that is intrinsically linked to the development of the affect regulatory system in the infant, as well as development of self-control, attention and mentalization capacity (Bateman & Fonagy, 2012).

The developmental process of mentalizing can potentially face disruption through social adversity, disturbance in early attachment, and psychological trauma in early or late childhood (Bateman & Fonagy, 2010). These experiences are likely to lead to disorganised attachments and reduced ability to reflect on the internal mental states

of the self and others, reducing the long-term capacity to mentalize, particularly when emotionally challenged. These difficulties are seen as some of the predominant causes of borderline personality disorder (BPD; Bateman & Fonagy, 2004, Bateman *et al.*, 2007; Eizirik & Fonagy, 2009), which are rooted in these adverse experiences in childhood.

Mentalization theory adds that well-functioning mentalizing in individuals can lead to more effective metacognitive abilities and improved psychological well-being (Sharp & Fonagy, 2008), leading to attempts to improve mentalization skills in individuals experiencing psychological distress with mentalization-based treatments.

Mentalization-based treatments

Some of the most traditional therapeutic approaches, regardless of the model guiding them, include some aspects of mentalization in their practice. They rely on the individual's ability to consider their own mental state, and for this to be re-presented by a psychotherapist, to foster hope and change for the individual throughout therapy (Bateman *et al.*, 2007).

Mentalizing theory has been used more specifically to develop treatment approaches for a range of disorders (e.g. post-traumatic stress disorder, eating disorders and depression) but the treatment method is most clearly organized for BPD (Bateman & Fonagy, 2010).

Mentalization-Based Treatment (MBT) is a structured, time-limited therapy that aims to promote the development of mentalizing in an individual. The focus of MBT is to enhance the patient's interpretation of his/her own mind, as well as the mind of others. The patient and therapist explore how he/she thinks about themselves and others and how that determines emotional and behavioural responses. Therapy also

considers how misunderstandings of the self and others lead to typically maladaptive actions, often which are attempts to cope with incomprehensible emotions (Bateman & Fonagy, 2006; Fonagy & Bateman, 2006a). It is these aspects of MBT that are often practiced between clinicians and young people within the AMBIT approach.

Other versions of mentalization-based interventions have been adapted to offer treatments for children, (MBT-C), adolescents (MBT-A), families (MBT-F) and for chaotic, multi-problem, hard-to-reach youth (AMBIT). The focus of these interventions it not to develop insight, but to regain mentalization skills. The relational context of the therapeutic relationship is viewed as the vehicle of change, in that it provides a safe space for the individual to explore their own mind as well as the mind of another. It also encourages mentalization and a confrontation of negative affect, all of which take place alongside the simultaneous stimulation of the attachment system (Midgley & Vrouva, 2012).

Mentalizing differences

Mentalization skills differ widely among individuals depending on their own childhood attachment experiences, as well as situational factors (e.g. emotional arousal level). The ability to mentalize in children and adolescents is similarly known to vary widely for these reasons, and this variance is reflected within different childhood disorders, an excellent summary of which is provided by Midgley and Vrouva (2012). For example, Baron-Cohen and colleagues (1985) demonstrated what they termed ‘mind-blindness’ in autistic children who appeared less able to mentalize the perspective of a child who was searching for a hidden toy. Early-onset psychosis in adolescence also appears to show a pattern of reduced mentalizing, although these difficulties may be due to the positive symptoms of the disorder rather than underdeveloped mentalization

skills. Abu-Akel and Bo (2013) added to this, finding better mentalization skills in females compared to males with a schizophrenia diagnosis. They suggested that this could be due to higher overall cognitive functioning in females. In addition to this, children with conduct problems have been shown to have deficits in social information processing, particularly the tendency to attribute hostile attributions to others, suggesting deficits in mentalization. These findings discussed by Midgley and Vrouva (2012) offer evidence for varying levels of mentalization within childhood disorders, suggesting that mentalization-based approaches may be useful.

As mentioned, some mentalization-based interventions are beginning to be applied to children, adolescents and families. An adapted version for adolescent populations, MBT-A, is the most prominent modified version of mentalization therapy for young people, primarily treating those who self-harm. It incorporates the same aspects of MBT but has been adapted to account for developmental factors and the family context that adolescents occupy (Bateman & Fonagy, 2012). Research has been relatively limited thus far, but evaluative studies are emerging.

In one investigation, Rossouw and Fonagy (2012) found MBT-A to be more effective in reducing self-harm in adolescents than TAU. They claimed that enhanced mentalization skills and reduced attachment avoidance led to improvements in the group of young people treated with MBT-A. Hutsebaut, Bales, Busschbach and Verheul (2012) examined implementation difficulties during the application of MBT-A. They suggested that given the complexity of the treatment approach and patients receiving it, an extended heuristic treatment model integrating organisational, team and therapist issues may be more suitable when delivering MBT-A. This would consider adherence to the model across multiple service and contextual domains and potentially lead to more successful implementation of treatment approaches (Hutsebaut *et al.*, 2012). In line with

this, incorporative approaches that include these contextual and service factors are beginning to emerge, such as the AMBIT model.

Aims

There are three main outcome domains of AMBIT, namely client outcomes that consider the impact on the young people, practitioner outcomes and service outcomes. This study will focus primarily on client outcomes, examining how a team trained in the AMBIT model can lead to improved outcomes for adolescent clients receiving a service. The main research aim is to evaluate the indication that teams operating using an AMBIT model positively influence how the young person views the care-giving system around them, which subsequently affects their internal working model. Bowlby (1973, p. 203) wrote that *'each individual builds working models of the world and of himself in it, with the aid of which he perceives events, forecasts the future, and constructs his plans. In the working models of the world that anyone builds, a key feature is his notion of who his attachment figures are, where they may be found, and how they may be expected to respond. Similarly, in the working model of the self that anyone builds, a key feature is his notion of how acceptable or unacceptable he himself is in the eyes of his attachment figures'.* This internal working model will be examined by considering a range of factors such as therapeutic relationship, empathy, attachment and ability to mentalize.

Research Questions

Firstly, the data will be analysed as two groups – those in treatment (i.e. AMBIT and alternative treatment as one group) and healthy controls. Following this, the data can be examined in relation to the three separate samples collected – AMBIT, alternative treatment and healthy controls. The main research questions consider:

1. How do mentalization skills differ between the three groups? It was hypothesised that the AMBIT group would have better mentalization skills than the alternative treatment group and potentially the healthy controls, which could imply the need for mentalization-informed treatments across services for young people.

2. How do the attachments differ across these groups? Does the AMBIT group differ in their view of their attachment figures?

3. How does empathy differ across the adolescent groups? Are there differences in those receiving AMBIT intervention?

4. Is the quality of the therapeutic relationships different in AMBIT services in comparison to alternative services?

5. How do the two groups, treatment and healthy controls differ in terms of mentalization skills, attachment and empathy?

Method

Design

This study employed a cross-sectional correlational design to investigate differences in adolescents' mentalization skills, as well as their attachments, levels of empathy and therapeutic relationships. The study also considered relationships between these variables. Assessment of participants occurred at one time-point, determined by the availability of young people.

Participants

Fifty participants entered the study between September 2014 and March 2015 and were acquired using opportunity sampling. Participants were young people aged 13-18 years and were recruited from the wider London metropolitan area and the Cambridge area. Inclusion criteria consisted of: (1) any adolescent aged between 13 and 18 years inclusive, (2) sufficient proficiency in English, (3) receiving input from AMBIT or similar alternative services. Exclusion criteria comprised (1) Any mental health problem or intellectual disability that may have influenced the ability to participate. Table 1 highlights the demographic characteristics of the participants in the study.

AMBIT group

Service users receiving support from teams that adopted an AMBIT approach were recruited as the treatment group. The AMBIT approach utilised by the teams in this study was as described in the introduction of this paper and utilised explicit mentalization across its various domains. Young people recruited from the AMBIT sample were experiencing and displaying several of the following problems; substance misuse difficulties, social exclusion, extremely challenging behaviours, offending history/risk of offending, educational difficulties or were at risk of going into care. Interventions offered were intensive (minimum of two sessions per week) and delivered in community settings, offering flexibility, active engagement and out-of-hours support. Most treatment within the AMBIT services involved idiosyncratic goal-setting with the young people and their families. This could be, for example, to improve relationships with parents, to engage in education or to reduce substance misuse. Various team members (e.g. Clinical Psychologists, Support Workers or Social Workers) were involved with the young people based on their individual needs. There was active encouragement of a mentalization stance throughout the treatment, such as encouraging

the young person to mentalize the perspective of their parents, teachers or clinicians, for example, as well as improving their ability to mentalize themselves in various interpersonal scenarios. AMBIT staff were given weekly group supervision and were encouraged to work across the network of family and professional bodies linked to the young people receiving support.

Alternative treatment group

Young people receiving input from different services were recruited as the alternative treatment group. These young people had similar difficulties to the AMBIT adolescents but were receiving treatment from a 'specialist multi-agency outreach service'. This service provided specialist, intensive outreach services to young people and their families where; there was high risk of children becoming looked after; adolescents were involved in criminality and/or anti-social behaviour; had poor attendance at school and/or had severe behavioural difficulties within their education placement. Some families presented with complex additional needs such as self-harm, parental substance misuse, parental mental illness, sexual exploitation risk, gang involvement and chronic physical health problems. The service consisted of two teams who shared multi-agency services and operated under one management structure within an inner London borough. Key features of the model included intensive, assertive outreach support for the whole family (at least twice-weekly face-to-face visits), multi-agency joint working and weekly group supervision for professionals. Similar to AMBIT, these interventions were tailored to the young person's individual needs and clinicians were involved based on specific goals. Examples included Support Workers assisting young people to engage in educational placements or Clinical Psychologists offering evidence-based treatments for specific psychological difficulties. The mentalization stance adopted by AMBIT was not included in this treatment approach or

service context. Intensive interventions were delivered in the community; they incorporated practical and therapeutic treatments to support the entire family's needs, provided alongside the young person's professional network. Overall the service offered a similar approach to AMBIT, with the exclusion of explicit mentalization guiding the framework, as well as some other minor features.

Healthy control group

A healthy control group was recruited from a high school in North London; this school was identified due to previous links with the external supervisor of this study. Participants in this group received no treatment intervention and were recruited as a sample of young people who were not currently receiving input from NHS services for social and/or psychological support.

Table 1: Participant Characteristics

	AMBIT	**Alternative treatment**	**Healthy controls**	**All Participants**	**F/$\chi 2$ value, *p*-value**
Age, mean (SD)	15.6 (1.68)	15.0 (1.13)	14.4 (0.49)	14.88 (1.22)	F(2,47) = 5.78, $p = .01$
Gender					
Male (%)	6 (40.0)	6 (50.0)	0 (0)	12 (24.0)	$\chi 2$ (2) = 13.82, $p = .001$
Female (%)	9 (60.0)	6 (50.0)	24 (100)	38 (76.0)	
Ethnicity					
White British (%)	10 (66.7)	8 (66.7)	8 (34.8)	26 (52.0)	$\chi 2$ (8) = 8.02, $p = .43$
White Other (%)	0 (0)	1 (8.3)	2 (8.8)	3 (6.0)	
Black British (%)	2 (13.3)	2 (16.7)	7 (30.4)	11 (22.0)	
Asian British (%)	2 (13.3)	0 (0)	5 (21.7)	7 (14.0	
Mixed Ethnicity (%)	1 (6.7)	1 (8.3)	1 (4.3)	3 (6.0)	
Living Situation					
Living with Parents (%)	10 (66.7)	10 (83.3)	24 (100)	43 (86.0)	$\chi 2$ (4) = 945, $p = .05$
Living Independently (%)	4 (26.7)	1 (8.3)	0 (0)	5 (10.0)	
Supported Housing (%)	1 (6.7)	1 (8.3)	0 (0)	2 (4.0)	
Total *N* (%)	15 (30.0)	12 (24.0)	23 (46.0)	50	

Procedure

The study was conducted as part of a joint research project with Keerthana Rudhra and Rashal Ullah, two Trainee Clinical Psychologists at UCL (see Appendix 1 for a full explanation). The research was approved by London – Stanmore Research Ethics Committee (Appendix 2).To recruit participants, the researcher visited NHS teams and the school to inform clinicians and teachers about the study (Appendix 3.2) prior to data collection. The clinicians and teachers then identified potential young people, who were provided with information about the study's aims, objectives and practicalities (Appendix 3.1). Those who expressed interest were contacted by the researcher and provided with a Participant Information Sheet (Appendix 4) and Consent Form (Appendix 5).

Adolescent volunteers were met by the researcher for one hour-long session. All measures were completed using an electronic recording system called Patient Outcome Data (POD). POD enabled participants to complete measures on an iPad, recording anonymous scores and preventing the need for paper questionnaires. The film component of the MASC was played using a PowerPoint presentation on a laptop but the scoring component was also completed on the iPad.

The researcher, a Trainee Clinical Psychologist, travelled to meet participants, with assessments taking place in schools, libraries, council buildings, NHS services and young people's homes, depending on the preference of the young person. Subjects received a gift voucher of £10 for their participation to cover out-of-pocket expenses.

Measures

1. *The Movie for the Assessment of Social Cognition (MASC; Dziobek, Fleck, Kalbe, Rogers, Hassenstab, Brand, Kessler, Woike, Wolf & Convit, 2006).*

The MASC was used to examine participants' mentalization skills. Subjects were required to watch a short 15-minute film about four characters getting together for a dinner party. Various interpersonal issues developed throughout the movie, which was stopped 46 times to ask participants about characters' thoughts, feelings and intentions. Answers were presented in a multiple-choice format with four response options. Each response was coded as *hypermentalizing, undermentalizing, no mentalizing or accurate mentalizing*. Total correct responses were summed to give a total mentalizing score. In addition, three separate scales were calculated to consider the extent to which incorrect mentalizing occurred, including hypermentalizing, undermentalizing and no mentalizing. The MASC was used to consider differences in the young peoples' mentalization skills (Hypothesis 1).

2. *The Reflective Functioning Questionnaire for the Youth (RFQ-Y; Ha, Sharp, Ensink, Fonagy & Cirino, 2013)*

The RFQ-Y is a 46-item instrument examining ability to understand the mental states of the self and others (i.e. mentalization/reflective function). Adolescent users self-rated their scores on various statements on a 6-point Likert scale ranging from *Strongly Disagree* to *Strongly Agree*. The questionnaire provided two subscores for *self* and *other* reflective function, as well as an overall score for reflective functioning ability. This tool was also used for Hypothesis 1, to examine differences in mentalization skills.

3. Adolescent Attachment Questionnaire (AAQ; West, Rose, Spreng, Sheldon-Keller, & Adam, 1998).

The AAQ is a self-report questionnaire examining attachment. It consists of 3 subscales, with Likert responses ranging from *Strongly Disagree* to *Strongly Agree*. The *Availability* scale examines the young person's perception of their attachment figure in terms of their availability and responsiveness to their needs. The *Goal-Corrected Partnership* scale measures the adolescent's empathy towards their attachment figure, including their understanding of their attachment figure's needs and feelings. The *Angry Distress* scale considers levels of anger in the adolescent–parent relationship.

4. STAR (Scale To Assess therapeutic Relationship in community mental health care; McGuire-Snieckus, McCabe, Catty, Hansson & Priebe, 2007).

The STAR is a 12-item assessment of therapeutic relationships. It uses a Likert scale asking participants to rate their level of agreement with different statements from *Never* to *Always*. It has both a clinician version and a patient version assessing different aspects of the therapeutic relationship. Adolescent service users completed the patient version of the scale. The healthy control group did not complete this item because they did not have a clinician to consider for this construct.

5. Basic Empathy Scale (BES; Jolliffe & Farrington, 2006).

This is a 20-item measure developed to examine the dimension of empathy. Adolescents rated items on a 5-point Likert scale from *Strongly Disagree* to *Strongly Agree*. Jolliffee and Farrington (2006) found good convergent and divergent validity for the BES, with two components within the scale providing two subscores for cognitive and affective empathy.

Statistical Analysis

The Statistical Package for Social Sciences (SPSS) Version 17 was used to analyse the data following recruitment. To address the study's hypotheses, various analyses were carried out. Firstly, mixed model ANOVAs were computed to examine differences between two groups; adolescents receiving treatment and healthy controls. This was conducted for all outcome measures, excluding the therapeutic relationship assessment because the healthy controls did not complete this measure. The AMBIT and alternative treatment participants were classified as one group for these analyses, termed 'treatment participants', and compared to the healthy controls to determine if there were differences in young people receiving treatment and healthy controls. Following this, mixed model ANOVAs were then computed to examine differences in the mentalizing abilities of the young people within the three groups. This was conducted separately for MASC scores and RFQ-Y scores. Mixed model ANOVAs also considered differences in attachment and empathy scores between the three groups. T-tests were used to examine these differences further. In relation to therapeutic relationship, only the two treatment groups (and not the control group) completed this measure; t-tests considered group differences in this construct.

Power Analysis - Sample Size and Statistical Power

Due to the lack of research examining the effectiveness of AMBIT, it was difficult to determine an effect size for the different measures based on previous literature. An extensive search of the youth literature was carried out in relation to the different variables in this study, such as mentalization, empathy and attachment. Some studies were quite irrelevant because they did not consider AMBIT or treatments similar to this approach. Other studies used specific measures that were employed in this

investigation, and offered useful guidance for power calculations. For example, Preibler, Dziobek, Ritter, Heekeren and Roepke (2010) investigated social cognition in BPD using the MASC and suggested that for an effect size of $f2$ = .40, a sample of 64 would be required in a study. Evidently their focus was concentrated on mentalization, whereas previous studies considering the other variables of interest in this study, empathy, attachment and therapeutic relationship, were relatively dissimilar to this investigation. For these reasons it was fairly difficult to determine an effect size for the variables and analyses within this study. After discussion within the research team, it was decided that for a moderate effect size of $f2$ = .40 (Cohen, 1988), with α = .05 and power =.80, an ideal sample size of 66 would be required, similar to that suggested by Preibler *et al.* (2010).

Results

Statistical analysis was carried out in two phases. Firstly, analyses were carried out to compare the three separate groups in the study – AMBIT, alternative treatment and healthy controls. Secondly, as a planned comparison, two groups were compiled, namely 'treatment participants' and 'healthy controls'. These two groups were compared on some of the outcome measures, excluding therapeutic relationship because the healthy controls did not complete this measure.

Preliminary Analyses

Tests for normality

All outcome data were checked for normality; this was carried out via visual inspection of histograms, as well as statistical tests for outliers, skewness and kurtosis. Firstly, the AMBIT and healthy control participants were grouped together and

classified as 'treatment participants'. This group was checked for normality first, and the histograms were normally distributed. Skewness and kurtosis were quite limited, and the Kolmogorov-Smirnov test produced a value of $p > .01$, meaning the data did not deviate normality significantly. No outliers were identified. Following this, the AMBIT and alternative treatment groups were considered separately. Again for both groups, the variables were normally distributed and there were no outliers identified.

Demographic Information

A description of the demographic characteristics of participants is presented in Table 1. Of the total sample size, 30% comprised of AMBIT young people, compared to 24% in the alternative treatment group and 46% in the control group. The mean age of the entire sample was 14.88 years (*SD* = 1.22). The AMBIT group had a mean age of 15.6 (*SD* = 1.68), compared to the alternative treatment group (*M* = 15.00, *SD* = 1.13) and the healthy controls (*M* = 14.40, *SD* = 0.49). Gender was relatively evenly distributed in the AMBIT group (40% male, 60% female) and alternative treatment group (50% male and female) but the control group was 100% female due to opportunity sampling. Both the AMBIT and alternative treatment groups were quite homogenous in terms of ethnicity, with 66.7% of participants being White British in both groups. This contrasts with a heterogeneous healthy control group where only 34.8% were White British, with the remainder of this group comprising various ethnic backgrounds. A high proportion (86.0%) of young people in the study were living with their parents at the time of data collection, although this was expected due to the average age of the sample. Overall, the majority of young people included in the study were female White British participants, living with their parents.

Correlation Matrix

A large, multi-factorial correlation matrix was computed for the entire sample and included the numerous measures and their internal scales (see Appendix 6). The majority of the correlations were not significant at the $p < .05$ level. For example, there was a moderate positive correlation between total mentalizing ability and therapeutic relationship, but the correlation was not significant ($r = .31$, $p = .15$). Some of the findings were significant; there was a moderate positive correlation ($r = .30$, $p = .03$) between total MASC scores and the *self* reflective function scale of the RFQ-Y. Interestingly, there was a moderate negative correlation between s*elf* reflective function scale scores on the RFQ-Y and the *goal-corrected partnership scale* of the AAQ ($r = -.44$, $p=.002$). Additionally, there was a moderate positive correlation ($r = .45$, $p = .03$) between total STAR scores and the *self* reflective function scale of the RFQ-Y, suggesting a link between increased *self* mentalizing and improved therapeutic relationships with staff.

Analysis of Outcomes

Three samples – AMBIT, alternative treatment and healthy controls

Mentalization Skills

One-way ANOVA revealed that there were no significant differences between the mentalization skills in the three groups, as assessed using the *accurate mentalizing* scores within the MASC, $F(2,47) = 2.551$, $p = .08$. The differences were not significant for the subscales within the MASC; *hypermentalizing* ($p = .26$), *undermentalizing* ($p = .48$), and *no mentalizing* ($p = .36$). However, an independent samples t-test revealed significant differences between males and females in their mentalization skills. Males had lower

MASC scores (*M* = 25.25) compared to females (*M* = 29.47), *t*(48) = -3.075, *p* = .003; the null hypothesis was rejected.

In relation to the RFQ-Y assessment of mentalization, ANOVA revealed that there were significant differences between the three groups on this measure, F(2,47) = 3.376, *p* = .04. Bonferonni post-hoc comparisons demonstrated that there were no significant differences between the AMBIT and alternative treatment group means (*p* = .21) but there were significant differences (*p* = .04) between the alternative treatment group (*M* = 8.13; *SD* = .80) and control group scores (*M* = 8.83; *SD* = .67). It was therefore possible to reject the null hypothesis, but this finding is limited to differences between the alternative treatment and control group only.

Additionally, the RFQ-Y features two subscales – *self* and *other* reflective function; in relation to the *self* reflective function scale, ANOVA revealed significant differences between the three groups, F(2,47) = 3.610, *p* = .04. Post-hoc comparisons (Bonferonni tests) revealed that the AMBIT group (*M* = 4.24, *SD* = .44) had higher *self* mentalization skills than the alternative treatment group (*M* = 3.84, *SD* = .54), but the result only approached significance (*p* = .06). ANOVA was also carried out for the *other* reflective function scale, finding no significant differences, F(2,47) = 1.007, *p* = .37.

Attachment

One-way ANOVA revealed no significant differences between the three groups on overall scores on the AAQ, F(2,47) = .420, *p* = .66. This was also the case for the *Angry Distress* subscale (*p* = .90), the *Availability* subscale (*p* = .61) and the *Goal Corrected Partnership* subscale of the questionnaire (*p* = .48). To examine the construct of attachment further, an independent samples t-test was computed and revealed that

females had significantly higher attachment scores (*M* = 22.34) than males (*M* = 17.08), $t(48) = -2.112$, $p = .04$.

Empathy

ANOVA was computed and found no significant differences in overall empathy scores between the three groups, $F(2,47) = .321$, $p = .73$. This was also the case for the subscales of the BES; *cognitive empathy* ($p = .07$) and *affective empathy* ($p = .89$). It was expected that the samples would differ on this construct, but because this was not the case, the null hypothesis could not be rejected.

Therapeutic Relationship

An independent samples t-test was employed to consider this but found no significant differences, $t(9.07) = .938$, $p = .38$. It was therefore impossible to reject the null hypothesis in relation to this research question.

Table 2: Mean (and SD) scores on outcome measures for the three groups

	AMBIT	**Alternative Treatment**	**Healthy Controls**
MASC	28.27 (4.82)	26.25 (4.88)	29.74 (3.72)
RFQ-Y	8.68 (0.87)	8.13 (0.80)	8.83 (0.67)
AAQ	21.73 (6.70)	22.33 (9.05)	20.00 (7.93)
BES	72.60 (9.81)	72.92 (11.79)	70.09 (12.76)
STAR	40.07 (4.68)	36.88 (9.00)	N/A

Planned comparisons: Two samples – NHS participants and healthy controls

Mentalization Skills

This construct was examined using two outcome measures, the MASC and the RFQ-Y. In relation to the MASC, several independent samples t-tests were conducted but revealed no significant differences in the *accurate mentalizing* scores of the two groups (p = .06). This was also the case for the *hypermentalizing* (p = .13), *undermentalizing* (p = .25) and *no mentalizing* (p = .63) subscales of this test. Similarly, on the RFQ-Y, an independent samples t-test revealed no significant differences between the two groups (p = .08).

Attachment & Empathy

Independent sample t-tests were conducted for scores on the AAQ and the BES. There were no significant differences in attachment scores between the two groups (p = .37). In addition to this, analysis revealed no significant differences in levels of overall empathy between the groups (p = .42). However, the subscales of the BES were examined further, revealing significant differences in the treatment participants' and healthy controls' levels of *cognitive* empathy, $t(48)=2.427$, p = .02, with treatment participants having higher cognitive empathy scores (M = 35.63, SD = 4.07) than healthy controls (M = 32.39, SD = 5.36). However, there were no significant differences in the *affective* empathy scores (p = .68). Additionally, there were no significant differences in empathy scores in relation to gender (p = .66).

These findings meant it was impossible to reject the null hypothesis in relation to the constructs being tested. It was expected that the treatment group would have higher levels of mentalization skills or empathy than the healthy controls, as well as

potentially higher attachment scores. However, no significant differences were observed between the two groups on any of the measures, except cognitive empathy.

Discussion

Summary of Main Findings

This study aimed to consider differences in levels of mentalization, attachment, empathy and therapeutic relationship between young people receiving Adolescent Mentalization-Based Integrative Treatment (AMBIT) and alternative services, and to compare these adolescents to healthy controls. Due to difficulties acquiring a large enough sample and the consequent limited power, it is difficult to draw substantial conclusions from the findings in this investigation. However, the study could be considered useful for identifying some of the potential issues and difficulties a larger scale study may face. In essence it is best considered a feasibility trial where the main outcome concerns the potential for fielding a future trial and the identification of barriers in the way of one. Rather than offering significant conclusions, this investigation should be considered as a feasibility study or to offer preliminary suggestions for future research in this area. Typically in studies of this nature, statistical analyses are relatively limited; however, it was considered important to complete this practice within this study due to the significant resources invested in the data collection process. With this in mind, data was analysed in relation to two groups initially; those receiving services and healthy controls, and some differences in empathy were observed. Additionally, when the data were analysed as three groups, AMBIT, alternative treatment and healthy controls, some mentalization differences were observed, although there were no significant differences in attachment, empathy or therapeutic relationship.

Interpretation of Results

Correlations

The correlation matrix revealed rather interesting relationships. Firstly, there was a moderate positive correlation between total MASC scores and the *self* reflective function scale of the RFQ-Y. This suggests that the two measures are examining a similar construct, and that as the ability to mentalize the self increases, there are improvements in the ability to mentalize within social interactions, as examined within the MASC. Additionally, there was a moderate positive correlation (r = .45, p = .03) between total STAR scores and the *self* reflective function scale of the RFQ-Y, suggesting that increased *self* mentalizing is related to improved therapeutic relationships with staff. The correlation matrix also revealed a moderate negative relationship between *self* reflective function scores and scores in the *goal-corrected partnership* measure of attachment. This is an unusual finding, given that the *goal-corrected partnership* scale examined the extent to which the young person can consider the goals, needs and intentions of their attachment figure. It would be expected that increased ability to *self* mentalize would increase the ability to consider the attachment figure too.

Sample comprising three groups - AMBIT, alternative treatment and healthy controls

Mentalization Skills

As mentioned, this construct was assessed using two different measures, the MASC and the RFQ-Y. In relation to the MASC scores, there were no significant differences in the mentalization skills between the three groups on any of the subscales. This meant it was impossible to reject the null hypothesis in this case. However, there were significant differences in the mentalization skills of males and females on this

construct, with males having lower mentalization scores than females. This supports the findings by Abu-Akel and Bo (2013) who found gender differences in mentalization skills in those diagnosed with schizophrenia. The writers postulated that this female superiority could be due to overall advantages in general cognitive functioning such as executive functioning, verbal and visual memory (Abu-Akel & Bo, 2013).

In relation to the RFQ-Y, there were significant differences between the three groups. This was examined further using post-hoc tests which revealed no significant differences between AMBIT and alternative treatment, but there were significant differences between the alternative treatment group and the healthy controls, who had higher levels of mentalization. It could be argued that this supports mentalization theory in that it provides evidence that those experiencing social adversity or living in chaotic environments (i.e. the alternative treatment group) are likely to have poorer mentalization skills (Bateman & Fonagy, 2010). Within the *self* reflective function scale of the RFQ-Y, the AMBIT had higher scores than the alternative treatment groups, suggesting that AMBIT does improve mentalizing in some adolescents, but the results only approached significance.

Attachment, Empathy and Therapeutic Relationship

When comparing the three groups, analysis revealed no significant differences between the three groups in overall attachment scores, including all subscales of the AAQ, and so it was not possible to reject the null hypothesis. In relation to empathy, Hypothesis 4 stated, '*There will be significant differences in levels of empathy between the three groups*'. Statistical analysis revealed no significant differences in overall empathy scores between the three groups. This was also the case for the two subscales of the BES; *cognitive empathy* and *affective empathy*, meaning it was not possible to reject the null

hypothesis. Finally, the AMBIT and alternative treatment group were compared for differences in therapeutic relationship scores but there were no significant differences; the null hypothesis was not rejected.

Sample comprising two groups - NHS participants and healthy controls

Mentalization Skills

A series of independent samples t-tests examined the differences between the two groups in relation to the MASC and the RFQ-Y, as well as their subscales. No significant differences were found on any of these measures. It is difficult to draw conclusions from these findings, because arguably they demonstrate that overall, those receiving treatment services of this nature appear to have similar mentalization skills as healthy controls. However, it could simply be that no significant differences were found due to limited power in the study.

Attachment & Empathy

Similarly, the construct of attachment and empathy were examined using independent samples t-tests. There were no significant differences between the two groups in levels of attachment. However, there were significantly higher cognitive empathy scores in the treatment participants in comparison to the healthy controls. Cognitive empathy is considered a largely conscious motivation to understand another's perspective, and this was higher in the young people who were receiving treatment services, suggesting a beneficial impact on this construct of empathy. There were no significant differences in empathy scores for males and females, contradicting previous findings by Jolliffee and Farrington (2006).

Methodological Limitations

The study could be criticised for containing various limitations. Firstly, the assessor was not blind to any of the participants' treatment conditions, and therefore it is difficult to determine the extent to which observer bias may have influenced assessments in the study. However, the young people completed many of the assessments with little input from the assessor, and due to funding and time constraints only one researcher could be involved in the study.

Secondly, it was difficult to measure the treatment fidelity of the different services working with the young people involved in the study. No measure of the extent to which services were utilising the AMBIT model or alternative services (i.e. not using any mentalization-based treatments) was conducted. This was checked by the research team before services were considered for inclusion in the study but no formal measure was utilised.

Thirdly, there are some limitations to the sample in the study. A large majority of the overall participants were female (76%) and in the case of the control group, all young people were female. This may have influenced some of the findings due to theoretical gender differences in attachment, empathy and mentalization skills. It is also under-representative of healthy male adolescents. Additionally, a point should be made about the heterogeneity of young people included in the AMBIT and alternative treatment groups. These young people had a range of difficulties including substance use problems, offending history, educational difficulties, gang involvement and additional complex family needs. This wide range of factors certainly reduced the homogeneity of the sample and may have influenced the young people's willingness to participate in the study (i.e. the representativeness of the sample), as well as their

performance on outcome measures. Finally, a fundamental difficulty within the investigation is that the sample size was relatively small. The nature of the sample involved in this area of research was very hard-to-reach, and although 50 adolescents participated, the limited power of the study may have reduced the capacity to detect smaller treatment effects.

Given these limitations, and in particular the challenge to acquire a large sample size, it is imperative to mention that it is difficult to make substantial conclusions from this study. Instead, the investigation offers insight into some of the potential difficulties and areas for consideration for a larger scale study in the future.

Clinical Implications

Bearing these issues in mind, the findings from this study are relatively tentative. The investigation has highlighted that there are no differences in mentalization abilities in young people receiving treatment in comparison to healthy controls. It could be potentially postulated that this reflects beneficial treatment effects for young people receiving support from such services, because their mentalization abilities are similar to healthy controls, or the findings could simply be due to limited power. When empathy differences were considered, it was discovered that those receiving treatments had significantly higher levels of cognitive empathy than healthy controls. This implies that young people receiving social and psychological support in the services mentioned have increased ability to empathically consider another person's perspective. This dimension is known to be a conscious, driven facet of empathy, and mentalization-based treatments examined in this study encourage the young people to consciously and actively consider others' perspectives, suggesting that the two may be linked.

In addition to this, the study has shown that mentalization abilities do differ between those receiving AMBIT intervention, alternative treatments and healthy controls, when assessed using RFQ-Y measure of mentalization. Healthy controls had significantly higher levels of mentalization than the alternative treatment group, supporting previous research that maladaptive environments can reduce mentalization skills in children and young people (Bateman & Fonagy, 2010). These findings could be used to consider mentalization treatment as integral to many child and adolescent mental health services and treatments, particularly for those children and young people living in unstable, chaotic environments.

There were no significant differences in the overall mentalization scores of those in AMBIT services when compared to healthy controls and alternative treatments. However, on the *self* reflective function scale, which examines the ability to consider and reflect on one's *own* mental state, the AMBIT group had higher levels of mentalizing ability than the alternative treatment group, although the results only approached significance. This was also moderately positively correlated with therapeutic relationship scores. Perhaps with a larger sample, it would be possible to demonstrate a treatment effect of improved *self* mentalizing capacity for those in AMBIT services as opposed to alternative treatment packages.

Additionally, the study highlighted significant differences in the mentalization skills of males and females, with males having lower mentalization capacity than females on average. This supports previous findings by Abu-Akel and Bo (2013), but perhaps further research could consider why gender differences in mentalization skills exist, and how this can be incorporated into treatment planning and delivery for male young people in particular.

Research Implications

Despite the limited power of the study and the associated difficulties, the overall findings offer some interesting considerations for research in the future. It is evident that the treatment services evaluated in this investigation, whether AMBIT or the alternative treatment, had beneficial effects on levels of cognitive empathy for young people in comparison to healthy controls. The mechanisms behind this, particularly the theoretical role of explicit mentalization tasks in these services, as well as how improvements in cognitive empathy helps these young people, could be examined in future research.

The study has also highlighted how mentalization skills differ in relation to gender and the treatment intervention being received. General mentalizing abilities were higher in the healthy controls in comparison to the alternative treatment group, whereas the AMBIT young people had higher levels of *self* mentalization skills than the alternative treatment participants. It would be interesting for future studies to consider why gender differences exist and how this can impact psychological functioning and improvement in young people. Additionally, the specific mechanisms underlying higher *self* mentalization skills in the AMBIT sample could be considered further, given that AMBIT research is currently in such early stages.

Finally, some of the non-significant findings in this investigation highlight a wider recommendation regarding sample size in adolescent research. Young people are relatively difficult to engage in services and research, particularly when labelled as 'hard to reach'. Prior to the study, a power analysis was conducted and revealed an ideal sample size of 66 or more. Regrettably, this was unattainable due to the various complexities of trying to engage young people in a study of this type. A total of 50

young people were recruited from various services and backgrounds, but this small sample size may have reduced the power of the study, potentially reducing the capacity to discover significant findings, or missing smaller treatment effects that could have been found using a larger sample size. Without doubt this was the largest sample size attainable given the financial, temporal and practical constraints of a doctoral research study. Numerous services were contacted and several did not wish to participate from the outset, whereas others were more forthcoming. All services who were contacted expressed concern regarding the desirability of a £5 voucher for the young people, meaning this was subsequently increased to £10 per participant. Even within these services, young people were extremely difficult to engage; many did not wish to participate from the beginning and some who did were, understandably, quite inconsistent in their commitments to the study. For example, five AMBIT young people and six alternative treatment young people initially expressed interest in the study but did not attend or engage further. Perhaps other services adopting an AMBIT model or those classified as 'alternative treatments' could have been approached for inclusion in this study if there were fewer constraints on time and financial resources; this certainly would have improved the power of the study and could have highlighted some additional treatment effects. An ideal study of this nature would perhaps include a repeated measure design to examine the constructs within this study at two time points – at the point of referral and at the end of treatment. This could potentially demonstrate changes over time. Further consideration is required on how best to involve young people in research studies in order to improve findings and recommendations.

Conclusions

The findings from this investigation are evidently quite impaired due to difficulties obtaining a large sample size with sufficient power to draw significant

conclusions. However, the study does offer relatively novel insights, given that AMBIT is a newly emerging treatment model to guide young peoples' services. The investigation has highlighted a beneficial impact of assertive, outreach youth intervention on levels of cognitive empathy in comparison to healthy controls, regardless of whether that is AMBIT or the alternative treatment approach outlined.

The study has also demonstrated that young people receiving AMBIT intervention have higher levels of *self* mentalization, which was associated with improved therapeutic relationships in this sample. Additionally, healthy controls had higher overall mentalization skills than those in the alternative treatment group. Future research should prioritise generating larger sample sizes in youth research to investigate these relationships further and to improve the significance of findings.

References

Abu-Akel, A., & Bo, S. (2013). Superior mentalizing abilities of female patients with schizophrenia. *Psychiatry Research*, *210*(3), 794-799.

Bateman, A., & Fonagy P. (2010). Comorbid antisocial and borderline personality disorders: Mentalization-based treatment. *Praxis der Kinderpsychologie und Kinderpsychiatrie*, *59*(6), 477-95.

Bateman, A., & Fonagy, P. (2004). *Psychotherapy for borderline personality disorder: A mentalization-based treatment*. Oxford: Oxford University Press.

Bateman, A., & Fonagy, P. (1999). The effectiveness of partial hospitalization in the treatment of borderline personality disorder - a randomised controlled trial. *American Journal of Psychiatry*, *156*, 1563-9.

Bateman A., & Fonagy P. (2001). Treatment of borderline personality disorder with psychoanalytically oriented partial hospitalisation: an 18- month follow-up. *American Journal of Psychiatry*, *158*, 36-42.

Bateman, A. W., & Fonagy, P. (2012). *Handbook of mentalizing in mental health practice*. Washington, DC: American Psychiatric Association.

Bateman, A. W., & Fonagy, P. (2006). *Mentalization-based treatment for borderline personality disorder: A practical guide*. Oxford: Oxford University Press.

Bateman, A. W., & Fonagy, P. (2004). Mentalization-based treatment of BPD. *Journal of Personal Disorders*, *18*(1), 36–51.

Bateman, A., Ryle, A., Fonagy, P., & Kerr, I. (2007). Psychotherapy for borderline personality disorder: Mentalization based therapy and cognitive analytic therapy compared. *International Review of Psychiatry*, *19*, 51-62.

Bevington, D., & Fuggle, P. (2012). Supporting and enhancing mentalization in community outreach teams working with socially excluded youth: the AMBIT approach. In Midgley, N., & Vrouva, I. (Eds.) (2012). *Minding the child: Mentalization-based interventions with children, young people and families*. London: Routledge.

Bevington, D., Fuggle, P., Fonagy, P., Target, M., & Asen, E. (2013). Innovations in Practice: Adolescent Mentalization-Based Integrative Therapy (AMBIT) – a new integrated approach to working with the most hard to reach adolescents with severe complex mental health needs. *Child and Adolescent Mental Health*, *18*(1), 46-51.

Bowlby, J. (1973). *Attachment and loss: Vol. 2. Separation: Anxiety and anger*. London: Hogarth Press.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum Associates.

Cook, T. D., & Campbell, D. T. (1979). *Quasi-experimentation: Design and analysis issues for field settings*. Boston, MA: Houghton Mifflin.

Dziobek, I., Fleck, S., Kalbe, E., Rogers, K., Hassenstab, J., Brand, M., Kessler, J., Woike, J. K., Wolf, O. T., & Convit, A. (2006). Introducing MASC: A movie for

the assessment of social cognition. *Journal of Autism & Developmental Disorders*, *36*, 623-636. doi.10.1007/s10803-006-0107-0.

Eizirik, M., & Fonagy, P. (2009). Mentalization-based treatment for patients with borderline personality disorder: an overview. *Revista Brasileira de Psiquiatria, 31*(1), *72-75*.

Fonagy P., & Bateman A. (2006a). Progress in the treatment of borderline personality disorder. *British Journal of Psychiatry*, *188*(1), 1-3.

Fonagy, P., Gergely, G., Jurist, E.L., Target, M. (2002). *Affect regulation, mentalization and the development of the self*. New York: Other Press.

Fonagy, P., Steele, H., Steele, M., & Holder, J. (1997). Attachment and theory of mind: Overlapping constructs? *Association for Child Psychology and Psychiatry Occasional Papers*, *14*, 31–40.

Ha, C., Sharp, C., Ensink, K., Fonagy, P., & Cirino, P. (2013). The measurement of reflective function in adolescents with and without borderline traits. *Journal of Adolescence*, *36*(6) 1215 - 1223. doi:10.1016/j.adolescence.2013.09.008.

Hutsebaut, J., Bales, D. L., Busschbach, J. J. V., Verheul, R. (2012). The implementation of mentalization-based treatment for adolescents: a case study from an organizational, team and therapist perspective. *International Journal of Mental Health Systems*, *6*, 10.

Jolliffe, D., & Farrington, D. P. (2006). Development and validation of the Basic Empathy Scale. *Journal of Adolescence*, *29*, 589-611.

Laurenssen, E. M. P., Hutsebaut, J., Feenstra, D. J., Bales, D. L., Noom, M. J., Busschbach, J. J. V., Verheul, R., & Luyten, P. (2014). Feasibility of mentalization-based treatment for adolescents with borderline symptoms: A pilot study. *Psychotherapy*, *51*, 159-166.

Lietz, C. A., Gerdes, K. E., Sun, F., Mullins-Geiger, J., Wagaman, M. A., & Segal, E. A. (2011). The Empathy Assessment Index (EAI): A confirmatory factor analysis of a multidimensional model of empathy. *Journal of the Society for Social Work and Research*, *2*(2), 104-124.

McGuire-Snieckus, R., McCabe, R., Catty, J., Hansson, L., & Priebe, S. (2007). A new scale to assess the therapeutic relationship in community mental health care: STAR. *Psychological Medicine*, *37*, 85–95.

Midgley, N., & Vrouva, I. (Eds.) (2012). *Minding the child: Mentalization-based interventions with children, young people and families*. London: Routledge.

Pomerantz, K., Hughes, M., & Thompson, D. (2007) (Eds). *How to reach 'hard to reach' children: Improving access, participation and outcomes*. Chichester: Wiley.

Roussouw, T., & Fonagy, P. (2012). Mentalization-based treatment for self-harm in adolescents: a randomized controlled trial. *Journal of the American Academy of Child and Adolescent Psychiatry*, *51*(12), 1304-1313.

Sharp, C., & Fonagy, P. (2008) The parent's capacity to treat the child as a psychological agent: Constructs, measures and implications for developmental psychopathology. *Social Development*, *17*, 737-754.

West, M., Rose, M. S., Spreng, S., Sheldon-Keller, A., & Adam, K. (1998). Adolescent attachment questionnaire: A brief assessment of attachment in adolescence. *Journal of Youth and Adolescence*, *27*(5), 661-663.

Part Three: Critical Appraisal

Overview

This critical appraisal consists of personal reflection on the process of completing the literature review and empirical paper. It considers factors that attracted me to this area of research, the various conceptual and methodological issues faced throughout the research process, as well as some personal reflections on the research project.

Background Interests and Experiences

I was initially drawn to this area of research for a variety of different reasons. Firstly, I have always felt a strong affiliation to attachment theory. Attachment is an enduring emotional and psychological connection between one person and another, formed between an infant and their caregiver in the early stages of development (Ainsworth, 1973; Bowlby, 1969). It has long been recognised that strong, healthy attachments facilitate adaptive child and adult functioning and that disruptions in attachment can often led to difficulties in interpersonal functioning and emotional regulation, as well as disrupted internal working models (Fonagy, 1998; Fonagy, Gergely, Jurist & Target, 2002; Holmes, 1993). This vital role of attachment has been a prolonged interest of mine and was shaped by my early childhood experiences. From a young age, my family fostered children from relatively problematic backgrounds and still continue to do so. I strongly believe that these experiences, rather implicitly, encouraged an interest within me about how early attachment experiences and interpersonal relationships can strongly shape behaviour and functioning throughout childhood and later life. It also provided learning experiences of how environmental changes and alternative interpersonal experiences can facilitate healthy, adaptive functioning in children and young people.

Through academic study I became more aware of the role of attachment in relation to mentalization and adult interpersonal functioning, including the development of personality disorders (Bateman & Fonagy, 2004; Fonagy *et al.*, 1996; Levy, 2005). It was this combination of interests and experiences that attracted me to the area of mentalization research initially. Following discussion with Professor Peter Fonagy at UCL, I was informed about a relatively new mentalization-based approach, Adolescent Mentalization-Based Integrative Treatment (AMBIT), demand for which was growing across the world, with limited research evaluating its effectiveness to date. I was particularly interested in how this new methodology impacted the young people it aimed to structure interventions for. AMBIT is very much an overarching, guiding framework to scaffold the entire service context in which it operates, as well as guiding the treatment approach for young people, and I was strongly drawn to the effects on the young people, as opposed to clinicians or services, as an area of research interest.

Conceptual and Methodological Issues

Literature Review

The first part of the literature review process was to indicate a focus for the review question. This was relatively difficult, and initial ideas encircled young people who are labelled as 'hard to reach', given the nature of the empirical paper. The notion of 'hard to reach' is a comprehensive, overarching term that can refer to a wide variety of social and psychological difficulties such as substance misuse, gang involvement, emerging personality disorder, homelessness, and many other complex issues (Pomerantz, Hughes & Thompson, 2007). This posed some difficulty finding an area of literature of adequate size and nature to match the scope of the thesis project.

Initially the review considered the effectiveness of service contexts that aimed to engage or treat 'hard to reach' young people in general, but after a search of the literature it was evident that the search criteria were much too broad, and required a specific disorder or difficulty as part of the search strategy. This was discussed within the research team, and the area of personality disorder was decided as a focus for the review. This was because emerging personality disorder in adolescence was relatively well-researched to fit the scope of the review, but there had been limited focus on the role of service contexts as opposed to specific treatment approaches *per se*. Secondly, it was considered an adequate literature review topic because mentalization theory and treatment had been well researched in relation to adult personality disorders, but less so in adolescent populations, and because mentalization was the guiding framework within AMBIT, the intervention under evaluation in the empirical paper.

Given the large variety of studies examining treatments for personality disorder in adulthood, it was surprising that such a small number existed for emerging personality disorder symptoms and diagnoses in young people. Even within these studies, the focus was primarily on psychological and pharmacological treatment approaches, with little consideration for the role of service organisation or context. The services guiding treatment for emerging personality disorder within the studies were often clearly outlined and described, but there had been minimal focus on how this impacted outcomes, with a tendency to concentrate on psychological treatments and their effectiveness. This provided an interesting focus for the review because service context and organisation had not been considered extensively before, and yet proved problematic because it was difficult deciding upon labels or categories for different types of service contexts to enable the findings to be categorised and discussed. Following careful assessment of the studies within the literature, some contextual themes did

emerge, meaning it was possible to categorise service contexts within the literature review. It was extremely interesting to then discover that some contexts proved more beneficial than others when treating emerging personality disorder. It is hoped that future investigations will consider this aspect of intervention for young people experiencing personality disorder symptoms as a priority rather than an extra issue, so that service planning and delivery can be adjusted accordingly.

Empirical Paper

Recruitment of young people

It was evident from the outset that recruitment of a sample would be difficult within this study, given that AMBIT was designed for young people labelled as 'hard to reach'. These 'hard to reach' adolescents often come from backgrounds with multiple and cumulative burdens as opposed to experiencing one particular mental health problem (Bevington & Fuggle, cited in Midgley & Vrouvra, 2012) and these afflictions often reduce the extent to which these young people approach and engage in their local services, as well as their willingness to engage in psychological research. This was one of the main difficulties throughout this investigation, and although this was anticipated from the outset, the scale of such difficulty recruiting participants was rather under-estimated. In relation to this, the external supervisor of this study and the clinicians involved in the various services that participated should be highly commended for their diligent and consistent efforts in acquiring a sample from their respective services. It would be useful for future studies to prioritise this aspect of youth research, given that it can prove to be an extremely arduous task. Detailed consideration is required in relation to specific populations of interest (for example, those experiencing psychosis, personality disorder symptoms or anxiety), but perhaps finding more effective ways to

reach these young people could be adopted, including the employment of more assertive, outreach techniques during recruitment, as well as improving or changing financial or other incentives to participate in research.

Qualitative and Quantitative Research

Given the relatively small sample size obtained, it could be argued that a qualitative research design would have been a more adequate approach for this investigation. In hindsight, this may have proved a more profitable endeavour but for a number of reasons I did not feel that this was totally appropriate at the outset of this research. As mentioned, it was initially expected that engaging 'hard to reach' young people would be quite difficult in this study. However, the extent of this problem only became apparent throughout the research process and during the data collection period. Many services were initially identified, some of which expressed interest and later retracted, which was also the case with many of the young people within the services that did participate. Secondly, I believe that a quantitative research design was more in line with my professional ambitions as a researcher and scientist practitioner. From an epistemological perspective, I would be more affiliated to the positivist stance regarding psychological research. I believe that psychological research should be as similar as possible to the experimental method of the physical sciences, involving the assessment of hypotheses using controlled and systematic means, where feasible. For these reasons, a quantitative design would be more in line with my beliefs regarding the superiority of different research methods.

Measurement

It felt important that measurement within this study was adequately considered and reflected upon. Measurement, or which outcome measures to use, is clearly an important aspect of any research design because it ultimately determines the type and quality of data your research will collate. Additionally, the specific outcome measures chosen by clinicians and researchers to examine patient characteristics is influenced by a myriad of clinical, practical, financial and social factors (Dawson, Doll, Fitzpatrick, Jenkinson & Carr, 2010) and therefore deciding which to include in this study was a lengthy, difficult process. As discussed in the empirical paper, it was imperative to consider Bowlby's (1973) concept of the internal working model, which could be examined by considering the young people's attachment, trust, therapeutic relationship, empathy and mentalization skills. There are a multitude of instruments available to assess these components of psychological functioning, but in relation to adolescents and young people, the area is relatively limited. Additionally, there are a small number of options available to examine the construct of mentalization, particularly in youth populations. Following consideration and discussion within the research team, the MASC (Dziobek *et al.*, 2006) and the RFQ-Y (Ha, Sharp, Ensink, Fonagy & Cirino, 2013) were chosen because they were different assessments of the same construct. The MASC was very interactive and engaging and involved watching a video about interpersonal issues, with the young people answering questions to assess their mentalization skills. The FFQ-Y, on the other hand, was a self-report questionnaire and encouraged participants to reflect on a series of statements about themselves and others.

These are evidently quite different assessments of mentalization, each with their own advantages and disadvantages specific to adolescent research. For example, the MASC is relatively easy to engage with because it requires simply watching a film and

answering questions, whereas the RFQ-Y is quick and easy to administer. Whilst the MASC is an effective measure of mindreading (Dziobek *et al.*, 2006), there are areas for consideration, as discovered in this study. Firstly, the movie lasts 15 minutes but the entire time it takes to proceed through the different parts of the film, including questions, is closer to 45 minutes. This is an extremely strenuous amount of time, particularly for young people who have social and psychological difficulties, problems engaging in services and varying levels of interest in research participation. The film is also quite dated at present, and features unfashionable clothing, hairstyles and furnishings throughout. Additionally, the movie has been recorded in German with English commentaries added to the film, which has created an unusual experience where the characters appear to talk inconsistently to the sound. Evidently these issues are impossible to control and seem rather pedantic, but almost all of the young people involved in the study commented on these aspects of the film, which may have influenced their interest or engagement in the MASC, as well as the extent to which they seriously considered the film, or potentially, the research study. On reflection, given the large amount of time required to administer the MASC, as well as the minor features of the film discussed, perhaps an alternative assessment of mentalization would have proved more desirable. This may have provided more time in the study, and would have enabled the inclusion of additional assessments of functioning in the young people. It would be a recommendation that future studies should consider the RFQ-Y as an effective assessment of mentalization, as well as other more convenient instruments such as The Awkward Moments Test (Heavey, Phillips, Baron-Cohen & Rutter, 2000), The "Reading the Mind in the Eyes" Test (Baron-Cohen, Wheelwright, Hill, Raste & Plumb, 2001), or The Perspectives Task (Dumontheil, Apperly & Blakemore, 2010).

Indirect Treatments

Whilst this study examined various components of psychological functioning as mentioned throughout, it felt important to consider some of the indirect or unobserved benefits of treatment within the services involved in this research. Throughout the data collection period it was very evident that many of the young people had strong, trusting and supportive relationships with the various members of staff involved in their care and treatment. This was the case for both the AMBIT and alternative treatment groups. It can only be postulated that there could be a multitude of additional, indirect benefits to having a strong, trusting relationship with service staff, both on a short- and long-term basis. Many of these indirect factors are seldom considered in service evaluation or academic research, and yet they assumingly have long-lasting, beneficial impacts on the young people and their families. It felt important to note this because many of these factors are difficult to measure or quantify and yet are so clearly existent.

Conclusions

The process of conducting the literature review and empirical paper has been an excellent learning process for my future as a Clinical Psychologist. It has highlighted the importance of service organisation and context when engaging and treating young people who are hard to reach, and has raised interesting questions about the role of service context when delivering any psychological intervention for different disorders and populations. Additionally, the empirical paper, whilst impaired by sampling difficulties, presented interesting findings about differences in adolescents' internal working models, and provided supplementary research experiences such as difficulties engaging certain populations, learning about barriers to service input and research

participation, as well as the various indirect benefits of interventions, often overlooked by service evaluation and research.

It is imperative that future adolescent research considers the barriers to treatment and research participation to ensure that service provision and research findings extend as far as necessary to those who are most difficult to engage and treat. It is hoped that my reflections on this process can encourage future researchers to consider these issues that prevent and facilitate service engagement and research involvement.

References

Ainsworth, M. D. S. (1973). The development of infant-mother attachment. In B. Cardwell & H. Ricciuti (Eds.), *Review of child development research* (pp. 1-94) Chicago: University of Chicago Press.

Baron-Cohen, S., Wheelwright, S., Hill, J., Raste, Y., & Plumb, I. (2001). The "Reading the Mind in the Eyes" test revised version: A study with normal adults, and adults with asperger syndrome or high-functioning autism. *Journal of Child Psychology and Psychiatry*, *42* (2), 241-251.

Bateman, A. W. & Fonagy, P. (2004). *Psychotherapy for borderline personality disorder: Mentalization Based Treatment*. Oxford: Oxford University Press.

Bevington, D., & Fuggle, P. (2012). Supporting and enhancing mentalization in community outreach teams working with socially excluded youth: the AMBIT approach. In Midgley, N., & Vrouva, I. (Eds.) (2012). *Minding the child: Mentalization-based interventions with children, young people and families*. London: Routledge.

Bowlby J. (1969). ***Attachment and loss: Vol. 1. Loss***. New York: Basic Books.

Bowlby, J. (1973). *Attachment and loss: Vol. 2. Separation: Anxiety and anger*. London: Hogarth Press.

Dawson, J., Doll, H., Fitzpatrick, R., Jenkinson, C., & Carr, A. J. (2010). The routine use of patient reported outcome measures in healthcare settings. *British Medical Journal*, 340: c186. doi: 10.1136/bmj.c186.

Dumontheil, I., Apperly, I. A., & Blakemore, S. J. (2010). Online usage of theory of mind continues to develop in late adolescence. *Developmental Science, 13,* 331-338.

Dziobek, I., Fleck, S., Kalbe, E., Rogers, K., Hassenstab, J., Brand, M., Kessler, J., Woike, J. K., Wolf, O. T., & Convit, A. (2006). Introducing MASC: A movie for the assessment of social cognition. *Journal of Autism & Developmental Disorders*, *36*, 623-636. Doi: 10.1007/s10803-006-0107-0.

Fonagy, P. (1998). Prevention, the appropriate target of infant psychotherapy. *Infant Mental Health Journal*, *19*(2), 124-150.

Fonagy, P., Gergely, G., Jurist, E., & Target, M. (2002). *Affect regulation, mentalization, and the development of the self*. London: H. Karnac (Books) Ltd.

Fonagy, P., Leigh, T., Steele, H., Steele, M., Kennedy, R., Mattoon, G., et al. (1996). The relation of attachment status, psychiatric classification and response to psychotherapy. *Journal of Consulting and Clinical Psychology, 64*, 22–31.

Ha, C., Sharp, C., Ensink, K., Fonagy, P., & Cirino, P. (2013). The measurement of reflective function in adolescents with and without borderline traits. *Journal of Adolescence*, *36*(6) 1215 - 1223. doi:10.1016/j.adolescence.2013.09.008.

Heavey, L., Phillips, W., Baron-Cohen, S., & Rutter, M. (2000). The awkward moments test: A naturalistic measure of social understanding in autism. *Journal of Autism and Developmental Disorders*, *30* (3), 225-236.

Holmes, J. (1993). *John Bowlby & attachment theory*. London, Routledge.

Levy, K. N. (2005). The implications of attachment theory and research for understanding borderline personality disorder. *Development and Psychopathology*, *17*, 959-986.

Pomerantz, K. A., Hughes, M., & Thompson, D. (2007) (Eds). *How to reach 'hard to reach' children: Improving access, participation and outcomes*. Chichester: Wiley.

Appendix 1: Joint Project Contributions

This research project was carried out as a partially joint project with two other UCL Trainee Clinical Psychologists, Keerthana Rudhra and Rashal Ullah. The three thesis projects had separate working titles, and as such contained different aims and methodologies.

Keerthana Rudhra's project considered how AMBIT as an organisational framework helped team effectiveness, and in particular, staff members' ability to cope with professional anxiety. Rashal Ullah's thesis was a qualitative study exploring team members' experiences of working in services guided by the AMBIT framework.

The three researchers worked collaboratively when considering services to approach for inclusion in their studies. This entailed visiting AMBIT teams and discussing and presenting the different research studies. This study required NHS ethics whereas the other two projects required UCL ethics only; this was completed by Keerthana Rhudra and Rashal Ullah together, while I completed NHS ethics separately. Additionally, the data collection, statistical analyses and empirical write-up of all studies were conducted independently.

Appendix 2: NHS Ethical Approval

Health Research Authority

NRES Committee London - Stanmore
Ground Floor
NRES/HRA
80 London Road
London
SE1 6LH

Telephone: 020 7972 2554

09 July 2014

Professor Peter Fonagy
Freud Memorial Professor of Psychoanalysis and Head of Department, UCL
University College London
Department of Clinical, Educational and Health Psychology
1-19 Torrington Place
London
WC1E 7HB

Dear Professor Fonagy

Study title:	**Differences in adolescents' empathy, trust, attachment and mentalization skills: Adolescent Mentalization-Based Integrative Treatment (AMBIT)**
REC reference:	**14/LO/0596**
IRAS project ID:	**150423**

Thank you for your letter of responding to the Committee's request for further information on the above research and submitting revised documentation.
The further information has been considered on behalf of the Committee by the Chair.

We plan to publish your research summary wording for the above study on the HRA website, together with your contact details. Publication will be no earlier than three months from the date of this opinion letter. Should you wish to provide a substitute contact point, require further information, or wish to make a request to postpone publication, please contact the REC Manager, Ms Julie Kidd, nrescommittee.london-stanmore@nhs.net .

Confirmation of ethical opinion
On behalf of the Committee, I am pleased to confirm a favourable ethical opinion for the above research on the basis described in the application form, protocol and supporting documentation as revised, subject to the conditions specified below.

Conditions of the favourable opinion
The favourable opinion is subject to the following conditions being met prior to the start of the study.

You should notify the REC in writing once all conditions have been met (except for site approvals from host organisations) and provide copies of any revised documentation with updated version numbers. The REC will acknowledge receipt and provide a final list of the approved documentation for the study, which can be made available to host organisations to facilitate their permission for the study. Failure to provide the final versions to the REC may cause delay in obtaining permissions.

Management permission or approval must be obtained from each host organisation prior to the start of the study at the site concerned.

Management permission ("R&D approval") should be sought from all NHS organisations involved in the study in accordance with NHS research governance arrangements.

Guidance on applying for NHS permission for research is available in the Integrated Research Application System or at http://www.rdforum.nhs.uk.

Where a NHS organisation's role in the study is limited to identifying and referring potential participants to research sites ("participant identification centre"), guidance should be sought from the R&D office on the information it requires to give permission for this activity.

For non-NHS sites, site management permission should be obtained in accordance with the procedures of the relevant host organisation.
Sponsors are not required to notify the Committee of approvals from host organisations

Registration of Clinical Trials
All clinical trials (defined as the first four categories on the IRAS filter page) must be registered on a publically accessible database within 6 weeks of recruitment of the first participant (for medical device studies, within the timeline determined by the current registration and publication trees).

There is no requirement to separately notify the REC but you should do so at the earliest opportunity e.g when submitting an amendment. We will audit the registration details as part of the annual progress reporting process.

To ensure transparency in research, we strongly recommend that all research is registered but for non clinical trials this is not currently mandatory.

If a sponsor wishes to contest the need for registration they should contact Catherine Blewett (catherineblewett@nhs.net), the HRA does not, however, expect exceptions to be made. Guidance on where to register is provided within IRAS.

It is the responsibility of the sponsor to ensure that all the conditions are complied with before the start of the study or its initiation at a particular site (as applicable).

Ethical review of research sites

NHS sites

The favourable opinion applies to all NHS sites taking part in the study, subject to management permission being obtained from the NHS/HSC R&D office prior to the start of the study (see "Conditions of the favourable opinion" below).

Non-NHS sites

Approved documents

The final list of documents reviewed and approved by the Committee is as follows:

Document	*Version*	*Date*
Copies of advertisement materials for research participants	Staff Poster v2.0	11 March 2014
Copies of advertisement materials for research participants	Adolescent Poster v2.0	11 March 2014
Evidence of sponsor insurance or indemnity (non NHS sponsors only)	Certificate of Insurance	26 July 2013
Non-validated questionnaire [MASC]		
Participant Consent Form [School]	3	14 May 2014
Participant Consent Form [NHS Oxleas]	3	14 May 2014
Participant Consent Form [Alternative treatment]	3	14 May 2014
Participant Consent Form [NHS Cambridgeshire & Peterborough]	3	14 May 2014
Participant Consent Form [NHS Camden & Islington]	3	14 May 2014
Participant Information Sheet [School]	3	14 May 2014
Participant Information Sheet [NHS Oxleas]	3	14 May 2014
Participant Information Sheet [Alternative treatment]	3	14 May 2014
Participant Information Sheet [NHS Cambridgeshire & Peterborough]	3	14 May 2014
Participant Information Sheet [NHS Camden & Islington]	3	14 May 2014
REC Application Form		24 March 2014
Research protocol or project proposal	1.0	08 February 2014
Summary CV for Chief Investigator [CI]	Fonagy	
Summary CV for Chief Investigator [CI]	Fuggle	
Summary CV for Chief Investigator [CI]	Gelston	
Summary, synopsis or diagram (flowchart) of protocol in non-technical language	Flowchart v1.0	01 February 2014
Validated questionnaire [RFQ-Y]		
Validated questionnaire [AAQ]		
Validated questionnaire [BES]		
Validated questionnaire [STAR]		

Statement of compliance
The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

After ethical review

Reporting requirements

The attached document "After ethical review – guidance for researchers" gives detailed guidance on reporting requirements for studies with a favourable opinion, including:

- Notifying substantial amendments
- Adding new sites and investigators
- Notification of serious breaches of the protocol
- Progress and safety reports
- Notifying the end of the study

The HRA website also provides guidance on these topics, which is updated in the light of changes in reporting requirements or procedures.

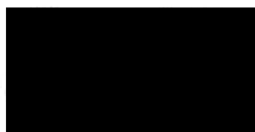
Feedback

You are invited to give your view of the service that you have received from the National Research Ethics Service and the application procedure. If you wish to make your views known please use the feedback form available on the HRA website: http://www.hra.nhs.uk/about-the-hra/governance/quality-assurance/

We are pleased to welcome researchers and R & D staff at our NRES committee members' training days – see details at http://www.hra.nhs.uk/hra-training/

With the Committee's best wishes for the success of this project.

Yours sincerely



Mrs Rosemary Hill
Chair

Email:nrescommittee.london-stanmore@nhs.net

Enclosures: "After ethical review – guidance for researchers"

Copy to: Ms Suzanne Emerton
Mrs Angela Williams, Camden & Islington NHS Foundation Trust

Appendix 3: Information Posters

Appendix 3.1: Participant Poster

Appendix 3.2: Clinician/Teacher Poster

Do you WANT TO BE INVOLVED IN A PSYCHOLOGICAL EXPERIMENT?

UCL

Differences in adolescents' empathy, trust, attachment and mentalization skills

What will happen?
If you take part, you will be asked to watch a video about a group of friends and answer some questions. After this there are some questionnaires looking at trust, attachment and empathy.

Everything is anonymous and confidential & no personal details are required.

You will be rewarded with a £5 iTunes voucher for your time.

Total time: Approx 1 hour

Questions? p.gelston.12@ucl.ac.uk

Differences in adolescents' empathy, trust, attachment and mentalization skills

Paul Gelston, Trainee Clinical Psychologist, UCL

AMBIT Client Outcomes

- **Mentalization** is something we all do without realising. It is our ability to understand our own and other people's behaviour based on how they are feeling inside (e.g. thoughts, feelings, needs, desires).
- Mentalization begins very early in life through attachments and is seen as one of the most important developmental processes.
- Recently, improving peoples' mentalization skills has been a basis for treatment of different healthcare problems. For example, personality disorder, PTSD, eating disorders and depression.
- It has now moved towards helping adolescents, known as Adolescent Mentalization-Based Integrative Treatment (AMBIT), which this study aims to investigate....

The Study

My study aims to investigate mentalization skills in adolescents, as well as their levels of empathy, trust and attachments.

Three samples will be used: those receiving input from AMBIT services, young people in similar, alternative services, and those in mainstream schools. Young people recruited for the study will be asked to watch a 15-minute video of a dinner party to look at their mentalization skills.

After this, they will complete a few questionnaires on an iPad which will consider their levels of trust, empathy and attachment styles.
This whole process should take approximately 1 hour to complete. This can be split across two or more sessions (on the same day) if needed.

It is expected that the adolescents will vary on these traits. The main interest is whether the AMBIT group differs from the other two groups.

Participation is completely anonymous and confidential and no personal details are needed. Those who take part will be offered a £5 iTunes voucher to thank them for their time.
All of this will be passed by NHS Ethics before it begins.

Appendix 4: Participant Information Sheet

Research Department of Clinical, Educational & Health Psychology
University College London
1-19 Torrington Place
London
WC1E 7HB

Tel: 020 7679 1897
Fax: 020 7916 1989
Website: www.ucl.ac.uk/dclinpsy

Camden & Islington NHS Foundation Trust
St Pancras Hospital
St Pancras Way
London
NW1 0PE

Tel: 020 3317 3500
Website: www.candi.nhs.uk
Email: communications@candi.nhs.uk

Participant Information Sheet: NHS

TITLE: Differences in adolescents' empathy, trust, attachment and mentalization skills: Adolescent Mentalization-Based Integrative Treatment (Student Study)

Part 1 - Information Sheet

This study will form part of Paul Gelston's Doctorate in Clinical Psychology
I am asking you to join in a research project to find out if young people think about others differently, using a process called mentalizing (explained below). Before you decide if you want to join, it is important to understand why the research is being carried out and what will happen. So please think about this leaflet carefully. Talk to your family, friends, teacher, doctor or nurse if you wish.
What is the reason for this study?

Mentalizing is a complicated word for something very simple; it is how we think about ourselves and other people in terms of how they might be feeling inside. Everyone uses mentalizing without even realizing to think about themselves and others. Some use it more often than others. The reason for this study is to see if young people differ in how they mentalize, as well as how they differ in things like empathy.

Why have I been invited?
You have been invited to join this study because you are a young person (healthy controls) /because you are receiving support from X team (AMBIT & alternative treatment). The study is interested in how young people

mentalize differently and you have been invited to take part because you are receiving input from an NHS team. Around 70 other young people will be asked to take part too.

Do I have to take part?

No. It's up to you. I will ask for your consent and then ask if you would sign a form. I will give you a copy of this information sheet and a signed form to keep. **You are free to stop taking part at any time in the study without giving a reason**. If you decide to stop, it will not affect the care you receive. If you do decide to stop, all of the data and information you provided will be removed from the study.

What will happen if I take part? What will I have to do?

You will be asked to take part for around one hour. You don't have to meet me again or do anything else after that. You will be asked to complete some tasks on an iPad. These tasks will include watching a video of people together on a Saturday night and filling in four short questionnaires afterwards. These questionnaires look at your mentalization skills, as well as your levels of empathy, relationships, attachment and trust. Once the hour is up, you won't have to do anything else and your role in the study will be completely finished.

Expenses and payments

It won't cost you anything to take part. When you have finished, you will be rewarded with a £10 iTunes voucher to thank you for taking part.

Is there anything to be worried about if I take part?

There are no major risks involved in taking part. You will be kept free from physical and psychological harm. There are very low risks of negative effects, pain, discomfort, or distress. You will only be required to watch a short 15 minute video about a dinner party and answer short questionnaires relating to empathy, relationships and attachment.

These questionnaires may, although unlikely, cause distress to some adolescents. These questionnaires have all been developed by healthcare professionals and researchers and are all viewed as extremely low risk to any type of harm.

Will any of the content be sensitive, embarrassing or upsetting?

You will be asked to complete self-report questionnaires about empathy, relationships, attachment and mentalization skills. These all have an extremely low level of risk. If any topic comes up that you do not wish to talk about, this is absolutely fine - just let the researcher know. Also remember that you can leave the study at any time.

All questionnaires have been developed and used in other research, meaning the risks associated with them are extremely low. The student researcher has been trained to help those in distress and will be able to help you if you feel upset.

What are the benefits of taking part?
I cannot promise that the study will help you but it is hoped that the results will help to make treatment plans for young people having difficulties. These treatment plans could be based on improving the mentalization skills of young people. The results will also help psychologists to understand how young people mentalize in different ways, as well as how their levels of empathy and attachment differ.

Yes. For this study your personal details will be linked to an individual code and stored securely, which means no-one will ever be able to identify you. Any information you do provide will be kept completely private and confidential and it will be used for this study only. There are circumstances where I might have to break confidentiality, which include if you disclose a criminal offence or risk of harm to yourself or others.

Contact Details
If you would like more information, my contact details are:
Paul Gelston, Trainee Clinical Psychologist, UCL: p.gelston.12@ucl.ac.uk

Or you can contact others involved in the research:
Peter Fonagy, UCL: peter.fonagy@ucl.ac.uk
Peter Fuggle, Anna Freud Centre: p.fuggle@nhs.net

Thank you for reading so far. If you are still interested, please go to Part 2

Part 2 - Information Sheet

More detail - information you need to know if you want to take part

What happens when the research project stops?
The findings from the study will be used as part of my academic qualification called the Doctorate in Clinical Psychology. This is so I can become a qualified Clinical Psychologist. When the project stops, all data you have provided will be deleted as it will no longer be needed.

What happens if new information about the research comes along?
If any new information related to this study comes along during the research, I will let all participants know.

What happens if something goes wrong?
If you want to complain, or have any concerns about any aspect of the way you have been treated by members of staff in the research, National Health Service (NHS) or UCL complaints procedures are available to you. Please ask the researcher if you would like more information. In the unlikely event that you are harmed in this study, compensation may be available to you.
If you suspect that the harm is the result of the sponsor's (UCL) or the hospital's negligence, then you may be able to claim compensation. After discussing with the researcher, please make the claim in writing to Peter Fonagy who is the Chief Investigator for the research and who is based at the Research Department of Clinical, Health and Educational Psychology, University College London. The Chief Investigator will then pass the claim to the Sponsor's Insurers, via the Sponsor's office. You may have to bear the costs of the legal action initially, and you should consult a solicitor about this.

Will anyone else know I'm doing this study?
All information you provide is completely private and confidential. Your personal details will be linked to an individual code and stored securely meaning it will be impossible for others to identify you in the research or be aware that you have taken part.

What will happen to the information I provide?
The information you provide will be used to compare how adolescents differ in their ability to mentalize, use empathy, trust and other similar things. The findings will be published as part of my research for my degree (Doctorate in Clinical Psychology). Any information provided will only be used as part of this study and will not be passed on to anyone else.

Who is organising and funding the research?
The study is funded by Camden & Islington NHS Foundation Trust and University College London.

Who has reviewed the study?
Before any research goes ahead it has to be checked by a Research Ethics Committee. They make sure that the research is fair and safe. This study has been checked and reviewed by the NRES Committee London Stanmore and has gained Research and Development approval from the following NHS trusts:
XX NHS Foundation Trust
XX NHS Foundation Trust
XX NHS Foundation Trust.

How will the results be reported?
The research will be part of my Doctorate in Clinical Psychology (DClinPsy) thesis. This means the findings from the study will be published as part of this qualification. The findings may also be published in scientific journals or at conference presentations to let other psychologists and researchers know what happened and what the findings were.

Will I be made aware of the results?
It is difficult to inform participants about the research findings because personal information is not required as part of the study (e.g. address details).
However, participants will be offered contact details of the student researcher to seek information about the results of the study if interested.

Thank you for reading this. Please ask any questions if you need to.

Appendix 5: Consent Form

Consent Form

TITLE: Differences in adolescents' empathy, trust, attachment and mentalization skills: Adolescent Mentalization-Based Integrative Treatment (Student Study)

Young person to circle all they agree with:

Has someone else explained this project to you?	Yes/No
Do you understand what the study is about?	Yes/No
Have you asked all the questions that you want?	Yes/No
Have you had your questions answered in a way you understand?	Yes/No
Do you understand it's OK to stop at any time?	Yes/No
Are you happy to take part?	Yes/No

If any answers are 'no' or if you don't want to take part, don't sign your name!

If you do want to take part, you and a parent/guardian should sign below:

Name: ____________________ Parent Name: ________________________
Signed: ____________________ Signed:________________________
Date: ______________________ Date: ________________________

The person who explained this project to you also needs to sign

Name: _______________________Signed: ________________________
Date: ________________________

Thank you for taking part!

Appendix 6: Correlation Matrix

		Accurate Mentalizing (MASC)	Hyper-mentalizing (MASC)	Under-mentalizing (MASC)	No mentalizing (MASC)	RFQ-Y Total	RFQ-Y (Self)	RFQ-Y (Other)	AAQ Total	AAQ Angry Distress Scale	AAQ Availability Scale	AAQ Goal-Corrected Partnership Scale	STAR Total	Empathy Total	Cognitive Empathy	Affective Empathy
Accurate Mentalizing (MASC)	Pearson Corr.	1	-.672**	-.606**	-.556**	.246	.305*	.088	.072	.026	.087	.060	.308	.005	-.015	.048
	Sig. (2-tailed)		.000	.000	.000	.085	.031	.543	.620	.859	.547	.678	.152	.972	.918	.742
Hyper-mentalizing (MASC)	Pearson Corr.	-.672**	1	-.067	.094	-.174	-.092	-.142	-.132	-.139	-.107	-.063	-.089	.263	.188	.213
	Sig. (2-tailed)	.000		.643	.517	.227	.525	.324	.361	.336	.461	.662	.688	.065	.190	.137
Under-mentalizing (MASC)	Pearson Corr.	-.606**	-.067	1	.231	-.046	-.151	.045	-.055	.017	-.008	-.175	-.294	-.186	-.108	-.190
	Sig. (2-tailed)	.000	.643		.106	.752	.296	.757	.702	.908	.954	.224	.173	.197	.455	.187
No mentalizing (MASC)	Pearson Corr.	-.556**	.094	.231	1	-.283*	-.433**	-.047	.135	.162	-.029	.227	-.215	-.214	-.141	-.233
	Sig. (2-tailed)	.000	.517	.106		.046	.002	.743	.350	.261	.844	.113	.324	.136	.328	.103
RFQ-Y Total	Pearson Corr.	.246	-.174	-.046	-.283*	1	.513**	.830**	-.254	-.060	-.267	-.310*	.359	.111	-.115	.229
	Sig. (2-tailed)	.085	.227	.752	.046		.000	.000	.075	.680	.061	.028	.093	.442	.428	.109
RFQ-Y (Self)	Pearson Corr.	.305*	-.092	-.151	-.433**	.513**	1	-.053	-.265	-.176	-.087	-.436**	.447*	.272	.132	.280*
	Sig. (2-tailed)	.031	.525	.296	.002	.000		.714	.063	.222	.550	.002	.032	.056	.360	.049
RFQ-Y (Other)	Pearson Corr.	.088	-.142	.045	-.047	.830**	-.053	1	-.124	.045	-.254	-.077	.111	-.047	-.219	.085
	Sig. (2-tailed)	.543	.324	.757	.743	.000	.714		.391	.758	.075	.593	.615	.743	.126	.557
AAQ Total	Pearson Corr.	.072	-.132	-.055	.135	-.254	-.265	-.124	1	.805**	.860**	.732**	.113	-.126	-.108	-.119
	Sig. (2-tailed)	.620	.361	.702	.350	.075	.063	.391		.000	.000	.000	.608	.382	.454	.411
AAQ Angry Distress Scale	Pearson Corr.	.026	-.139	.017	.162	-.060	-.176	.045	.805**	1	.518**	.368**	.321	-.016	-.014	-.030
	Sig. (2-tailed)	.859	.336	.908	.261	.680	.222	.758	.000		.000	.009	.136	.911	.922	.838
AAQ Availability Scale	Pearson Corr.	.087	-.107	-.008	-.029	-.267	-.087	-.254	.860**	.518**	1	.502**	-.075	-.047	-.045	-.044
	Sig. (2-tailed)	.547	.461	.954	.844	.061	.550	.075	.000	.000		.000	.735	.744	.755	.760

AAQ Goal-Corrected	Pearson Corr.	.060	-.063	-.175	.227	-.310*	-.436**	-.077	.732**	.368**	.502**	1	.010	-.288*	-.240	-.253
Partnership Scale	Sig. (2-tailed)	.678	.662	.224	.113	.028	.002	.593	.000	.009	.000		.964	.043	.093	.076
STAR Total	Pearson Corr.	.308	-.089	-.294	-.215	.359	.447*	.111	.113	.321	-.075	.010	1	.215	.162	.129
	Sig. (2-tailed)	.152	.688	.173	.324	.093	.032	.615	.608	.136	.735	.964		.324	.460	.558
Empathy Total	Pearson Corr.	.005	.263	-.186	-.214	.111	.272	-.047	-.126	-.016	-.047	-.288*	.215	1	.810**	.923**
	Sig. (2-tailed)	.972	.065	.197	.136	.442	.056	.743	.382	.911	.744	.043	.324		.000	.000
Cognitive Empathy	Pearson Corr.	-.015	.188	-.108	-.141	-.115	.132	-.219	-.108	-.014	-.045	-.240	.162	.810**	1	.546**
	Sig. (2-tailed)	.918	.190	.455	.328	.428	.360	.126	.454	.922	.755	.093	.460	.000		.000
Affective Empathy	Pearson Corr.	.048	.213	-.190	-.233	.229	.280*	.085	-.119	-.030	-.044	-.253	.129	.923**	.546**	1
	Sig. (2-tailed)	.742	.137	.187	.103	.109	.049	.557	.411	.838	.760	.076	.558	.000	.000	

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).