PERCEPTIONS OF STUDENTS WITH AN AUTISM SPECTRUM CONDITION OF THE VALUE OF A CBT INTERVENTION TO ENHANCE STUDENT EXPERIENCE

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ABSTRACT

This study describes the development and preliminary trialling of a cognitive behavioural therapy (CBT) intervention to enhance the student experience of six students with an autistic spectrum condition in a British university who were experiencing escalating anxiety. The study was located in a student enabling service setting and involved support workers and career services staff as co-therapists. A personalised student record index based on therapy goals was designed for each participant. This was used to monitor the quality of student experience during the intervention, expose crisis situations that arose and prioritise therapy session content. Interpretative phenomenological analysis findings imply that the first and second year participants perceived the intervention to be particularly effective in raising hope and agency and enhancing self-beliefs and rules for student life. Final year participants, whose anxiety was fuelled by the uncertainty of life beyond university, deemed the intervention helpful in containing their anxiety. Participants' accounts imply that gains in student experience outweighed experiences of emotional pain in therapy sessions. Metaphor reinforced through drawings seemingly accelerated understanding and application of cognitive models of anxiety and CBT processes. The study culminates with a CBT protocol based on study findings for future research.

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CHAPTER 1: INTRODUCTION

1.1: Research focus

The number of students with an Autistic Spectrum Condition (ASC) studying in British universities is steadily increasing. Higher Education Statistical Agency (HESA) figures report an approximate nineteen fold rise in the numbers of students declaring an ASC on application to university from 80 in the academic year 2003/04 to 1515 in 2010/11 (HESA, 2012). Numbers reported are likely to continue to increase with on-going widening access policies for higher education and also the new 'Fulfilling and Rewarding Lives' strategy for adults with autism in England and Wales (Department of Health, 2010). This latter strategy seeks to enhance opportunity for diagnosis locally, develop and plan appropriate services for adults with an ASC and help them into work. The challenge for universities is how best to extend the principles of this report to supporting rising numbers of students with an ASC holistically during their time at university. Whilst there are seemingly no publically available national statistics for attrition rates specifically of students with an ASC in British Universities, a recent Higher Education Academy funded survey of first year students who did not progress to the second year of study found that the most frequently cited influential factors for those with disabilities- other than the impairment itself - were dissatisfaction with the teaching content of courses, large class sizes, lack of support from students and staff, and sparse specialist resources (Yorke and Longden, 2007). A study of psychiatric co-morbidity in USA university students with an ASC, White et al. (2011) notes a disproportionately high number of students with ASC symptoms experiencing social anxiety and less student

satisfaction than their neurotypical student counterparts. There is anecdotal evidence that the situation is similar within British universities. This study seeks to explore and evaluate the potential merits of a cognitive behavioural therapy intervention to enhance the student experience of students with an ASC in a British university.

1.2: Research context

The research context of this study is one of displacement, tension and change in three respects, namely: what constitutes autism; theoretical developments; and how autism should be considered and supported in higher education and wider society.

Diagnostic changes

Diagnostic parameters of autism and the autism spectrum are currently under review with the updating of the Diagnostic and Statistical Manual of Mental Health Disorders (DSM-IV) of the American Psychiatric Association (APA) (2000) and scheduled introduction of the DSM-V in 2013, and also the updating of the International Classification of Diseases (ICD-10) to ICD-11 of the World Health Organisation in 2015. The DSM and ICD are the two main international standards of diagnostic criteria for autistic spectrum conditions. The updates are expected to bring a change in terminology and subsets of conditions that are collectively called the autism spectrum.

In the updated DSM-V, the range of autism-related conditions that comprise a group of pervasive developmental disorders (PDDs) will disappear and will be replaced by a single diagnosis of 'autism spectrum disorder' (ASD) (Lord and Jones, 2012). Currently the three subtypes that comprise PDDs are autistic disorder; Asperger disorder; and pervasive developmental disorders not otherwise specified (PDD-NOS). This change is welcomed by the National Autistic Society (NAS), who believes it will simplify diagnosis (NAS, 2012). However, concerns have been voiced elsewhere that this proposed category reduction could potentially be more stigmatising for people with milder forms of autism in the current spectrum such as Asperger syndrome, and create confusion for those with an existing diagnosis (Baron-Cohen, 2009).

In current literature, Asperger syndrome (AS) and High Functioning Autism (HFA) are frequently used to define the nature of autism in people with average to above average intelligence, but only AS is documented in the DSM -IV. The DSM-IV characterises AS primarily in terms of 'qualitative impairment in social interaction', and 'restricted, repetitive and stereotyped patterns of behaviour, interests and activities' that 'occur to an extent which impairs social functioning'. The terms AS and HFA are often used interchangeably and as yet there is no general consensus as to the relevance of the subtle differences between the two conditions that are now being proposed (Attwood, 2008; Howlin, 2000; Ozonoff et al., 2000). Proposed distinguishing features largely concern early childhood presentation, for example a delay in spoken and reciprocal language development in HFA, but not in AS (e.g. Klin et al., 2000). Looking at the debate so far, Attwood (2008) concludes there is no convincing data to unequivocally confirm that the two are '*separate and distinct*

disorders' since the 'profiles of social and behavioural abilities are so similar and the treatment is the same' (p.45). Because both of these forms of ASC are evident in today's university student population (Martin, 2008) and in recent research, the term AS / HFA will be used interchangeably in the literature review section of this document, where authors have used these terms in their studies. In the light of DSM-V updates and the proposal that autism constitutes a disorder rather than difference (e.g. Sainsbury, 2000; Beardon, 2007, 2008), the term ASC will be used most frequently in this thesis.

Current propositions for the DSM-V are that the triad of behavioural impairments featured in the DSM-IV will be condensed to two, namely 'persistent deficits in social communication and social interaction across contexts, not accounted for by general developmental delays', and 'restricted, repetitive patterns of behaviour, interests or activities', with symptoms being present in early childhood and collectively limiting and impairing 'everyday functioning'. Sensory behaviours will be included in the definition for the first time, under the second impairment criteria. It is intended that each impairment category will carry 'dimensional elements to indicate the extent to which a person's ASC affects them' to assist in the identification of support needs (APA, 2012).

Theoretical developments and tensions

The DSM criteria are rooted in the pioneering work of Hans Asperger (1941; reprinted 1991) and Wing and Gould (1979). Wing and Gould (1979) proposed a range of key features commonly known as 'the triad of impairments', namely impairments with social interaction, social communication and social imagination

and creativity. Building on these diagnostic criteria, Gaus (2007), conceptualises ASC as an information processing problem, whereby people with an ASC process information about themselves and others and non-social information 'erroneously' and in an 'idiosyncratic way' (p.40). Theories to explain these alleged impairments include 'weak theory of mind' (Frith, 2003), 'weak central coherence theory (Frith and Happé, 1994) and 'executive functioning theory' (Ozonoff and Miller, 1995), all of which are controversial. As Bogdashina (2006) points out, key theories seeking to explain autism have all been written by people who are not considered to have an ASC, without consultation with those who do, and follow a medical model based on deficiency.

A theory of mind is the ability to recognise others' perspectives, understand and recognise others' feelings, thoughts, beliefs and intensions in order to predict and make sense of behaviours. Baron-Cohen (2008) refers to this as mind-reading, and a deficit in this respect as 'mind-blindness'. Frith (2003) and Attwood (2007) contend that developmental difficulties or delays in forming a theory of mind in people with an ASC account for many of those characteristics exhibited which impact on daily life. Attwood (2007) for example summarises the daily consequences as difficulty capturing social and emotional cues from a person's eyes, a tendency to make literal interpretations of what people say, being portrayed as rude or disrespectful, being intensely honest, difficulty recognising the difference between deliberate and accidental actions of others and difficulty coping with conflict and understanding embarrassment. All of which can result in anxiety and exhaustion through the sheer effort needed to process social information. Frith and Happé (1999) contend that theory of mind can be subject to developmental delay in

some children, and hypothesise that others may achieve improvements through intelligence and experience rather than intuition.

Weak central coherence theory arises from Frith and Happé's (1994) observations that children with an ASC struggle to get the overall gist of complex detailed information and have difficulty teasing apart relevant and less relevant details. Ozonoff et al. (1994), however, contend that whilst the 'whole picture' may register, this is at the perceptual rather than higher order conceptual level. More recently, it has been hypothesized at the perceptual level that many people with an ASC have difficulty separating background and foreground sensory stimuli. This is thought to give strong coherence perceptually, with all elements perceived as a whole. Difficulty is deemed to arise when trying to break down this single entity into meaningful units (Bogdashina, 2006, 2010). This hypothesis has been extended to account for the anxiety and frustration experienced when any one part of a routine is changed. Drawing on gestalt theory, if just one element is altered, then the whole entity is changed, giving rise to confusion and uncertainty: this is a feature observed in children with an ASC (Bogdashina, 2006, 2010). This strong perceptual coherence may arise through any sensory modality, thus explaining why people with an ASC may easily be distracted by background noise or when too much information that requires processing is given at one time. It is hypothesised that an inability to break down this information to units and to integrate these to something meaningful leads to processing of random, often irrelevant parts and an inability to interpret the whole situation (Bogdashina, 2003).

Executive dysfunction theory is the third of the three main cognitive theories to explain features of ASC. The term executive function is derived from a computer

analogy in which a master controlling programme controls, co-ordinates and directs a range of tasks (Boucher, 2009). These tasks include planning and organising abilities, inhibition and impulse control, time management and task prioritisation, working memory, strategy generation and decision making. Research evidence suggests impaired executive function in people with ASC (e.g. Ozonoff et al., 2004; Ozonoff et al., 2005). Disengagement from a particular stimulus, shifting attention to another and starting a new task or train of thought are impeded through impaired response inhibition (Luna et al., 2006) and impaired cognitive flexibility (Ozonoff et al., 2004). The notion of executive function impairment as a key explanation for behavioural inflexibility in ASC is problematic in that it is not exclusive to ASC and can be explained in terms of intellectual disability (Hill, 2004).

Until recently, autism theory was primarily grounded in behavioural observations and linking these with structures and processes within the brain that are known to exist (Boucher, 2009). Analysis of brain MRI scans of people with an ASC demonstrates increased grey matter and reduced white matter in parts of the brain associated with the above theories in comparison to scans from matched controls (Bonilha et al., 2008; Groen et al., 2011). Grey matter is found in areas of the brain that are involved in sensory perception; the role of white matter is to coordinate communications between different brain regions. More concrete evidence of this nature serves to reinforce the view that ASC is neuro-developmental, with differences in patterns of brain development from very early stages (National Institute of Clinical Excellence (NICE), 2012).

The inclusion of ASC in the DSM and ICD is highly contentious amongst writers who consider ASC as a difference rather than disorder. Beardon (2007), for

example contends: 'this is because there are more 'neurotypical' people than people with ASC'. For Beardon:

> '…we should be talking about difference, not disorder, we should be recognising that just because a person with autism develops differently, it is not automatically a negative state (i.e. disorder) but a difference that needs acknowledgement.' (p.1)

Counter arguments from a social model of disability perspective

As demonstrated above, ASC research traditionally follows the medical model of disability, whereby disability is construed as an individual problem and it is the person that is considered problematic and in need of diagnosis and treatment (Swain at al., 2003). In the early days of the social model of disability, disability was construed as a socially-induced phenomenon, brought about entirely by the disabling practices of society (e.g. Finkelstein, 1980, 2001; Oliver, 1990, 1996). More recently there has been a recognition that the social model in its crudest form underplays the role of impairment in the lives of people with disabilities, and irrespective of efforts to remove disability by social change, some degree of residual disadvantage will remain and need to be accommodated. There is also recognition that the nature of disabilities is diverse and complex, and that removing what is a disability barrier for one disability may further disable people with another form (Shakespeare, 2006).

In higher education circles, ASC research based on the social model of disability is very much in vogue. Recent legislation stemming from the Disability Discrimination Act 1995 places responsibility for providing for students with an ASC on Higher Education Institutions (HEI), primarily in the form of removing barriers to full participation in education (Special Educational Needs and Disability Act (SENDA),

2001), and through improvements in practice to ensure equality in the day-to-day life experiences and educational achievements of disabled students (Disability Discrimination Act 1995 (Amendment) (Further and Higher Education) regulations 2006). These requirements are based on the social model of disability, which places strong onus on HEI to adapt to the needs of the 'disabled student', rather than vice versa. Support systems for students with an ASC are in the early stages of development and typically include reasonable adjustments to teaching delivery and assessment format, enhanced awareness and understanding of ASC amongst academic staff and the provision of a personal mentor. Such provisions arise from emancipatory and participatory study findings (e.g. Martin, 2008; Beardon and Edmonds, 2007; Madriaga et al., 2008; Glennon, 2001), that capture the voice of students with an ASC and offer good practice suggestions.

1.3: Rationale for the study

Currently, the quality of the 'student experience' is one of the key quality benchmark measurements used to assess and differentiate universities. To date, qualitative studies informed by university student participants with an ASC report both on the positive and negative attributes this syndrome may bring to the HEI arena, and how these may impact on the quality of student experience. On a positive note, for some students, the obsessive narrow interest ranges associated with ASC can prove highly advantageous in terms of interest, focus and motivation for their chosen courses of study. In contrast, there are numerous self-reports of social isolation, anxiety, depression, loneliness and low self-esteem; difficulty coping with changes, difficulty understanding social situations and academic requirements, and

inadequate coping skills to deal with these issues (Beardon and Edmonds, 2007; Madriaga et al., 2008; Martin, 2008).

Within this raft of participatory research, opinions among students with an ASC are split regarding the nature of interventions required. For example, Beardon and Edmonds' (2007) study voices the frustrations of students who reject the notion of being in need of a cure or training in how to feign normality and wish to be accepted in their own right; but it also acknowledges that students would like the opportunity to access specialist support for emotional, psychiatric and personal difficulties stemming from their ASC and also to gain a greater understanding of their problems and 'neurotypicals', i.e. people without an ASC. This raises the first professional dilemma: should a particular model of disability be followed, or should this be determined by individual student need regardless of concept.

Some of the findings are particularly worrying given the high co-morbidity incidence of ASC with psychiatric disorders, with the most frequent clinical diagnoses attributed to anxiety and depression disorders (Howlin, 2004). Recent research study findings of mental health disorder co-morbidity incidence within the ASC population vary but are consistently high, for example in one study 66%, of adolescent participants with an ASC were found to have a secondary affective or mood disorder (Ghaziuddin et al. 1998); a study of children and adolescents with an ASC identified clinically significant levels of behavioural and emotional disturbance in 65% of HFA participants and 85% of the group with an ASC (Tonge et al.,1999), and a study of adults with ASC identified mental health problems in 32% of participants, with 72% reportedly engaging in difficult or challenging behaviours (Barnard et al., 2001).

A further challenge to the social model of disability in relation to the HEI student population with an ASC is the issue of reasonable adjustments to teaching and assessment practices. While reasonable adjustments are a legal requirement designed to accommodate the needs of students with disabilities, these are often problematic for students on vocational courses, as professional standards of competence are exempt (Disability Discrimination Act 1995 (Amendment) (Further and Higher Education) Regulations, 2006; Quality Assurance Agency, 2010). Such standards encompass the nature of behaviour and relationships expected in professional practice and are based on neurotypical behaviours and information processing styles.

Collectively, higher educational research, clinical research findings and current disability legislation challenge the adequacy of social model type interventions alone to provide a high quality student experience for students with an ASC. The disability practitioner's role in HEI therefore merits reconsideration. Whilst the social model and its associated legislation moves attention away from underlying impairment, it is evident in the student with an ASC voice-based research (detailed above), that the 'impairment effects' (Thomas, 1999) continue to exist and have 'a direct and restricting impact' on student experience, despite HEI attempts to accommodate this form of disability. When coupled with growing evidence of high co-morbidity rates between ASC and a range of psychiatric disorders such as anxiety and depression (Ghaziuddin, 2005), it is arguable that HEI need to look beyond the barrier- free ethos of the social model in their attempts to enhance the quality of student experience of students with an ASC and to explore additional means of minimizing the impact of the impairment and potential complications in the HEI

setting. As Bury (1997, p.137) points out, 'The reduction of barriers to participation does not amount to abolishing disability as a whole.' There is growing recognition amongst disability writers, - for example Norwich (2002) - that the notion of total inclusivity may be an unrealistic ideology and any degree of inclusion requires dedicated support systems / units of additionality. It is this stance that will be embraced in the present study.

One such tool of potential additionality, emerging in both clinical and educational settings, is Cognitive Behaviour Therapy (CBT). CBT is primarily a psychological therapy for mood disorder and has recently been hailed as the treatment of choice for depression and anxiety (NICE, 2006). Its effectiveness in changing the way a person interprets and responds to emotions and situations is well documented in the literature, the underlying hypothesis being that people's emotions and behaviours are influenced by the way they construe a situation (Beck, 1995). CBT provides a means of raising a person's awareness and understanding of their own emotional state, equips them with strategies to express and manage their emotions more easily and simultaneously enhances their awareness of other peoples' emotional states. It is therefore deemed highly applicable for people with an ASC who, through impaired or delayed theory of mind, struggle in these respects (Attwood, 2007).

A small body of literature is emerging on its successful application in relation to children and adults with an ASC, as detailed in Chapter 2; however accessibility to this form of therapy is problematic as until recently, ASC has fallen into the 'gap' between learning disability and mental health fields (Rosenblatt, 2008; Department of Health (DoH), 2009). This raises the second professional dilemma: the location

of CBT provision for the student population with an ASC within the university structure.

Provision of psychological therapies in universities is typically the remit of counselling services: small teams of British Association of Behavioural and Cognitive Psychotherapies (BABCP)/British Psychological Society (BPS) accredited counselling psychologists who provide short courses of treatment to students on a reactive basis. Such services operate on a 'closed shop' system, i.e. they operate under strict confidentiality guidelines and do not share information with other student support services. This may be highly problematic for both students with an ASC and disability practitioners. From the perspective of a student with an ASC, the counsellors may be unaware that their client has an ASC (Vermeulen and Vanspranghe, 2006), and are unlikely to have the degree of skills and knowledge that are necessary to work effectively with this client population. From the disability practitioners' perspective, the situation is frustrating in that they may well have a good understanding of ASC, and be well -versed in mentoring this student population on a routine basis, manipulating the environment to support and respond to their needs and helping them devise coping strategies for the problems they encounter in daily student life. Whilst disability practitioners are well positioned to work on a more proactive basis, in collaboration with the student and important others within the university, they do not tend to be trained psychotherapists. However, it is here that the author, a disability practitioner, is the exception to the convention in also being a qualified cognitive behaviour therapist.

1.4: Purpose and outline aims of the research

The principal aim of the research study is to develop, trial and evaluate a CBT intervention for students with ASC in a university disability support service setting, with myself as principal therapist. The research is intended to be both exploratory and evaluative in nature. It will be exploratory in terms of adapting conventional CBT techniques to meet the needs of student participants with ASC, identifying the types of problems the therapy might be suitable for, and how the therapy should be undertaken, i.e. who should be involved and to what extent. It will also be evaluative in terms of seeking participants' perceptions on the impact the CBT intervention has, if any, on their student experience, and exploratory in terms of gaining their perceptions of underlying change processes. This latter term relates to participants' perceptions of what has changed during the course of the therapeutic intervention, in what way and what they deem this attributable to.

The study is intended to be student centred in terms of participants identifying and setting own their goals and seeks to raise their potential to participate more easily in university life, a requirement of the recent Disability Equality Duty (Disability Research Council (DRC), 2006). Its aims are also in keeping with the government's recent 'Fulfilling and rewarding lives': the strategy for adults with autism in England (DoH, 2010), which seeks to provide people with any form of disability full opportunity and choice to improve their quality of life. It is hoped that any raised self-awareness, self-understanding and enhanced self- control and coping strategies arising from the intervention will be transferable to situations beyond university life, although it is appreciated that overall generalisability of skills may be somewhat limited for people with an ASC.

1.5: Structure of the study

The study comprises four parts. Of these, the first part is a literature review of studies investigating the use of CBT with clients with an ASC in both clinical and educational settings and narrative accounts from people with an ASC on the challenges faced when studying at university. The second part is the design and initial piloting of a personalised CBT intervention to enhance student experience and a self-reporting measurement tool for one student with an ASC to establish a core protocol for both. The next part of the study is the trialling and further development of these basic protocols with six 'main study' participants with an ASC in the same university. The final part is a quantitative analysis of measurement tool weekly scores, Change Interviews with each participant and subsequent qualitative analysis of their perceptions of the intervention. In a final discussion, recommendations are made for future research in this field.

CHAPTER 2: LITERATURE REVIEW

2.1: Scope of the review

There are four key aims underpinning the following literature review. The first is to detail the emergence of a new genre of writing: the 'autistic narrative' - i.e. narratives of people with an ASC. The second is to track the emergence of CBT as a potential psychotherapy for people with an ASC. The third aim is to track and evaluate its introduction, use and effectiveness in both clinical contexts and educational contexts and to evaluate its potential merits in the proposed research setting, as described in Chapter 1 in the light of these studies.

To identify and retrieve relevant empirical studies relating to the four aims, five clinical and psychology databases - Cinahl, Medline and PsychInfo, Science Direct and Web of Science, were searched for articles from 1990 onwards that acknowledged the rising popularity of CBT in the 1990s. Since the study aim crosses both clinical and educational contextual boundaries, three educational databases were also searched, namely the Education Resources Information Centre (ERIC), the British Education Index (BREI), and the Australian Education Index (AUEI).

The selection criteria for the studies included in the latter section of the review were that they detailed actual CBT interventions for the target population - i.e. people with an ASC - and that the studies related to the areas of difficulty identified by Beardon and Edmonds (2007) and Madriaga et al. (2008). In view of the present study setting and potential participants, a third criterion was that study participants' ASC

were considered to be at the higher functioning end of the autistic spectrum. Studies found fell broadly into two categories: those that took place in primarily clinical settings and from a clinical psychology perspective, and those that were conducted primarily in educational settings and from an educational psychology perspective.

2.2: Personal narratives of people with an ASC

During the course of the past few years, we have seen the birth and 'epidemic' of the 'autistic narrative', i.e. narratives of individuals with an ASC. Hacking (2009a) describes this as a 'boom industry', populated with autobiographies of and by people with an ASC or their parents, fictitious children's stories centred on young characters with an ASC, biographical and autobiographical accounts on Internet 'blog-sites' and chat-rooms. This also extends to the film industry and stage. In Hacking's view, narratives of people with an ASC constitute a new genre of writing that is not restricted to 'experts' such as theorists or clinicians in the field. For Hacking (2009a), such narratives appear to have multiple benefits, but simultaneously raise interesting questions regarding the extent of worth. He questions the extent to which, if at all, these stories and accounts actually constitute rather than merely describe lived experiences of having autism. Hacking also questions if the autobiographies have the potential to become 'prototypes for describing and thinking of all autistic people' (p.1467). He cautions against the popular notion that this new genre enables us to get 'a unique insight into the autistic mind' of people with an ASC (p.1468). This, he fears promotes the idea of the autistic mind being a species of mind, which seemingly defies the growing

evidence of individuality and diversity amongst populations with an ASC, and reminds readers of the saying 'if you know one person with autism, you know *one* autistic person'.

In terms of benefits arising from this new genre, Hacking (2009a, 2009b) draws on what he terms 'Köhler's phenomenon'. This phenomenon recognises that often the neurotypical population sees rather than infers what a person is doing, and that this phenomenon is not always available to people with an ASC. He postulates that this phenomenon is not available to the neurotypical population when trying to make sense of feelings or actions of people with an ASC, particularly with severe autism. This notion supports Beardon's (2007, 2008) views, presented in Chapter 1 section 1.2, whereby neurotypical people seemingly lack theory of mind about understanding the intentions, behaviours and perceptions of people with an ASC.

Narratives of people with an ASC are therefore helpful in this respect in the way they create and apply a language for this purpose. Hacking (2009a) illustrates this point through 'hand-flapping', whereby many of the neurotypical population would not be able to understand this behaviour by observation alone: autistic autobiography has the potential to explain its calming purpose and enable the observer to partially infer what is happening. Arguably, for the neurotypical population, autistic narratives are on a par with the various regimes that seek to enable people with an ASC to infer from neurotypical behaviour, and thereby help redress symmetry between the two populations.

In relation to Hacking's views, McGeer (2009) suggests two ways in which these self narratives can affect how ASCs are conceptualised and experienced. Firstly

through providing neurotypical people with better insight into subjective worlds of people with an ASC, and secondly through the power of these narrative accounts to transform how ASCs are construed for both people with an ASC and those without. With regards to people with an ASC, McGeer (2009) suggests these narrations 'create a framework, a 'form of life', in terms of which their individual lives will be experienced differently', as it may be from how they would be experienced if this framework was not in place' (p.521). In McGeer's (2009) view, this framework has the potential to make the seemingly abnormal more 'normal' and 'accepted', and more 'worked with than worked against' (p.528). In this respect, changing environmental conditions offers the potential to transform the lived experiences of those with an ASC.

Further endorsement of personal narratives of people with an ASC is offered by Woolsey (2008), for the evidence these offer in both supporting psychological theories of autism and disputing consistent applicability of these across populations with an ASC. Woolsey, too, cautions on the potential to draw inferences from small samples of narratives to wider populations. For Woolsey, 'personal narratives are best viewed as providing a vital piece in the jigsaw, rather than a complete picture' in the quest for seeking a more balanced view of ASCs (p.56).

With the introduction of the Autism Act 2009 and subsequent government strategy seeking to enable adults with an ASC to fully participate in society (DoH, 2010), several consultative documents emerged that captured the voices of people with an ASC and their relatives. The National Autistic Society, for example, sponsored campaign papers such as 'I Exist' (Rosenblatt, 2008). Within this campaign, the voices of 1,400 people with an ASC and family members called on the government,

local authorities and NHS to be better informed about the prevalence of ASC in England, understand the range of barriers that people with an ASC encounter when attempting to access services and much needed support, provide this support and issue statutory guidance on this. Statistics and supporting narratives portray restricted lives of loneliness and dependence on others, with 67% of respondents experiencing anxiety through lack of support, and 33% experiencing more serious mental health problems for the same reason. Approximately 47% of adult respondents with an ASC reported that they were denied local authority and NHS support on the grounds of not fitting into current adult mental health or learning disability services (Rosenblatt, 2008). Both this report and the government strategy (DoH, 2010) make little reference to education. However, as the next section reveals, a range of government initiatives have emerged to address this problem.

2.3: Personal narratives of HE students with an ASC

The new genre of narrative has extended to the higher education arena. Accounts of lived student experiences are now actively sought from students and ex-students with an ASC with the intention of exposing the challenges faced by this student population, giving voice to this minority population, and informing good practice in terms of service provision. This is part of a wider movement to consult with people with disabilities brought about through the Duty to Promote Disability Equality Statutory Code of Practice 2006, which requires public sector bodies to develop a Disability Equality Scheme (DES) in consultation with people with disabilities at every stage of its development. The DES is aimed at promoting equality of

opportunity for people with disabilities within public institutions, and at reviewing this on a three yearly basis. This wider movement also extends to disability research through the participatory and emancipatory research paradigms. These forms of research seek to improve the lives of people with disabilities, with researchers and people with disabilities working collaboratively at all stages. The key difference between the two paradigms is in the origins, where in the emancipatory paradigm people with disabilities are the originators of the research (Chappell, 2000). The most extensive study to date of this nature that is specific to HE current, past or potential students with an ASC is documented in the 'ASPECT Consultancy Report' (Beardon and Edmonds, 2007). Another commonly cited study that is specific to students with an ASC is referred to in the field as 'the Madriaga Transcripts' (Madriaga et al., 2008).

The ASPECT study (Beardon and Edmonds, 2007), captured the views and narratives of 238 adults with an ASC in the UK during the year 2006-2007 through questionnaire written responses on Local Authority service provision. Questions were both open-ended and closed. In a detailed analysis of the ASPECT report, Beardon et al. (2009) deduce that of the total respondents, 135 experienced difficulties at varying stages of college or university, with just 54 (40%) receiving support for these.

What is striking within the ASPECT report is the frequency and consistency of some of the difficulties experienced. A common theme is social isolation, with 54 respondents reporting their experiences of this (Beardon et al., 2009). Comments portray difficulty mixing socially, lack of friendships, being isolated from course peers and within student accommodation. There were numerous testimonies from

students who had felt unable to continue their studies because of social difficulties or had been forced to leave shared accommodation with flat-mates with little or no insight or compassion to their needs. Bullying and teasing on account of perceived differences appeared rife amongst respondents through a variety of channels, for example cyber bullying.

Difficulties experienced extended to academic issues. 35 respondents felt poorly supported in lectures and other academic aspects (Beardon et al., 2009), with respondents feeling the need for greater levels of instruction and task clarity, and greater help in approaching people to ask for further explanation. There were frequent reports of difficulty coping with the workload and self-organisation, such as meeting deadlines and failing to start assignments in good time. Difficulties with self -motivation to attend scheduled lectures, seminars and tutorials and get assignments and reading done were also frequently reported. There were repeated reports of having insufficient or poor physical and emotional survival skills, lack of understanding by peers, support and teaching staff, and also misinterpretations on student respondent parts. For numerous respondents, these factors led to anxiety and depression.

Whilst the ASPECT report is weak in terms of academic robustness, it is important from a direct consultation point of view. Beardon et al. (2009) forewarn of its potential for multiple interpretations of the highly complex and potentially incomplete data. More academically robust narrative-based studies include a series of transcripts (Madriaga et al., 2008), referred to in the field of autism studies as the 'Madriaga transcripts'. This study identifies similar themes to those identified in the ASPECT report through longitudinal study methodology involving following eight

students with an ASC through their first year of university. The authors identify the diversity among respondent narratives, thereby reflecting the diversity within the category ASC. They also identify the common theme of anxiety underpinning respondents' first year experiences and conclude:

> 'Anxiety stems from confronting barriers in attending fresher's fairs, accessing information in lectures, working in seminar groups, disclosing their AS condition, gaining friendships and having support arrangements in place ... difficulties faced by many of the respondents were not principally the result of the impairment effects of AS. These difficulties can also be credited to a lack of good practice and disability awareness among teaching and student support staff.' (p.5)

Similar themes are also identified in broader studies based on narrative accounts of HE students with a range of disabilities. These include Goode (2006) whose study highlights the differing expectations of student life, varying degrees of knowledge about support systems available at the outset, and problems of not wanting to draw attention to unseen disability or becoming 'over-visible' when support needs haven't been identified or communicated to key staff.

These reports and studies raise the question of support needs and the level and quality of support provision. Whilst study buddying, mentoring and counselling provision and support have been provided to some respondents in the ASC focused studies above, findings suggest that this is not always at the required level. For example, two of the Madriaga et al.(2008) study respondents perceived their respective mentors as insufficiently qualified to meet their needs, with one making particular reference to emotional support : 'my mentor is not a trained counsellor, so she can't' (p.41). Reportedly, this respondent was unable to access counselling during her first year of study. Further concerns arise from the ASPECT report findings regarding lack of awareness of ASC by counsellors, a request for support

from ASC specific teams, and 'appropriate level of specialist support to cope with the issues'(p.169). As a result of their study, Madriaga et al. (2008) flag the need for counselling service access, particularly for first year students.

As previously identified, it not just social learning needs and social factors that lead to escalating stress and depression within this student population. Through two case studies on support provision for students with an ASC in another UK university, Macleod and Green (2009) identify: 'when the social learning needed by an individual is at least as great as the academic learning, the accumulative burden on that person can be just too great' (p.637). The authors therefore conclude the need for a holistic model of support that encompasses both study-related and social support; one that can accommodate the highly variable needs of students with an ASC.

2.4: Responses to student narratives

In response to narratives from people with an ASC and participatory and emancipatory research studies, more holistic models of support are actively being developed within British universities, including Macleod and Green's host university (Macleod and Green, 2009). Martin (2008) too lists and illustrates the types of support required for this student population.

 Taylor and Knott (2007) report the success of a support model in which an ASC co-ordinating team mixes and matches the support needs of students with an ASC with student mentors, academic mentors and social mentors. These three forms of mentor are recruited from the host university's current and post graduate student

population and as with the previous system are funded through the Disabled Student Allowance. This is a fund that is available to students with enduring disabilities to finance additional support needs (Student Finance England, 2012). The establishment in a growing number of British universities of similar mentoring schemes to those described above is evident through numerous disability conference presentations in recent years.

Macleod and Green (2009) describe and detail the virtues of a specialised collaborative support service for students with an ASC, with main academic and social mentoring support being provided by an external charity organisation that specialises in supporting people with an ASC. A limitation of this identified by the authors however is the potential for delay in accessing this support because of waiting list demands, particularly in the early often crucial stages of university life. They also raise the common problem of the reluctance of some students to disclose their ASC until they are experiencing problems. The problem of disclosure is widely documented in disability research of this nature, where fear of stigma and negative responses or self- reported naivety in self- assessments of needs or denial of challenges to be faced dissuade student applicants from disclosure (e.g. Fuller et al., 2004; Riddell et al., 2005; Goode, 2006). The potential for a seemingly minor difficulty to escalate rapidly into a full blown emotional turmoil, potentially leading to clinical anxiety or depression for people with an ASC is well documented (e.g. Taylor and Knott, 2007; Attwood, 2007), hence availability of support of the right kind at very short notice is crucial.

What is missing in the light of the Madriaga et al. (2008) study and the ASPECT report (2007) is mention of specialist counselling / psychotherapy provision /

availability for this student population. Arguably, to be truly holistic, and with so many references to stress, anxiety and depression, there is also need for this form of support, one in which counsellors or psychotherapists have good awareness of ASCs and the challenges university life throws at this diverse student population.

In an American study that captures the narratives and experiences of students with an ASC and identifies similar stressful experiences of university students (Glennon, 2001), the author strongly advocates the use of CBT. From a review of stress management literature and case study narrative, Glennon identifies that, 'stress results from the interaction between stressors and individuals' perceptions and reactions to these' (p.188). Glennon also recognises however, that addressing negative thoughts and repressed feelings about alienating experiences is often a very difficult process and one that needs to be addressed by appropriately trained professionals.

2.5: Conceptual models of anxiety

In this section, I present a series of cognitive conceptual models, which cumulatively offer tentative explanation as to why informants of the ASPECT report and Madriaga transcripts detailed above experienced student life as reported. The models are Beck's cognitive model (Beck, 1964); the cognitive model of anxiety (Clark and Beck, 2010), and a conceptual model of core problems in Asperger syndrome and pathways to mental health problems (Gaus, 2007).

Beck's Cognitive model

Beck's early cognitive model (Beck, 1964) postulates that people's feelings and behaviours about any given event are shaped by the way in which they perceive the event. It is not the situation that generates resultant emotional responses - i.e. feelings, but the way in which it is interpreted. Quick, automatic and interpretive thoughts at the time may be barely noticeable and accepted unquestionably as true.

Automatic thoughts are driven by core beliefs, also known as schemas. These are deep seated beliefs and understandings that people develop from early childhood onwards about themselves, other people and the world around them. They are shaped by experiences and accepted unchallenged as true. Core beliefs are the primary and most deeply seated level of belief and thus very rigid and generalised globally.

Core beliefs shape the development of a secondary or intermediary level of beliefs, which are made up of rules, attitudes and assumptions. These influence a person's perception of a situation, their thoughts and feelings about it and behavioural reactions to it. So, to summarise, in a specific situation core beliefs are triggered, which trigger intermediate beliefs and automatic thoughts, which in turn influence emotion and subsequent behaviours.

Clark and Beck's cognitive model of anxiety (2010)

This model extends two previous versions by Beck et al. (1985, 2005). The model is based on the premise that anxiety is a state of heightened vulnerability. Vulnerability has been described as:

> '…a person's perception of himself as subject to internal or external dangers over which his control is lacking or is insufficient to afford him a sense of safety. In clinical syndromes, the sense of vulnerability is magnified by certain dysfunctional cognitive processes.'
>
> (Beck et al., 1985, pp.67-68)

The level of anxiety experienced will depend on the perceived ratio of the probability and severity of a threat to the person's perceptions of his/her ability to cope with the anticipated danger (Beck et al., 1985, 2005). Anxiety will be high when the intensity of the threat and probability of it happening are perceived to be high, coupled with a perception of personal inability to cope with that threat or danger. Behavioural responses include defensive actions, escape from or avoidance of the threatening situation, panic induced by increased heart rate, freezing and feeling dizzy (Clark and Beck, 2010). These responses are deemed to arise from highly restricted processing of safety cues and restricted logical thoughts and reasoning. This has the potential to become a vicious circle in which raised self- focused attention then exacerbates physiological symptoms of anxiety and emotional distress. Vulnerability is fuelled by deep-seated core beliefs about personal vulnerability or helplessness in such situations.

Cognitive therapy for anxiety therefore seeks to expose, challenge and reduce unhelpful core and intermediary beliefs about personal vulnerability and coping capacity. It also seeks to reduce worry and safety-seeking behaviours that are deemed to maintain the vicious cycle described above, and to help the client to re-evaluate the risk and intensity of the perceived threat (Clark and Beck, 2010).

Returning to vulnerability, Beck et al. (1985) suggest that in clinical syndromes, the perception of vulnerability is enhanced by certain dysfunctional cognitive processes where there is a pre-disposition to misinterpret potentially threatening situations as overly dangerous. This suggestion is taken up by Gaus (2007) in the following conceptual model for mental health and ASC.

Cognitive models and ASC

Gaus's (2007) model maps the way in which she considers core information processing problems experienced by adults with an ASC have the potential to lead to mental health problems. It is also based on empirical findings, (e.g. Klin et al., 2005) that people with an ASC process information about themselves and others, and non-social information associated with central coherence and executive functioning, 'erroneously' and in 'an idiosyncratic fashion' (p.40). Gaus's model suggests how the interactions between these three categories can lead to two categories of difficulties during a person with an ASC's interactions with his/her environment. Behavioural differences arising from social skills deficits such as unusual mannerisms and misperceptions of social behaviours may lead to social consequences such as rejection, ridicule and isolation. Problems with self-management, or as Gaus terms it 'activities of daily living', such as procrastination and weak problem- solving skills, may result in 'daily hassles' and 'stressful events' (p.64). The social and daily living consequences arising from these categories of difference have the potential to culminate in the hypothesised outcomes of 'chronic stress', 'poor social support', and ultimately 'anxiety' and 'depression' (p.43). Gaus

(2007) hypothesises it is the 'repeated failures' in the three information processing domains that lead to the two widely recognised risk factors for mental health: 'poor social support' and 'chronic stress' that increase the vulnerability of adults with an ASC to mental illness.

In relation to Beck's (1976) cognitive theory, Gaus (2007, 2010, 2011) contends that people with an ASC are at high risk of developing a wide range of maladaptive schemas through their information processing differences. Social information processing differences make it difficult to draw and utilise inferences from other people in social situations and may lead to behaviours that are 'unappealing to others' (Gaus, 2010, p.51). This in turn limits opportunity to develop healthy schemas about others, with opportunity being further limited by cognitive rigidity. Recurrent negative experiences of lived events, such as rejection, ridicule and isolation then have the potential to strengthen negative beliefs about themselves, their world and the future.

Gaus's (2007) conceptual model, although primarily a medical model of ASC, in some respects straddles both social and medical models and thus allows us to consider the two together when attempting to interpret and make sense of narratives of people with an ASC's lived experiences. Unusual behaviours and difficulties with self -management are purportedly a direct result of the person's ASC, yet the personal stress these may cause is a result of society's expectations of neurotypical behaviours and its negative responses to non-typical behaviours. A criticism of Gaus's conceptual model and Clark and Beck's (2010) cognitive model of anxiety in the light of autistic narrative research such as the ASPECT report (Beardon and Edmonds, 2007) and the Madriaga transcripts (Madriaga et al.,

2008), is the notion that a high level of anxiety is the product of 'cognitive dysfunction' i.e. distorted patterns of thinking, otherwise known as 'thinking errors' (Padesky and Greenberg, 1995; Beck, 1995). Reports of bullying, isolation, ridicule, and expulsion from accommodation shared with neurotypical peers, for example, suggest that perceived personal safety risks and "worst fears" can indeed be realistic rather than irrational.

2.6: The emergence of CBT as a psychotherapy for people with an ASC

Despite the reportedly high co-morbidity incidence and growing awareness of the need for some form of psychological support for people with an ASC, 'remarkably little has been written about autism and psychotherapy' (Vermeulen and Vanspranghe 2006, p.23). There is recognition amongst writers with an ASC, e.g. Lawson (2001) and Edmonds (Bliss and Edmonds, 2008), that conventional psychotherapeutic interventions founded on psychoanalytic theories are largely unhelpful to people with an ASC. These forms of intervention are based on the premise that problematic thoughts and behaviours can be interpreted as either conscious or unconscious means of mastering or soothing problems / difficulties that people encounter in their external or internal worlds. Whilst the psychotherapist's role is to help the client to unearth and interpret and understand the underlying meanings of their actions and thoughts, for clients with an ASC, the attribution of meaning may be problematic. As we see in Gaus's conceptual model above, behaviours and thoughts are considered to be the direct product of

information processing difficulties inherent in ASCs, rather than underlying motivations.

Hare (2004) identifies further complications with psychodynamic and person-centred approaches for people with an ASC in that these require a strong therapeutic relationship between client and therapist, based on reciprocal empathy, shared understandings, acknowledgement of what was said, and an adequate level of insight, all of which are challenging for people with an ASC. Additional complications may arise in the interpretation of psychotherapeutic "language", as it is widely recognised that people with an ASC interpret things in a very concrete way and struggle with abstract and vague concepts (Vermeulen and Vanspranghe, 2006). A final challenge for any form of psychotherapy with this population is the presence of strong and rigid cognitive distortions in thinking patterns that parallel those identified by Beck's (1976) cognitive models of psychological disorders such as "all or nothing thinking" (Hare, 2004). For these reasons, it is deemed essential that therapists working with clients with an ASC have a good understanding of the cognitive features underpinning ASCs and can readily draw on this to help both themselves and their clients with an ASC to understand each other's minds and perspectives (Jacobson, 2004).

In recognition of the problems identified above, Hare and Paine (1997), both clinical psychologists and active members of the National Autistic Society, set the challenge for interested parties in the ASC field to develop appropriate forms of psychotherapeutic interventions for clients with an ASC. As a starting point, they proposed a 'service specification' (p.5) for work with such clients, the most important requirements being highly structured but brief sessions which must not be

based on 'reciprocal understanding of emotion or therapeutic relationship'. The therapy should not seek to provoke anxiety and arousal of emotions as this may be counterproductive, and it must be delivered on a one-to-one, rather than group format in order to bypass potential social difficulties, unless the emphasis is specifically on developing social skills. In Hare and Paine's (1997) view, cognitive behaviour therapy best accommodates this specification in that it provides a clear, structured approach based on working towards explicit goals, and gains credibility with a client with an ASC through its action focus on specific symptoms and problems, rather than on "big issues" (p.6). Through conducting initial single, exploratory case studies with clients with an ASC, Hare (1997) and Hare and Paine (1997) identified both advantages and difficulties of the use of this form of psychotherapy with people within this population. On a positive note, they found that CBT facilitated the exposure and active challenging of unhelpful and distorted thoughts and fears, and some (but not all) of the therapy goals were largely met in the short term. In contrast, these preliminary studies highlighted several practical potential difficulties including clients rejecting the need for self-help in their treatment, poor ability to cope with the social pressure CBT entails, client misinterpretation of direct challenges instigated by the therapist, and limited social understanding leading to negative responses to therapy.

Hare and Paine (1997) and Hare's (1997) interventions were made over fifteen and four sessions respectively and crudely evaluated, but nevertheless encouraged the authors to recommend more carefully evaluated CBT work with clients with an ASC. Since these early pioneering studies, interest in this field has gradually emerged in

both clinical and educational contexts. The following two sections will draw on key studies to track and evaluate progress to date.

2.7: The application and effectiveness of CBT with clients with an ASC in clinical settings

Within the literature to date, studies in this field predominantly concern child/adolescent clients rather than adults, and occur both independently and in clusters (i.e. series of studies by the same research teams). The review in this current section will detail how studies based in clinical settings have evolved from primarily targeting co-morbid mental health conditions that appear secondary to participants' ASC (with a view to decreasing these), to a more recent intervention approach. These more recent interventions primarily target traits associated with ASC and observe how reductions in these may impact on co-morbid mental health condition symptomology such as anxiety and depression.

A total of fifteen studies meeting the literature review criteria detailed in section 2.1 will be described in this section, starting with adult studies, followed by child/adolescent studies, before a critical analysis of the studies collectively. To recap, the literature review criteria for this review are that the studies must detail actual CBT interventions for people with an ASC; the studies relate to areas of difficulty identified by Beardon and Edmonds (2007) and Madriaga et al. (2008), and lastly that study participants' ASC were considered to be at the high functioning end of the autistic spectrum.

Adult Studies

Of the fifteen studies found that met the review criteria, only four involved adult clients with an ASC. Two of these were single case studies, each involving a single individual; the remaining two were group treatment studies.

Adult single case studies

In the first of the individual studies (Hare, 1997), a 26 year old male with an ASC and co-morbid severe depression and self-harm tendencies, received CBT over fifteen weekly/fortnightly sessions with a clinical psychologist. Therapy goals were to reduce clinical depression symptoms and self-harm incidents. The key carer was trained to adopt a co-therapist role both within and outside formal sessions. Therapy centred on material described in the participant's diary responses, with linkages emphasised between actions and emotional states. In keeping with conventional CBT strategy, dysfunctional beliefs were identified and challenged through use of reliable informants and alternative, more helpful courses of action identified and practised. Outcomes were measured by an objective clinical measure of mental health namely the Beck Depression Inventory (BDI) (Beck et al., 1961), plus self-reports and observations of cutting of forearms: a form of self-harm. At the end of the therapeutic intervention, BDI scores had fallen from a high of 29 at the start to thirteen, steadily rising again to twenty, eight months post-treatment. No escalation in self-cutting was noted either during the intervention or eight month follow-up period.

In the second adult study, Cardaciotto and Herbert, (2004), sought to reduce anxiety symptoms in a 23 year old male with an ASC and social anxiety disorder (SAD), a condition characterised by an intense fear of being negatively evaluated by others in social situations. The fourteen weekly treatment sessions focused on feared and avoided social situations and utilized cognitive restructuring, role playing, and thought monitoring intervention techniques. Specific social skills were taught and practiced through role play, prior to *in vivo* 'homework' exercises. Treatment was based on a treatment protocol previously developed for use with the (general) neurotypical population but modified to incorporate social skills training to target the client's social skills deficits. The treatment was evaluated each session through five standardised scales normalised on the general population for SAD and depression, namely the BDI-II (Beck et al., 1996) and the Social Anxiety Scale (LSAS) (Liebowitz, 1987), and intermittently through the Social Phobia and Anxiety Inventory (SPAI) (Turner et al., 1989), the Clinical Global Impression (CGI) (National Institute of Mental Health (NIMH), 1985) and Global Impression-Severity (CGI-S) scales (NIMH, 1985). Clinically significant decreases in anxiety and depression occurred during the course of the intervention, with the client no longer meeting diagnostic criteria for SAD two months after. Improvements in the clients social skills were however less evident, leading the researchers to conclude that remediation in these more fundamental and profound deficits may warrant a longer course of therapy.

Adult Group Studies

The first of the two group treatment studies found was conducted by Kenny et al. (2008). The aim of the study was to deliver an anxiety management programme to a group of five adult participants - recruited through an adult, Dublin-based outreach service - who were experiencing high levels of anxiety. The programme sought to teach participants to manage the anxiety they experienced in everyday life more effectively. The intervention was based on a CBT programme designed specifically for children with an ASC and adapted by Attwood (2004) for the adult population. The intervention comprised affective education on emotive states, cognitive re-structuring and effective coping skills for anxiety. Unlike the two previous adult studies, evaluation was solely qualitative, whereby participants provided written feedback on their intervention experiences. Overall, the intervention was experienced positively with self-reports of improvements in self-esteem, social skills and empathy with others.

The second group study, Weiss and Lunsky (2010), occurred in Toronto, Canada, and involved three adult participants with DSM-IV-TR diagnosis of one or more anxiety disorder or a major depressive disorder. Participants were recruited through self-referral via ASC websites or referral by community service agencies for people with an ASC. The intervention comprised twelve weekly one hour sessions, based on the 'Mind over Mood' client workbook and the clinicians' guide to this programme (Greenberger and Padesky, 1995), and was reportedly (by the authors) the first group intervention study of its nature targeting adults with an ASC. Impact on anxiety and depression were monitored weekly using the BDI-II (Beck et al., 1996) and Beck Anxiety Inventory (BAI), (Beck and Steer, 1990) respectively. Results for both scales did not consistently follow the linear reduction during the course of the

intervention and eight week follow up as hoped by the authors, but rather more sporadic patterns. Overall reductions were noted for just one participant in the BDI-II between the first measurement and monitoring at the end of the final CBT session. Eight week follow-up measurements were not taken. A similar pattern was noted in this participant's BAI scores. Progress for a second participant was seemingly marred by the anniversary of his mother's death and not subsequently regained. Behavioural observations showed 'definite gains' (p.443) in interpersonal skills. BAI scores from the third participant demonstrate an overall reduction from start to completion of the intervention, with a slight rise at the eight week follow-up, with no overall improvement noted in BDI-II scores.

Informal qualitative evaluation from participants suggested a liking for the scientific aspects of the CBT programme, and perceptions of social benefits gained from group membership. The authors noted a delay in group members grasping cognitive re-structuring principles and processing 'hot thoughts' (Greenberger and Padesky, 1995).

Child / Adolescent Studies

Eleven child and adolescent studies were found that met the three review criteria detailed for this literature review and summarised above. These largely emanate from the work of three research teams who have conducted multiple studies in the area under review, and subsequent independent studies either informing or arising from these multiple study findings. The two earliest pioneering teams' work will be

presented first, to illustrate how the nature and design of CBT research for people with an ASC has evolved over the past decade.

Cluster 1

This first research cluster of studies arose from the University of Queensland, Australia and focused on the reduction of anxiety in children with an ASC. The intervention 'Exploring Feelings' was specifically designed for children with an ASC by Sofronoff and Attwood and piloted in the first of two successive studies (Sofronoff and Attwood, 2003; Sofronoff et al., 2005). The pilot study involved 65 children with an ASC and anxiety symptoms, aged between ten and twelve years and was designed to teach child participants effective strategies to manage their anxiety and gain a broader understanding of emotions. Three participant groups were formed: a waiting list control group, a treatment group, and a further treatment group with parents trained as co-therapists. Over six weekly sessions, intervention groups participated in affective education interactive exercises. They were introduced to a metaphoric 'emotional repair toolbox' and emotional thermometer and utilised these through role play; they constructed 'social stories' and antidotes to 'poisonous thoughts' and cooperatively designed programs to manage anxiety. Just two measures were used in this preliminary study: 'James and the maths Test' (Attwood, 2002 (unpublished), in Sofronoff and Attwood, 2003, p.8) - a child measure specifically designed for this study - and a parent report measure of observed behaviours associated with ASCs (Sofronoff and Farbotko, 2002). 'James and the Maths Test' was designed to measure a child's ability to generate effective

strategies for an anxiety provoking scenario. Each measure was completed pre and post intervention and at six week follow-up. Children in the 'intervention + parent therapist' groups were able to produce significantly higher numbers of anxiety control strategies in response to anxiety provoking situations post intervention, than intervention group only and wait-list counterparts. Also, anxiety reduction reports from parents from the 'intervention + parent group' identified highly significant reductions immediately post intervention and at six week follow-up.

Following this initial pilot study, the authors extended this research to a randomised control trial (RCT) (Sofronoff et al., 2005) involving therapy provision to 71 children with an ASC and anxiety symptoms. The design was largely the same as for their previous study, but with random allocation to the groups and pre-test screening to assess the nature and degree of anxiety experienced by child participants. In addition to 'James and the Maths Test', the Spence Child Anxiety Scale (SCAS-P) (a measure and typing of child anxiety symptomology) (Nauta et al., 2004)), and also the Social Worries Questionnaire-Parent (Spence, 1995): a measure designed to assess the level of social worry experienced by children were also employed. At the six-week follow up stage, both intervention groups produced significant reductions in anxiety symptomology, with main reductions occurring in the six week post intervention period. SCAS-P results demonstrated significant reductions in child participant social worries in both intervention groups by this third measurement point; similar results were obtained from 'James and the Maths Test'. Significant differences were obtained from both SCAS-P and James and the Maths Test scores between the two intervention groups, thus demonstrating the value of intensive

parent involvement on children's ability to manage anxiety beyond the clinical setting.

Cluster 2

This second cluster of research studies is led by Judy Reaven, currently of the School of Medicine at the University of Colorado, USA, and also comprises two studies.

In the first of these, Reaven et al. (2009) assessed the usefulness of a manualized CBT group treatment programme in the reduction of significant anxiety symptoms in 33 children with an ASC aged eight to fourteen years. It was believed that a group setting would provide 'opportunity for exposure to novel social situations in a protective and supportive setting' (p.29). Treatment groups comprised ten child-parent dyads, with similar waiting list control groups. Treatment followed three versions of a treatment manual namely 'Coping Group': Fighting Worry and Facing Fears' (Reaven et al., 2005 (unpublished), in Reaven et al., 2009, p.31) - an original manual that was specifically designed for use with children with an ASC to enhance accessibility to this form of psychotherapy. Specific manuals were produced for child participants, parent participants and facilitators. The twelve week intervention included graded exposure tasks and anxiety psycho-education. Psycho-education extended to parent participants, and introduced the concept of excessive parenting, a protective parenting trait of parents of children with an ASC, which the authors deemed to limit opportunity for children to experience anxiety-provoking situations and thus limit their chances of developing and practising suitable coping strategies

for such circumstances. The primary tool for evaluating intervention outcomes was the Screen for Child Anxiety and Related Emotional Disorders (SCARED) (Birmaher et al., 1999) which was completed before and immediately after the intervention by parents and child participants. Parent ratings suggest both a statistically significant reduction in comparison with waiting list groups, and a clinically significant reduction in child treatment group participant anxiety symptoms. Child ratings revealed no statistically or clinically significant effects for time or group membership.

Following this pilot study, the research extended to a randomised control trial (RCT) based on essentially the same but renamed ('Facing Your Fears') family-focused group treatment manual (Reaven et al., 2012). This was to compensate for the lack of random assignment to groups and independent evaluation in the pilot study and to enhance the efficacy of research findings. Samples of 50 eligible children between the ages of seven and fourteen were randomly allocated to active treatment groups and 'treatment as usual' groups. Outcome measures included the Anxiety Disorders Interview Schedule for DSM-IV-Parent Interview Schedule (ADIS-P) (Silverman and Albano, 1996), SCARED (Birmaher et al., 1999), CGIS-I (Clinical Global Impressions Scale – Improvement ratings) (National Institute of Mental Health (NIMH), 1970) and the ADIS Clinical Severity Ratings (CSRs) (Silverman and Albano, 1996) which was administered by independent clinical evaluators. The latter is a tool to classify types of anxiety in accordance with DSM-IV categories. CBT treatment group scores were significantly higher post-treatment for CRS diagnostic status and CGIS-I clinician ratings than those from the 'treatment as usual' group. 50% of the CBT treatment group demonstrated clinically significant CGIS-I scores compared to 8.7% of the treatment as usual control group. Three

and six month follow-ups demonstrated further and progressive child and parent reported reductions in SCARED (total anxiety symptoms) scores.

Cluster 3

This is the largest and most progressive cluster of the three in terms of studies undertaken and the scope of these.

The final cluster comprises Sze and Wood (2007, 2008) and Wood et al. (2009a, 2009b) co-morbid anxiety intervention studies. Intervention content was based on the hypothesized positive correlation between anxiety and core ASC symptom levels and the theory that if core symptoms are reduced, anxiety levels will drop. Initial piloting of a family CBT manual ('Building Confidence', Wood and McLeod, 2008) for anxiety, with additional modules targeting core ASC symptoms and skills deficits was trialled in Sze and Wood's (2007, 2008) single case studies. Additional modules covered friendship skills, awareness of self-appearance and behaviours on others, age appropriate self-help skills, techniques for suppressing stereotypical behaviours, and a school module addressing social isolation through 'buddying' and mentoring programmes. Parents and school aids were trained as co-therapists to accommodate *in-vivo* exposure to feared situations. Modules were selectively utilized in case studies with an eleven year old female (2007) and ten year old male (2008) who both had a diagnosis of an ASC and experienced a range of co-morbid anxiety disorders. Following treatment (sixteen weekly sessions, each lasting approximately 90 minutes), child participants in both trials no longer met diagnostic criteria for the specific types of anxiety disorders they were demonstrated to have at

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the outset of treatment (as identified by the Anxiety Disorders Interview Schedule for DSM-IV Child and parent versions (ADIS-C/P)). Sze and Wood's 2007 study reports large gains in social skills and adaptive functioning. More extensive evaluations were conducted in Sze and Wood's 2008 study including the Child Behaviour Checklist (CBCL) (Achenbach, 1991), the Social Skills Rating Scale (SSRS) (Gresham and Elliot, 1990), and the Vineland Adaptive Behaviour Scales (VABS) (Sparrow et al., 1984). Large gains were seen in all components. Findings led the authors to conclude that this supplemented family treatment therapy programme 'may be an efficacious treatment approach for children with ASD and concurrent anxiety' (p.403).

To test this conclusion, an RCT was conducted (Wood et al., 2009a) in a third study following the same treatment schedule. Forty seven to eleven year old children with an ASC and co-occurring clinical anxiety were randomly assigned to immediate CBT treatment or waiting list groups. Evaluation was through three main measures: the ADIS C/P and associated clinical rating scale (CSR), the CGI-I and the Multidimensional Anxiety Scale for Children (MASC) (March 1998). Following treatment, thirteen of the fourteen treatment group completers demonstrated a positive treatment response (CGI), and nine no longer met diagnostic criteria for any anxiety disorder, thereby demonstrating significantly larger differences in test scores at this point than those demonstrated by waiting list group completers. These positive treatment gains were largely maintained at the three month follow-up. MASC scores immediately post-treatment revealed a discrepancy between parent and child report ratings, where statistically significant differences were found between post-treatment and post-waiting list groups in parent-reports, but no real

differences between the two groups could be gleaned from child-report MASC scores. From these findings, the authors claimed 'with the appropriate enhancements, CBT may be potent in the treatment of anxiety disorders among children with an ASD' (p.231).

The final study in this cluster, Wood et al. (2009b), piloted the effect of Wood and McLeod's (2008) revised family therapy treatment manual on parent-reported autism symptoms. Nineteen child participants aged seven to eleven years with high functioning ASC and an anxiety disorder and their parents took part in the study and were randomly assigned to a CBT intervention or wait-list group. Social responsiveness scales (SRS) (Constantino and Gruber, 2005) were completed by children in both groups prior to the intervention. The SRS is a standardised, 65 item questionnaire with items based on children's ASC specific characteristics, employing a four point Likert scale. Session numbers and duration were as for the two previous studies. Of the nineteen child participants, nine were in the CBT treatment group. SRS questionnaires were completed by all parents again immediately post-intervention and compared with pre-intervention scores; also for four of the children in the intervention group at the three month post-treatment stage. Immediately post-treatment, intervention group parents awarded significantly lower scores than those in the wait-list group on three of the five subscales, namely Social Communication, Social Motivation and Social Awareness. Treatment gains were found to be still evident at the three month post-treatment stage. SRS-T scores of 70 or above are considered clinically indicative of autism symptoms. Immediately post-intervention, two of the nine intervention group children had scores below this threshold, (all of whom scored above this pre-treatment),

compared to all bar one of the wait-list children who remained on or above this. The exception was a child whose score fell below the clinical threshold prior to the intervention and remained so. Scores remained under 70 for three of the four intervention group children who participated in the three month follow-up. SRS results and ADIS-C/P CRS change scores suggested a correlation between anxiety scores and autism symptoms; where when one score decreased over time, so did the other. Results led authors to conclude that 'autism symptoms such as social communication deficits may be positively influenced by CBT' (p.1611), and that larger scale trials to test robustness of this initial finding were merited.

Single studies

There are three ASC/clinical anxiety single studies of note that fit the review criteria. I will present these in chronological order by date.

In the first of these independent studies, Chalfant et al. (2007) utilized traditional CBT intervention techniques in a randomised control study in Australia of a family-based CBT intervention for children with HFA and a range of co-morbid anxiety disorders. 47 child participants were assigned to either a treatment or waiting list group. The treatment group received twelve weekly two hour CBT sessions based on a group anxiety treatment manual supplemented with affective education, simplified restructuring exercises, coping strategies, role play practice and *in-vivo* exposure to feared situations, and additional visual aids and structured worksheets. Parents trained and served as co-therapists to support the intervention *in vivo*. Through the utilisation of a range of commonly used child, parent and teacher self-

report scales, Chalfant et al. reported that 71% of intervention group participants were anxiety diagnosis free immediately post-treatment in comparison to 0% of the wait-list group. Scales included SCAS for child participants, SCAS-P for parents, and the Strengths and Difficulties Questionnaire (Goodman, 1997).

In a Singapore based study, Ooi et al. (2008) also sought to reduce co-morbid anxiety symptoms in six children aged nine to thirteen with high functioning ASCs in a sixteen x 90 minute session manualized group CBT intervention delivered through therapists and parent collaborators. The programme comprised affective education, anxiety management techniques and problem-solving strategies based on a 'stop, think, act and reflect' procedure. Study findings reported reductions in anxiety symptomology post-treatment, although these were not deemed clinically significant due to sample size. Measures included the parent and child versions of the SCAS, and the Asian Children Anxiety scale – caretaker version (Koh et al., 2002) - which was completed by teaching staff who were considered informants to the intervention. Discrepancies were found between child participant and parent anxiety ratings post-treatment, where children reported lower levels at this point.

Moving back to the USA for the final study in this section, White et al. (2009) trialled the preliminary effectiveness of a 'Multi-Component Integrated Treatment' (MCIT) with four youths aged twelve to fourteen years with high functioning ASC. This manual-based intervention targets anxiety and social competence for youths aged twelve to seventeen years. The intervention consists of two parts, the first of which focuses on the reduction of anxiety. This part is modular and allows some flexibility in module choice from thirteen modules, which can be undertaken in up to thirteen individual therapy sessions lasting 50-75 minutes each. This is deemed to

accommodate each participant's specific anxiety disorder, and in the case of multiple anxiety disorders, to enable focus on the most problematic of these. Parents were trained as 'coaches' to promote skills generalisation through assisting with exposure activities between sessions, environment adaptations and other homework activities. For the second component, participants met for five group therapy sessions in which age appropriate social skills were taught within the group. The duration of the whole intervention was eleven weeks. Intervention outcome was largely assessed through parent and clinician rating scales - CASI-20 (Child and Adolescent Symptom Inventory -20) (Sukhodolsky et al., 2008) and ADIS-C/P (Silverman and Albano, 1996) respectively for anxiety, and parent reported SRS scores, with youth participants self-reporting anxiety symptoms through the MASC (March, 1997). Overall findings through parent and clinician rating scales included significant reduction of anxiety symptoms in three of the four participants, and improvements in social skills noted in all four. However, at six month follow up, three of the four participants showed increases in anxiety through ADIS-C/P scores and two through CASI-20 scores.

Similar to the Lopata et al. (2010) study in section 2.8, there was a discrepancy between parent and self-report measures for anxiety, where adolescent participants reported smaller reductions in anxiety symptoms than their respective parents.

Conclusions from clinical studies

Perhaps the two most obvious conclusions that can be drawn from the clinical studies above are that there are a dearth of clinical studies on the use of CBT with

adults with an ASC, and that the ideas for this area of research that originated in the UK (Hare, 1997; Hare and Paine, 1997) are now being developed overseas, predominantly in the USA.

What is particularly interesting in the children's studies are the clusters of research studies that have emerged, all starting with tentative pilot studies and extending to RCTs. This developmental pattern is in keeping with the NIMH working group model and recommendations that systematically validate psychosocial interventions for individuals with an ASC, as outlined by Smith et al. (2007). The first stage of the four step model is to conduct an initial study to show that a particular technique may have therapeutic value. This may be through the application of the technique to a small number of cases using, for example, reversal or multiple baseline designs or through between-group designs. The second step is the development and small scale feasibility trialling of a manual and intervention protocol. Following any necessary refinements, the third step is to conduct a large scale RCT in order to evaluate the efficacy of the intervention with larger samples and across different sites. On successful demonstration of efficacy with large samples under controlled conditions, the ultimate step in demonstrating the efficacy of an intervention is testing if similar outcomes can be achieved when conducted in the wider community by community practitioners, rather than in specialised research centres.

In the child study clusters reviewed above, all have surpassed the manualization stage and preliminary RCT stages with promising results. The fourth step, community evaluation, has yet to be undertaken by any of the three research clusters.

What we also see within the final cluster of studies by Wood et al, is a development in the approach to reducing co-occurring clinical anxiety conditions. Wood et al. (2009a, 2009b) studies shift attention to treating ASC symptoms rather than the secondary anxiety, with seemingly enhanced results in terms of anxiety reduction and ASC symptomology reduction. The Wood et al. (2009b) study finding of three of the four child participants falling below the clinical threshold for ASC at the three month post-treatment phase is particularly interesting. Perhaps the biggest question it poses to clinical and research circles is does this mean that the child is no longer considered to have an ASC? A second question is how reliable, valid and enduring is this finding? It is also questionable how this finding may apply to wider age ranges and environmental contexts, given the broadly consistent family and school conditions that children and young adolescents tend to live in, as compared, for example, to a student in higher education.

Whilst results from multiple studies and more preliminary single studies appear encouraging, several concerns arise within this body of research as a whole. In the light of NIMH guidelines for designing research studies of psychosocial interventions, as summarised by Smith et al. (2007), these are seemingly more attributable to the stage of intervention development and efficacy testing rather than poor design.

Potential biases through small sample size, stage of development, lack of control, and researcher effects are yet to be ironed out in the high proportion of single case studies in this clinical study category. This is particularly relevant with regards to adult studies. As Gaus (2011, p.20) points out, 'there is no evidence- based protocol yet established for treating adult ASD', and indeed the adult studies presented

above support this view. Interventions that have been demonstrated as being effective are known as evidence-based practices (Mills and Marchant, 2011).

Enduring concerns however, are the often over-reliance on parent / researcher reporting and the low opportunity for the participant's voice to be heard. Parents being trained as co-therapists and evaluators may have created bias, especially if there was a perception that results may be reflective of their own performance, also they may also have had expectations of improvement through their participation and personal time invested in the intervention. In all the children's studies reviewed above, the parent / researcher assessment takes predominance over the child's perspective. Four of the children's studies, (Reaven et al., 2009; Wood et al., 2009a; Ooi et al., 2008; and White et al., 2009), report discrepancies between children and parent anxiety rating reports, in which parents reported greater anxiety reductions than their child participants in three of the four studies. An alternative suggestion for the reasons behind this nature of discrepancy is offered by White et al. (2009), who question the extent of child participant's understanding of MASC questions and consider if they lacked insight into their personal experiences of anxiety.

A further concern is that in the studies which reached the stage of testing for lasting effects, again, results were calculated on only a proportion (ten out of fourteen) of the original test sample, due to participants or their respective parents choosing not to return (Wood et al. 2009a), and four out of nine in the Wood et al. latter study (2009b). This limits opportunity to generalise findings. In the White et al. (2009) study - as previously mentioned - anxiety levels were reportedly higher in all participants at six month follow up. In one of the three studies with longer follow-up

periods (six months plus), one, an adult study (Hare, 1997) reported a marked

increase in anxiety eight months post-treatment. This questions the sustainability of

improvements over longer periods.

The issue of measurement also raises concern. All of the anxiety measures used in

the reviewed studies seem to have been designed for the general population. This

brings into question results claiming clinically significant decreases in anxiety/mood

disorder as participants will have been categorised in accordance with clinical/non-

clinical baseline scores for the neurotypical population.

Returning to the issue of evidence-based practice, a guideline to advise on

interventions and support for adults with an ASC has recently been published

(NICE, 2012). Three specific aims of the guideline that are most pertinent to the

present study are to:

- Improve access and engagement with treatment and services for people with autism
- Evaluate the role of specific psychological, psychosocial and pharmacological interventions for the treatment of autism
- Evaluate the role of specific service-level interventions for people with autism

  (NICE, 2012 pp.9-10)

This new guideline 'Autism: Recognition, referral, diagnosis and management of

adults on the autistic spectrum' (NICE, 2012), however, confirms the dearth of adult

studies that meet the review's eligibility criteria to support a recommendation for the

use of cognitive behavioural therapies with adults with an ASC. With just one quasi-

experimental study for adults with autism (Russell et al., 2009) meeting the review

criteria, learning disability studies were also considered in the evaluation. The

Russell et al. (2009) study, which compared a CBT intervention group of

participants with co-existing Obsessive Compulsive Disorder (OCD) symptoms with a treatment as usual group, however, reported no evidence of significant treatment effects on OCD symptoms within the experimental group. The study was also criticised for its failure to detail any specific adaptations for autism in the CBT intervention and was therefore deemed to lack efficacy.   On this basis, at draft republication stage, the report concludes:

> 'The evidence concerning the cognitive behavioural treatment of co-existing conditions is very limited and provides no specific evidence to support the development of adaptations to CBT to make it potentially effective for people with autism.' (p.221).

Sadly, the children and young people's counterpart review (NICE, 2011) focuses on recognition, referral and diagnosis of autism in children and young people up to the age of nineteen years, but does not include treatment interventions. The splitting of the two reviews into age groups and the restricted scope of the children's review means that despite the advances in efficacy demonstration in the children's studies detailed in the present review, these advances remain unconsidered and undocumented at the NICE review and recommendation level.

A problem arising from the evidence-based practice approach is the strong focus on quantitative data that lends itself to statistical analysis. The studies above give us very limited qualitative information as to how the adult participants concerned actually experienced the intervention. Weiss and Lunsky (2010) and Kenny et al. (2008) provide very sparse detail on what participants reportedly liked about their respective interventions, but there is no detailed analysis that expands on this to better inform future research. For example, it is difficult to deduce from such sparse detail if elements of an intervention are detrimental to the person's psychological

well-being and to what extent, or detrimental to the intervention overall. It is also difficult to deduce in what other ways, anticipated or otherwise, the intervention may have impacted on the participant: knowledge which again may be particularly useful for intervention design, delivery and future research.

2.8: The emergence of CBT for pupils with an ASC in educational settings

Whilst CBT is typically delivered and researched in clinical settings, in response to deteriorating mental health status, research on its application with children with an ASC and adolescents has extended to educational settings. Although not acknowledged in the studies described in the following section, there is seemingly a dichotomy in the delivery and focus of studies within this category. This is where CBT is utilised either proactively to equip child participants with the social skills and emotional understanding to manage challenges they may encounter in everyday life, or reactively, but with the same aims, i.e.: in response to a deterioration in mental health status.

 Description of studies

A cluster of studies by Bauminger (2002, 2007a, 2007b) explores the potential of CBT to enhance social-emotional understanding and social didactic interaction skills in a sample of Israeli school children, aged seven to eleven years, with a diagnosis of high functioning ASC. The Bauminger (2002, 2007a) studies comprised a 'cognitive-behavioural-ecological' uncontrolled intervention, conducted primarily in

participants' respective schools by their main teacher for three hours each week for seven months. Participants received instruction in friendship development and maintenance skills, affective education, and social-interpersonal problem-solving skills through the use of vignettes. Throughout the programme, the skills covered were practised with assigned neurotypical peers both in school and after school and supported by parent co-therapists at home. Bauminger's (2007b) study, based on the same curriculum, was expanded to small special needs teacher-led groups comprising children with a high functioning ASC and two typical peers. Of the participants with high functioning ASC, eleven had participated in Bauminger's previous study (2007a) and fifteen had not. Skills practice and evaluation extended to group social interaction in a non-structured social situation.

In Bauminger's suite of studies, assessments were made immediately before and on completion of the intervention. Taking firstly the 2002 and 2007a studies, two measures were used to assess changes in social cognition. The first was the Problem-solving Measure (PSM) (Lochman and Lampron, 1986), which required participants to compose the middle sections of a series of social problem-solving stories with given endings. The second measure was the Emotion Inventory (Seidner et al., 1988) to test participants' experience and understanding of simple and complex emotions. To assess changes in the quality and intensity of participants' social behaviours, participants were assessed through observation by an external specialist education observer, and rated against an adapted version of the Behaviour Coding Scheme for children with autism (Huack et al., 1995). Participants' overall social skills were measured by their respective teachers through the Social Skills Rating Scale -Teacher Version (SSRS-T) (Gresham and

Elliott, 1990). In the group study (Bauminger, 2007b), additional tests included the Companionship Measure (Bauminger, 2004 (unpublished), in Bauminger 2007a, p.1607); the Strange Stories Measure (Frith and Happé, 1994), to assess progress in theory of mind capabilities; and the sorting sub-test of the Delis Kaplan Executive Functioning System to assess conceptualising, reasoning, problem-solving skills and thinking flexibility (Delis et al. 2001).

Bauminger's collection of studies produced results that suggest significant gains can be made in children's social problem-solving and emotional understanding through affective education and social skills training with a strong cognitive behavioural focus. Significant gains were reported in assertiveness, cooperation, and ability to initiate positive social interactions (2002, 2007a, 2007b), with improvements maintained four months post-treatment in 2007a participants. In the group study, (2007b), significant treatment gains were only generalised to external situations in participants whose parents were previously trained as co-therapists.

In a similar vein to the Bauminger studies, a study by Lopata et al. (2006) targeted social behaviour in a classroom setting in the USA. Twenty-one child participants, aged six to thirteen years with high functioning ASC were randomly assigned to either a solely social skills instruction group (SS group) or to a social skills instruction plus a behavioural reward/costing system regarding pro-social behaviours (SS+RC group). Cognitive therapy techniques were utilized in both treatment groups through a nine step, manualized 'skills streaming' procedure (Goldstein et al., 1997) involving role-play and feedback and reinforced with affective and social skills education and co-operation activities. The intervention was conducted at a special summer school and ran for five days per week, six

hours per day for six weeks. The intervention was facilitated by graduate psychology and education students following a course of intensive training in the intensive social skills training protocol. Three assessment measures were used at the start and post intervention: the Behaviour Assessment System for Children (BASC) (Reynolds and Kamphus, 1998), with Parent Rating Scales and Teacher Rating Scales to measure adaptive and problem behaviours in school and home/community settings respectively.

Lopata et al. (2006) reported significant increases in parents' and teachers' social skills ratings post-treatment; significant increases in adaptability were reported by parents only. No significant differences were found between the two experimental groups. In a second study, (Lopata at al., 2008), again involving a social skills training with a reward-cost group and one without, similar findings arose, but this time results were indicative of a positive effect of the RC behavioural system on some behaviours.

To redress the lack of a control group in the two preliminary studies, Lopata et al. (2010) conducted an RCT based on the same manualized 'Skillstreaming' programme. This involved 36 child participants with high functioning ASC, aged seven to twelve years, of which eighteen were assigned to the intervention group and the remaining eighteen to a wait-list control group. The delivery of the intervention was intensified to five weeks. Assessment tools included three researcher developed measures, namely the Adapted Skillstreaming Checklist (ASC), the Skillstreaming Knowledge Assessment (SKA) and Parent, Child and Staff Satisfaction Surveys. Significant treatment gains were found in five of the seven parameters tested. Clinically significant reductions of ASC symptoms were

deduced from pre and post-treatment parent rated SRS scores, with a 50% of post-test scores showing a reduction in clinical range.

Not only did the Lopata and Bauminger's studies above differ in setting and application to the studies in section 2.7, in these studies the starting point of the therapy was the assembly of new thought patterns through affective education and problem-solving to interpret situations and identify feelings and emotions, rather than the unravelling of dysfunctional thought patterns. This application seemingly turns conventional CBT techniques inside-out and provides a proactive rather than reactive approach to therapy with regards to the co-morbid mental health condition vulnerability, from which the population with an ASC is seemingly at risk. The prime focus of these studies is 'habilitation' (Gaus, 2007, p.133) and the building of skills that have not yet been mastered. They thereby utilise a discourse of acquisition and development, rather than one of dysfunction.

Whilst the Lopata and Bauminger suites of studies above were conducted in America and Israel respectively, efforts are underway for making CBT available to children with an ASC in educational settings in the UK through educational psychology services. In a single exploratory case study that was predominantly reactive to a twelve year old adolescent's co-morbid depression, anxiety, trauma and social competence difficulties, Greig and Mackay (2005) - both educational psychologists - administered a fifteen session intervention that drew on both clinical and affective educational strands of CBT. The intervention was based on an author created meta-cognitive visual aid, 'The Homunculi', (Latin for 'little men'), to promote the development of problem-solving and social skills and thought, emotion and behaviour regulation. Greig and Mackay (2005) reported enhanced social

competence in terms of ability to establish reciprocal friendships and clinically significant reductions in emotional status.

Conclusions and points of interest from educational setting studies

Again, as for the clinical study clusters, we see within Bauminger et al. and Lopata et al. clusters of studies a progression through the NIMH research stages towards evidence based-status for this form of intervention within educational settings. Bauminger's suite of studies starts to reach into the realms of community effectiveness, the fourth and ultimate recommended phase of research on psychosocial interventions for autism (Smith et al., 2007). This is through the incorporation of special needs teachers as programme deliverers, facilitators and evaluators within participants' natural school setting. The Lopata et al. studies (2006, 2008, 2010) too extend to non-clinician delivery through the import of psychology and education graduate programme implementers and co-evaluators. However, the summer school setting arguably carries less credence than Bauminger's home school settings in terms of ecological/community validity.

Within these studies we see the development of specific measures by the researchers to accommodate autism traits and particular aspects of the research. The Lopata et al. (2010) study is seemingly the first to take into consideration and try to capture satisfaction ratings of child participants. Interestingly, this was scored out of a total of 56 points and findings presented in these terms. Lopata et al. (2010) suggest that the lower satisfaction ratings reported by child participants are unsurprising, in view of the fact that children were working intensively on skill

deficits, but do not expand on this thought. What is also of note is that the three satisfaction rating scales contained different questions on different parameters, therefore not comparing like with like. Another point of note is that the rating scales were quantitative, simply requiring respondents to self-assess against a seven point Likert scale. This tells us the level of respondents' satisfaction /dissatisfaction, but not the underpinning reasons. It also restricts information to a set list of criteria, thereby not allowing exploration beyond list items, thus curtailing potential opportunity for improvement.

In keeping with the Wood et al. (2009a, 2009b) and White et al. (2009) clinical studies, these two clusters of educational setting studies targeted both core diagnostic features of ASCs, whilst simultaneously targeting individualised child needs. This was accommodated through 'module choice' in the Wood et al. and White et al. studies, and extensive *in-vivo* practice and experimentation in all. These approaches therefore take into account the diversity of ways in which people within populations with an ASC experience their ASC, and extend to the places in which participants' behaviours are deemed most problematic.

What is striking about the Bauminger and Lopata suites of studies is the intensity of the interventions time-wise, with Bauminger's interventions entailing three hours each week for seven months and Lopata's six week, five days per week, six hours per day intervention. With traditional CBT sessions usually within the region of eight to twenty (NICE, 2007), Rotheram-Fuller and MacMullen (2011) raise concerns as to how realistic it may be to try and incorporate this into school settings on a wider basis. They suggest that interventions may need to be adapted to shorter sessions, encompassing fewer skills, within that period.

In a British context, Greig (2007), an educational psychologist, accredited cognitive behavioural therapist and co-researcher in Greig and Mackay's (2005) study above, is eager to see CBT becoming a more integral part of the educational psychologist's role. This primarily would be for early intervention and prevention purposes. In Greig's (2007) view, educational psychologists are well placed to offer this service within their school support remit. In relation to growing mental health needs of school aged children, Greig argues:

> 'Given the time children spend at school and its familiarity to children and parents alike, schools are in a good position to facilitate and sustain therapeutic inputs and such school-based interventions may offer great potential for helping these children.' (p.19)

In a recent review of the educational psychologist's role (Atkinson et al., 2011), the provision of therapeutic support to children and adolescents by educational psychologists is seemingly on the increase, and CBT is their treatment of choice. However, whether this should be the exclusive remit of educational psychologists is questionable and elicits mixed opinion. Recommendations arising from a systematic review of secondary school-based cognitive behavioural interventions (Kavanagh et al., 2009) include consideration of the use of 'adequately trained and supported school staff to provide CBT based interventions to young people' (p.3) on a preventative basis. There is no mention within this review, however, of ASC. This takes us full circle to the more community level delivery thinking encapsulated in NIMH recommendations for effective interventions. A final view to conclude this aspect of the review takes us back to America, and is from Rotherham-Fuller and MacMullen (2011) with regards to school-based interventions for pupils with an ASC. Rotherham-Fuller and MacMullen contend:

'Given the paucity of CBT interventions in this setting for this population, however, the specific requirements to effectively implement CBT with children with ASD in schools remains largely unknown. Initially, it is clear that school based providers should receive training in both CBT methods and common characteristics of ASD.' (p.270)

2.9: Adaptations to conventional CBT techniques to accommodate ASC traits

In all of the studies discussed in sections 2.7 and 2.8 there is a strong recognition of the need to adapt conventional CBT techniques and protocols to take into account the ASC underpinning cognitive processing style, and to cater for associated information processing deficits. A review by Anderson and Morris, (2006) of four early CBT studies involving participants with an ASC, built on Hare and Paine's (1997) initial "service specification" and identified five necessary modifications that they felt necessary to conventional CBT to make it more accessible to clients with an ASC. Nine of the ten studies discussed in the present literature review that were instigated for primarily clinical reasons were based on adapted versions of existing CBT protocol manuals that were designed initially for use with neurotypical clients. Each of the five modifications recommended by Anderson and Morris (2006) are detailed below, along with further illustration of the implementation of these in the above studies and a look at the wider literature to debate the validity of these.

'Greatly increased use of written and visual material in view of the predominantly visual style of thinking'

This first recommended modification by Anderson and Morris was based on a study by Hulbert et al. (1994) comprising three participants with an ASC, who reported

that their inner experiences were predominantly visual rather than verbal. Anderson and Morris (2006) speculate that a person with an ASC may have difficulty translating such visual thoughts into words, hence writing and drawing may be of assistance in this respect. The potential value of visual imagery is reiterated by Hare and Flood (2000) and also that of idiosyncratic visual imagery as a mechanism for instigating and recalling particular thoughts during CBT. Further testament is provided by Grandin, (1995), an adult author with an ASC, in her first -hand account of atypical rule development inherent in people with an ASC and the value of pictures in piecing snippets of information together to gain a clearer understanding of rules and guiding principles.

This recommendation is clearly embraced within the studies briefly outlined above. Further examples include the construction of written 'social stories' in the two Sofronoff and Attwood studies (Sofronoff and Attwood, 2003; Sofronoff et al., 2005) to help facilitate the exploration of specific emotions and corresponding behaviours, and 'happiness diaries' to record experiences of this particular emotion and the situations in which they were felt. Hare and Paine's (1997) inclusion of participant diary entries detailing negative thoughts provided a vehicle for bypassing the need for sustained face-to-face dialogue, as the client found the latter means of communication difficult and overly challenging. A further illustration of the value of written material was provided in the Chalfant et al. study (2007) in which the authors produced written lists of helpful and unhelpful thought cues for child participants to select from in order to help compensate for primary communication impairments. In addition to Greig and Mackay's study (2005), cartoon characters to illustrate key concepts in simplified terms featured strongly in the Sze and Wood collection of

studies (2007, 2008, 2009a, 2009b). In Sze and Wood's 2007 study for example, the characters corresponded to participants' special interests and were thus utilized in a programme module designed to suppress participants' intense pre-occupations.

Whilst these applications are primarily child focused (with the exception of Hare and Paine's 1997 study), further support for the usefulness of visual and written materials with the adult population with an ASC is provided by Gaus (2007) and Kenny et al. (2008). Gaus, for example details the successful use of a visual thought flowchart to identify dysfunctional thought pattern chains of a particular client. This linear chart reportedly enabled thought patterns and abstract concepts to become more concrete and observable to the client, and pose a direct challenge to their rigid thinking style. A further suggestion by Gaus (2007) is the use of 'Talk Blocks'. These resemble children's coloured building bricks. Surfaces of this set of six cubes contain an assortment of eighteen different feelings and needs. These are used to help participants identify and express their personal feelings and needs pertaining to these along the lines of 'I feel..., therefore I need...', and to compensate for weak emotional state recognition and alexithyma: skills deficits often experienced by people with an ASC (Gaus, 2007; Berthoz and Hill, 2005).

Whilst visual materials feature strongly in treatment protocols for neurotypical clients, for example 'Mind Over Mood' (Greenberger and Padesky, 1995), such materials tend to be limited to data collection, data recording and activity planning and tend to be in tabular format with written text. In essence, these provide a therapy 'log'. Collectively, the studies reviewed demonstrate a much broader and creative use of visual materials, with the aim of targeting specific ASC traits and promoting understanding. The extent to which the enhanced use of visual materials

aids the achievement of these aims, however, remains unevaluated. All we have to go on at present are the authors' perceptions of this.

Greater emphasis on affective education

The purpose of 'affective education' in a CBT context is to educate clients in the purpose, the advantages and the pitfalls of emotions, and the identification of differing levels of these in both the self and in others (Attwood, 2004, 2007). It is therefore a vehicle for addressing impairment of emotional recognition. Affective education components are strongly evident in all of the studies reviewed, irrespective of client age and study setting. It was employed primarily to teach skills that were not learned automatically as part of typical child development. As detailed previously in section 2.5, in Gaus's view (2007) inappropriate expression of emotions is likely to lead to social consequences such as rejection and ridicule by others, and thereby raise the risk of anxiety and depression. On this basis, the location and focus of the studies reviewed suggests affective education has a dual role in relation to people with an ASC: firstly as a means of proactively attempting to safeguard the mental health of people with an ASC, and secondly to reduce anxiety and aid relapse prevention for those who experience co-morbid mental health conditions. In these respects, its inclusion in both categories of study seems highly justified.

Avoidance of the use of metaphor or abstract concepts in view of the literal, rigid thinking style

Of the five recommendations made by Anderson and Morris (2006), this is perhaps the most contentious.   Metaphor is actively embraced in the Sze and Wood collection of studies to illustrate key concepts in simplified terms and is based on child participants' special interests. For example, in Sze and Wood's (2007) study the concept of 'icky' and 'calm' thoughts are played out through the creation of cartoon images of a favourite film star. Similarly, in the Sofronoff and Attwood studies (2003, 2005), scientific metaphor is utilised in terms of an astronaut exploring the new world of emotion and collecting data, and the concept of an 'emotional tool box' is introduced to 'fix' feelings, which Attwood (2007) considers an extremely effective strategy for cognitive restructuring in anxiety and anger treatment programmes for children. Greig and Mackay's (2005) 'Homunculi', briefly described in section 2.8, is utilised in a similar vein. Beyond the studies reviewed, further support of the use of metaphor with child clients with an ASC is provided by Reaven and Hepburn (2003) through application of a 'fear thermometer', which the child participant concerned labelled her 'worry machine'. For Anderson and Morris (2006) the bone of contention is seemingly based on one adult informant with an ASC, for whom the concept of an emotional thermometer was overly puzzling as they professed not to experience varying degrees of emotion. Yet Gaus (2007), through practical experience of working with clients with an ASC, claims clients enjoy and learn through metaphor when talking about abstract concepts and readily create their own. Whilst we have qualitative observations on the merits of metaphor in the ASC CBT context, what is lacking in the reviewed studies and indeed in Gaus's account is qualitative evaluation from clients' perspectives. Similarly,

qualitative evaluation from this latter source would also serve to further support the enhanced use of visual aids in this respect.

A more directive approach than is usual in CBT... judiciously used when appropriate.

Anderson and Morris (2006) offer this recommendation for times when clients with an ASC are unable to generate 'socially appropriate alternative thoughts, beliefs or solutions' due to executive functioning deficits. In this situation, they suggest that therapists offer 'concrete alternatives, backed by logical evidence' (p.299). This seems credible within the CBT ethos, as the desired cognitive re-structuring may still arise through testing and evaluating the alternatives provided. Whilst enhanced direction may have occurred within the reviewed studies, details of instances where this happened are not included, and for this reason extent of 'judicious use' cannot be evaluated.

Just how directive CBT or indeed any psychotherapy should be with a person with an ASC is questionable, and this issue is not resolved within the literature. In an advisory article on how to support students with an ASC in college, VanBergeijk et al. (2008) state, ' while neurotypical students may benefit from a variety of counselling modalities, students on the autism spectrum require directive, explicit guidance and counselling' (p.1364). Similarly, in a single child case study, Reaven and Hepburn (2003) too give merit to the use of explicit directions within therapy for the AS client group. The authors claim the presentation of a simple list of rules to their child client with co-morbid OCD proved more productive than basic cognitive

restructuring techniques. If as Gaus (2007) suggests, a core goal of CBT is to teach clients to evaluate their existing rules and intermediate beliefs in a more effective way and recognise ones that are unhelpful and maintain anxiety, it is questionable in this situation if such a degree of direction would inhibit potential cognitive restructuring while dysfunctional beliefs remain unchallenged. A key consideration for any CBT programme therefore is at what point the intervention ceases to be CBT and becomes more in keeping with social skills training. It is perhaps in this respect that Anderson and Morris (2006) add a cautionary clause to this fourth recommendation.

Involvement of a family member or key worker as co-therapist in an attempt to improve generalisation of skills

Anderson and Morris (2006) add no further detail to this recommendation, however, involvement of 'important others' in this respect is a core feature of almost all of the studies reviewed. The principal reason offered by the authors of the studies reviewed is to promote opportunity to practise newly acquired social and coping skills within *in- vivo* situations, both at home and at school. Further reasons found in the reviewed studies are to provide external objectivity on the extent of progress against therapy goals (e.g. Hare, 1997; Sofronoff and Attwood, 2003; Sofronoff et al., 2005; Bauminger, 2002, 2007a) and to assist with on-going critical evaluation of evidence for existing and alternative beliefs (e.g. Hare, 1997).

What is not called into question within the reviewed studies is sustainability of co-worker/therapist involvement. This may be particularly salient in the Wood et al.

(2009b) study, in which parental participation was deemed central to the success of the programme; the fact that five out of nine parents chose not to take part in the three month post-treatment assessment could be indicative of problems with parental involvement sustainability post-treatment. Furthermore, there was no measure for comparative purposes of the actual amount of parental involvement that occurred within the home or the quality of this *in-vivo*. The only studies that included a control for parental involvement were the Sofronoff and Attwood studies (2003, 2005).

Overall, with the exception of the exclusion of metaphor, Anderson and Morris's (2006) recommendations seem consistent with the literature on information processing deficits associated with ASCs, and are deemed by the authors to be beneficial in the therapeutic process. As yet, with the exception of the Sofronoff and Attwood (2003, 2005) studies, there are no comparative studies that specifically seek to evaluate the differences between incorporating these special accommodations into CBT programmes for participants with an ASC. Given that many of the studies are based on adapted versions of existing protocols, perhaps the ultimate evaluation as to the merits of the adjustments detailed and debated above would be controlled studies, where the control group undertook CBT in accordance with the protocol designed for neurotypical clients. An interim or alternative action could be to extend qualitative evaluation of such measures to study participants.

Whilst not being able to support the use of CBT with adults with an ASC through empirical evidence, the Guideline Development Group (GDG) for the recent NICE review (NICE, 2012) drew on their own knowledge and expertise of CBT

intervention with people with an ASC to recommend how CBT interventions might best be adapted for the adult population with an ASC. In keeping with the adaptations recommended in this section, the GDG too supported the inclusion of the following:

> '…a more concrete and structured approach with greater use of written and visual information ...involving a family member, partner or professional' to support the implementation of the intervention, and 'maintaining the person's attention by offering regular breaks and incorporating special interests into therapy if possible.' (p.222)

2.10: Implications of review findings for the potential use of CBT in a Higher Education context

Implications for the proposed research study

Due to the dearth of adult studies included in the review and in general, review findings offer limited empirical support for CBT use with the adult population with an ASC; however, findings from child/adolescent studies offer no reason why, with good adaptation, it may not be equally effective in reducing anxiety and enhancing social skills and behaviours. Of the difficulties reportedly experienced by HE students with AS in the Beardon and Edmonds (2007) and Madriaga et al. (2008) studies, the review studies provide initial evidence of CBT having the potential to be effective in addressing social isolation, reducing anxiety through various means, enhancing social interaction in both dyadic and group situations, and in enhancing social cognition.

Collectively, the review studies and wider literature provide a body of knowledge on the adaptations to CBT interventions that may enable the HE student population with an ASC to access this form of therapy. The literature also offers examples of creative application of CBT techniques and materials that appealed to participant interests, which took advantage of their visual thinking preference (Hare, 2004) and made age appropriate. It thereby provides a starting point for HE application.

The review also highlights the potential benefits of utilizing parents and teachers in the delivery of CBT for maintenance of treatment gains and in assisting participants to generalise new skills and cognitions to other situations. With good training and supervision, similar opportunity could lie in the use of student and ASC specialist mentors and study skills tutors as co-therapists or aids within HE institutions.

Currently, despite recognition of over-representation of mental health difficulties in the population with an ASC, contrary to the intention of government policy, adults with an ASC have tended to fall in the gap between mental health and learning disability services (DoH, 2009); hence access to psychotherapy has been restricted. It is hoped that recommendations for public services to adapt service provision to the needs of people with autism in the new 'Fulfilling and Rewarding Lives' Strategy' (DoH, 2010) and the Autism Act 2009 will improve this provision.

Bauminger's collection of studies (2002, 2007a, 2007b), the Lopata et al. studies (2006, 2008, 2010) and Greig and Mackay (2005), demonstrate that CBT interventions do not have to be restricted to clinical settings and can be successfully implemented in educational institutions. In recognition of the easy access to children in school and the high proportion of time children attend school, there is

growing support for the reintroduction of psychotherapy to the educational

psychologist role (Greig, 2007). Arguably, and in support of the present study aims,

this debate could be extended to the provision of CBT to students by

psychotherapists and support staff in HEIs who have an understanding of ASCs.

Implications for Research Methodology

Emerging from this review is the steady escalation of sophistication in study design

over the past fifteen years. Evident in the clusters of studies discussed is a

tendency for researchers/research teams in this field to firstly conduct small scale

studies to facilitate and trial the development of adaptations to standard CBT

techniques and support materials, before advancing to more complex study designs

and subsequent refinements of these. In the absence of large scale adult studies in

this field, the present study should include a series of individual case studies

investigating the effectiveness of CBT in the context of HE students with an ASC,

delivered within an HEI and encompassing the range of problems identified by

Beardon and Edmonds (2007) and Madriaga et al. (2008), detailed in section 2.3.

This leads to a second issue, that of evaluation.

What is evident in sections 2.7 and 2.8 is that the abundance of quantitative

evaluation tools reflected the aims of the reviewed studies and age range of

participants (predominantly children). However whilst anxiety management and

social skills enhancement are likely to feature strongly in the proposed CBT

interventions, - as the Beardon and Edmonds, (2007); Madriaga et al. (2008); and

Martin, (2008) study findings suggest - the range of evaluative tools that is currently

available is not sufficiently broad to cover all the research outcome measures. While well validated, standardised tools such as the Clinical Outcomes in Routine Evaluation (CORE) (Evans et al., 2000) are readily available to monitor well-being, functioning, problems and risk in the adult clinical and general populations, the challenge will lie in monitoring and evaluating the quality of student experience for the chosen research participant population, as none appear to exist specifically for this purpose. Currently, all University students in the UK are encouraged to take part in both localised and national student satisfaction surveys (e.g. the Times Higher Education's Student Experience Poll); however, the questionnaires on which these are based are broad ranging and designed for the HE student population in general and therefore do not accommodate issues that seem particularly pertinent to the student population with an ASC, such as social isolation and coping with change. In the absence of a published measure to monitor student experience of students with an ASC, development and use of a suitable monitoring/evaluative tool requires careful consideration.

As previously raised in this review, there is a dearth of qualitative information at any stage of research intervention design and subsequent trialling. Participants are being asked to devote considerable amounts of time, and arguably a degree of personal risk to take part in intervention trials, but we hear very little of their voice. Apart from a brief list of likes (Kenny et al., 2008; Weiss and Lunsky, 2010) we hear nothing of their perceptions of how the intervention impacts on their overall wellbeing and life skill performance beyond highly contained rating scale item responses (Lopata et al., 2010).

2.11: Study aim and research questions

In the light of review findings, the central aim of the present study is as follows:

- To develop, trial and evaluate a protocol for CBT for students with an ASC within a Student Enabling Centre framework that utilises current enabling support provision

Arising from this are four research questions:

- How effective are current CBT tools when adapted to the HE student context?

- What is the scope and impact of the CBT intervention on enhancing the quality of university experience of students with an ASC?

- How useful is a personal student experience record (PSER) specifically designed for this purpose?

- How did student participants perceive the intervention and what were their lived experiences of it?

CHAPTER 3: STUDY DESIGN

3. 1: Design rationale and overview

Principal method

Case study is the chosen design frame for the study, based on Thomas's (2011)

recent definition:

'Case studies are analyses of persons, events, decisions, periods, projects, policies, institutions, or other systems that are studies holistically by one or more methods. The case that is the subject of the inquiry will be an instance of a class of phenomena that provides that provides an analytical frame – an object- within which the study is conducted and which the case illuminates and explicates.'

(Thomas, p.513)

In accordance with Thomas's case study typology (Thomas, 2011), the study is a

single case study with multiple information sources. It is both intrinsic and

exploratory in purpose, with the aim of capturing, illustrating and comparing student

participants' perceptions of the impact of the intervention on their lived student

experience.

 In order to address the aims of the study, the case study was both efficacy and

narrative-orientated. In relation to therapeutic interventions, efficacy-orientated case

research is designed to determine the effectiveness of a specific intervention /

therapy approach, i.e. the confidence that we can have in how attributable any

changes noted are due to the therapy itself. In contrast, narrative case research is

qualitative in nature and seeks to understand the sense that participants make of

the therapy and the meanings they attach to it in the context of their lives: i.e. their lived experience of the therapy (McLeod and Elliott, 2008).

For efficacy testing purposes, both quantitative and qualitative data were sought from each student participant for in-depth scrutiny. This involved a combination of a time series analysis of change over the course of each case and elements of Elliott's (2002) hermeneutic single case efficacy design (HSCED). To explore how student participants experienced their respective therapeutic interventions, Change Interviews were conducted and resultant transcripts subjected to interpretative phenomenological analysis (IPA).

HSCED outline and rationale

Taking firstly the conventional series analysis of change, each student participant served as their own control. The prime quantitative measurement was through the development and use of a 'Personal Student Experience Record' (PSER), a bespoke, non-standardized tool, which is intended to monitor and evaluate the quality of participants' holistic student experience before, during and on completion of each CBT intervention. It was thought that a standardised general measure would not capture the unique aspects of each student's experience, or the factors that for them personally lower their overall student experience. This is a pitfall of more general monitoring tools, such as the CORE (Evans et al., 2000) that are trialled across populations but only include the most common items (Morley, 2007). The intention underpinning the PSER therefore was to compile a bank of specific test items for each participant that was meaningful to them, that could be used for

self-monitoring purposes. Each participant would therefore have a PSER that was unique to them, hence the inclusion of 'personalised' in the title of the tool.

A decision was made not to use a clinical rating scale of any type in this research. This was to avoid the potential for prospective student participants to perceive the study as yet another medical intervention for their ASC. In the author's professional experience students, having embarked in higher education, are not keen to dwell on their ASC from a medical perspective. Students often arrive at University with the hope of taking greater control of their lives and being able to "move on" from prior medical model based interventions and perceptions. The intention was therefore to provide a change measurement that captured the middle ground 'additionality' approach (Norwich, 2002) to disability, as detailed in Section 1.3, without highlighting medical model orientated deficits.

In a similar vein and in contrast to many of the studies detailed in sections 2.7 and 2.8, a decision was also taken to not start interventions by revisiting participants' ASC status, such as the fine details of prior diagnoses and current presentations. It was felt that explorations of this nature could lead to the intervention being perceived primarily as a means of treating the dysfunctional aspects of 'the self', rather than a practical means of enhancing student experience.

Returning to Elliott's (2002) HSCED procedure, rather than simply accepting PSER scores to be a true reflection of the therapeutic intervention received, and automatically attributing any improvements identified to the therapy, Elliott's (2002) HSCED procedure is primarily intended to challenge such assumptions and evaluate the causal role of the therapy in bringing about the outcome. HSCED

involves semi-structured qualitative Change Interviews with participants, in which the participant offers their own interpretation of change attributions, the sense they made of any perceived changes, and how they experienced the intervention. It therefore covers both change process and outcome. The HSCED also includes the use of Llewellyn's (1988) 'Helpful Aspects of Therapy' qualitative rating measure (HATQ) of client and therapist perceptions of significant therapy events. Information from this scale is then considered alongside other data sources to identify agreement or contradictions between these, and offer clarity where needed. Elliott's (2002) HSCED model therefore offers a means of providing structure to the reflective discussions and evaluations arising from the intervention.

In combination, these two data production tools have the potential to satisfy the internal validity requirements for single case studies, namely: systematic quantitative data with multiple assessments of change over time, multiple cases, and an actual change either during or immediately after the intervention (Kazdin, 1998). The Change Interview questionnaire (Elliott, 1996 (unpublished), in Elliott et al., 2001, p.71) and the Llewellyn's (1988) HATQ are shown in appendices 1 and 2 respectively.

Selection and justification of a qualitative analytical method for Change Interview data

The Change Interview has the potential to generate a large volume of rich, unstructured data. This then requires thorough, systematic analysis and organisation into meaningful units through application of a suitable qualitative data

analysis method. It is important however, that the chosen data analysis method is compatible with the aims of the research and the research questions posed.

Elliott et al. (2001) suggest that Change Interview data is particularly suited to grounded theory data analysis (GTA). This is on the basis of its potential to draw on each participant's individual experience of a particular intervention, with the aim of constructing a generalisable account of experiences and processes involved.   It is designed therefore to facilitate the discovery and synthesis of new theory of basic social processes arising from qualitative data that is relevant to the area of study (Starks and Brown Trinidad, 2007; Charmaz, 2008; Willig, 2008).   Grounded theory seeks patterns within the data through a process of line-by-line coding, where the codes emerge from what is noted in the data rather than through pre-conceived ideas. In a second phase of analysis, namely focused coding, similarities and differences are sought within and between participants' interview statements of actions or events, to establish and refine the most frequent codes. This process leads to the development of theoretical conceptual categories; the characteristics of each are then carefully defined through further scrutiny and narrative statements. More data is then collected from participants to illuminate and develop emerging theories, and to identify and address gaps within these (Charmaz, 2008; Willig, 2008).

Whilst GTA offers a highly structured means of organising and making sense of complex interview data and is frequently used in qualitative educational, health and psychology research, it is not suited to a key aim of the present study. The key aim referred to here is that of gaining participants' idiosyncratic perceptions of their intervention experiences in order to determine the acceptability of the intervention

on a personal level. GTA, however, was designed to address sociological questions such as 'how does the basic social process of X happen in the context of Y environment' (Starks and Brown Trinidad, 2007, p.1373), and therefore differs from the present study aims and research questions. From a psychotherapy research arena, GTA potentially allows the researcher to build a generalisable account of important aspects of a particular therapeutic intervention from individual accounts (Elliott et al., 2001) However, if applied to research questions about the nature of experience of a particular event or intervention, GTA is arguably reduced to 'a technique for systematic categorisation' of experiences that lack explanation (Willig, 2008, p.47). It is therefore suggested that GTA should be reserved for the study of social psychological processes rather than idiosyncratic experiences (Willig, 2008).

A further problem of GTA in relation to the present study is the issue of researcher reflexivity, which it is deemed to sidestep. In positivist tradition, GTA assumes that the interview data will contain objective knowledge that can be observed and gathered by the researcher; it has object reality and should therefore be accepted without question. The researcher is merely an independent observer and witness, whose personal standpoint is deliberately excluded (Willig, 2008). Data is therefore captured from the sole standpoint of participant informants, accepted as reality, and processed at surface level without seeking to go beyond immediately apparent content and original meanings (Pringle et al., 2011).

In view of the limitations of GTA detailed above, Interpretative Phenomenological Analysis (IPA) was chosen for data analysis purposes. IPA has become increasingly popular as an experiential research tool in health care, counselling and

psychotherapy studies during the past ten to fifteen years (Reid et al., 2005);

Pringle et al., 2011). In contrast to GTA, IPA offers the opportunity to explore the

current study phenomenon more deeply than at observed surface level and thereby

gain an understanding of each participant's unique change process, the meanings

they attached to the CBT intervention and the ways in which they experienced it.

IPA focuses on perceptions of how the world appears to and is experienced by

participants from their own perspective, and how they engage in particular situations

with specific intentions (Willig, 2008).   This analytical method is therefore deemed

particularly appropriate in addressing research questions such as 'what is the lived

experience of a particular phenomenon of interest' (Starks and Brown Trinidad,

2007 p.1373).

IPA is rooted in phenomenology and hermeneutic epistemologies. Phenomenology

seeks to study and understand a particular phenomenon within the context in which

it occurs, through the accounts of individuals experiencing it first-hand and the

psychological meanings they attribute to these lived experiences (Giorgi and Giorgi,

2008). Hermeneutics recognises that understanding is always from a particular

perspective, and therefore subject to interpretation, prejudices and pre-

understandings (McLeod, 2001). The aim of IPA is to explore individuals' accounts

of personal lived experience regarding a phenomenon in its context, whilst

recognising that the researcher cannot get into the informant's perspective or world

completely. Making sense of the phenomenon in question therefore requires a

double hermeneutic, whereby informants attempt to make sense of their lived

experiences, and the researcher attempts to make sense of their accounts of these

(Smith and Osborne, 2008).

IPA involves critical scrutiny of informant interview transcripts for both overt and covert aspects of the phenomenon, within the terms of the text. Analysis draws on detailed nuances of specific idiographic experiences within texts, and pays close attention to descriptions of key objects of concern to informants, the language they use to portray these, and interrogation of exactly what is being said within the text and the meaning of this (Smith et al., 2009). Reid et al. (2005) summarise the essence of this process in the following extract:

> '...the researcher begins by hearing people's stories, and prioritises the participants' world view at the core of the account ... the researcher attempts to make sense of the participants' experiences and concerns, and to illuminate them in a way that answers a particular research question. This is underpinned by a process of coding, organising, integrating and interpreting of data...' (p.22)

This 'bottom-up' approach of IPA is of increasing interest to health care organisations such as the NHS, who under a series of service frameworks, are required to capture and understand service users' perspectives and take action accordingly to improve current practice (Reid et al., 2005). In seeking to trial a psychotherapeutic service in a public, educational institution to a particular group of service users, the current study has parallel aims in its research focus. It therefore seems fitting to utilise the same analytical approach.

Merits of using the chosen combination of research tools

These combined tools and orientations in a single case study context are arguably superior to randomised clinical trial techniques for this study, the so called 'gold standard' of evidence-based research (Odom et al., 2005), which seek to identify a causal relationship but sometimes lack capacity to track or understand its nature

(Elliott, 2002). Furthermore, the combined tools chosen for this case study give the opportunity to bring out the nuances of people with an ASC.

3.2: Ethical approval

Ethical approval was sought from the University of Birmingham's Arts and Social Sciences Ethical Review Committee and the host university's Behavioural Sciences Ethics Committee prior to the start of the research. Following minor additions to the information provided, 'favourable ethical opinion' was granted by both committees.

3.3: Pilot study

Aims of the pilot study

A pilot study was undertaken to develop and trial a personalised quantitative measurement tool and adaptive techniques that may be suitable for use with students with an ASC undergoing CBT interventions within the context of the study. Two further aims were to determine the scope of a co-therapist's role in the therapeutic intervention and the interface between this role and the author's own role, namely lead therapist. The intention was to recruit and train Student Enabling Centre mentors and specialist study skills tutors with whom potential student participants were familiar, into the role of co-therapists. The final aim was to determine a standard therapy framework for the main study interventions.

Participant recruitment

Student Enabling Centre mentors and specialist study skills tutors were briefed on the study aims by the researcher and invited to propose suitable student mentees for this preliminary stage of the study and to discuss the study with them. These mentors and specialist study skills tutors typically meet with prospective participants on a weekly basis to provide enabling support on a one-to-one basis. Two students were proposed by their respective mentors. Participant Information Sheets detailing the study were issued to proposed student participants and their respective co-therapists (see Appendices 3 and 4). Following student participant recruitment, their respective mentors were invited to become co-therapist participants. Signed consent was gained from all four participants (form shown in Appendix 5).

The inclusion criteria for co-therapist participants were that they were actively providing either Disabled Student Allowance (DSA) funded mentoring or specialist study support to one or more of the student participants within the university on a regular basis and secondly, that they were willing to undergo some CBT training and receive supervision, (provided by the author).

The inclusion criteria for student participants were that they were current students at the host university, and had a clinical diagnosis of an ASC. Also, they were either self reportedly or reported by academic or support staff to be experiencing difficulty with social aspects of student life or self-management difficulties relating to their chosen course of study, which appeared to be causing them concern or stress. The exclusion criterion was that they were already participating in some form of psychological therapeutic intervention.

Of the two student participants who were initially recruited, one chose to withdraw from the study after four weeks and also withdrew his consent to use any data generated concerning him. The pilot study therefore concerns only the remaining student, a first year, nineteen year old male undergraduate with a history of depression, living locally at his family home, and his respective co-therapist: an experienced female mentor with whom he had been meeting on a weekly basis. This student participant will now be referred to as 'Peter', a pseudonym to protect identity. The co-therapist proposed that Peter took part in the study on the grounds of his low mood, lack of progress in his studies and general apathy towards these.

The author's own role in the pilot was twofold: that of a practitioner participant and researcher. The author's practitioner participant role was lead therapist, given her post graduate qualifications and experience in delivering Cognitive Behavioural Therapy and supporting students with an ASC. In keeping with British Association of Behavioural and Cognitive Psychotherapy (BABCP) principles, this was under the supervision of a more experienced BABCP accredited supervisor. The author's researcher role was to monitor and evaluate pilot intervention progress; co-ordinate and refine interactions between the multiple participants involved where deemed necessary, and simultaneously design and refine intervention materials and techniques to suit Peter's goals and needs.

PSER design

The PSER was intended to mirror in part the design of the CORE tool that is the primary measure used in the current 'Increasing Access to Psychological Therapies'

(IAPT) initiative. Research into the development of CORE identified a need for a tool that was amongst other attributes: 'short and legible', 'sensitive to clients needs', 'unobtrusive', 'minimum administration', 'easy to score', 'easy to interpret', 'aids assessment', and 'enhances case management' (Evans et al., 2000, p.248). These features appeared transferable to the PSER.

Similar to the CORE, each PSER item is a short statement based on either a behaviour, thought or feeling in order to assess holistically how Peter had experienced student life in the past week. To promote reliability and validity, each goal was translated into a 'set' of three to four related short statements, as question sets are deemed to elicit more reliable results through cancelling out any unclear wording or 'mood of the moment' effects in a single statement (Oppenheim, 1992).

Factor analysis to determine chief underlying dimensions of 'student experience' was deemed unnecessary and inappropriate as the aim of the PSER was to capture each student participant's student experience in their own terms. The student experience of the individual participant with whom the PSER was designed was the common linking factor, rather than 'student experience' per se. All items on an individual participant's PSER were common to them personally, and reflected the terms they used to describe aspects of their student experience that they wished to improve.

Although rating scales can be designed to go beyond a five point scale, and a greater range has the potential to offer participants more choice (Cohen et al., 2007), a five point scale was chosen on the grounds of it being considered to offer sufficient detail, to be more easily understood by participants (Brace, 2004), and to

enhance the potential to elicit cooperation on these grounds (Rosenberg and Daly, 1993).

Data sets were randomly dispersed throughout the PSER. The CORE style rating scale required recipients to self-report the frequency of feelings, thoughts and behaviours in the past week on a scale from zero to four, with zero being not at all, to four being most of the time. To remove the potential for a left-right bias in rating scales where participants may be more lenient to the positive label if presented on the left hand side (Friedman et al., 1994), some statements were presented in reversed format. For this, some statements were written and marked positively, e.g. 'I have felt optimistic about my future', where 'most of the time' would command a score of four; others were written in a less favourable way, for example 'tension and anxiety have prevented me from studying effectively at home,' where a 'most of the time' response commanding a score of zero.

With each PSER item carrying a maximum score of four PSER points, total weekly scores can be deduced for each statement set (goal), and a total weekly score can be deduced by scores from all data sets. For example, for a sixteen question PSER, the maximum total score would be 4 x 16 = 64.

Session 1: Development of a Personal Student Experience Record (PSER)

Therapy goals were agreed in an informal joint preliminary meeting involving the author, the student participant and co-therapist. The co-therapist prompted Peter where necessary and offered her perceptions and observations of Peter's current student experience. Resultant goals were based on factors that Peter perceived to

be most detrimental to his current student experience and would most like to change.

The informal meeting also gave opportunity to find out what motivated Peter, the range of interests he had, and his beliefs about himself as a student and important others in his student life.

Following the initial meeting, the author translated each goal into a series of statements against which Peter could assess his progress at the start of each therapy session, using a five point Likert scale (as seen in Appendix 6). The intention was to track goal progress on a weekly basis and identify trends over the duration of the intervention.

PSER Trialling

Trialling of the resultant PSER was as follows: Peter was asked to read through the PSER items and the author explained how each related to the agreed therapy goals. Each item was explained before he attempted to score it for the first time and there was verbal checking of his understanding of what was being asked. He then explained his responses. The time taken to complete each PSER in subsequent sessions was monitored, and any questions or misunderstandings were addressed and noted. After each weekly session application, scores for each item were checked against scores from previous sessions to seek trends and check consistency of understanding. Any change in individual item score consistency was discussed with Peter to check his consistency of interpretation and the tool's sensitivity to a change in experience.

Session 2: Orientation to CBT and the cognitive model

This session, as with all weekly therapy sessions, was carried out in a small, private room with just the author and the student participant present. After completing a PSER in the opening minutes, the session focused on teaching the principles of Beck's cognitive model (Beck, 1964) and assumptions on which it is based. To ease understanding of how our thoughts and beliefs drive feelings and behaviours in certain situations and make this more overtly relevant to Peter, the explanation was adapted to one of his personal interests. The intention of the resultant metaphor was to provide the opportunity to develop collaboratively a shared language and terms of reference to carry and develop this explanation into a more personalised, less medicalised socialisation to the cognitive model. It was also intended to provide a working template to underpin the intervention. This emergent template was captured in a flip chart diagram to aid central coherence and stimulate further ideas.

At the end of the session, Peter was asked to complete a Helpful Aspects of Therapy Questionnaire (HATQ) (Llewellyn, 1988) to identify the aspects of the session that he found most helpful. To capture the principal therapist's perspective, the author completed the therapist's version. Findings were then used to inform future sessions.

Further sessions

Three further sessions were conducted in which the metaphor template was continuously utilised and collaboratively enhanced to aid understanding of the cognitive model and facilitate cognitive challenging and cognitive reconstruction. This was used in combination with and to support other standard CBT techniques and manualized programmes for the general population that seemed appropriate to Peter's agreed intervention goals. These sessions commenced with PSER completion and ended in 'homework' setting - an agreed activity that Peter would undertake with the support of his co-therapist, and completion of a HATQ to inform future application and content.

The pilot study ceased after the fifth session, when Peter unexpectedly left the University for personal reasons. He did not, however, withdraw consent to be included in the study.

Results and implications of the pilot study are presented in Chapter 4, section 4.1.

3.4: Main Study

Student Participants

Participants were recruited through Student Enabling Centre mentors and specialist study skills tutors in the same manner as for the pilot study and within the same inclusion/exclusion parameters. As detailed in the 'Participant Information Sheet' (as shown in Appendix 3), potential participants were given the option from the outset of whether to engage in a CBT intervention as a research participant or simply as a 'client'. It was made clear to potential participants that a decision to not

participate in the research study would not affect their access to CBT sessions with me, if they so wished. Six participants, five male and one female, were enrolled into the study, as detailed in Table 1. Details are deliberately brief and all names are pseudonyms to protect identity.

Table 1: Main study student participants

Student	Degree Course*	Year of study	Living arrangements	Point of recruitment	Reason for referral
Adam	UG	3 (final)	Family home	November 2010	Rapidly increasing anxiety. Has multiple worries about his current work placement which are exacerbated by unhelpful comments, and concerns about his future prospects, all of which are impacting on self-confidence and motivation to study.
Bruce	UG	3 (final)	Family home	March 2011	Becoming increasingly anxious about the prospect of applying for work. Particularly worried about contacting or meeting prospective employers for the first time and concerned would misinterpret questions and create a poor impression.
Chris	UG	1	Student halls	February 2011	Displaying escalating levels of anxiety and behaviours in Halls of Residence that don't appear to match current circumstances. This is impacting on his studies and on-going social relationships in Halls.
Dawn	PG	1 (final)	Family home	February 2011	Experiencing increasing levels of anxiety regarding assignment progress and time management. Anxiety seemingly impairing progress.
Ewan	UG	1	Family home	February 2011	Loss of motivation towards studies, loss of confidence in his ability to study at higher education level. Severe procrastination.
Freddie	UG	1	Student halls	January 2011	Suicidal thoughts regarding escalating social difficulties in Halls of Residence.

UG = undergraduate: PG = postgraduate

Co-therapist participants

Co-therapists were appointed in the same manner as in the pilot study; however,

the invitation to participate was extended to specialist study skills tutors as not all

student participants had been allocated a mentor. All co-therapists held graduate or

post graduate qualifications, and had at least three years' experience in their

present core roles. Co-therapist details and student participant pairings are shown

in Table 2.

Table 2: Main study co-therapist participants

Co-therapist	Sex	Student participant pairing
Specialist study skills tutor	Male	Adam, Bruce and Ewan
Mentor	Female	Dawn
Mentor	Female	Chris
Mentor	Male	Freddie

For reasons concerning potential bias, it is important to note that my professional relationship with co-therapists varied according to their job descriptions. The author, in her employed everyday work role, line managed the specialist study skills tutor, but had no management responsibility for the three mentors.

Intervention programmes

Main study interventions took place within one academic year. Student participants were recruited throughout this period as their difficulties became apparent to their respective mentor or specialist study skills tutor. Once recruited, CBT commenced immediately. Co-therapists were provided with two 30 minute training sessions on the cognitive model and CBT principles on recruitment by the investigator.

The role of the co-therapist was to support the therapeutic process through facilitation of primarily *in-vivo* 'homework' tasks agreed between the author as principal therapist and the student participant concerned at the end of each therapy session. Their brief was also to provide weekly feedback on these tasks, as detailed in the pilot study findings above. Briefing and feedback were achieved through a combination of email correspondence, telephone conversations and face-to-face

meetings. Modes of communication were deliberately flexible to accommodate the busy and often intensive work schedules of co-therapists and their availability during the working day. Details of co-therapist tasks undertaken with each participant are included in participant intervention summaries presented in Table 4 in this chapter and in Appendix 7.

Intervention programmes were designed on an individual student participant basis around core standard practices based on pilot study findings. The standard framework for each therapy session (derived from pilot study outcomes) was as follows:

- Completion of a PSER at the start of each session to both monitor progress and prioritise/inform session focus

- Adaptation of the CORE zero to four rating scale to a one to five scale

- Adaptation of existing CBT materials and techniques to accommodate the student's interests and/or make relevant to their course of study

- To listen out for potential hooks or metaphors in conversation with student participants that have the potential to aid understanding and application of the cognitive model; ideally these will be based on their interests or chosen course of study. To develop and utilise these collaboratively in all elements of the intervention.

- Visual recordings in real time of therapy proceedings to aid understanding, central coherence and collaboration.

- Completion of a HATQ at the end of each session to inform the content and delivery of the next session.

- Negotiated *in-vivo* homework tasks, subsequently communicated to and supported by the co-therapist.

- In keeping with good psychotherapy practice, each session was audio-recorded and brief manual notes were taken by the author.

Therapy goals for each student participant were identified and agreed in an informal meeting as per the pilot study. Intervention programmes were primarily based on these and included components to enhance skills to address core problems associated with ASCs, coping skills to counteract the stress these may generate, and components to address symptoms of clinical anxiety and depression, should these be found to be present. Rather than rigidly follow a pre-determined order, therapy programmes were intended to be flexible to accommodate most urgent needs and crisis incidents (unexpected stressful occurrences) should these arise.

Session duration was negotiable in line with student participants' preference, tolerance and concentration span. Sessions ranged from 30 to a maximum of 60 minutes.

The number of therapy sessions provided for each student participant was determined by a number of factors. These were primarily the time of the academic year that they enrolled to the study, the extent of their current difficulties, and when the student participant felt that their student experience had increased sufficiently or they were coping well enough to cease therapy.

A brief intervention summary for each student participant is included in Chapter 4 (Peter and Ewan) and Appendix 7 (Adam, Bruce, Dawn, Freddie and Chris).

Throughout these main study interventions, the author in her participant role of lead therapist received professional supervision on a fortnightly basis from a more experienced BABCP accredited supervisor, who specialised in supporting adults with learning difficulties and ASCs. Supervision sessions followed similar principles and techniques to CBT through the supervisor's use of Socratic questioning and guided discovery techniques. These served to help the author explore and rationalise ideas for specific interventions and self-discover ways of moving forward when stuck for ideas, and then reflect on the execution of these.

Throughout this stage of the research, the author's researcher role was similar to that in the pilot study. To recap, this was to direct and co-ordinate participant activities and interactions, monitor intervention progress and design and adapt appropriate materials and techniques.

3.5: Qualitative analysis

Change Interview

A Change Interview was conducted in the final CBT session. Interview length varied from 18 to 47 minutes, with the author as interviewer. The decision for the author to act as interviewer was taken on the grounds that student participants were familiar with her, and an interrogative meeting of this nature with a stranger at this stage may have evoked anxiety. Booth and Booth (1996) suggest four potential

challenges that people with learning differences may present to the narrative researcher, namely inarticulateness, unresponsiveness, the need for concrete frames of reference, and problems with time. For these reasons, it was felt that the interviewer needed to be familiar with CBT, the intervention, the student participants and ASCs. The author was aware that this could result in bias, and the potential for this was therefore considered throughout the analysis.

In the previous session, student participants were briefed on what to expect in the Change Interview and informed that this would last approximately 30 minutes, depending on their comfort levels. At the start of the interview, participants were briefed that they were free to give as much detail as they wished, that it was "ok" to tell the author if there was anything about their intervention experience that they did not like, including aspects directly relating to her.

Change Interview questions were asked in a flexible order, depending on participant responses. Questions were re-worded and broken down to closed questions at times when these were seemingly misunderstood, as suggested by Booth and Booth (1996). Short prompting questions were also used for this purpose and to elicit finer detail. Visual prompts that had been collaboratively developed in therapy sessions were utilised as a concrete frame of reference to aid understanding of questions, central coherence, memory of what had been covered in the sessions, and the lived experiences of participants over the duration of the therapy. These also served to provide a 'time-line' reference and aid articulation where necessary. Additional questions to those on the Change Interview list were introduced to follow up/pursue interesting points raised by the interviewee.

With participants' permission, Change Interviews were audio-recorded. The author listened to each recording at least twice before transcribing it verbatim, including pauses and noting intonations to aid interpretation, and then checked the transcription against the recording for accuracy. Participants were invited to see and comment on these if they wished.

Interpretative Phenomenological Analysis of Change Interview Data

As previously documented, one of the aims of the Change Interview was to investigate student participants' unique lived experiences of the CBT intervention on an individual basis and their personal perception of it.

Analytic processes for IPA (Smith et al., 2009) were followed manually with Change Interview transcripts. This seven stage process began with working with a single case transcript. Ewan's script was selected for this purpose on the grounds that it was one of the longer transcripts, the most emotive and most memorable. The opening phase of analysis was primarily a reading phase in which the selected transcript was read repeatedly to enhance free association with the data, identify points of interest, and identify links within the data.

In preparation for the second phase of analysis, the transcript was cut-and-pasted into the middle column of a three column table. The transcript data was then subjected to a line-by-line analysis. Exploratory comments were entered in the third column alongside points of interest in the data. Points of interest included Ewan's experiential claims and concerns regarding the intervention, his student experience leading up to and during the intervention such as relationships and events, and

inferences from these, i.e. what these meant to him. Exploratory comments were descriptive, linguistic or conceptual in nature and colour-coded accordingly. In the spirit of IPA, although the author had a wealth of prior knowledge of this participant, this had to be 'bracketed' as far as possible. In this context, to 'bracket' means to attempt to avoid engagement with the author's prior knowledge of Ewan during this seven phase analysis. Engagement has the potential to restrict identification and interpretation of phenomena under review (Giorgi and Giorgi, 2008). This required constant reflexivity.

The third phase of analysis aimed to reduce the volume of data to what was potentially important. This involved the identification of emergent patterns and commonalities, i.e. themes, within the exploratory comments. 'Themes', in the view of Smith et al. (2007), identify important aspects within the transcript data. These should reflect the essence of the participant's actual words and thoughts, and also the analyst's interpretation of what has been said. Each emergent theme was recorded in the first column of the table, parallel to the piece of original transcript in which it was grounded, as illustrated in Appendix 8. This effectively developed a dialogue between the three columns.

In the fourth phase, patterns were sought between the emergent themes to develop what Smith et al. (2009) consider 'super-ordinate themes', broadly following their guidance. Each emergent theme was written on a small card. Connections between individual cards were sought by physically moving cards around on a large table, and each resultant cluster of cards was labelled to reflect the relationship between the emergent themes. Nine super-ordinate themes were identified initially.

For auditing, validation and credibility purposes, a copy of Ewan's transcript annotated with codes, categories and initial themes and a summary of emergent super-ordinate themes and sub-themes for all Change Interview transcripts was forwarded to one of my research supervisors for comment and review.

In keeping with IPA's ideographic focus, stage five involved repeating the first four phases with each student participant's Change Interview transcript, allowing new themes to emerge. This required 'bracketing off' ideas and emergent themes from all previously worked transcripts, analysing each one on its own terms and merits.

The sixth phase involved identifying patterns of themes from all six analyses so far and the relationships between these. Following the advice of Smith et al. (2007), the richest and most potent themes were identified, and sub-themes and super-ordinate themes reconsidered to best accommodate these. Unique idiosyncratic accounts pertaining to a common theme with higher order qualities were included in sub-themes to accommodate convergences and divergences within and between the accounts. Smith et al. (2009) term this analytic approach as a 'case within theme' as opposed to a 'theme within case' approach. This phase culminated in the production of a master table of super-ordinate themes with associated sub-themes for the group of studies, cross-referenced to quotes within the original transcription data. An example of a super-ordinate theme from the master table is shown in Appendix 9.

The final phase of the analysis, a narrative account of how the six student participants experienced the therapeutic intervention and what contributed to that experience, is presented in section 4.2 of the results chapter.

Cross checking of analytical findings with participants and requesting feedback on these, i.e. respondent validation (Barbour, 2001) is sometimes considered an important component of qualitative analysis. Its main purpose is to check that respondents' views are not misrepresented or misinterpreted (Yardley, 2008). However, it was not possible to conduct respondent validation in this study given the case within theme nature of the analysis, timing of participant interventions and host institution policy. With participants embarking and completing their CBT intervention at varying points of the academic year and predominantly towards the end of it, this meant that the case within theme analysis could not be completed until after the end of the overall intervention timeframe, by which point three of the six participants had completed their studies. Host institution policy did not allow contact with former students for research purposes of this nature.

3.6: Quantitative analysis

To identify the overall change in total PSER scores for each participant between the first and final PSERs, the score from the former was deducted from the latter. Likewise, PSER item scores were categorised into four goal types, and an overall improvement score was calculated for each. Individual PSER total scores were plotted on a graph to identify trends in the data. To enable comparison between participant scores, given that the number of PSER items varied with the number of therapy goals, changes in scores were expressed as a percentage.

3.7 Summary of main study intervention

On account of the complexity of the main study, the CBT intervention and data gathering processes are summarised in a flow diagram in Figure 1. Session content summaries are presented in orange, and data collection and analysis tools are in red. Large white arrows link the main primary data sources to the two categories of analysis.

Figure 1: Summary of main study intervention and data gathering processes
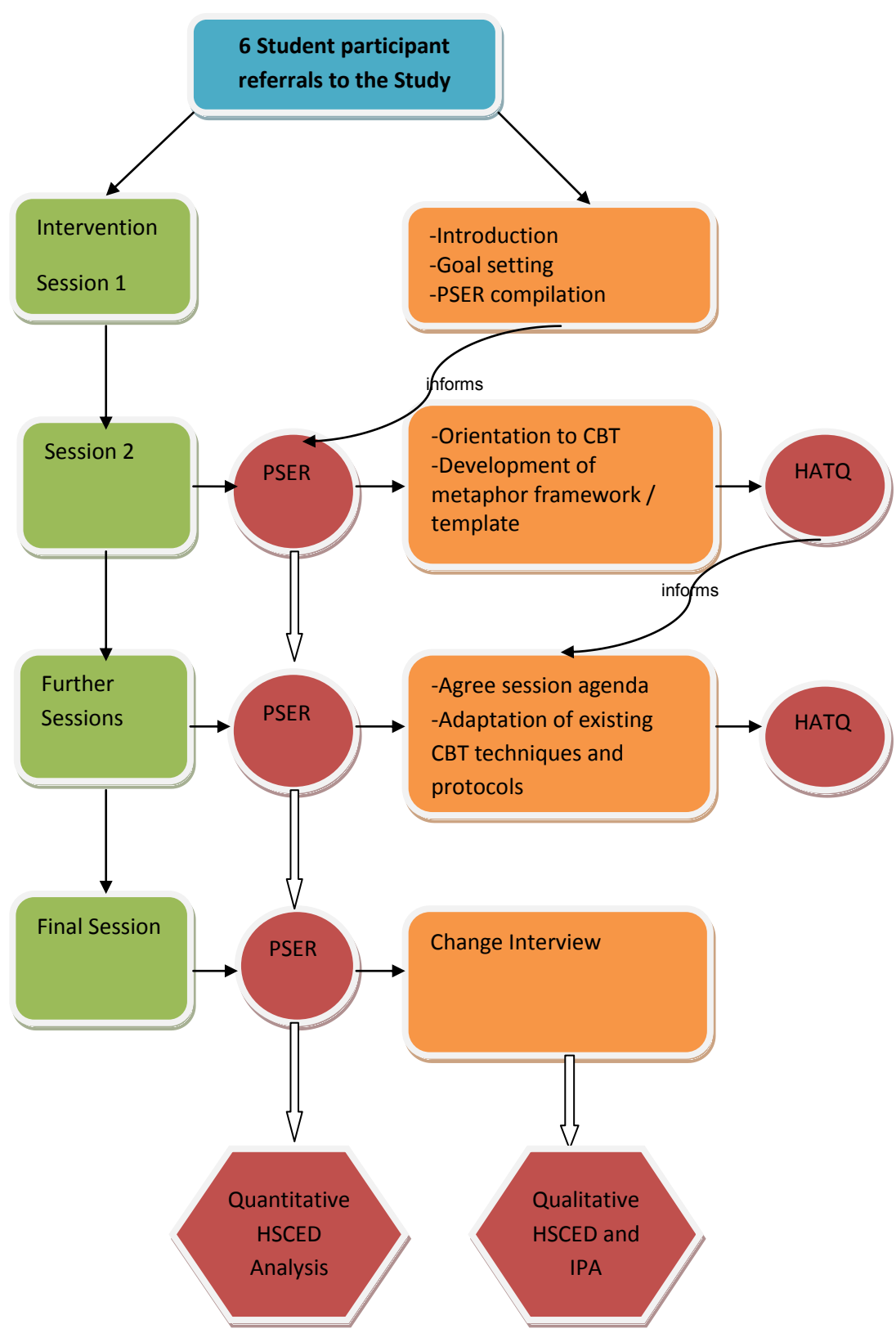
CHAPTER 4: STUDY FINDINGS

4.1 Overview

Study findings are presented in the two following sections:

4.1: Pilot study findings

Therapy sessions summary

Pilot study evaluation

4.2: Main study findings

Therapy programme for one main study participant

Co-therapist role development

PSER results

Interpretative Phenomenological Analysis

4.2: Pilot Study Findings

Therapy sessions summary

Peter's agreed therapy goals and session summaries are presented in Table 3.

Table 3: Summary of Peter's therapy sessions

Peter		*Number of sessions= 5*	
Interests: computer maintenance and repair, computer programming, computer gaming, the internet			
Therapy Goals • To think more positively about myself as a student and my studies • To manage the balance between studying and other aspects of my life more effectively • To apply myself effectively to my studies • To decrease my reliance on others for studying			
Session	Session focus	Key activities	Adaptations
1	Introductions and therapy goal setting	Three-way meeting between self, co-therapist and principal therapist. Guided discussion and initial formulation to clarify presenting problems, establish why these are occurring and appropriate intervention content and order	Generation of PSER based on discussion findings
2	Orientation to CBT and the cognitive model.	PSER completion Continuing formulation discussion with Socratic questions to establish what Peter's current situation means to him at surface, intermediate and core belief levels. Application of cognitive model to low study motivation. HATQ completion	Application of computer programming metaphor to cognitive model. Development of programming template. Working flipchart drawing to capture session content and ideas (shown in figure 2)
3	Motivating and organising for self-study	PSER completion Cognitive challenging and re-structuring techniques to challenge way in which Peter saw himself as a student and expose unhelpful rules and beliefs regarding studying. Cost/benefit analysis, Burns (1999) daily activity scheduling and pleasure predicting. HATQ completion	Techniques adapted to accommodate computer programming metaphor: emergent detail added to last week's flip chart drawing. Activity scheduling and pleasure predicting exercise progress supported by co-therapist.
4	Enhancing coursework productivity	PSER completion Explain the lethargy cycle (Burns, 1999) and its application to Peter: identified hopelessness and helplessness as key traits. Challenge belief that 30 minutes home study per week is sufficient. Identified negative aspects of current procrastination behaviours:	Translate into computer coding/apply computer coding template

		set goals and thought monitoring exercise for next planned home study session. Ask to complete Daily Activity Schedule (Burns, 1999, p95). HATQ completion	Activity scheduling supported by co-therapist
5	Motivating for new semester, following Christmas holiday and exam / marking period.	PSER completion Compared two recent thought records: one connected to practical study task that Peter enjoyed and gained an A 16 grade for; the other, a written portfolio task that he feared he would do less well in. HATQ completion	Translate into computer coding / apply computer coding template

The development of the computer programming metaphor is captured in the

photographed flip chart diagram below.

Figure 2: Flip chart diagram produced in sessions 2 and 3
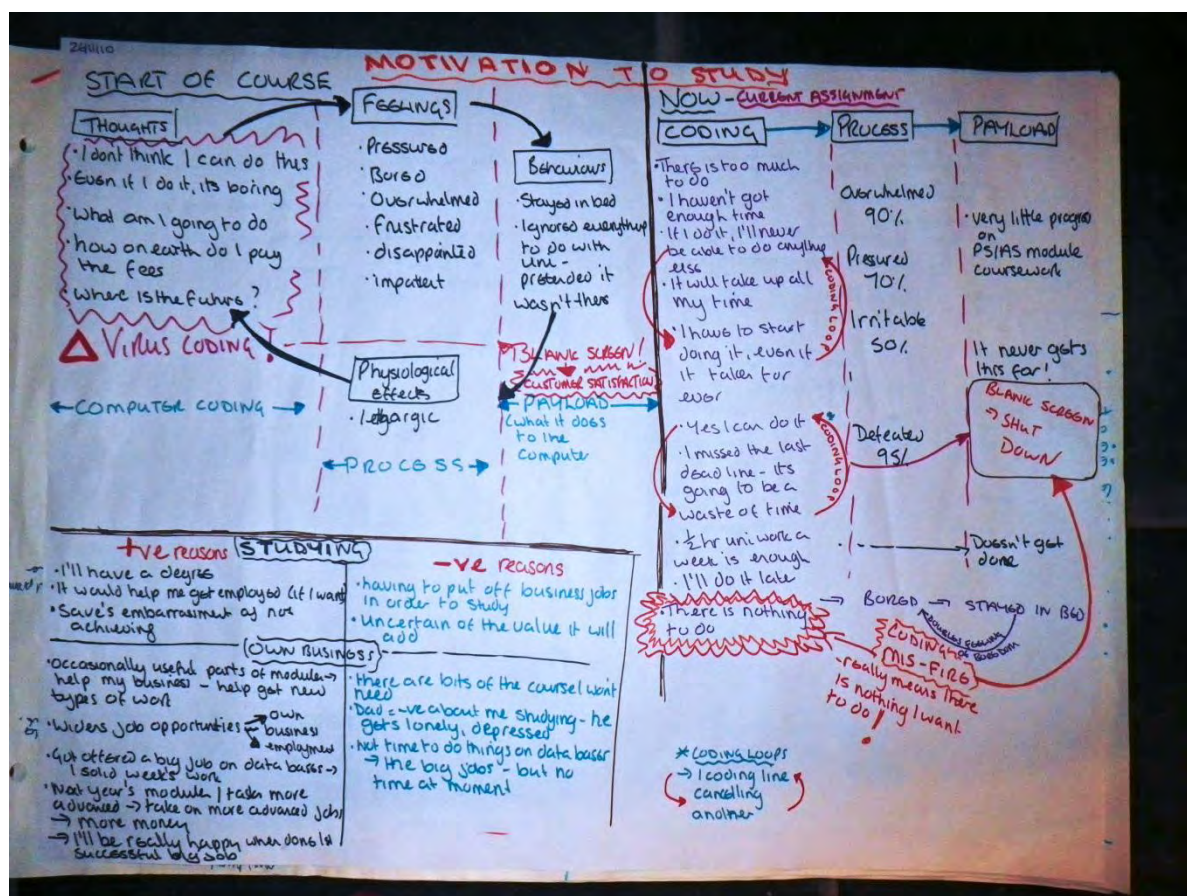
Pilot study evaluation

The following evaluations were deduced from completed HATQs (therapist and client versions), principal therapist notes, and discussions within the therapy sessions and with the co-therapist:

- The author's initial attempts (in her role as principal therapist) at explaining and socialising Peter to the CBT process and cognitive model (Beck 1964) through text book style explanations and diagrams were seemingly uninspiring. This was particularly evident in Peter's body language, lack of attention and conversational interchange. A solitary comment from Peter along the lines of "so it's a bit like computer coding then" when the concept of automatic thoughts was explained, gave rise to the development of the computer programming metaphor.

- Peter reported that the computer programming metaphor and the way in which the author in her role as principal therapist had recorded ideas on the flip chart as these emerged, had indeed aided his understanding of the cognitive model and he now felt surprisingly motivated towards the intervention.

- Following the successful application of metaphor to the socialisation to CBT process, it was decided to look for opportunity to use this in all the case studies, crafted around individual participants' interests and motivations and to incorporate this into activities.

- Peter's HATQ feedback suggested that recording all session proceedings on flip chart paper in real time was most helpful in understanding the links between CBT activities and how these related to him. From the author's perspective, these appeared to aid collaboration and cooperation. Flip chart records from previous sessions were useful for recapping and linking purposes. These also proved useful for briefing the co-therapist on progress, introducing her to the emerging shared language so she too could utilise this in mentoring sessions, and agreeing how she could best support Peter in homework tasks.

- Peter expressed that he found the zero to four rating scale irritating and unbalanced. He found a mid score rating of two difficult to comprehend and work with, given the five rating options, and stated a preference for a one to five rating scale.

- Difficulty was encountered in completing the final PSER on the grounds that some items were deemed inapplicable, given that Peter had just returned from the holiday period before which all his work for the semester was complete. For recording consistency, it was decided that in future applications the previous recordings would be entered in this event until such time that these items became relevant again. The PSER proved most useful in setting the agenda for each session: low scoring items were probed and prioritised. The rating scale used in the PSER was altered from zero to four to one to five in line with Peter's preference. All else remained consistent.

- Following two 30 minute training sessions on the cognitive model and CBT principles prior to the intervention, the co-therapist opted to confine her role to coaching for homework activities and providing encouragement for the desired target behaviours. She felt this was most compatible with her core mentoring role. It was agreed to meet after each one- to- one therapy session for up to twenty minutes so that the author could brief the student - with her permission and where deemed appropriate - on content and the outcomes of the intervention to date and to agree her tasks for the following week.   It was also agreed that prior to each session, she would provide the author with feedback (by email or phone) on homework task progress.

It was also decided to standardise these practices in all the main study interventions.

A key ethical dilemma occurred at the start of the pilot study intervention. This concerned the source of therapy goals. In the course of the co-therapist's communications with Peter's family through her primary university role of mentor, the co-therapist requested the inclusion of a goal that was not Peter's and one that he did not wish to pursue and would potentially find distressing. Whilst pursuit of the goal could have been beneficial to family members in this instance, the author (in her researcher role) recognised the potential for CBT interventions to unwittingly exploit student participants and coerce them towards complying or conforming to the goals of others. This was viewed by the author as unacceptable practice and not in participants' best interests. It was deemed essential therefore that all goals agreed were indeed those of student participants.

4.3: Main Study Findings

Therapy programmes for main study participants

Therapy goals and emergent intervention content for Ewan, one of the six main study participants, is summarised in the following table:

Table 4: Intervention programme summary for Ewan

Ewan	*Number of sessions* = 7		
Interests Cars, racing driving, computers, computer games			
Goals • *To gain my confidence in myself and my will to succeed; to regain my positive spark* • *To apply myself more effectively to my studies by breaking the cycle of procrastination, anger and frustration, angry outbursts with my family and then difficulty returning to studying.*			

Session	Session focus	Key activities	Adaptations
1	Initial introduction and agreeing goals of therapy	Guided discussion and initial formulation	Co-therapist attendance and contribution. PSER generation
2	Orientation to CBT	PSER 1 Introduction to the cognitive model: analysed recent study incident where Ewan became angry and unproductive. Applied downward arrow technique to elicit further information	Drew out recent angry incident and how this escalated on the flip chart: each elevation loop colour coded. Collaboratively developed "old school" computer metaphor to aid understanding of the cognitive model: populated with hackers (siblings) and firewall (parents), desired output (Ewan noted that old school computers RAM can't multi-task). Developed metaphor through drawing (as seen in Figure 3)
3	Sourcing anger and assignment procrastination	PSER 2 Cognitive challenging through applying the cognitive model to a further angry studying incident at home. Guided discovery to identify triggers, which were rushing into an assignment without fully understanding the assignment task. Identified helpful and unhelpful behaviour options	Driving through Afghanistan metaphor: to illustrate safe and less safe "route choices" for studying. Drew this out on the flip chart. Translated this to helpful computer coding and output: added to computer metaphor drawing. Activity scheduling with co-therapist, incorporating preferred "route" choice.

4	Procrastination Anger management	PSER 3 Tracked assignment progress in past week, also potentially anger provoking incident in an earlier teaching workshop. Exploration of early anger warning symptoms and translated to computer codings: identification of alternative more helpful codings. Visual imagery exercise for self-calming purposes	Used Afghanistan route maps to identify strategy followed: driving/ route choice metaphor Application of computer metaphor diagram: updating with more helpful coding (thoughts). Taylor and Novaco's (2005) 'Anger thermometer' metaphor and diagram. Development of a calming screen saver metaphor to "call up" when detect signs of anger arousal. Activity scheduling with co-therapist
5	Critical incident analysis	PSER 4 Cognitive re-structuring: mapped how Ewan had managed to diffuse a critical angry incident through thought substitution.	Drawing of cyclone metaphor development with timeline of events (as seen in Figure 4) Likened to computer defragmentation process Screen saver recall practise.
6	Anger provocation de-sensitisation	PSER 5 Anger psycho-education: mapped three recent study related angry incidents on an anger sale. Visual imagery to recall / replay the mildest incident, use of calming techniques to hold the image and desensitise	Utilisation of calming "screen-saver" metaphor. Likened "call-up" process to TV advert script writing, where screen saver represents TV advert break. Produced calming card for home study, with more helpful calming script lines/codings.
7	Change Interview	PSER 6 Identification and analysis of crisis incident over Easter break	Use of drawings and metaphors to aid central coherence, memory and understanding of what is being asked

Intervention programme summaries for the remaining five main study participants are presented in Appendix 7.
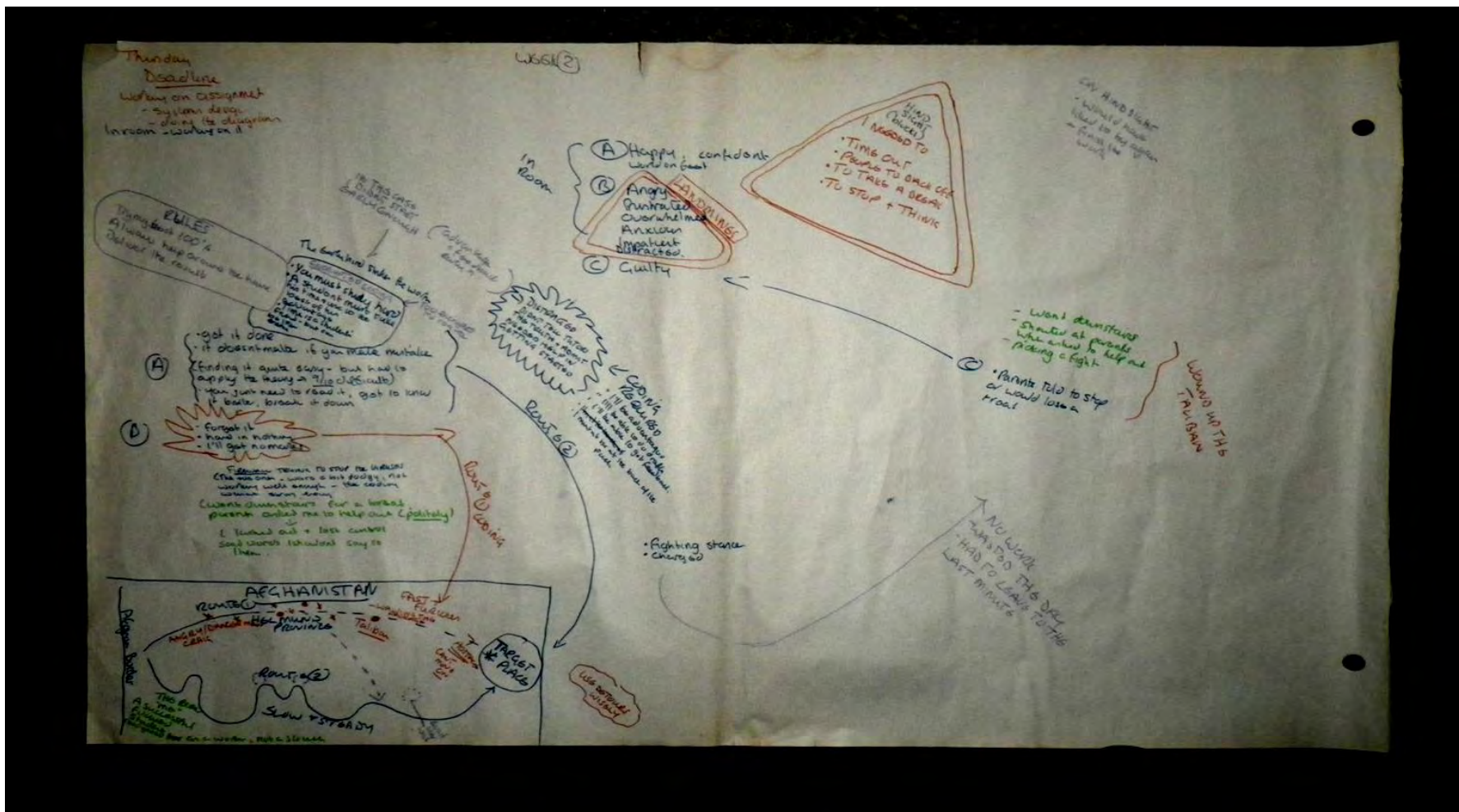
Figure 3: Metaphor development: Ewan

Figure 4: Cyclone metaphor and timeline: Ewan

PSER Results

All six student participants' PSER self-rating scores increased from the initial

measurement taken at the start of their therapeutic intervention during the course of

the intervention, as seen in Table 5. This indicates enhanced student experiences

overall in terms of the PSER criteria used. Percentage increases in these scores

between T1, the initial measurement, and T2, the final measurement, ranged from

10.5% to 46%, with the mean increase being a 24% in student experience.

Table 5: Main study participant PSER score summaries

Student	1	2	3	4	5	6	7	8	9	10	11	T2-T1	PSER Total score	% Diff
Adam	35	38	35	40	39	39	45	52	45	44	44	9	85	10.5
Bruce	21	22	26	28	35	38						17	60	28
Chris	27	30	31	26	35	33						6	50	12
Dawn	39	52	51	56	56	55	47	54				15	60	25
Ewan	12	14	37	35	40	35						23	50	46
Freddie	38	44	46	45	52	48	53					18	75	24

Individual student participant PSER total scores, however, fluctuated during the

course of the intervention, as seen in Figure 5.

Figure 5: PSER summary scores
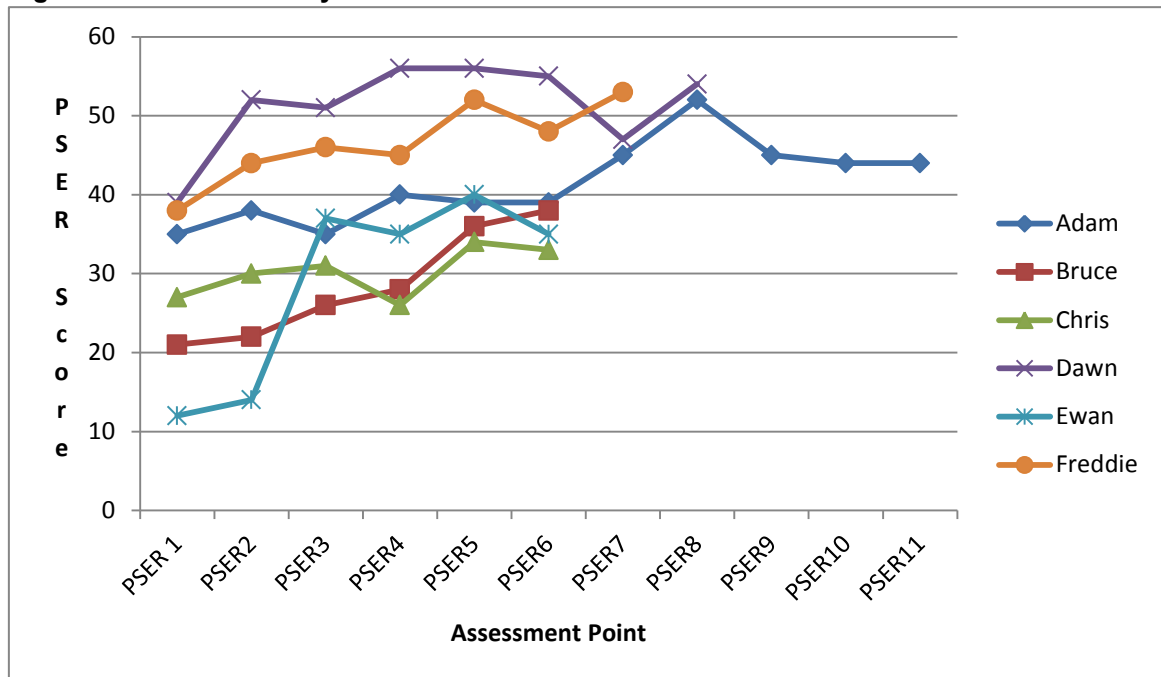
Allocation of PSER items to categories

Given that each student participant had their own set of goals, issues and circumstances, PSER items were very diverse.

To enable comparison between student participants' scores and look for possible trends, given that goals were either socially or academically orientated and focused on feelings and behaviours, PSER items were categorised as shown in Table 6 overleaf.

Table 6: PSER item categories

SOCIAL FEELINGS (SF)	ACADEMIC FEELINGS (AF)
Feelings about the quality of social interactions and relationships; social anxieties, self as a student with regards to social relationships/ interactions	Feelings towards academic studies, such as enthusiasm, motivation, overwhelmed, and self as a student in relation to academic goals
SOCIAL BEHAVIOURS (SB)	ACADEMIC BEHAVIOURS (AB)
Social skills such as assertiveness, interpersonal relationship problem-solving, interpreting actions /intensions of others, conversational skills; application of calming techniques regarding social situations; sleep patterns	Study related behaviours such as procrastination, planning and organisation of self and work, academic study problem-solving, and effective application to studies

The grids and comparative summary chart on the following pages are based on these categories.

There were differences within and between individual student PSER profiles in the percentage increases T1 and T2, as shown in Table 7 and Figure 6 with little to no improvement reported in some categories. It is important to note however, that not all categories featured in each participant's PSER if intervention goals did not include these. Where this occurs, this is recorded as N/A (not applicable) in the summary table.

Table 7: T2-T1 % Increase Summary Table

Category	Adam	Bruce	Chris	Dawn	Ewan	Freddie	Average %
Social Feelings	20	33	13	N/A	20	28	23
Social Behaviours	0	23	27	0	47	15	19
Academic Feelings	-3	N/A	0	28	47	13	17
Academic Behaviours	20	N/A	0	27	53	20	24

Figure 6: Block graph demonstrating % increases (T2-T1) in each relevant PSER item category for each student
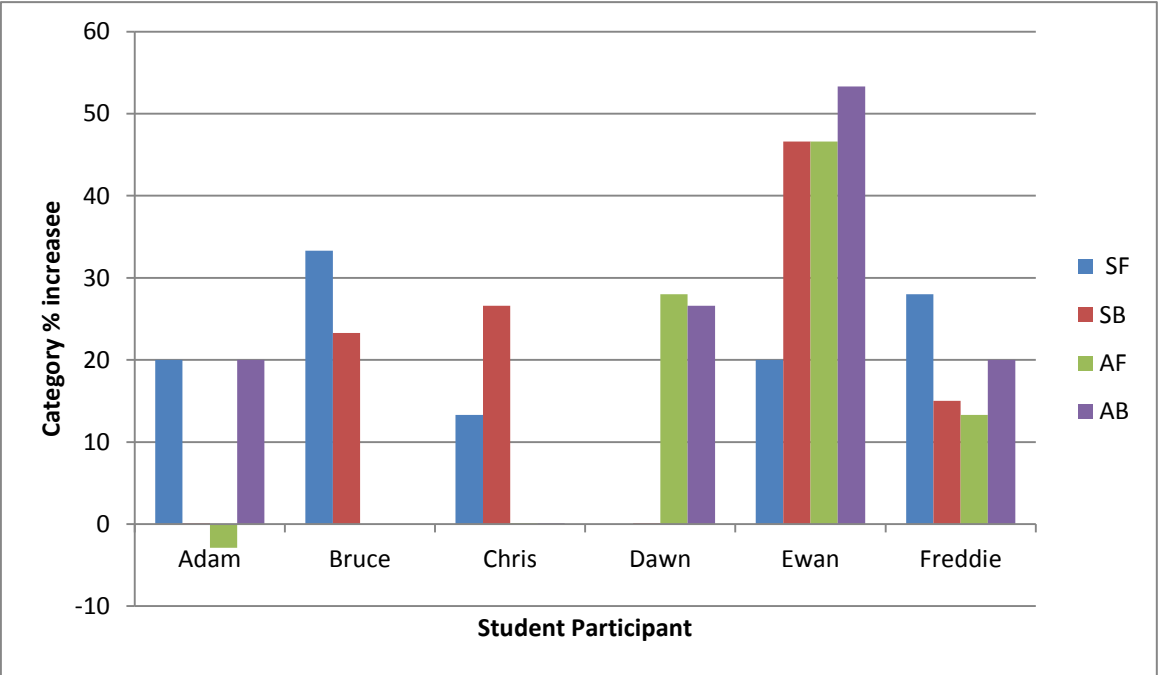
Individual profiles

Adam

Of the six student participants, the percentage rise in PSER total scores between T1 and T2 was the least at only 10.5%, as detailed in Table 5 and Figure 5. Figure 5 shows a largely steadily rising trend in scores in the first eight PSERs, followed by a reduction and subsequent plateaux in the final three PSERs. This is indicative of the lowest rise in student experience during the course of the intervention.

As seen in Table 8 and Figure 5, no sustained improvement is evident in overall social behaviour item scores. Most fluctuation is demonstrated in academic feeling category scores, which collectively rose three score points to a high of nineteen in PSERs 8 and 9, before sustained deterioration in PSERs 10 and 11 and a T2-T1 percentage decrease of -3%. The greatest rises were noted in the academic behaviours and social feelings PSER item categories, which both rose 20%, as illustrated in Figure Y1.

Table 8: **Individual participant PSER grid categorising PSER items: Adam**

PSER Item	1 (T1)	2	3	4	5	6	7	8	9	10	11 (T2)	T2-T1	Max Total Score	% Rise
Social Feelings														
14	2	2	2	4	1	2	3	3	3	3	3	1		
Total Scores	2	2	2	4	1	2	3	3	3	3	3	1	5	20
Social Behaviours														
7	4	3	2	3	2	2	3	4	3	3	3			
15	2	1	3	2	3	3	3	2	2	2	2			
17	3	3	3	3	2	1	4	4	4	3	4			
Total Scores	9	7	8	8	7	6	10	10	9	8	9	0	15	0
Academic Feelings														
1	2	2	3	1	3	2	2	2	3	4	4			
3	3	1	2	1	2	3	2	4	4	3	2			
4	2	2	4	3	3	3	3	3	3	2	2			
6	2	2	1	3	1	2	4	2	3	2	2			
8	3	1	2	2	3	2	3	3	2	1	1			
10	2	3	2	3	2	2	3	2	2	2	2			
12	2	2	1	2	2	2	2	3	2	3	2			
Total Scores	16	13	15	15	16	16	16	19	19	17	15	-1	35	-3
Academic Behaviours														
2	2	2	2	4	4	4	4	4	2	2	2			
5	2	3	1	1	2	2	2	3	2	3	3			
9	2	2	3	3	2	2	3	2	4	3	3			
11	2	3	2	3	3	4	2	4	2	3	5			
13	1	2	1	1	1	1	2	3	3	2	1			
16	2	4	1	2	3	2	4	4	1	3	3			
Total Scores	11	16	10	14	15	15	17	20	14	16	17	6	30	20

Bruce

Composite PSER scores rose consistently throughout the intervention from 21 score points at T1 to 38 at T2, equating to a 28% rise in student experience, as seen in Table 5 and Figure 5.

Rises of 33% and 23% were reported for social feelings and social behaviour categories respectively, as seen in Table 9 and Figure 6: (academic behaviour and academic feelings categories were not relevant to this student's goals).

The greatest difference in total PSER scores was noted between PSERs 4 and 5. This constituted seven PSER score points across both categories.

Table 9: Individual participant PSER grid categorising PSER items: Bruce

PSER Item	1	2	3	4	5	6	T2-T1	Max Total Score	% Increase
Social feelings									
1	2	1	2	2	2	3			
3	2	3	4	3	4	3			
5	1	1	1	1	3	3			
8	1	2	2	4	3	3			
9	1	2	1	2	3	3			
12*	3	4	4	4	5	5			
Total Scores	10	13	14	16	20	20	10	30	33
Social Behaviours									
2	2	1	2	2	2	3			
4	3	2	2	2	3	4			
6	1	2	2	2	2	2			
7	2	1	2	2	2	3			
10	1	1	1	2	3	3			
11	2	2	3	2	3	3			
Total Scores	11	9	12	12	15	18	7	30	23
Academic Feelings	N /A								
Academic Behaviours	N/A								

Note: Item 12* would fit both social feelings and academic feelings, but given that Bruce's goals are all socially based, the author decided that it best fitted under social feelings.

Chris

Table 5 and Figure 5 indicate improvement in Chris's student experience of six PSER scores between T1 and T2. Table 10 indicates no sustained improvement in goals concerning academic feelings and behaviours between T1 and T2.   Dips in the overall profile of session scores were evident in PSERs 4 and 6. The most marked rise in Chris's overall profile was between PSER 4 and 5, an increase of nine PSER score points.

Table 10: Individual participant PSER grid categorising PSER items: Chris

PSER Item	1	2	3	4	5	6	T2-T1	Max Total Score	% Increase
Social Feelings									
1	4	4	5	2	5	5			
3	2	4	4	4	2	5			
10	4	2	1	1	1	2			
Total Score	10	10	10	7	8	12	2	15	13
Social Behaviours									
4	5	3	4	2	5	5			
8	2	3	2	4	5	2			
9	1	4	4	5	5	5			
Total Score	8	10	10	11	15	12	4	15	27
Academic Feelings									
5	2	2	4	3	4	3			
6	3	4	2	2	3	2			
Total Score	5	6	6	5	7	5	0	10	0
Academic Behaviours									
2	2	3	3	1	3	2			
7	2	1	2	2	1	2			
Total Score	4	4	5	3	4	4	0	10	0

Dawn

Sessional composite PSER scores for Dawn indicate a rise of fifteen score points between T1 and T2, representing a 25% increase in student experience. Figure 5 demonstrates a

sharp rise of thirteen PSER points between PSERs 1 and 2. There was a further sharp rise of seven score points between PSERs 7 and 8. Table 11 suggests that the greatest gains were achieved in academic behaviour.

Table 11: Individual participant PSER grid categorising PSER items: Dawn

PSER Item	1	2	3	4	5	6	7	8	T2-T1	Max Score Possible	% Increase
Social Feelings	N/A										
Band total											
Social Behaviours											
11	5	5	5	5	5	5	5	5			
Band Total	5	5	5	5	5	5	5	5	0	5	0
Academic Feelings											
1	1	3	4	3	4	4	1	3			
2	3	5	5	5	5	5	4	5			
7	4	5	5	5	5	5	5	5			
9	1	2	1	3	3	3	3	3			
10	5	5	5	5	5	5	1	5			
Band Total	14	20	20	21	22	22	14	21	7	25	28
Academic behaviours											
3	2	5	4	5	4	3	3	3			
4	5	5	5	5	5	5	5	5			
5	4	5	4	5	5	5	5	5			
6	4	5	5	5	5	5	5	5			
8	1	2	3	5	5	5	5	5			
12	4	5	5	5	5	5	5	5			
Band Total	20	27	26	30	29	28	28	28	8	30	27

Ewan

Ewan's profile of results suggest the biggest rise in student experience of all six participants, with an overall increase of 23 PSER score points equating to a rise of 46% from T1 to T2, as seen in Table 5 and Figure 5. Improvements of 20% and greater were noted in all four item categories, with the greatest difference reflected in academic behaviours (53%), as seen in Table 12 and Figure 6. The largest rise, thirteen PSER score points, is noted between PSERs 2 and 3.

After peaking at 40 PSER score points (PSER5) immediately before the three week Easter

break when we did not meet, Ewan's score fell the following session by five score points.

Table 12: Individual participant PSER grid categorising PSER items: Ewan

PSER Item	1	2	3	4	5	6	T2-T1	Max total score	% Increase
Social Feelings									
6	1	1	3	1	2	2			
Total score	1	1	3	1	2	2	1	5	20
Social Behaviours									
5	1	2	4	5	2	3			
9	1	1	3	4	3	2			
10	1	1	4	5	5	5			
Total score	3	4	11	14	10	10	7	15	47
Academic Feelings									
1	1	1	4	5	4	2			
2	2	3	2	3	4	4			
8	1	1	5	2	5	5			
Total score	4	5	11	10	13	11	7	15	47
Academic Behaviours									
3	2	1	3	4	4	4			
4	1	2	4	3	5	4			
7	1	1	5	3	5	4			
Total score	4	4	12	10	14	12	8	15	53

Freddie

Freddie's PSER results show an eighteen PSER score point rise between T1 and T2,

suggesting a 24% rise in overall student experience as illustrated in Table 5 and

Figure 5. Table 13 shows improvements of 13% and greater in all four PSER score

categories with the largest, 28%, in social feelings.

The biggest rises in PSER scores occurred between PSERs 1 and 2, and 4 and 5, which increased by six and seven score points respectively. The rise between PSERs 4 and 5 was also most noticeable in social feeling items.

PSER total scores fell by four score points between PSERs 5 and 6, then increased by five PSER scores mainly in social feeling items in the subsequent and final PSER (PSER 7).

Table 13: Individual participant PSER grid categorising PSER items: Freddie

Item	1	2	3	4	5	6	7	T2-T1	Max Score Possible	% Increase
Social Feelings										
3	2	3	3	4	4	3	4			
4	2	3	3	3	4	3	4			
5	2	4	3	3	4	3	4			
11	3	3	3	3	4	3	3			
12	3	3	3	3	4	4	4			
Band total	12	16	15	16	20	16	19	7	25	28
Social Behaviours										
1	2	3	3	3	3	3	3			
10	2	2	2	2	3	2	3			
13	2	3	3	3	3	3	3			
15	3	3	3	3	3	3	3			
Band total	9	11	11	11	12	11	12	3	20	15
Academic Feelings										
2	3	2	3	3	4	4	4			
6	3	3	3	3	4	3	4			
9	3	3	3	3	3	3	3			
Band total	9	8	9	9	11	10	11	2	15	13
Academic Behaviours										
7	2	4	4	3	3	4	4			
8	3	2	3	3	3	4	3			
14	3	3	4	3	3	3	4			
Band total	8	9	11	9	9	11	11	3	15	20

Interpretative Phenomenological Analysis

Analysis of Change Interview transcripts generated six super-ordinate themes (as seen in Table 14). Collectively these describe how student participants experienced the therapeutic intervention and how the sense they made of any changes they perceived had occurred during the course of the intervention.

The first of these six themes, *perceptions of the intervention,* details the shared and differing ways in which student participants chose to describe the intervention.

The second theme, *changing academic behaviours, skills and attitudes towards studying,* details contrasting experiences of three participants who shared the same goal of reducing the time they spent procrastinating when trying to work on academic assignments.

In the third theme, c*hallenging and changing perceptions of relationships,* participants describe and interpret the changes they encountered in key relationships during the course of the intervention. Accounts span a range of social settings.

The fourth theme, *enhanced, controlled and enacted student identities,* details participants' accounts of the differences they perceived in themselves by the end of the intervention and the sense they made of these changes.

No pain: no gain, the penultimate theme, provides insight into the emotional and physiological pain experienced by participants during the course of the intervention and their efforts to overcome this in order to fulfil their therapy goals.

In the final theme, *enhancing therapy process and outcome through drawings,* participants described how the drawings generated during therapy sessions which

captured critical incidents that were marring their student experience, aided their understanding and resolution of these.

Contributions to each theme are varied through participants sometimes finding it difficult to respond to certain interview questions. Hence, not all participants are represented in each theme.

Key of markings used in student accounts:

... pause in narrative delivery

() gaps in narrative

[ ] author's observations during the interview and contextual comments

Table 14: Super-ordinate themes and sub-themes from student participant Change Interviews.

Super-ordinate theme	Sub-themes
Perceptions of the intervention	Experiencing through critical time-frames Perception of a journey Perception of release Perception of a military strategy
Changing academic behaviours, skills and attitudes towards studying	Making up lost ground The importance of knowing Resigned and disappointed
Challenging and changing perceptions of relationships	Challenging relationships in student halls of residence Challenging relationships at home Challenging work placement relationship
Enhanced, controlled and enacted student identities	Enhanced student identities Skilled and controlled performers Conditional identity Regained identity
No pain: no gain	Re-living painful pasts Bitter pills and pain barriers Painful truths Painful feedback
Enhancing therapy process and outcome through drawings	Facilitating release Facilitating empathy and understanding Facilitating prevention Facilitating choice

Theme 1: <u>Perceptions of the intervention</u>

Student participants were asked to comment on their overall experiences of the CBT intervention: what it had been like, in broad terms, on a personal basis to undergo the intervention. Participants' accounts revealed four subordinate themes: experiencing through critical timeframes; perception of a journey; a perception of release; and a perception of a military strategy, with some participants experiencing the intervention in multiple ways.

Experiencing through critical-timeframes

Two student participants, Freddie and Chris, related and attempted to make sense of their experiences during the intervention through critical events, and reflected on these in terms of eras. In this sense, 'era' refers to discrete and specific periods of time, marked by specific happenings within their educational histories. Critical eras experienced by both students were based on situations involving important others and their interactions with these people at the time. These served as benchmarks through which to evaluate their progression and rationalise their experiences.

Freddie experienced the intervention through eras within the duration of the intervention, with an element of looking ahead to future relationships/eras. His accounts emphasised a clear distinction between eras and also recognition of potential "carry over" from one era to the next, whilst portraying senses of optimism, pragmatism and anxiety.

> Freddie: I hope this situation hasn't been damaged too much in [hall of residence name], with the old gang, so to speak

> Freddie: It's um, time to move on, really, onto the next stage, really. Getting into next year might be of real benefit, get this year done with, get it out of the way.

These two utterances are quite conflicting. The latter utterance suggests a need for a new start, a need to leave socially damaging occurrences behind him. However, the first is an expressed wish, and possibly a need, to still salvage and repair something from a past era in the next.

In contrast, Chris experienced and made sense of the situations brought to the intervention through drawing on a much wider time-span. Eras were populated by relationships with single individuals and within educational institutions from both present and past.

> Chris: On to X [person's name]
>
> Chris: It was probably a hell of a lot more to do with school than I realised. Er, and then there was all that stuff with Y [name of former flat-mate]

During the course of the intervention, each era was likened by Chris to a music track on a record or compact disc. A key therapy goal was to stop intermittent track reversals. This metaphor extended to the Change Interview when discussing goal progress. This is captured in Chris's statement below of his perception of the most helpful aspect of the intervention:

> Chris: Er...the most helpful things have definitely been moving on from, from the first track and moving to the second track.

Both Freddie and Chris portrayed a sense of repetition within their descriptions of eras, returning to the same starting point between each whilst experiencing a sense of personal progression from previous eras, with each era an improvement on the one before. This latter point is particularly evident in Freddie's accounts below:

Freddie: I never would have considered it last time round

Freddie: I suppose I was suffering cabin fever last time round

What is also evident in the examples above are multiple applications of metaphor and the ease with which the student participants use these to illustrate and communicate the sense they make of their intervention experiences and the situations they brought to therapy sessions. Freddie's second statement, for example, contains metaphor (cabin fever) within metaphor (last time round) to portray how the isolation and sense of frustration this brought about was experienced in the initial timeframe he refers to.

Perception of a Journey

Five student participants reflected on their intervention experiences in terms of a journey undertaken, having reached varying stages of completion but nevertheless a journey of progression. Here, language used emphasises movement and location, often combining the two, whilst again reflecting and communicating this through metaphor.

For Ewan, the intervention was a journey of self-discovery involving sequences of events, with each event driving another in consequence:

> Ewan: It's been a real journey...it's been a real journey of self discovery
>
> Researcher: Uh hm, in what sort of respects?
>
> Ewan:...respecting myself and my peers () Finding out that the one incident could trigger another one in quick succession...it's like dominoes. One will fall down first, then the others will fall down.

Likewise for Freddie, where the journey of self-discovery was perceived in terms of enlightenment, surprise and sometimes discomfort, with a sense of not having reached a comfortable endpoint as yet; a journey still in progress:

> Freddie: Enlightening...It's surprising really, it started from there...then...all sorts of things happened from then () Well it showed some faces of me that I never quite knew existed up until now. Some are quite disturbing but others are quite...reassuring really. Um...naturally I am quite keen to move on.

For Bruce, the intervention was also experienced as a partial journey. This journey, however, was seemingly one from the surreal towards reality, coupled with an element of caution, and where again the intended endpoint had not been reached as yet. Here the student clearly differentiates between interview process preparations covered in the intervention from as yet unlived, future experience in real time, whilst choosing to reserve judgement on the outcome:

> Bruce: I've got a better idea of how to handle interviews, like, but I suppose the real thing is going to tell, er, if it has worked for me.

This notion of partial completion was also experienced by Ewan, but with a stronger element of optimism:

> Ewan: I'm only half way through, but with a little more time I will have it fully and start getting down...

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In contrast, Chris's journey was one of distancing, rather than discovery, with some confusion as to the exact stage of journey he had reached, but nevertheless one of progression. This was implicit in several utterances:

> Chris: I feel I am in a better place, really, I'm finding it a lot easier, really

> Chris: I have moved off now: I have let go

> Chris: I haven't really gone back there...I think I have come on in quite a leap from going back there...I have moved on from that point now and don't think I will be going back any time soon.

> Chris: But I'm back to where I am; I am better than where I was

Within Chris's utterances is a sense of physical displacement: physical places or locations which he can metaphorically move away from or towards both physically and mentally within his mind. Here, his perception of journey seems to fuse both the relative ease in which he has experienced student life mentally (e.g. 'I am finding it a lot easier now'), and his concept of physical anchorage to past events and happenings ('I have moved off now: I have let go').

Perception of release

For Adam, Chris and Dawn, the intervention provided a means of releasing tension and pent up worries, particularly during face-to-face therapy sessions:

> Adam: Er, it's been positive, it's actually helped me, um...get a lot of worries out that have been happening () I'm not worrying as much () I just stopped worrying. I'm worrying less. () Each time coming to these sessions has helped me kind of...relieve that worry () I've been able to park the worries

> Chris: It's out of my system...I'm glad I've done it, because it's out now...I just feel so much lighter

> Dawn: It's been good coming every week, it's like if I have got any concerns I'll let you know, and what's been worrying me, and it's got me telling it all.

This sense of release was experienced positively by all three students, either emotionally or constructively: for Adam and Dawn, it was deemed helpful; whilst for Chris, it generated a feeling of joy.

In terms of speed of release, of the three accounts above, Adam's portrays the strongest sense of suddenness ('I just stopped worrying'), possibly as the result of a controlled conscious act to disengage from these ('I have been able to park the worries'), i.e. self-agency.

Sub-themes so far have encompassed two or more student participants. A more idiosyncratic experience is detailed in the final sub-theme of this super-ordinate theme:

Perception of a military strategy

One student, Freddie, experienced the intervention as a military strategy, based on planned courses of action and embedded in military literature:

> *Freddie ..."first of all we need a man, then we need a plan, after that we shall succeed not otherwise." And once those things are in place...well that's it really. And then of course you have to make it succeed.*

This being a famous quote from General Montgomery, which also informed and described his role, as experienced, within the intervention:

> Researcher: Uh hm: the plan?
>
> Freddie: It won't do on its own. Neither will the person who is implementing it.
>
> Researcher: And that's where your role is?
>
> Freddie: Yer...yes, that's really it.

He gives the impression of experiencing the intervention in a very matter of fact, pragmatic way, with clear role expectations and a strong sense of self agency and personal responsibility. The 'plan' could be interpreted as the CBT goals, i.e. planned, intended changes, and strategies for achieving these.

Theme 2: Changing academic behaviours, skills and attitudes towards studying

Perceptions of the scope of changes in academic behaviours, new skill acquisition and attitude towards academic studies varied considerably among the six participants. Passages from the following three students have been selected to demonstrate the range of contrast in their experiences and the idiosyncratic nature of these, starting with Chris. All three accounts relate to a shared academic study problem, namely procrastination, whereby participants continually put off working towards their academic assignments.

Making up lost ground

Chris: I'm where I should have been in Semester One now. So, I think it's helped: these sessions have helped me get back on track.

Researcher: You say how you should have been in semester one: how would you describe that?

Chris: Work-wise, I've been able to get on with my work once I've dealt with these [pointing to specific diagram areas] and got in there, whereas now, I'm getting that done now, and it's really how it needed to be in semester one, really.

Researcher: So just being able to settle down, get on with it and keep up, get your work done?

Chris: Yep, yep.

Chris: () The time management and organisation skills - I'm working on that with X [Specialist Study Skills Tutor], and that's coming along, so that's doing quite well.

These statements are best understood through the visual aid that was developed within therapy sessions with Chris, and brought to the Change Interview for recapping purposes.

In the first of these statements, Chris is pointing to flip chart diagram areas listing the negative core beliefs he held about himself, namely worthless and unintelligent, and detailing how these impacted past and recent educational experiences within the course of the intervention. This flip chart drawing is presented in Figure 7. Chris was unable to apply himself effectively to academic tasks until we had been able to challenge / diffuse and re-interpret these to something more helpful. Given that the Change Interview took place at the end of the second semester of the academic year, Chris's first comment signifies how far behind he had fallen with academic studies through being distracted by the thoughts, feelings and interpretations pertaining to these negative core beliefs and incidents. Through repeated reference

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to the CD track metaphor (described in the previous section), Chris affirms the

usefulness of CBT in finally settling himself down to his academic work, albeit

somewhat later than desired, a course of action seemingly unachievable beforehand.

Figure 7: Summary diagrams: Chris

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Continuous use of "I" throughout the series of statements above implies a growing sense of ownership of the problems encountered with regards to application to academic studies, and a sense of self-agency, responsibility and recognition of his own role in the changes experienced. What is also evident are emergent rules of self-conduct for academic study, for example:

> Chris:...and it's really how it needed to be...

The importance of knowing

For Ewan, the key changes in academic behaviour reported pertained to asking for help when struggling to understand what is required of him:

> E: Actually asking...actually asking my tutors for help, saying if I'm stuck or something: I'll put up my hand and I'll say can you help me with this...(): Learnt, learnt that there is always a technique where, um, where, um, where it can help me with my stu, student studies, with my student studies, like taking time out, calming down...maybe...I usually read a book or electronic book on my DS of course, or in my head...that will do me better.() It needs a little more improvement, but with patience...and knowing...once an assignment is live, I'll be early. Then it gets better. I need a little more time to get to know...to get to know...to get to know... how I can start, like if the assignment is out now, to get to know the assignment brief, do a paper copy first. () I now know alternative paths and alternative solutions () I'm following them. Finally following them...and starting to understand. ()I will get the confidence fully and start getting down...So when I go to a lecture or workshop, I'll start by doing the workshop right there, right then. () As time goes by...I will start...I will be very productive.

In these passages, Ewan explains how procrastination - the putting off of potentially stressful academic tasks - is problematic to him. Ewan is describing

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his newly acquired knowledge and range of more helpful behaviours he can activate when he is struggling to understand academic tasks required of him. In the accounts, Ewan explains his need to calm himself when he becomes agitated under these circumstances. Again, Ewan reasons that there is scope for further improvement and a need to actively apply these new behaviours in stressful situations. He appears to perceive a sense of payoff, weighing up the potential benefits of applying this new knowledge and suite of more helpful behaviours. Throughout the extracts are recurrent undertones of 'knowing' and the importance of getting to know alternative courses of action and associated knowledge, whilst insinuating that this type of knowledge was not actively sought or considered previously. With this, there appears to be a sense of relief in that he has at long last recognised and learnt a more helpful way of responding to stressful academic situations. This growing, yet incomplete knowledge base appears to be very important to him, as is mastery of the application of this new knowledge to his studies. He now 'knows' of the existence of alternative and more helpful behaviours and appears to understand the implications of these regarding his student experience; mastery, however, is seemingly yet to be achieved.

Ewan uses positive self-talk throughout his accounts, and like Chris, he seemingly conveys a strong sense of commitment to his newly set rules for studying through this mode.

While students Chris and Ewan reportedly developed and actively sought to apply new rules and more helpful behaviours to curtail procrastination when studying, procrastination remained a problem for Adam.

Resigned and disappointed

> Adam: [Sighs], um, I still think I am losing a lot of time.
>
> Researcher: Are you losing as much time?
>
> Adam: Not as much () but the work still isn't getting done. () Like I had to do all my work last minute the other day. Um...and I dunno how well I did on that or not but (sighs)...it was a bit of a pain.

Adam's repeated sighing portrays a strong sense of disappointment regarding his progress towards his studies, and also perhaps towards the intervention. There is an element of contradiction as to the extent of his procrastination between the statements, ranging from not producing any work, to work being completed very close to the deadline, and also for the amount of time spent procrastinating. 'Losing' rather than 'wasting' implies a lack of agency - something beyond his scope of control, a sense of helplessness and/or resignation. He seems to largely engage in 'all or nothing' thinking on this matter and struggles to make any other sense of it beyond this interpretation or quantify it in any clearer way.

In summary, whilst all three accounts focused on the problem of procrastination, attempts to counteract this through alternative behaviours and ways of thinking were experienced in differing ways. Whilst a sense of optimism and commitment to new actions, underpinned by new rules for studying, can be gleaned from the first two accounts, an overall sense of resignation and disappointment is indicative throughout the third account.

Theme 3: <u>Challenging and changing perceptions of relationships</u>

During the course of the therapeutic interventions, student participants reportedly encountered changes in the way they perceived and experienced relationships that were central to their student experience. What is evident amongst Change Interview transcripts is the diversity of important relationships of this nature and the challenges these presented. We see commonalities and variations in the processes involved in participants' changes in perceptions of important relationships, and the level of agency perceived in their maintenance and management of these. This is illustrated in the following three examples.

Challenging and changing relationships in student halls of residence: Freddie

As detailed in previous chapters, two of Freddie's goals for the therapeutic intervention concerned relationship problems with fellow "flat-mates" within his initial shared accommodation. In consequence Freddie was forced to change apartment and develop new relationships within this accommodation. At this point, therapy goals changed from salvaging old relationships to developing new ones. Freddie perceived the therapeutic intervention as being instrumental in exposing and orientating him towards new ideals regarding peer relationships, and extracting workable strategies for the achievement of these from his mind and shaping these. This is apparent in the following utterances:

> Researcher: How likely do you think that these changes you have noticed in yourself would have occurred without our sessions?
>
> Freddie: <u>Not likely</u> [said with emphasis]. I really kind of needed someone to point me in the direction roughly and get the ideas down...get the ideas out of my head and put

them in-front of me cos, um, I think I had the ideas in my head - it just was a kind of

shapeless mass, I really needed encouragement to get them out and start it, which I

suppose I should really thank you for that..() That was the defining factor, I thought, was

making a workable, usable strategy rather than perhaps something a bit naive...

Here he expresses the perception of a need for facilitation in the exposure,

extraction and re-orientation processes rather than instruction, and scheduled

time to accommodate this. Freddie's utterance that the ideas in his head were

'a shapeless mass' portrays a strong sense of confusion and disarray at the start of

the intervention. Note again the repeated undertones of military language and

context in 'That was the defining factor, I thought, making a workable, usable strategy...' as

demonstrated in theme 1.

Whilst the CBT goal of salvaging relationships within Freddie's initial

accommodation failed, in the next excerpt we witness flexibility of thought

regarding blame attribution, the impact of changing circumstances on therapy

agenda and outcome, and a marked change in orientation regarding therapy

goals:

> Freddie: …the CBT sessions themselves, they were alright, because we simply tried to
>
> save the situation: it didn't work because of circumstances, not the therapy. The
>
> therapy matched up to the new expectations rather than facing off the old ones, and
>
> directed me towards newer ideals...which I thought was a lot more helpful.

It is questionable exactly what Freddie means in his reference to 'new ideals'.

However, this may be explained through his revised rule for relating:

> Freddie:...I thought of this only a couple of days ago, um: if they [former flat-mates] are
>
> moving on quite normally with their lives after I left, why shouldn't I? [said slowly and

emphatically] So then I thought, well, that's what I have been doing for the last while, at least that's what I hope.

Within this statement and rule are undertones of emergent moral principles and the perceived, yet questionable realisation of these. Yet he seemingly defends this incomplete realisation and reluctance to take this any further in two further rules:

> Freddie: …I suppose just a little bit of ignorance is a good idea, really. Just the tiniest bit of it really, because if you were constantly um, thinking of what might happen, then quite simply it's not going to do you any good...The idea of constantly looking over your shoulder all the time () Of course, don't be naive enough to be completely trusting, you can't go and do that immediately, but er a little bit of ignorance of what's happening - just for your own sanity's sake.

Freddie's rules therefore appear to be based on a combination of self-protection and moral reasoning.

Challenging and changing relationships at home: Ewan

Central to Ewan's student experience as a "living at home" student is his relationship with his parents through its impact on his attitude and behaviours towards his studies.

For Ewan, and similar to Freddie, the therapeutic intervention facilitated exposure and re-orientation in relationships, and the development of new rules for relating, albeit in different ways and context. 'Exposure' in Ewan's case was the discovery of the impact of his behaviour on his parents:

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> Researcher: What changes, if any, have you noticed in yourself since we started these sessions?

> Ewan: I have noticed...I've noticed...[sighs]...my behaviour to others, how they feel ...have started to notice how it feels to be in their shoes, if they was me and they did this, what would I feel, so starting to notice...their aura, or knowing where I stand in their line of trust.

With this exposure came a sense of shock and re-orientation within the relationship:

> Truthfully, I was shocked (). I was really shocked to know that my behaviour to my parents was very important to them. () It's starting to know that the impact, the impact between me and my parents...what is a good word...is humungous, it's a big importance. The decisions I make...the decisions I make easily affect...easily affect what they do.

> I'm starting to believe that my parents are now for me, they need me...they need me to succeed and I will give it them.

From this exposure and re-orientation emerged new rules for this now recognisably important relationship:

> I am trying to understand that I have to be a truthful person () and being truthful to my parents, saying "Mum, I really need help with this" () and actually telling them, being honest.

Within these passages, we see a shift in Ewan's empathy towards his parents; a growing awareness of the impact of his unhelpful behaviours towards them; a recognition of a strong desire to be trusted by them, and the personal importance of this. Note how he searches to capture a word that portrays the enormity of the importance of this emerging relationship to both parties:

"humungous" is voiced with conviction and immediately qualified with "it's a big importance" to ensure this was interpreted as he intended. Ewan's utterance in the last of the above extracts "I am trying" however, qualifies that in his opinion, he is yet to fully comprehend the importance of a relationship based on trust and truth with his parents.

What is also evident within these extracts is the recognition of a symbiotic relationship. Within this, Ewan realises that his parents need him to satisfy their needs as parents, whilst simultaneously we see through his revised rules for this relationship, that Ewan's success as a student is partly dependent on his mother.

These new rules for relating are not dissimilar to Ewan's new rules for studying, as both are based on honesty and recognition of the need to seek help from important others when struggling with studies.

Challenging work placement relationship: Adam

In contrast to Freddie and Ewan, Adam perceived the CBT intervention to be of limited success regarding important relationships central to his student experience. What is most evident in Adam's Change Interview transcript is the number and variety of relationships with perceptually dominant 'others' within his student experience. Of particular importance to him is the perceived power imbalance between himself and his work-placement supervisor, and the knock – on-effect of this on self-agency within this relationship. Despite intensive assertiveness training and *in-vivo* actioning of this within the course of the

intervention, it was seemingly insufficient to produce a positive impact on this relationship from Adam's perspective:

> I tried to be assertive with her, but...you can't be with that woman () cos -- [supervisor's name] is just : (sighs)...once she is adamant about something, no matter how hard you try to tell her, she won't have it.

> I tried, I did once or twice get a bit of assertiveness out of her, but she's very stubborn, -- is...very, very stubborn.

In keeping with outcomes detailed previously concerning attempted changes in academic behaviours, the outcome of Adam's attempts to improve an important relationship was also one of grim resignation to the continuation of his difficult and unsatisfactory student experience. No overt new rules for this relationship or relationships in general emerged from this experience.

On a more positive note, the intervention seemingly facilitated exposure of alternative ways of perceiving this difficult important relationship and his role within it:

> The [therapy] sessions have kind of helped me think about why she might be saying it [detrimental comments excluded to protect identity] and it's made me think about as that, well, look at it from another angle: it might not be me it might, it might just be her. () I keep changing my mind in this one. I think I need a new mentor, a new placement somewhere and let someone else judge me so I can get a second opinion.

> It [the intervention] helped when it comes, um, like -- [work-placement supervisor] for instance, um, understanding where they are coming from because that's something I find hard to do.

> You know, it might be as you said. It might be a bit of jealously, like my mum says as well. It might just be the fact that she feels insecure with me, you know, me having a

degree () Yes, she thinks because she has been in it 25 years, she thinks that everyone else should have the same, kind of thing.

It's kind of settled my mind a bit...kind of put my mind...at...you know...at rest a bit, because when I did the work with -- [lecturer] on er, on people in the --- on video and all that, -- said I did great.

Here we witness Adam's attempts at making sense as to why his supervisor seemingly criticises him relentlessly about aspects of his work placement performance. We see a re-orientation in Adam's attention from a singular explanation for the failing relationship to wider sources. Within the above accounts, Adam seeks consistency between what has been debated in therapy sessions with me, his discussions with his mother and lastly with feedback he received from a lecturer on his interpersonal skills that was captured in a video recorded professional relationship skills assessment. Having gathered these supportive views, Adam's repeated utterance of "it might" implies that he is yet to be fully convinced that his revised theory of the cause of his supervisor's criticism is fully correct. However, he was seemingly able to derive some comfort within the intervention in recognising that an alternative theory is possibly plausible.

Common to all three participant accounts in this subsection are undertones of relationship difficulties with others who are central to their student experience. We hear differing perceptions of the contributions of the therapeutic intervention on these seemingly crucial relationships. Through the extracts for each of the three students featured above, we see how within the remit of the intervention it is reportedly the student who has taken steps to adapt and modify the relationship to something more helpful to them and the other parties concerned.

These attempted changes in relationships did not come without emotional cost to student participants and changes in their student identity. These will now be explored further in the following two sections.

Theme 4: <u>Enhanced, controlled and enacted student identities</u>

This section details how participants made sense of the changes in the way they viewed themselves during the intervention and subsequent to this. Common to all accounts is a sense of seeing the self in a more positive light, whereby all six student participants considered themselves more positively through the intervention in varying ways and to differing extents. However, the extent to which often recently developed positive self-perceptions are embedded within their core identity is questionable in the following participant passages. Accounts have been divided into four strands: enhanced student identities, skilled and controlled performers, conditional identity, and regained identity. I will explain these divisions further through the following accounts, starting with the most confidently projected of these by Freddie.

Enhanced student identities

During the course of the intervention, Freddie surprised himself in realising his newly discovered sense of agency. With this agency came a rise in self-worth:

> Freddie: I've just become more positive really () I was surprised I was capable of doing
>
> that myself, actually, if I am honest, I really didn't know I had it in me () to go out and

> change to match circumstances and doing things I had never considered doing last time round () I'm feeling pretty good about myself really.

> Freddie: Unlike the first time round, I consider myself something a little more valuable. Well perhaps a little bit. I'll probably always flagellate myself somewhat...

Seemingly contributing to his self-worth is his self-perception, having survived first year relationship traumas with former flat-mates, of now being an experienced student, one who could serve as a role model or mentor to new students:

> Freddie: I have been trained by the best [laughing], if you see what I mean. () Lucky me! [laughing] () Who knows, I might be able to teach them a few things! Who knows?

Ewan portrayed two changes underway in personal identity, the first becoming a more motivated student. He explained this elevating identity through the following metaphor:

> Ewan: My positive spark is definitely coming back to me, with a little more improvement it will be...it will be...it will keep me going.

His choice of metaphor is interesting in that it could pertain to a sparking plug, which fires an engine, or perhaps a spark of light, symbolising a boost of energy. Either way suggests hope of progression in his studies, and hope of becoming successful. This is in stark contrast to his predicted self if he had not undergone the intervention:

> Ewan: I would be a ghost out there, I wouldn't understand a thing.

His reference to a 'ghost' could imply a predicted sense of not feeling completely present, unable to participate, and possibly unable to comprehend what is going on in the present: i.e. left in the dark.

As seen previously in theme 3, honesty is a newly realised value for Ewan and this translates to his strong desire to become an honest person. In the passage below, he reports on his progress in this respect:

> Ewan: I am trying to understand that I have to be a truthful person () It's like I am changing...say...I'm in the chrysalis stage now, and am actually, like, turning into a butterfly () Turning into an honest person.

Yet again he draws on visual imagery and metaphor to help voice his thoughts. Note the delays in this utterance as he accesses this image, before then putting it into words. This metaphor could be interpreted as how much easier he perceives his student life will be; how much more easily he will perform once this final stage has been realised, and his belief that he can become the truthful person he so strongly aspires to be.

Skilled and controlled performers

Bruce's perceived raised self-confidence came with the self-discovery during the intervention that he came across fluently and confidently in mock interview situations. Prior to the intervention he feared:

> Bruce: I'd probably have come across as someone who doesn't pay attention or something, or, er...yer...maybe I answered it wrong or something.

Yet he contradicted himself at times in the degree of self-confidence he now held, for example:

> Bruce:...I suppose I would be more fluent now I think because I know better what to say ()...but I'm always going to be nervous in those situations, but, er, I know better how to

> control it () I know better how to handle situations like that now, like how to introduce
> myself, like how to introduce myself like.

What seems to be emerging in Bruce's accounts is a self-perception of a more skilled and more experienced performer than prior to the intervention; someone who can portray self-confidence through acting, rather than perceiving self-confidence as embedded within his true identity. This could be construed as a performance: i.e.an act that he has learnt and can now control, rather than something from within himself that occurs more naturally.

This notion of controlled, contrived identity is also evident in Dawn's account of her student identity. When debating if Dawn felt any more positive about herself as a student than before the intervention, she explained:

> I don't think there has been that much of a change or anything, I mean, to think about
> my work...I think at the moment it's still the same, but it's not as if I am negative or
> anything like that all the time. I do ensure that I feel positive...

It is the utterance "I do ensure" that portrays this sense of control.

Conditional identity

In keeping with Bruce's perceptions, Adam too considered himself as a person with a chance in the employment market, rather than initially someone with no hope (both were final year students). However, for Adam, this chance seemed conditional on his degree classification, rather than on his live performance at interview:

Adam: I see that I have a chance of success, a chance of getting a career. I mean, we discussed degree classification and that. It all depends on if I get this 2.2 or not.

Regained identity

Lastly, for Chris, the more confident self he hoped for at the start on the intervention had not fully materialised. Instead, he considered that during the course of the intervention, his level of self-confidence had returned to the level he perceived when he first became a university student. This plummeted during a difficult relationship with a former flat-mate. He now appears to have the desire to continue to enhance his self-confidence himself, now that the intervention has ended:

Chris: I wouldn't say I haven't got any self-confidence, I'd say I have got back to where I was when I first started Uni, but I think that's something I need to work on a lot more. I think I have always had low self-confidence in myself, um, and then with that stuff with -- [former flat-mate], it just hit rock-bottom...

When asked if his original perceptions of himself had changed, Chris responded:

Chris: I think, I think they have actually. () I suppose I was seeing myself or seeing other people seeing me if that makes sense,...um, which was the link to this quite heavily [pointing to list of negative self-beliefs attached to the school scenario diagram we generated during the intervention]. And that has changed dramatically on that one (pointing to 'I am stupid'). () Um, and I think now I can deal with a lot more problems now, I can do the whole solution: solve the problem type of thing, where before I couldn't have handled that, so I've definitely become more of a problem solver as well.

Here Chris portrays a shift in self-worth, from someone who he formally considered quite helpless and lacking agency and who would be perceived that way by society, to someone with the confidence now to make his own decisions and resolve his own dilemmas. We see a teasing apart of fused social and personal identities, where he is seemingly now paying greater attention to his own revised beliefs about himself than to the formerly dominant perceived and internalised beliefs of others.

Whilst these accounts suggest positive shifts in personal and social identity, as mentioned previously, this came with a cost: the cost being pain.

Theme 5: <u>No pain: no gain</u>

In this section I present personal accounts of pain experienced during the intervention from four participants, starting with Chris.

Re-living painful pasts: Chris

In this account we see how revisiting, challenging and re-structuring a traumatic past experience that Chris encountered at school initially re-kindled the emotional pain experienced at the time:

> Chris; Er, I think the, the...most difficult thing was challenging that (pointing to the drawing of the difficult school scenario). () Yer, I'm glad, I'm glad I've done it because now it's out, because now I feel I have accepted the other alternative, I have moved off now: I have let go. I feel so much lighter.

We can deduce from Chris's word choice in the last line of this account how, following the initial experience, this pain has lingered and continued to sap him emotionally. Challenging the self-beliefs generated through this past scenario and seeking out alternative and more constructive explanations of the scenario enabled him to finally rid himself of the seemingly false beliefs. In the next passage Chris explains how the emotional pain he experienced during the intervention had physiological repercussions, whereby he physically felt nauseous:

> Chris: There have been weeks when we have been going over things, I've felt like old feelings coming back and that. I used to get quite a sick feeling in my stomach and I think that was all of it coming back up when I was thinking over it, but after - it had all gone down. It just sort of disappeared and was fine.

This implies he experienced the pain through his stomach and each time he dwelt on the initial incident, the feeling was so intense and deeply rooted that he felt a sick feeling being transmitted upwards from his abdomen.   Seemingly, his phrase 'but after – it had all gone down' suggests that having accepted a plausible alternative explanation of the original situation, this sensation disappeared along with the original beliefs. This could be interpreted as a perception of physical illness that he has now conquered or risen above.

Bitter pills and pain barriers: Freddie

Freddie also chose to face and work through an unwanted and difficult incident within the therapy sessions. We see in his account below how, following an initially painful phase, he too gained a sense of relief as he seemingly

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desensitises himself against the pain initially experienced. His reference to swallowing a 'bitter pill' could be indicative of acceptance of the situation and his role within this. Having partly desensitised himself against the pain, he is able to cope with the situation and its aftermath more easily:

> Freddie:…It isn't pleasant to go and face the situation first hand, but once the bitter pill has been swallowed, then it quite simply gets easier after a while. I suppose you could call it the pain threshold, so to speak.

Similar to Chris, Freddie's reference to 'pain threshold' gives connotation of a physical challenge, where mental processes are experienced more as physical processes.

This notion a 'bitter-pill' extends to Ewan's painful experiences which are detailed next.

Painful truths: Ewan

> Ewan: [Sighs]...It's painful knowing the truth...it's like getting the real feelings, just trying to get them out. That's been painful to me and, and I am trying to understand that I have to be a truthful person () So I have to go through this pain every time...to be truthful

Here we partly re-visit an account presented earlier where Ewan appears to be still coming to terms with the truth as he sees it regarding his academic study behaviours and his tendency to lie to his parents and important others and the impact this creates. The 'bitter-pill' is still being swallowed and there is no perception of desensitisation as yet. Ewan experiences raw pain each time he tries to be truthful, and this appears to be triggered by shame. It is plausible that this may be because he doesn't as yet fully appreciate the potential

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consequences of his untruthful actions, or it is still too painful to confront these fully. He is seemingly one step behind Freddie in this latter respect.

Painful feedback: Dawn

This last account takes a slightly different tack, where pain for one participant originated from an indirect relationship. This was through written feedback from a lecturer concerning the participant's written assignment. After a somewhat contradictory start to the passage below, which may be indicative of the participant's initial difficulty in interpreting the question, Dawn was eager to confirm the origin of the pain was external to the therapy sessions. She perceives how bringing this situation to therapy helped alleviate the pain it initially caused, through our re-interpretation of what was actually being said within the feedback and the original choice of words used by the lecturer. Again, she draws on being positive. Seemingly the outcome of this exercise satisfied her rule 'I am doing a Masters so in a way I should be feeling more positive...' and met her on-going need for re-assurance that we have noted in previous sections. The process of crossing the pain barrier and confronting the situation though remained the same as for Chris, Ewan and Freddie.

> Dawn: I don't think there was anything that we talked about that was painful but helpful. I think it might have been just when we were going through last week, going through that assignment, all those comments. I think that was (name of lecturer), it wasn't you, that was all. () It did lessen the pain and we managed to interpret in a way that was being more positive and that, where he is being difficult in those bits, by looking at the comments, the words he put in. It got me in a way to reassure: OK, the majority of the

comments he put on sound positive, it's just the very few that sounded difficult and
negative.

So we see how for different participants, goal advancements made during the
intervention were often preceded by painful realisations and emotions arising
from troubled but crucial relationships; and for two participants, this extended to
the physiological sensation of nausea. We hear of the pain barriers that
participants had to break through to enable sufficient desensitisation in order to
re-examine difficult and sometimes shameful situations in a more constructive
way. What is striking is participants' willingness to do this, knowing that this
process will induce pain within the therapy sessions, and also for some, their
sense of relief experienced once pain barriers have been overcome and 'bitter
pills' swallowed.

The next and final section of this interpretative analysis details the mechanism:
the process enhancer and change driver that participants reportedly believed
facilitated this process above all others. This was the collaborative construction
of drawings within the therapy sessions, as described in participant session
summaries presented in Appendix 7 and Tables 3 and 4.

Theme 6: <u>Enhancing therapy process and outcome through drawings</u>

Student participants identified five interrelated functions that various drawings
facilitated. These were namely: release, understanding, empathy, exposure and
choice.

Facilitating release

For Chris, the drawings we produced in therapy sessions seemingly had two key functions. The first of these was to facilitate the release of painful, lingering feelings, described in the previous section, from within himself to the outside world.

From Chris's account below we hear how the paper served as a receptacle for catching and recording these, and the importance he places on the latter:

> Chris: A lot of this does help [pointing to the flip chart drawings] on the, on the paper because it's like when I was coming in here and we was just talking about it, I was getting quite...Once it's out on the paper, it's like it was out of the system, I didn't...I didn't feel sick any more, it was like it was being released, it's being released onto the paper.
>
> Researcher: Like being parked on a shelf?
>
> Chris: Yes, it's not sort of lingering in me anymore, that sort of thing...I don't know what sense that makes [laughing] () Yer, see, I don't think getting it out would have been enough: it needed to go down.

For Chris, the recording function of the drawings captured, exposed and explained key elements of his life story:

> Chris: It was a bit like a bibliography, a biography, I mean.

For Adam, too, the drawing facilitated release; release of worries and a means of capturing these for debate:

> Adam: Most helpful is when we've been discussing issues such as passiveness and assertiveness and we have drawn the diagrams and we've gone through it and I've explained my worries and my problems.

Facilitating empathy and understanding

The second function that the drawings seemingly served for Chris was a means of facilitating empathy and understanding. On several occasions during the Change Interview, Chris made reference to elements of this 'biography' by pointing to the most difficult issues captured in the drawings, without further detailed explanation. The shared meaning developed during the construction of the drawings and captured within these negated the need for this:

> Chris: Er, I think the, the...most difficult thing was challenging that [pointing to the school scenario drawing].
>
> Um...I suppose it's the way I was seeing myself or seeing other people seeing me , if that makes sense...um, which was the link to this quite heavily [pointing to school scenario negative self-beliefs recorded on a critical incident drawing].

For Dawn, the drawings provided a means of demonstrating my understanding and empathy of the situations she brought to therapy, as well as developing her own understanding of these. This is captured in her account below:

> Dawn: You drew out those diagrams, like how the thoughts link to behaviour and action and feelings and all the, to help. There's understanding being shown. () I really do understand, but at the same time when you are discussing it, you show your understanding as well when you are explaining it.

Within this statement is a sense of mutuality, whereby Dawn is expressing her perception of reciprocal benefit being gained through these diagrams between herself and me as principal therapist and researcher.

Facilitating exposure

As for Chris and Dawn, the drawings also provided a useful aid in developing understanding for Ewan. For Ewan, this understanding extended to a perception of prevention of future similar painful incidents:

> Ewan ...the drawings in my mind has helped me...because those drawings actually know what goes on in here [pointing to head] () Well, they represent what makes me tick...Like, and if I look at these drawings now and in the future, I can avoid...I can avoid that happening

Note how Ewan brings a sense of life to the drawings when he says "those drawings actually know what goes on in here". For him, these are seemingly a source of intelligence and a true replication of lived experiences and the way in which he interacts with important others in his student experience.

In this next account, Ewan expands on how the drawings have helped clarify links in thought and behaviour patterns and why he behaves as he does. Here he refers to his recognition through drawings of alternative courses of action that he could take and alternative sources of information that he could access.

> Ewan: Like trying to find alternative sources...the sessions here have, have helped me a lot...and I've felt like I can find out where links, where something is [pointing to the flip diagrams] () Yes, the drawings have helped me to find out the links...and what makes me tick.

This repeated reference to 'what makes me tick' portrays a sense of bringing the inside outside – exposing what is in Ewan's mind.

Facilitating choice

Identification and representation of choice through diagrams and the merits provides is further reflected in Dawn's accounts below:

Dawn: I think what has been most helpful is you again when you write on your yellow lined paper you go through all these, you know, you write all the things down, like having obviously the situation I have mentioned, and then you do a brain storm and you write it on paper. I think in a way its helped going into detail and oh, this is why it goes through the route, how I'd solve it but then consider the consequences and in a way it's got me to be more positive, you know, these sessions in a way...

Dawn: I've had all sorts of problems and I have come to these sessions; I tell you, you go through all these feelings, the patterns and all that and then you put down the route, ways I could deal with it, and then at the same time consider the consequences, and the one I'd rather choose. () I don't think I have ever been through the choices and picked which one.

The latter account reflects the novelty of the idea of having choices in how to respond to difficult situations and the sense of agency this generated within Dawn.

So, with these accounts comes a sense of binding and linking within the therapeutic interventions undertaken by the six student participants. Through the five functions detailed above, we see how the drawings served as timelines and records of the therapeutic 'journeys' undertaken, and also a visual, accessible and meaningful representation of each stage in real time.

CHAPTER 5: DISCUSSION

5.1: introduction

Five particularly striking outcomes emerge from this study, the first being a greater understanding of the sources and impact of anxiety on participants' with an ASC student experience. The second is the idiosyncratic ways in which participants experienced and gained benefit from the intervention; thirdly, is the role played by metaphor and drawings at all stages of the intervention in driving and monitoring goal achievement. The fourth is the unexpected recognition of the potential of a personalised quantitative measuring tool beyond tracking progress in numerical terms. Lastly is recognition of the versatility and potential of CBT interventions of this nature within a Student Enabling Centre/disability support service setting. These outcomes will now be discussed in detail. It is recognised within IPA literature that IPA has the potential to take the researcher into new and unexpected areas (Smith et al., 2009); hence, in keeping with IPA convention this discussion will introduce some literature that has not been included in previous chapters.

5.2: Anxiety and student experience

Anxiety sources

At the heart of all referrals to the study intervention was the recognition by Student Enabling Centre support staff of rapidly escalating anxiety within student participants prior to enrolment to the study. This study highlights the sources and factors underpinning participants' anxiety and provides new insight

particularly into academic course stage related anxieties and common factors irrespective of course stage.

Taking firstly the stage of academic study, we see through IPA findings, initial and shifting goals within the duration of the intervention and session summaries how for the two first year participants, Freddie and Chris, the main anxiety source was student accommodation in which they were struggling to 'fit in' with neurotypical flat-mates' behaviours and expectations. Findings of loneliness, isolation, rejection, ridicule and flat-mates' lack of empathy and tolerance were very much in keeping with recent study findings and anecdotal literature of first year student experiences (e.g. Beardon and Edmunds, 2007; Madriaga et al., 2008; Beardon et al., 2009; Glennon, 2001; White et al., 2011) .

Freddie's unwanted and much feared eviction by fellow flat-mates goes beyond providing yet another sad illustration of the potential for sharing student accommodation to impact on reinforcing negative self-beliefs and promoting chronic stress, clinical anxiety and depression, as illustrated in Gaus's (2007) conceptual model of ASC. Contrary to anxiety models such as Clarke and Beck (2010) and Beck (1976), Freddie's experience also demonstrates that seemingly catastrophic underpinning thoughts can indeed be justified and in keeping with reality for people with an ASC, rather than irrational.

Whilst first year and transition stage challenges are well documented in HE student with ASC literature, third and final year challenges and anxiety sources are less well covered. The present study illustrates how for two third and final year students, Adam and Bruce, key enduring sources of anxiety were not necessarily contained within the present time period, but relate more to the

uncertainty of the rapidly approaching world beyond university. Employment chances and degree classifications seemingly outweigh other anxieties. Study findings also demonstrate how anxieties arising from inter-personal relationships deemed crucial to these two factors become difficult to contain and subject to rapid escalation.

Rapid escalation of anxiety, with perceivably serious incidents erupting unexpectedly, was common to most participants and irrespective of stage of study, as evidenced in PSER results and session summaries. The speed at which this occurred and the seemingly paralysing impact it had on academic work progression and daily functioning in general is clearly noteworthy. An example of this is Freddie's sudden eviction from his shared student accommodation soon after the start of the second semester. Other examples are documented in Chris, Dawn and Adam's intervention programme summaries, all of which centred on relationships that were crucial to their student experience and university outcome. For Chris, this pertained to his relationship with a particular lecturer; Dawn experienced the unpleasant surprise of what she perceived to be highly negative, highly critical feedback from a lecturer, whilst Adam experienced intense criticism from his work placement supervisor that he feared would jeopardise his future. These events were perceived by the student participants experiencing them as so devastating that they could not progress with their academic work until resolved.

This 'snowballing' effect is not uncommon in ASC literature (e.g. Attwood, 2007; Dubin, 2009) and demonstrates a key observation by Beardon (Beardon, 2011) of the potential for individuals with high functioning forms of ASC to move in an

instant from the top end of the ASC spectrum to much further down in terms of intensity of ASC traits. Andrews (2002), a writer with ASC, explains that people with an ASC get particularly anxious at times when they feel they have no control over their life and situation in life. The devastating incidents experienced by participants in this study are indicative of this view.

From a social model perspective, these happenings are reflective of the lack of understanding from neurotypical peers and the demands placed on students with an ASC by university society as a whole, as demonstrated in the Madriaga transcripts (Madriaga et al., 2008) and the ASPECT report (Beardon and Edmonds, 2007), and further demonstrates the vulnerability of this student population. From a psychological perspective - as noted in the literature review - vulnerability is deemed to fuel anxiety, and anxiety is likely to be high in situations where the threat of something highly negative happening is thought to be high and coping abilities are perceived to be low (Beck et al.,2005). This indeed seemed to be the case for these four participants in these seemingly catastrophic incidents, which therefore required urgent attention to enable them to progress their studies. For Freddie, however, his greatest fear of being rejected and evicted by his flat mates was fully realised, as documented in his intervention summary (as seen in Appendix 7); his perceptions of the gravity of this situation were indeed rational rather than unfounded. This illustrates criticism made in Chapter 2, section 2.5 of Clark and Beck's (2010) cognitive model of anxiety. In this situation, his anxiety is seemingly the product of society's negative response to his idiosyncratic behaviours arising through his ASC, rather than through cognitive distortion and maladaptive schema. A pervasive sense of fear or apprehension has been found to be a predominant

unpleasant emotion for people with ASC (Jones et al., 2001), and this study reinforces that this can be for good reason. It was important for the author, as principal therapist, to accept this and not challenge the rationality of these apparently realistic thoughts, but instead help steer Freddie to what he termed in the Change Interview as "newer ideals". This illustrates the need for therapists working with students with an ASC to have a good understanding of ASC and the challenges they face when trying to interact with a predominantly neurotypical university society, and to accept that conventional CBT techniques such as cognitive challenging may not be helpful in this situation. There is the potential for evidence seeking exercises to disprove difficult thoughts to backfire spectacularly and reinforce the perceived validity of these thoughts.

From a practical aspect, this study is additional testimony to the high pressure environment that students with an ASC are operating in; an environment comprising critical deadlines for academic work, forced relationships and potential for rejection, with very real potential consequences of eviction, unemployment and academic failure. Arguably, the context of this study - in comparison to contexts in the intervention studies in Chapter 2, sections 2.7 and 2.8 of the literature review - is far more urgent and carries far higher potential personal costs to participants, both emotionally and financially. In this study, participants are adults undertaking university degrees intended to launch them to the next stage of independence, and in some cases living away from their principal social support, namely their family. Arguably, studies such as Bauminger (2002, 2007, 2007b), Lopata et al. (2006, 2008, 2010) and Wood et al. (2009a, 2009b) occurred in a lower risk environment with far more controlled variables such as: a range of social relationships; principal support networks on

hand, and within far greater timeframes. In contrast, present study participants' problems are arising within very tight and critical timeframes dictated by assessment deadlines and duration of academic semesters. For interventions with university students with an ASC, time therefore is the essence in terms of speed of grasping CBT principles and concepts – making these accessible to participants with an ASC, identification of critical occurrences and goal accomplishment. This latter point will be expanded on in Chapter 6, section 6.1.

5.3: PSER attributes in exposing anxiety

Returning to crisis incidents experienced by participants in the present study, what the author found particularly striking about the PSER was its potential to capture and alert her to the 'snowballing' effect of perceivably catastrophic or crisis incidents that had occurred since the previous therapeutic session and had impacted on specific aspects of their student experience and limited therapy goal progress. Asking participants to complete a PSER at the start of each session enabled the comparison of individual item scores with scores from the previous week. Given that each PSER was compiled to capture and reflect the nature of each individual participant's idiosyncratic student experience and target aspects of student life that were unsatisfactory, one negative change in just one item score was often sufficient for the author to target investigative questions accordingly and ascertain reasons for the decline very quickly. This allowed the author to adapt the session and focus the remaining time on collaborative problem resolution with the participant concerned, with a view to minimising the negative impact of the event on on-going student experience.

Arguably, it is unlikely that measures with more generalised items such as the CORE and BAI, would have proved as useful in alerting the author to these crisis incidents, given the commonly documented difficulties in generalising and central coherence associated with ASCs (e.g. Gaus, 2007,2010, 2011: Attwood, 2007). There is anecdotal evidence that in times of stress, people with an ASC may mask the fact that they are having difficulty coping and are feeling particularly anxious. Glennon (2001), a specialist occupational therapy practitioner, has found that rather than raising this voluntarily, they may 'tune out, day dream, demonstrate flat effect, or simply not respond' (p.185). Arguably, given that PSER items carried so much personal relevance to participants and were highly specific as opposed to generalised, being asked to respond to each by-passed this potential masking effect and brought out what may otherwise have remained unsaid.

Further support of the PSER's sensitivity to the student experience is demonstrated through the comparison of troughs in the overall trend of a participant's PSER scores (presented in Figure 5) with their therapy session summary for that particular week (shown in Chapter 3, section 3.4 and Appendix 7). Each trough can be traced to a critical event that occurred in the previous week. This impact on PSER scores further illustrates the vulnerability of the student population with an ASC to university study pressures. This finding has implications for future therapy design for this student population, particularly with regard to maintenance of therapy gains and means of bringing therapy participants' student experience back on track following a seemingly critical event post intervention. In addition, to recap, CBT intervention studies in the literature review, e.g. Hare (1997) and Weiss and Lunsky (2010) inform of

mixed outcomes of therapy in terms of lasting effects, which begs further consideration of post main intervention opportunity.

For this study context, the 'early warning' property of the PSER was crucial for reasons explained above, and it demonstrates the potential of 'local', personalised measures with this student population. The author as principal therapist needed more than a standardised measure with generalised items. In this situation, it was far more important to have a tool that would steer the author towards resolving or defusing crises immediately, than to demonstrate or map clinical or statistical significance.

5.4: Indicators and perceptions of CBT effectiveness

Rising trends in PSER total scores were accompanied by raised perceptions of hope and agency, changed core and intermediate beliefs and enhanced theories of mind concerning important interpersonal relationships that were central to student experiences. These raised perceptions are particularly evident in first and second year participants' Change Interview transcripts and subsequent IPA findings.

CBT effectiveness in raising hope and agency

The study demonstrates the effectiveness of the CBT intervention in enabling academic progress through raised senses of agency and hope for some participants. Narratives from three participants in this study, Chris (first year), Adam (final year) and Ewan (second year), portrayed the debilitating impact of

lack of agency and hope on academic assignment progress, arising from uncertainty, a lack of understanding, and the impact of past trauma on current educational experience. Procrastination is widely documented in anxiety disorder literature (e.g. Meares and Freeson, 2008; Clark and Beck, 2010; Shafran et al., 2010), less frequently so in autism literature, and recognised as a potential product of both types of condition.

Gaus (2007, 2010, 2011), contends that the root cause of procrastination in people with an ASC is weak non-social information processing, which impacts on problem solving-ability, time and self-management, weak self-management skills and central coherence difficulties. The resultant stress then has potential to become chronic and clinical. Drawing on anxiety disorder literature, in Clark and Beck's (2010) cognitive model of anxiety, a central tenet of anxiety is 'heightened helplessness': the 'inaccurate evaluation of personal coping resources, resulting in an underestimation of one's ability to cope with a perceived threat' (p.36). This in turn can lead to avoidance behaviours such as procrastination. Flett et al. (1995) suggest that procrastination is an avoidance orientated coping style whereby the person is either unable to or resists focusing on the cause. This seems fitting with the present study findings and supports these hypotheses.

Academic procrastination - the postponement of academic tasks to a degree that generates stress and impairs academic performance - is by no means confined to students with an ASC and is common practice amongst neurotypical students. For example, studies by Day et al. (2000) and Gallagher et al. (1992) report moderate to high procrastination problems in 32% and 52% of university

students sampled respectively. In a study of undergraduate statistics students, high levels of academic procrastination were identified during exam revision, writing assignments and weekly reading tasks. Whilst there are seemingly no published studies on procrastination involving students with an ASC, findings from a study involving undergraduates with learning difficulties (Klassen et al., 2008) found a strong inverse relationship between procrastination and self-beliefs and anxiety. Task difficulty and fear of failure were the most commonly reported antecedents to procrastination, with these three elements operating in a vicious circle to reinforce each component. This relationship was seemingly evident in the present study.

In keeping with Klassen et al. (2008) study observations and Clark and Beck's (2010) cognitive model for anxiety, narratives of all three participants for whom procrastination was a problem revolve around perceptions of hope and hopelessness regarding their academic studies. Hope is defined by Lazarus (1993), a pioneer of the positive psychology movement, as 'a wish and belief that the desired outcome could occur and anxiety that it will not' (p.99). Snyder et al. (2000) consider hope as a 'positive motivational state' derived from 'a sense of successful agency and pathways', where agency refers to 'goal directed determination' and 'pathways' refers to identification of 'workable routes' (p.749). For progress to be made towards a given goal, the person must believe they have a range of means of achieving this. Snyder et al. (2000) have found that people with high hope perceive themselves as having the ability to generate alternative pathways when the one they were following is not helpful. Conversely, people with low hope produce fewer alternative paths.

In the present study narratives we see through the identification of alternative pathways in problem-solving exercises and co-therapist support that hope is indeed raised. We also see the challenging of unhelpful beliefs of worthlessness, helplessness and lack of intelligence. For Ewan and Chris, IPA findings demonstrate how once the balance of the hope equation was addressed through the CBT intervention, their levels of procrastination dropped, and new and more helpful rules for living and studying emerged. For Adam, a maintained sense of helplessness was evident, seemingly through continuing lack of agency. It is important to consider, however, his stage of final year study and the uncertainties extending beyond student life, as previously mentioned, that are seemingly inherent at this point of academic study. Despite this, Adam (a final year participant) considered that the CBT helped him to contain his anxieties concerning his future and was deemed of benefit in this respect. His academic work was produced on time, although somewhat rushed.

A challenge documented in the literature for people with an ASC is the difficulty of identifying alternative courses of action (e.g. Gaus, 2007; Sofronoff and Attwood, 2003; Sofronoff et al., 2005). From a hope theory perspective, the challenge for the therapist is helping the person to identify alternative pathways to explore and resolve problems. The more directive approach adopted in the present study intervention in which alternative perspectives or approaches are offered for consideration and evaluation seems particularly appropriate in this respect. Findings from final year participants for whom uncertainty beyond university is a key factor in the maintenance of their anxiety - and related effects of this such as procrastination - pose a greater challenge for the therapist in this context. Suggestions for alternative courses of action that could be considered

were limited given the country's current economic recession, poor employment rate among new graduates, and increasing competitiveness amongst new graduates for available jobs.

CBT effectiveness in enhancing understanding of social situations

IPA findings are indicative that the CBT intervention was effective in enhancing participants' understanding of social situations and challenging relationships to varying degrees. Narrative comments from four participants, Freddie, Chris, Ewan and Adam, suggested developments during the course of interventions in the way in which they perceived specific relationships that were of great importance to their student experience. When comparing participant thinking shifts in this respect, what is particularly striking from IPA findings is participants' application of agency as to how to use or cope with this enhanced understanding of important others, which I will now explain.

Through both Freddie and Chris's utterances, we see what appears to be a deliberate toning or dampening down of their perceptions of peers' actions and responses towards them for protective reasons, and to safeguard their vulnerability to anxiety. Both appear to be redressing the balance of key elements in Clark and Beck's (2010) cognitive model of anxiety. This is seemingly through initially challenging and expanding their perceptions about the behaviours of important 'others' to a more helpful and acceptable level, (these being former flat-mates in Freddie's case and current and former class peers and teaching staff in Chris's case), then purposely choosing to pay less attention to these people's thoughts and feelings towards them and not actively

looking out for signs of trouble. Both Freddie and Chris consciously calculate that they will preserve their mental health and reduce perceptions of threat through this toning down strategy. In voicing new rules about relationships for maintaining this new balance, they also voice hope and agency.

In contrast, Ewan's narrative comments are indicative of enhancing his perceptions of his relationship with his parents. Through statements presented in Chapter 4, section 4.3 such as '*...I've noticed...my behaviour to others, how they feel...have started to notice how it feels to be in their shoes, if it was me and they did this, what I would feel...*', he seemingly recognises that he still does not fully appreciate the consequences of his actions in this respect. We also witness how Ewan's enhanced understanding of his parents' needs of him bring new motivation to succeed in his studies, new goals of truthfulness and trust, and new rules for the achievement of these goals.

For all three first and second year participants, these changes in perception appear to be of huge magnitude and seemingly well supported by new goals, intermediate beliefs and motivations. This is a promising outcome from the study as we understand from CBT literature that intermediate rules, attitudes and beliefs such as these maintain behaviours (Beck, 1976, 1995).

The narrative statements of Adam, too, are suggestive of changes in his perception of his difficult relationship with his work-placement supervisor. We witness how this was achieved through him actively seeking the opinions of important others on alternative interpretations of his supervisor's reciprocal behaviours, and evaluating these in therapy sessions. The resultant shift in perception is seemingly to a lesser degree, but nevertheless deemed helpful by

Adam in reducing his anxiety. Unlike the first and second year participants, Adam's only emergent rule for this relationship was simply to endure it.

Collectively, IPA findings suggest that CBT interventions of this nature have the potential to enhance the perceptions of participants with an ASC about important others, and illustrate a willingness to engage in this learning. This found willingness is in keeping with Beardon and Edmunds (2007) study finding that support in developing better understanding of neurotypicals' behaviour and facilitation in how best to respond, would be welcomed by student participants with an ASC. However, as ASC relationship literature informs us, successful interpersonal relationships are largely dependent on the willingness of both parties to seek greater understanding of each other (e.g. Beardon, 2007, 2008; Hacking, 2009a; Martin, 2008). Study findings, particularly those regarding Chris, Freddie and Adam, illustrate the challenge of this when it remains a one way process in a university setting, with all effort coming from students with an ASC to learn how to read and better interpret the behaviours of important neurotypical others.

This finding leads to an important consideration for future CBT research with adults with an ASC: should CBT interventions seek to include opportunity for participants to develop the skills and courage to educate their neurotypical counterparts in important relationships on what it means to have an ASC and the behaviours they would find helpful from them, if they so choose? Whilst this option is not covered in the adult CBT studies in the literature review, according to hope theory (Snyder, 2000) this could offer advantages in generating a further alternative pathway for resolving tension within relationships and a

greater sense of agency. It may also partly redress the social/medical model tension concerning psychotherapeutic interventions for people with an ASC that is felt by some writers with an ASC. Andrews (2006), for example, voices strong distain for 'normalising therapies' to 'enforce conformity' within the predominantly neurotypical society. In another ASC narrative however, Holiday-Willey (2006) forewarns how self-esteem may be undermined by peers and wider society 'who aren't quite ready or willing to share our precious gems' (p.22). For Holiday-Willey, being able to act outside her comfort zone and make a disclosure of this nature requires a strong sense of self-confidence. Exploring the option of a disclosure pathway in future CBT efficacy studies for the adult population with an ASC, would therefore need to be considered carefully alongside self-confidence enhancement.

CBT effectiveness in changing core beliefs

Through Change Interview transcripts and subsequent IPA, we witness positive changes in participants' core and intermediate beliefs which they attribute partly and sometimes wholly to the CBT intervention. These were particularly evident in the three participants who were in their first or second year of study.

Freddie perceived an increase in his sense of self-worth during the course of the intervention, from someone of no or little worth to someone a 'little more valuable'. Dubin (2009), a writer with an ASC, contends through personal experience that the negative core beliefs of people with an ASC stem from five statements including 'people cannot be trusted' and 'I am inherently worthless/I have worth only when I have the approval of others', and 'I cannot function

adequately in the world' (pp. 90-91). For Dubin (2009), mistrust arises from bullying and vulnerability, leading to a change from being overly trusting of others to less trusting. Dubin also contends that a sense of worthlessness arises through the need to comply with the needs and wants of others, and a fear of rejection if unable to meet these wishes. For Freddie, the rise in sense of worth was accompanied by an enhanced sense of agency to pursue alternative student relationships as detailed above, and how much to 'buy into' other people's perceptions and be trusting of them. The intervention for Freddie seemingly offered a means of re-calculating these balances to something that was more comfortable to him personally and facilitated a more positive student experience.

Chris perceived an even more dramatic shift in self-identity through the therapy from someone who is 'stupid' to someone with strong-problem solving agency. For Dubin (2009), Chris's former core beliefs depict helplessness, incompetence and not being able to cope with adult responsibility.

From the narratives of Adam and Bruce, (final year participants), we can deduce core beliefs pertaining to impaired autonomy and performance similar to those that Chris initially held. However, the intervention seemingly had less impact on them than for Chris, with both requiring stronger proof to the contrary for cognitive challenging purposes than was facilitated in therapy. For Adam, the contrary evidence he felt that he needed was actual employment and a high degree classification. Bruce, too, needed to confirm his autonomy and performance abilities in the employment field. Both participants appeared to have additional and perceivably more powerful goals exceeding the scope of

the intervention, and high awareness of the competitiveness of the world beyond university and student living. The therapy did not provide sufficient opportunity to seek wider confirmation of their likely acceptance by the wider social world of employment. In Bruce's case, this was despite the inclusion of host university Careers Service staff in role play activities as part of a graded exposure exercise aimed at raising his confidence in employment interview settings. With full-time employment statistics for adults with an ASC being estimated as low as 15% (Redman et al., 2009) and personal histories of low self-esteem and self-worth, their concerns were not surprising. The therapeutic needs of these final year students were therefore very different to first and second year students in this respect. Stage of study and associated goal types therefore merit consideration in future intervention design.

In the current study, containment of anxiety in final year participants sufficient to enable academic progress was the primary outcome. This may be a more realistic goal at this level of study and with the time restrictions encountered. It is here where "newer wave "CBT approaches may be of benefit, such as acceptance and commitment therapy. This is rooted in mindfulness, where the focus is on accepting but not denying intrusive and difficult thoughts and the feelings these generate. Instead of engaging and mentally challenging these intrusive thoughts, the focus is simply to acknowledge the occurrence of these and stay focused on the present (Harris, 2009; Eifert and Forsyth, 2005). Whilst there are seemingly no published research studies as yet on the use of mindfulness and the value of its use for people with ASC, Dubin (2009) argues the merits of people with an ASC utilising this technique to bypass anticipating or replaying events that are not in real time.

5.5: The power of metaphor and drawings in facilitating change

IPA findings are indicative of the combined power of metaphor and drawings in driving the reductions in participants' anxieties, as detailed in the above three subsections. 'Drawings' in this context refers to flip-chart diagrams and tables populated with words that were developed collaboratively with participants.

Collaboratively developed metaphor proved a useful catalyst in the socialisation to CBT process for both pilot study and main study participants. Difficulty in grasping abstract principles and the need for concrete examples is well documented in ASC literature, for example Attwood (2007) and Gaus (2007). Lakoff (1993) contends that metaphor has the power to convert abstract 'target' ideas i.e. the target domain, into a concrete 'source'. This is illustrated in the pilot study within the present study where the target idea, (in this case the cognitive model), was likened to computer coding - something tangible that the participant was very familiar with. HATQ feedback from participants and feedback from the pilot study illustrate the potential of collaborative metaphor to accelerate the speed at which participants with an ASC grasp the cognitive model and utilise it effectively. In the light of Weiss and Lunsky's (2010) study finding that adult participants found these aspects difficult to grasp, the use of metaphor with adult participants with an ASC at this early stage of intervention merits further investigation. This latter point will be expanded on in Chapter 6, section 6.1.

Metaphor as a shared language

It is noted in the literature that metaphors have the potential to become a shared reference point that enable clients and therapist to speak and explore meaning through the same language, and thus strengthen the therapeutic bond (e.g. Stott et al., 2010). This was indeed the case with five of the six main study participants and the pilot study participant in the present study. The author's careful listening to participants as they tried to explain and make sense of their student experience facilitated the collaborative development of metaphors that were sometimes common, but always with highly idiosyncratic content and fine detail. Examples from Peter and Ewan, presented in Figure 2 and Figure 3 demonstrate idiosyncratic application, development and utilisation of the same computer programming metaphor to enhance understanding and application of Beck's cognitive model (Beck, 1974). Note, for example, how Peter's metaphor is populated with terms such as coding loops (elements of computer coding that keep feeding back into each other in a cyclical, non-progressive manner), payloads (behavioural outputs) and coding misfires (where elements of coding fail to do what is required), whilst Ewan's is populated with hackers (his siblings), firewalls (his parents), motherboards and illegal viruses.

Collaborative drawings proved useful in supporting metaphor in the development of shared language throughout the interventions. For example, in the making of Figure 4, the participant, Ewan, likened an angry episode of behaviour to a cyclone. Once the author drew a picture of a cyclone developing and subsiding, he then populated this with his own words. The drawing lent itself to the identification of a timeline of antecedents and ensuing thoughts and

behaviours in an interesting way that captured Ewan's interest, attention and comprehension. It also illustrates a means of utilising Taylor and Novaco's (2005) 'How Anger Works' chart and similar published materials for child interventions in a more adult way.

Stott et al. (2010) summarise three hypotheses on the usefulness of metaphor in therapy. These are firstly that metaphor lends itself to explaining concepts that would be difficult to put into words without the use of metaphor. Secondly, it is an efficient means of communication that enables a 'rich and complex configuration of information structure, which literal language would not permit' (p.15). Lastly, it enables portrayal of the vividness of their lived experience. These three attributes were clearly evident throughout the present study. The fact that participants drew widely on the metaphors that we had developed collaboratively during therapy sessions in Change Interviews, is indicative that these were of continuing value to them post intervention.

Metaphor as a means of monitoring and evaluating progress

Metaphor proved a highly useful tool in evaluating the effectiveness of CBT interventions, mapping and exposing the process of changes in this study, and also for eliciting participants' personal experiences of their respective interventions.

Participants spoke about their overall therapeutic intervention experiences in positive terms. A central metaphoric theme that participants utilised in their narratives pertaining to this theme was that of a journey. The metaphor of a

journey is frequently used in psychotherapy (Tay, 2011) to conceptualise the therapeutic process by both clients and therapists, and it is one of the most commonly used metaphors when talking or thinking about relationships (Sullivan and Rees, 2008). Tay (2011) suggests that in the psychotherapeutic process, the journey is the psychotherapy and the therapist is the 'guide' who helps clients to choose 'appropriate destinations' and 'overcome obstacles, but the road to recovery must ultimately be traversed by patients themselves' (p.13). Given that a central aim of CBT is to transform meaning to help clients progress towards their goals and help them move towards a more helpful and adaptive perspective of themselves, others and the world in which they live, Stott et al. (2010) contend that metaphor should make a good 'travelling companion' (p.14).

What is striking in the therapeutic 'journeys' undertaken by participants in the present studies is the idiosyncratic nature of these, the personalised elements and meanings grounded in lived experience that each carried, and also the use of multiple metaphors to portray these. Chris and Freddie, for example, plotted their journey progress through eras; these being discrete periods of time in which specific events or behaviours occurred. Chris then extended his to music tracks on a compact disc, with each era representing a discrete but orderly track. Freddie's journey was also framed as a military operation, based on a strategic plan, with the therapy sessions the basis for formulating the plan and himself as the implementer of the plan. All these four metaphors had been developed and modified during the course of their respective interventions. It has been suggested that a change in metaphor through new insight or knowledge is representative of a change in lived experience (e.g. Sullivan and

Rees, 2008). Through the narratives of both participants, we sense perceptions of leaving past unhelpful situations and associated behaviours and thoughts behind and refocusing on the present and future.

Original therapeutic goal endpoints have seemingly been extended by the participants themselves, suggesting a developing sense of agency and recognition of alternative pathways. This was captured in some instances by metaphor. For example, Ewan's initial goals of regaining his self-confidence and breaking an unhelpful cycle of behaviours that were marring academic study progress have developed into a 'journey of self-discovery', on which he is part way.

Ewan's narrative statements are laden with metaphor. His current self-identity metaphor of being at the chrysalis stage of metamorphosis in becoming an honest person is vastly different from the 'ghost' metaphor he uses to portray how he believes he would be experiencing himself had he not participated in the study. This too is reflective of Sullivan and Rees' (2008) observation that a change in metaphor frequently accompanies a change in real life. Grove, a counselling psychologist contends that people don't seem to simply have metaphors; it is as if they become these metaphors. If we apply these theories to Ewan's narrative, we can sense through his rules accompanying his current metaphor that he does indeed seem to be living this (Lawley and Tompkins, 2008). This sense of living the metaphor extends to the two other first or second year participants, Freddie and Chris, who seemingly became the military strategist and a new 'music track' (i.e. song) on a compact disc of life respectively.

Additional powers of drawings in change processes

Four additional powers arising from the author's use of drawings in the change process emerged through Change Interviews and subsequent IPA and HATQ feedback. The first of these emergent properties is the impact that the drawings had on broadening participants' perceptions about important others, and the reciprocal value of this to both therapy participant and therapist. For example, Ewan's reflective comments on the use of drawings suggest these facilitated developments in his perception about his relationship with important others. Dawn's account however, focuses on the reassurance the drawings provided that the author's understanding about the way she was experiencing critical relationships was in keeping with her own. This illustrates Oster and Crone's (2004) view that drawings can enhance the therapeutic relationship through development, demonstration and acknowledgement of shared understandings. In the light of Beardon's (2007, 2008) and Hacking's (2009a, 2009b) social model orientated views that poor understanding of others' perspectives is a two way problem between neurotypicals and people with an ASC, drawings of this nature provide a promising means of exploring and redressing this balance during therapy.

A second property of drawings was the value of these in choice mapping. Consistent with Gaus (2007), Paxton and Estay (2007), and Martin's (2008) views, choice mapping was useful in raising participants' awareness of the range of behavioural and strategic choices available to them to solve a given problem, and more importantly in facilitating awareness and contemplation of the consequences of each option. Study findings were also consistent with

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Oster and Crone's (2004) observations that drawings have the potential to get across the message to therapy recipients that the onus for any therapeutic change is on them, rather than the therapist. Whilst Oster and Crone (2004) write largely in reference to child client produced pictorial drawings, participants' comments suggest that their views translate to the more adult, largely word-based diagrams that were produced collaboratively within this study.

A third and unexpected attribute of drawings in the study context was that of perceived release. From Chris's interpretive account, drawings facilitated the release and resolution of his past traumas. When captured and contained in drawings, he didn't need words to make reference to these; as demonstrated in the Change Interview, he could simply point to them. The drawings therefore had an additional property of further distancing him from painful past trauma. This additional potential of drawings and other visual materials is recognised within the ASC CBT literature. Anderson and Morris (2006), for example, acknowledge the possibility for distancing the individual from 'uncomfortable personal interaction' on painful topics (p.295) through these means.

Participants' narratives on the value of the drawings produced in therapy sessions suggest a further and final attribute. Seemingly, the drawings provided a means of compensating for weak central coherence. To recap, central coherence is the ability to integrate pieces of information to get an overall gist of the bigger picture (Baron-Cohen, 2008; Ozonoff et al.,1994), and it is hypothesised as being an information processing weakness associated with ASC (Frith,2003), particularly at the conceptual level (Ozonoff et al.,1994). Recording of all proceedings of each session on flip chart paper offered

participants a complete and accessible account of the therapeutic process and comprehensive accounts of their situations.

These properties of drawings emerging from participant accounts confirm the positive value of the detailed format of drawings collaboratively produced in the study interventions.

5.6: Personal cost and acceptability of CBT intervention

Change Interview and subsequent IPA findings provide detailed insight into the personal costs that participants were prepared to endure in order to enhance their student experiences.

As demonstrated in IPA findings, working through difficult situations in therapy sessions and reflecting on this between sessions was emotionally painful for participants. In Ewan's account, we can deduce lingering pain through its laboured delivery, accompanied by sighs. Through his account we gain a sense of the magnitude of the emotional pain he endures when coming to terms with his improved theory of mind on his difficult relationship with his parents.

Chris's and Freddie's accounts portray physical and sensory dimensions to the emotional pain experienced. For Freddie, the pain experienced is likened to the physical swallowing of a bitter pill, and Chris experienced this pain through sensations of nausea. This begs the question of whether these seemingly physical or sensory accounts of pain are simply metaphor or were indeed experienced in a more physiological form.

Clark and Beck's (2010) cognitive model for anxiety accounts for this apparent cross over - or intertwining - of emotional and more physical pain through an exaggerated appraisal of potential personal harm that trigger the body's primal threat/response defence system. This is deemed to heighten autonomic arousal, which can result in physical symptoms of nausea, chest-tightness and pain and heart palpitations. Social pain theory suggests that this arousal has evolutionary roots whereby being separated from important social groups or individuals posed a critical challenge for survival, hence an early threat warning mechanism was needed (MacDonald and Leary, 2005). Evidence is accumulating through neuro-imaging literature that physical and social pain share neural and computational mechanisms (Panksepp, 2003; Eisenberger and Lieberman, 2004) and have a number of correlating variables (MacDonald and Leary, 2005). Correlates include perceptions of social support, where people with perceptions of low social support have been found to experience greater physical pain, and linguistic expression, where similar words and phrases are used to describe pain types, for example 'broken hearted' and 'wounded' (p.206). MacDonald and Leary (2005) postulate that both forms of pain lead to increased defensiveness and caution and anxiety.

If we consider the above theories in the light of autism literature regarding heightened sensory perception, then the physical and sensory experiences of pain described by present study participants seemingly gain further credence. There are numerous self-testimonies from people with an ASC of synaesthesia, which is the confusion of sensory information, where information arriving through one sensory channel may be perceived in terms of another (e.g. Mukhopadhyay, 2008; Williams, 1994). Arguably, it may be plausible that this

could enhance or make people with ASC more prone to the shared effects of the neural and computational mechanisms identified by Panksepp (2003) and Eisenberger and Lieberman (2004). However, there does not seem to be any published research on these shared effects that incorporates ASC.

These theories clearly support Chris and Freddie's reports of physiological pain and physical reduction processes. What is striking is that despite this, they chose to endure the pain they experienced in pursuit of an enhanced student experience. So too did Dawn and Ewan. While the accounts vary in relation to the type of pain experienced, all four participants were experiencing threats to social inclusion from challenging relationships. Participants' willingness to attend therapy knowing that this may prove painful may be explained by MacDonald and Leary's (2005) suggestion. These authors draw on social pain theory to suggest that social pain experienced within an important relationship can motivate people to seek help from trusted others or seek new relationships. It seems reasonable to deduce from this that the therapy intervention provided or represented a safety mechanism that may otherwise not have been available. Elsewhere within the Change Interview transcripts from these participants, all four attributed pain reductions experienced during their respective interventions to the therapy, and considered that the perceived benefits outweighed the pain experienced. This suggests that the pain initially experienced by participants before resolution is an acceptable and desirable element of this form of therapeutic practice.

5.7: Location, accessibility and versatility of the CBT intervention within a student enabling/disability support service setting

Study findings raise a number of professional issues regarding the timing and location of psychotherapeutic support for university students with an ASC location, and also post-intervention care. The study also raises issues about the professional qualifications and experience required for the delivery of CBT in this context.

Taking firstly the issue of timing, given the nature of problems that arose for participants leading up to referral to the study intervention and during the course of therapy, and the strong negative, instant impact these had on academic progress and their wellbeing: early referral is needed. The earlier the referral in the academic year, the greater the opportunity will be for addressing problems with self-management and behavioural differences in a more proactive way, and for minimizing the potential for anxieties to escalate towards clinical levels. This leads to the second professional issue of location.

As revealed in the ASPECT report (Beardon and Edmonds, 2007), and the Madriaga transcripts (Madriaga et al., 2008), ease of access to counselling or psychotherapeutic support within universities appears mixed. The ASC knowledge of the provider of the therapist / counsellor is also variable. The present study demonstrates the value of locating psychotherapeutic interventions within a service that is well informed and experienced in supporting students with an ASC holistically, where information can be shared amongst co-workers, who can then quickly refer to the therapist and support the student in the achievement of therapy goals.

Anderson and Morris's (2006) recommendation to involve key workers as co-therapists was easy to implement through my role and location within the Student Enabling Centre, which is housed within Student Services. Mentor and specialist tutor baseline roles blended well with work planning and organisation activities and wider activity scheduling, practising social skills and facilitation of these *in vivo*. What became apparent in the planning and execution of Bruce's intervention was the opportunity within the host university's Student Services for wider collaboration in CBT goal achievement. This was realised through inclusion of Careers Service staff in role play activities, as the graded exposure exercise escalated. Careers staff were eager to be involved and co-operate with the self-rating tools and procedures that the author had developed collaboratively with Bruce. Had time permitted, there was potential to extend the graded exposure exercise to the Service's industry contacts. From Bruce's intervention, the author recognises the potential to extend this collaborative approach to other student services along similar lines through her position and location.

We see in Chapter 2, section 2.8, that in the Bauminger (2002, 2007a, 2007b) and Lopata et al. (2006, 2008, 2010) non-clinical setting studies, principal therapists were teachers, psychology and education graduates, rather than qualified and experienced psychotherapists. This seemed appropriate with the highly manualized and tightly standardised nature of these interventions, where there is no indication of therapists going "off-script" or the potential to do so. Interventions and intervention goals were pre-determined and uniform. From the range of issues arising and the often reactive and changing nature of the therapeutic interventions in the present study, the author contends that

interventions in this context require a qualified and experienced psychotherapist with a good awareness of ASC, with access to supervision from a more experienced BABCP accredited CBT practitioner. To illustrate this point is the example of Chris. As his problems unravelled during the course of the intervention, it became clear that a post-traumatic stress disorder (PTSD) approach was needed in order for him to progress his goals. Arguably, this is not beginner's territory, and in the study context, there is much potential to take the beginner/inexperienced therapist beyond basic therapy models and out of their comfort zone, especially regarding co-morbidity issues.

The final point in this section concerns after-care. We see in the literature review how, in some studies, therapy effects dwindled in post intervention months (e.g. Hare, 1997; Weiss and Lunsky, 2010). In the first semester of the academic year following the present study intervention, two of the three formerly first and second year participants experienced further anxiety-provoking situations. This may be reflective of generalisation problems associated with ASC: difficulty generalising and applying information from one situation to another (Attwood, 2007) or of insufficient length or content depth of previous therapeutic interventions. Referral for further sessions facilitated through participants' respective mentors and through their own previous knowledge and experience in CBT principles and techniques enabled quick resolution within two to three sessions. If the problem largely concerns ability to generalise skills from therapy in such a fast moving and changing environment as university life, then opportunity for "top-up" sessions needs to be factored into holistic support provision. Consideration could also be given to a more proactive approach

through offering "top-up" sessions at the start of each academic year to remind and reinforce prior CBT outcomes.

5.8: Study limitations

There are several limitations of this study that are compatible with its early stage of investigation. Limitations presented are in accordance with the 'Evaluative Method for Determining *EBP* in Autism' for single subject research (Reichow et al., 2008).

In terms of primary quality indicators, specific diagnostic information of participants' ASC was not provided. Whilst some aspects of the intervention were documented for replicable precision, due to the developmental and exploratory nature of this preliminary study, others were not.

Student experience was the only dependent variable employed in the study so correlations could not be sought between therapy outcomes and measured co-existing factors such as anxiety. This was a limitation on quantitative result relevance. As detailed in section Chapter 3, section 3.3, the PSER, (the dependent variable in this study), was not consistent for all participants; and baseline measurements were only taken once, so stability trends could not be ascertained. However, given the urgency of some participants' situations, delaying therapy to allow for this was not considered ethical or practical in the present study.

The small sample size was a further limitation. Having only six main study participants limited opportunity to compare and contrast data between

participants. In a different respect however, the small sample size facilitated deeper analysis of the data collected within the available timeframe of this study. Student sampling opportunity was limited by the size of the ASC student population within the host university, this being 35 members in total at the time, and further restricted to those who were engaging with tutor and mentoring provision. Whilst this could raise questions as to the adequacy of the range of views voiced in the study (Yardley, 2008), the diversity of student participants in terms of issues that they wished to be addressed through CBT intervention should be considered. Although details of chosen course of academic study are deliberately omitted in this thesis so as to protect identity, student participants were from a variety of courses and academic schools, cultural and social backgrounds, and differed in their living and social support arrangements. The six main study student participants and the pilot study participant comprised a 20% representation of the host institutions' student ASC population at the time of the study.

Moving on to the main quantitative measurement tool, in its current form, the PSER has a number of weaknesses, perhaps the largest of which - from a research efficacy perspective - concerns significance of results. Whilst pre-post intervention scores demonstrate percentage rises in student experience ranging from 10.5% to 46%, the lone use of the PSER is problematic on two counts. Firstly is the issue of significance, and secondly is the issue of sensitivity over time.

 As a non-standardised, "local" and highly individualised measure, used in the absence of a comparison group, it was not possible to deduce either

experimental or clinical significance from total scores. By 'local', the author means a measure that has been specifically designed for a particular study by the researchers concerned. In other studies that include the use of a local, non-standardised measure such as Lopata et al. (2010) and the Sofronoff and Attwood, (2003) and Sofronoff et al. (2005) studies, measure items remain consistent for all participants or other respondents and are used alongside standardised measures for that particular dependent variable or different ones and against control groups. This enabled correlations and other forms of statistical relevance to be sought either between scores from different measures or from the same measure but between participant groups.

Given that rising and fluctuating anxiety was a central feature of participants' student experience in the present study, a standardised measurement tool for anxiety could have been used for comparison. This would also have offered some measure of clinical significance for this particular variable. However, it is noteworthy that many of the standardised tools that are commonly used to measure anxiety are neither of British origin nor based on British normative data. The Beck Anxiety Inventory (Beck and Steer, 1990), for example, was norm- referenced on the American general population. We cannot therefore take for granted that score bandings are directly transferable across the two general populations in terms of clinical significance. Furthermore, there is no evidence that the score bandings provided will directly equate to people with an ASC, British or American. As yet, there does not appear to be a standardised, norm- referenced tool for measuring anxiety in British adults with ASCs that can capture experimental or clinical significance.

Next to consider is the sensitivity of the PSER. Whilst there are clear merits in its ability to alert the therapist to crisis incidents as these occur, its overall sensitivity over time is questionable. Chris's profile of PSER results in comparison to IPA findings are a case in point. The overall rise of just 12% in student experience between first and final PSER totals does not capture the magnitude of change in Chris's perceptions of himself as a student, his newly rekindled will to study, his scope of agency and hope for the future as reported in his Change Interview and subsequent IPA findings. Chris's overall increase in PSER scores at 12% was the second lowest identified, yet seemingly incongruent with IPA and Change Interview findings. This raises the question of reliability amongst informants with an ASC when using quantitative rating scales, particularly those areas between the two extremes of a particular parameter / inventory item – the "grey areas" as opposed to clear cut all or nothing. This notion is compatible with the 'black and white' thinking styles commonly observed with people with an ASC (Gaus, 2007), and the recurrent lower self-assessments observed in the literature review studies by child participants with ASCs in comparison to their respective parents observers. With these factors in mind, the author proposes that if used for future research, the PSER should not be used in isolation. It should continue to be used alongside qualitative measures such as Change Interview data and IPA of this that seem better suited to capture "grey areas" and contextualise self-rating scores.

A further limitation of the PSER as utilised in the present study is its lack of uniformity between participants. Participants shared some common intervention goals; however, not all items pertaining to each shared goal were

common to each participant's PSER. This variation within shared goal items therefore prevented direct comparison of results for particular goals. For future development of the PSER and indeed the present study, the challenge therefore is balancing the need for a measurement tool that is sufficiently sensitive to capture the idiosyncrasies of individual participants, with the need for results that lend themselves to statistical analysis to assess efficacy in a more meaningful way. A compromise might be to standardise goal PSER items, so each goal has a consistent set of associated items. This would allow better comparison of specific goal outcomes between participants, whilst retaining idiosyncrasy through goal mix.

The number of CBT sessions received by main study participants ranged from six to eleven sessions, with six sessions being the most frequently received. This latter figure matched the usual number of sessions offered by the University's Counselling Service. However, it fell short of NICE's optimal range recommendation for anxiety in adults in primary care settings of sixteen to twenty sessions or alternative of eight to ten hours brief integrated design supplemented with self-help materials and appropriate focused information and tasks (NICE, 2007). Four of the six participants were recruited to the intervention after the first semester, thus limiting the number of sessions that could be offered given the one academic year timeframe for the study. This meant for some participants, particularly Chris, that not all therapy goals could be covered within the time available.

Changing focus now to the qualitative aspects of the study, a further point of note and questionable limitation is respondent validity, given that the prime tool

of analysis in this study is IPA. As mentioned in Section 3.6, student participants did not have the opportunity to comment on the case within theme generic analysis as this proved unfeasible. Even if the intervention timeframe had been less restrictive or host institution policy allowed contact with student research participants after academic course completion, the appropriateness and value of respondent validation in the context of this study are debatable. It has been suggested that such an exercise may prove distressing to respondents, particularly where painful or embarrassing memories are rekindled (Bloor, 1997). Furthermore, it is recognised that respondents in some contexts may have difficulty understanding and relating to the analysis, especially if they are unfamiliar with the theories and methods that underpin this and the analysis highlights contradictions and differences between respondent accounts (Yardley, 2008). There are also issues of stability and relative importance. Bloor (1997) points out that the contexts in which respondents view a researcher's analysis are subject to change, so responses to such accounts are 'provisional and subject to change' (p.45). This view is supported by Larkin (2012) who questions the helpfulness of asking respondents to revisit the research context and content if they have moved forward in their lives and ways of thinking. Furthermore, in generic analyses, there may be imbalances in the degree of importance that the researcher and individual respondents attribute to particular issues. This has the potential to result in discrepant accounts between the two parties (Mays and Pope, 2000).

The above views seem particularly pertinent to the present study given the potential for people with an ASC to struggle with generalisations and abstract material. On numerous occasions during the course of the interventions most

of the participants appeared to have difficulty revisiting or relating to former personal crisis situations that were no longer current that were seemingly of huge importance to them at the time. This was also evident in two of the Change Interviews, where participants (Freddie and Dawn) were reluctant to respond to questions about traumatic past incidents and painful aspects of therapy, but very willing to talk about current and more positive events and trains of thought. To ask participants to revisit the material gleaned yet again post analysis, albeit in a more diluted or concentrated, potentially confusing and sometimes disguised form, and comment on this arguably may not have been helpful to the student participants or research process. Given that a key aim of CBT is to assist a person to move forwards in their life, it is questionable how helpful it might be to take them back through the respondent validation process to more difficult times, thoughts, feelings and behaviours. This may be all the more pertinent given that the overall aim of the CBT intervention was to enhance student experience.

Moving finally to the broader research context, consideration must be given to the complexity of the study, particularly the duality of my role throughout the study and the variety of participant groups involved and relationships between these. My role in the study could be likened to that of a playwright, who directs, orchestrates their play whilst simultaneously playing a leading role as an actor within that play and refining scripts as the play unfolds. The complexity of the research, coupled with my management and practitioner status within the host institution's Student Enabling Centre - the research setting, offers potential for bias, coercion and collusion.

Taking firstly the potential for coercion, this concerns student and co-therapist participants as well as my own roles in the study. To recap, student participants were self-selected volunteers recruited through their respective mentors and specialist tutors, who in turn were invited to participate as co-therapists by the author.

The potential for perceptions of coercion concerning the my dual roles within the study and host institution at this point was examined in the Change Interviews through the question 'what has it been like for you to have been involved in this research' (see Appendix 1). Student respondents were unanimous in their reported perceptions of me, this being a fellow student who was eager to help current and future students with ASCs and pave the way for better student experience. They viewed me primarily as a research student rather than member of staff, appeared keen to help achieve my aim, and perceived the potential for reciprocal benefits for themselves and among the ASC student population. From a CBT perspective, arguably, participation in the research offered potential for enhancement of core beliefs concerning perceptions of low worth. As noted in CBT and autism literature (e.g. Dubin 2009; Gaus 2007), low worth is a common core belief amongst people with an ASC.

Despite the mutual benefits described above, it is questionable if my dual roles in the study and prior familiarity with some participants through my primary role within the host institution's Student Enabling Centre may have had a bearing on participants' self-reports in both HATQ feedback and Change Interviews. The study did not facilitate independent measures to test for this effect. This raises the issues of truth and willingness to be critical on the part of student

participants in the Change Interview and also among people with an ASC in general. With regards to present study student participants, it is questionable if any advantages gained through the rapport built with me prior to and during CBT interventions were lost through students feeling less able or willing to be critical of the study. However, I did not perceive the latter in Change Interviews. Indeed, respondents reported experiencing pain during CBT sessions and appeared very analytic in terms of perceived attributions to the therapeutic intervention per se.

Relating the above points to autism literature, it is interesting to note study findings that neurotypical adults are more disposed to lie about themselves in conversation than people with ASC (Feldman et al., 2002) and have less difficulty in deceiving others (Barbaro and Dissanayake, 2007). It has been suggested that adults and children with an ASC have a greater commitment to honesty and telling the truth than to the thoughts and feelings of recipients (Attwood 2007). This often appears to be driven by theory of mind weaknesses and rigid adherence to social rules regarding deception (Attwood 2007; Howlin, 2004).

Altruism was a common feature amongst student and co-therapist participants. In my repeated checking of co-therapist participants' comfort in taking part in the research, the main reason voiced collectively for participating in the research was the desire to assist their respective student counterparts in achieving a better student experience and academic course outcome. Relationships with student participants leading up to enrolment to the study were therefore seemingly based on empathy and desire to help. From co-

therapist accounts, any sense of obligation to participate was if anything on the student's account, rather than on mine. As mentioned previously, co-therapist participants were free to exit the study at any point with no consequence to future student allocation, as stated in the 'Participant Information Sheet for Co-therapist Participants' (see Appendix 4).

Last to consider in this complex web of relationships and roles is the efficacy and integrity of the interrelationship between me and my BABCP accredited clinical supervisor. A potential limitation to the study was my relatively novice CBT practitioner status, hence this person's wealth of knowledge and experience in autism and CBT were essential to me as both researcher and practitioner participant. In both pilot and main study interventions the clinical supervisor provided a safety net when I "unearthed" and had to deal with difficult or traumatic incidents such as those experienced by Chris, and for when struggling to find ways forward with particular participants' situations. With suitable prompts, I was able to formulate, talk through and role-play intended actions with the clinical supervisor before conducting these for real. The clinical supervisor also advised on risk management with student participants. On the latter point for example, she recommended an extended next CBT session when revisiting a past traumatic incident with Chris so that I could fully deal with this within the session and not leave him in a troubled state of mind between sessions.   In the spirit of CBT and as mentioned previously, the clinical supervisor's key supervision techniques were guided discovery through Socratic questioning and challenging my thoughts and intended actions, and referring me to published CBT models when deemed helpful. At no point did she offer solutions per-se. From a researcher's perspective, inclusion of the clinical

supervisor offered a crude means of monitoring construct validity in the study

interventions in terms of CBT principles and practice: i.e. a means of checking

that what was being operationalised in therapy sessions and my perceptions of

this was indeed CBT.

Chapter 6: CONCLUSIONS AND SUGGESTIONS FOR FUTURE RESEARCH

6.1: Conclusions

Literature review findings imply that this study is the first of its type. The study extends the application of CBT research for people with an ASC from a predominantly clinical, child orientated arena to a naturalistic setting in a higher education institution with adult student participants. It demonstrates a novel way of providing a psychotherapeutic intervention for students with an ASC whose student experience is being compromised by the anxiety generated through trying to "fit in" into a predominantly neurotypical institution and cope with the everyday challenges this presents. Whilst CBT is primarily considered a clinical treatment, in keeping with social model of disability thinking this study aimed to identify individuals' barriers to an acceptable and desired student experience, and then sought to remove these through CBT. Arguably, the study surpassed this aim. The intervention for most of the main study participants may have been the difference between success and failure in terms of academic work completion and coping with the social aspects of student life.

In keeping with the NICE (2007) recommendations for brief CBT interventions for the management of anxiety in adults, present study interventions possibly surpassed NICE requirements for an integrated, structured approach through the highly targeted and ecologically viable approach taken. Tasks were largely based on "live"/real problems, with genuine personal consequences and personal importance. Self-help materials in the form of composite diagrams to aid central coherence, problem-solving, and broaden perceptions about

important relationships were collaboratively designed and utilised, and in an age appropriate manner.

Despite not always meeting NICE's (2007) suggested brief intervention duration of eight to ten hours, CBT interventions for all six main study participants demonstrated improvements from baseline PSER scores to final scores. This implied improvements in student experience, as defined by individualised PSER goals and items. In its current form and as previously raised, the most useful application of the PSER was, however, that of alerting the author as principal therapist to crisis incidents and necessary agenda alterations to deal with these. This was an unanticipated but highly useful emergent property of this initially intended quantitative tool.

Change Interviews and subsequent IPA provided the most useful data in terms of evaluation of the effectiveness of CBT interventions. These revealed participants' perceptions of change and ability to move forward. Unlike the large, primarily quantitative based studies detailed in the literature review section of this study, these qualitative techniques enabled the author to capture the fine detail of what study participants consider the key indicators of moving forward with their current lives in a more positive way. The only way to understand their idiosyncratic views on this is to actively seek opportunity to elicit and listen to these, which is precisely what the Change Interview and IPA elements of the study facilitated. Resultant qualitative data informed that interventions were both acceptable to participants and perceived to be of value in terms of pain cost / benefit effectiveness, and drew out the unique ways in which this was realised. IPA exposed participant perceptions of the CBT

intervention effectiveness subtly and idiosyncratically through narratives of raised agency, hope, changed intermediate beliefs and rules for living. Narratives imply that the therapy also dislodged unhelpful core beliefs and revised perceptions of challenging interpersonal relationships to versions that were more helpful and easier to live with. These are core components of Becks' (1974) cognitive model and Clark and Becks' (2010) cognitive model of anxiety, coupled with hope theory (Snyder, 2000) and aspects of autism theory. These outcomes were particularly evident in the Change Interview accounts of participants who were in their first and second year of study, but less so in those of final year students. Given that the ultimate aim of therapy is to steer clients towards self-change through increasing their self-confidence to do so (Tay, 2011), these first and second year participants appeared well on course by the end of therapy. Final year participants, however, perceived their respective CBT interventions as being successful in containing the potential escalation of anxieties that extended to uncertainties regarding degree classifications and future employment. All participants attributed these improvements at least partly and mostly wholly to the intervention.

Participant academic courses of study and interests provided a rich source of metaphor. This study demonstrates the potential of metaphor with HE students with an ASC beyond a shared language and means of self-expression. With most participants' apparent ease and enjoyment of utilising metaphor, the study demonstrates the potential for metaphor to be an additional evaluative tool in its own right in the study context. If, as Stott et al. (2010) suggest, a change in metaphor is indicative of a change in life, then there is potential to establish a baseline metaphor and monitor its development during the course of CBT with

this student population. The study also demonstrated the potential for metaphor to be an effective catalyst for study participants in grasping the principles and applications of cognitive models of anxiety, and how this can be reinforced through flipchart drawings such as Figures 2, 3, 4 and 7. This suggests potential in compensating for shortened intervention opportunity due to the stage of academic year.

Location of the CBT interventions within the Student Enabling Centre provided a basis for therapy referral and a rich source of assistance in therapeutic processes through current Disabled Student Allowances (DSA) funded support worker systems. Further training of support workers in the recognition of anxiety signs in students with an ASC has the potential to speed up the referral process and extend available therapy time. Opportunity has been identified and taken for wider inclusion of Student Services staff in CBT interventions for exposure and cognitive challenging exercises. In combination, this readily available therapy support network compensates for parent support networks employed in child studies detailed in the literature review to drive therapy goal progress and is seemingly appropriate to present study participants and context.

6. 2: Suggestions for a CBT therapy model for future research

To further research on the potential benefits of CBT interventions for anxious students with an ASC and compromised student experiences, I propose the following outline model set out in Figures 8 and 9 which incorporates key observations raised in the discussion and above conclusions. The model offers a modular approach, with modules and module content based on the barriers to

satisfactory student experience exposed by current study participants. Next steps to expand this research would be to detail the intervention model protocol and each module in a manual to enable standardisation of CBT interventions within and across different institutions, whilst simultaneously offering choice in intervention content.

Figure 8: Suggested CBT intervention model for use with students with ASC to enhance student experience

Start of each academic year: Remind support worker staff of availability of CBT intervention for students with an ASC experiencing escalation of anxiety, anxiety warning signs, and merits of early referral
Referral With student's agreement, referral of student to principal therapist by enabling service / disability service support staff. Co-therapist recruitment and training
Week 1 Introductory meeting with student and support worker / co-therapist who made the referral. Initial formulation. Identification and selection of therapy goals from the 8 modules below (Figure 9) Where possible, encourage and establish baseline metaphor of current student experience. Compile PSER
Week 2 *Initial PSER completion* Socialisation to cognitive model, based on the situation or goal that student perceives as most important / urgent to address. Collaborative application and development of metaphor to enhance understanding of cognitive model. *Appraise baseline metaphor*
Weeks 3 to 8 *PSER completion* Crisis intervention if needed; collaborative agenda setting, selecting from chosen goal modules. Goal module progress, with all elements of session recorded in flip chart diagrams. Co-therapist support in exposure and other *in-vivo* tasks agreed in sessions. *Appraise baseline metaphor* Week 8: *Change Interview* to establish perceptions of goal progress and if there is a need (time permitting) for further sessions
Start of each following semester: Brief informal interview with student, either with principal therapist or support worker / co-therapist to ascertain if goal progress is being maintained and if top –up sessions are required. **Throughout each semester:** Opportunity for top-up sessions in event of crisis situations occurring or new challenges compromising student experience: support worker / co-therapist to monitor and communicate to principal therapist, or student self-referral.

Figure 9: Therapy Module Choices

Raising self confidence	**Effective time management and work organisation**
• Identification of current self-image/ beliefs • Identification of important self-image/ identity factors, and what a self - confident student does • Identification and analysis of past situations impacting on self-confidence, challenging and reframing these • Challenging negative core beliefs • Problem-solving/developing agency • Graded exposure exercises	• Identification of barriers to effective study and time management • Cost/benefits of improved time management • Problem-solving • Activity scheduling and monitoring • Identification, challenging and revising of rules for studying
Managing multiple worries	**Reducing procrastination**
• Identification of multiple worries and current worry chains • Psycho education of worry • Identification and analysis of parallel situations where didn't worry • Cognitive challenging of worries and maintaining worry chains • Prioritising worries • Acknowledging but not engaging with worries	• Identifying ,understanding and monitoring procrastination • Psycho-education of procrastination • Identification of key time losers • Motivating to study • Establishing conditions for study • Cognitive challenging of unhelpful thoughts maintaining procrastination and identification of more helpful thoughts
Managing difficult relationships	**Preparing for employment**
• Exploring perceptions of relationships • Relationship psycho-education • Exploring ASC disclosure choices • Identification of alternative perceptions • Relationship choices and problem-solving options/execution • Developing and practising assertiveness skills	• Guided discovery of employment concerns • Identification of coping strategies • Preparing for interviews/cold calling • Graded exposure exercises with wider Student Services staff and employer contacts
Managing anger	**Coping with life in shared student accommodation**
• Drawing out recent angry episode timelines • Identifying triggers and early stages of anger arousal • Alternative ways of perceiving anger evoking situations • Developing and practising calming techniques • Establishing anger hierarchy • Graded exposure exercises	• Identification of current situation/ desired situation • Exploration of barriers and options available • Social habilitation skills option • Selecting and motivating toward chosen options, graded exposure exercises where appropriate • Exploring and exposing the hidden rules

6.3: Research contribution

I have presented an original piece of research that demonstrates the usefulness of CBT as a tool for enhancing the student experience of students in higher education with an ASC. Study findings suggest that when used in this context, CBT is particularly useful for dealing with the social aspects of university life. Unlike many CBT studies, feedback on its application and usefulness is both detailed and straight from the voices of recipients of the therapy themselves. Not only did the study demonstrate the usefulness of CBT in dealing with social and emotional aspects of student life, but also in some aspects of academic study and in the provision of new life skills for the remainder of their chosen courses of study and life beyond university. The study demonstrates how students with an ASC often need support to succeed both academically and socially in university, and how CBT, if used cautiously, offers a means of provision. Perhaps most importantly, the study shows how this can be delivered in a personalised, non-medicalised and timely way, with the emphasis being on difference, habilitation and empowerment, rather than on disability and dysfunction.

I end this thesis re-iterating a popular belief commonly voiced by autism spectrum practitioners in various guises (Hacking, 2009a):

'If you know one person with autism, you know *one* person with autism'

CBT clearly has the potential to embrace the idiosyncrasies of students with an

ASC and in the ways they experience university life. The challenge for future

research is to further develop this potential.

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APPENDICES

Llewellyn's (1988) Helpful Aspects of Therapy Questionnaire (HATQ):

completed example (Bruce)

Participant Information Sheet (student)

Study Title

Cognitive Behaviour Therapy as a tool for enhancing the student experience of students with Asperger syndrome or High Functioning Autism in a British university.

Invitation to take part in the study

You are invited to take part in this research study. Before you decide if you would like to take part it is important for you to understand why the research study is being done and what it will involve. Please read this information sheet carefully and talk about it with your personal tutor, disability adviser, mentor or study skills tutor if you wish. If you would like more information or have any questions about the research study, please ask me.

What is the purpose of the study?

The aim of the study is to develop a Cognitive Behavioural Therapy service for students with Asperger syndrome or High Functioning Autism here at the University. Cognitive Behavioural Therapy is proving very good for helping people who find themselves in stressful situations and are having difficulty in coping with these, and as a result might be feeling sad, depressed, angry, overwhelmed or worried.

Studies have shown that cognitive behavioural therapy can be used successfully with people who have Asperger syndrome or High Functioning Autism to develop social skills and better problem-solving strategies, and for them to think more positively about themselves. This seems to help them cope more easily in their daily life and reduce the amount of stress they were experiencing. The effectiveness of this approach has yet to be tested in a university student context, so this is what I would like to explore.

Two recent research studies on University students with Asperger syndrome or High Functioning Autism have found that for some students who took part life at university was good and they enjoyed being a student. Other students with Asperger syndrome or High Functioning Autism said they felt lonely, anxious or depressed, had difficulty coping with changes, and had difficulty understanding social situations and what they were expected to do in their coursework and other study tasks. This suggests that universities need to find better ways of

supporting students with Asperger syndrome or High Functioning Autism who are struggling to cope with university life, so I would like to find out if current Cognitive Behavioural Therapy techniques could be adapted for this purpose and how successful these might be in helping students to get the most out of their time at University. The study is therefore experimental.

Why have I been chosen?

You have been chosen to take part in this study because you have Asperger syndrome or High Functioning Autism and you have told either me or your mentor/ tutor that you are finding some aspects of university life difficult to cope with because of your Aspergers / High Functioning Autism, and this is making you feel stressed and unable to get the most out of your time at university / course of study. For these reasons, I am inviting you to help me develop and try out some cognitive behavioural therapy techniques to help you and other students with Asperger syndrome / High Functioning Autism cope more easily with university life and feel more positive about being a university student.

What will happen to me if I take part?

You will meet with me for about 40 minutes each week for Cognitive Behavioural Therapy. We will discuss the problems you are experiencing and how you are feeling about these, and then agree some goals for the therapy. With your help I will then design a course of cognitive behaviour therapy for you that will focus on these goals. During the therapy, we will work on each of the set goals: this will involve some skills training, trying out some problem solving techniques and other coping strategies, and monitoring how helpful these are in making you feel more positive about yourself as a student, how less stressed or unhappy you might be feeling, and hopefully how much more able you are to cope with aspects of your course or university life in general. I will ask your disability mentor / tutor to help us carry out some of the therapy tasks, so that they too can support you in achieving the therapy goals we agree.

The exact number of sessions you will be offered by me and your disability mentor / tutor will depend on the number of therapy goals we agree and your rate of progress in achieving these. Your first six therapy sessions will be with me, then providing we both feel that you are making good progress, further sessions will be given by your disability mentor / tutor. If I don't think you are ready to be handed across to your disability mentor / tutor after 6 sessions, I will continue working with you until we both feel your mentor / tutor can take over.

All through the course of therapy, I will make written notes of what we do and how you progress. This is a requirement of the British Association of Behavioural and Cognitive Psychotherapies, which is the professional body for Cognitive Behavioural Therapists. With your permission, I will also tape record the therapy sessions so that I can review each session carefully and make any

necessary changes as the therapy progresses. No one except for me and my cognitive behaviour therapy practice supervisor will listen to these tapes.

Do I have to take part?

No, you don't. It is for you to decide if you wish to take part in the study. If you do decide to take part, you will be asked to sign a consent form. If you decide to take part in the study and then change your mind, you would be free to leave the study at anytime and would not be asked to give a reason for this. Whilst I would have to keep your therapy session records until you finish studying at this University (in a locked cabinet), any information that you have given up to that point and details of your therapy programme would not be included in the research. If you decide not to take part in the study would this will not in any way affect your rights to disability support at the university and you would not be treated any less well by disability support staff.

What are the possible benefits of taking part?

You will have the opportunity to develop or learn social and coping skills that need improving or that you might not have had before, and to develop more positive ways of thinking about yourself and your experience of being a student. The therapy may reduce the level of stress you might be experiencing and help improve the way you feel. The techniques we develop to try to do this may be used to help other students with Asperger syndrome / High Functioning Autism.

What will happen to the results of the study?

Results will be included in my Doctoral Thesis and may be published in some learning disability journals. The techniques we develop will be made available to other universities for supporting students with Asperger syndrome / High Functioning Autism. I will be able to provide you with a targeted summary of the research and you will be invited to read a copy of my doctoral thesis after I have written it. I will not include any details in my thesis or journal articles about you that would make it easy for readers (apart from disability support staff and your personal tutor) to know or find out who you are, such as your name, age, address, or the course you are studying.

Who has reviewed the study?

The study has been reviewed and approved by the following Research Ethics Committees: Birmingham University's School of Education Ethics committee; Wolverhampton University's Behavioural Sciences Ethics Committee.

How to contact me for further information

If at any stage of the study you would like more information or you are feeling worried about any part of it, please ring me on ▮▮▮▮▮▮▮▮ or call in to see me at the ▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮.

If you decide to take part in the study please keep this information sheet in case you want to remind yourself about any of the information it contains. I also ask you to sign and return the accompanying consent form. You will be issued with a copy of the consent form.

Thank you for reading this information.

Please ask me any questions you might have about it.

Sally Holgate, Disability Adviser / Cognitive Behaviour Therapist

Student Enabling Centre, University of Wolverhampton.

Co-therapist Information Sheet

Study Title

Cognitive Behavioural Therapy as a tool for enhancing the student experience of students with Asperger syndrome or High Functioning Autism in a British University.

Invitation to take part in the study

You are invited to take part in this research study. Before you decide if you would like to take part it is important for you to understand why the research study is being done and what it will involve. Please read this information sheet carefully and talk about it with colleagues within the Student Enabling Centre if you wish. If you would like more information or have any questions about the research study, please ask me.

What is the purpose of the study?

The aim of the study is to develop a Cognitive Behavioural Therapy (CBT) service for students with Asperger syndrome and High Functioning Autism within the University's Student Enabling Centre. Cognitive Behavioural Therapy is proving very effective for helping people who find themselves in stressful situations and are having difficulty in coping with these, and as a result might be feeling sad, depressed, angry, overwhelmed or worried. If left unresolved, these feelings may escalate into more serious mental health problems.

Studies have shown that CBT can be used successfully with adults and children with an autistic spectrum disorder (ASD) to develop social skills and better problem solving strategies, and for them to think more positively about themselves. This seems to help them cope more easily in their daily life and reduce the amount of stress they were experiencing. The effectiveness of this approach has yet to be tested in an ASD university student context.

Two recent research studies on University students with an ASD have found that for some students who took part, they were able to cope well with university life and therefore reported having a positive student experience. Other students with an ASD said they felt lonely, anxious or depressed, had difficulty coping with changes, and had difficulty understanding social situations and what they

were expected to do in their coursework and other study tasks. This suggests that universities need to find better ways of supporting students with ASDs who are struggling to cope with university life, so I would like to find out if current Cognitive Behavioural Therapy techniques could be adapted for this purpose and how successful these might be in enhancing the quality of their student experience.

I would also like to explore how well the NHS's current model of delivering CBT to patients / clients might fit the university / ASD student context. This model is based on a 'two tiered' therapy service, in which a qualified cognitive behavioural psychotherapist takes the lead in the design and delivery of therapy sessions, and co-therapists assist in the maintenance and monitoring of the agreed therapeutic programme.

Why have I been chosen?

You have been chosen to take part in this study because you are currently supporting a student with an ASD who has volunteered to undergo a course of CBT as part of this study and is reportedly experiencing difficulty with aspects of university student life. This places you in an ideal position to become a co-therapist for this student and help in the maintenance, monitoring and evaluation of the planned CBT intervention, should you chose to participate.

What will happen to me if I take part?

You will receive some initial training in CBT principles and techniques from me. I will take the lead therapist role and thoroughly brief you on the planned therapeutic intervention. We will then agree how you can best contribute to the maintenance, monitoring and evaluation of this. The design of the therapeutic intervention will be based on the student participant's expressed needs and goals. Therapeutic sessions are intended to take place on a weekly basis, with your contribution being made within the time you usually spend with the student participant. Ideally, I would like to play a time-limited role in the therapeutic work I undertake with student participants. My intention is that I provide the first 6 therapy sessions, and then providing the student is progressing well towards the achievement of their therapy goals, for you to then provide the remainder of the therapy programme. The exact number of sessions that you will be asked to provide will depend on the student's rate of progress and the number of therapy goals agreed with the student in advance of therapy. I will provide you with ongoing supervision throughout the course of therapy and fine tune the intervention content in line with the student's needs and progress. Naturally, your observations and feedback will help in this respect. You will be asked to keep records of the therapy sessions you provide; this will enable us to review progress and identify and resolve difficulties that might arise.

Do I have to take part?

No, you don't – participation is entirely voluntary. If you do decide to take part and then change your mind, you would be free to leave the study at anytime and would not be asked to give a reason for this. Whilst I would have to keep the therapy session records that you will have made up until that point in time for professional reasons, any surplus information that you have provided me with relating to the study would be withdrawn from the research if you so wish. If you decide not to take part in the study, this will not in any way affect your usual scheduled work with the student concerned or your status within the Student Enabling Centre.

What are the possible benefits of taking part?

You will have the opportunity to learn new skills for supporting students with an ASD and gain an enhanced understanding of difficulties experienced by students with an ASD in the university setting. You will play a key role in the development and evaluation of a new service within the Student Enabling Centre. If the study aims prove successful, the CBT techniques, programmes and delivery model we develop can be shared with other adult education institutions. Please, however, appreciate the experimental nature of the therapy involved in this study.

What will happen to the results of the study?

Results will be included in my Doctoral Thesis and may be published in some learning disability journals. The techniques we develop will be made available to other universities for supporting students with an ASD. I will provide you with a targeted summary of the research findings and you will be invited to read a copy of my doctoral thesis on completion. I will not include any details in my thesis or journal articles about you that would make it easy for readers (apart from disability support staff and the academic tutors with whom you liaise) to know or find out who you are.

Who has reviewed the study?

The study has been reviewed and approved by the following Research Ethics Committees: Birmingham University's School of Education Ethics committee; Wolverhampton University's Behavioural Sciences Ethics Committee.

How to contact me for further information

If at any stage of the study you would like more information or you are feeling worried about any part of it, please ring me on ⬛⬛⬛⬛⬛⬛ or call in to see me at the ⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛ .

If you decide to take part in the study please keep this information sheet in case you want to remind yourself about any of the information it contains. I also ask you to sign and return the accompanying consent form. You will be issued with a copy of the consent form.

Thank you for reading this information.

Please ask me any questions you might have about it.

Insert my signature

Sally Holgate, Disability Adviser,

Student Enabling Centre, University of Wolverhampton.

Participant consent form

GENERAL CONSENT FORM AND RIGHT TO WITHDRAW (Student Participants)

Title of research study: Cognitive Behaviour Therapy as a tool for enhancing the student experience of students with Asperger syndrome or High Functioning Autism in a British university.

Name of Principal Researcher: Sally Holgate   Please tick the box if your answer to the following statements is YES.

1) I confirm that I have read and understand the information given in the Participant Information Sheet (Version 1, dated September 2009) for the above study and have had the opportunity to ask Sally Holgate questions about the research study.

2) I understand that my participation in the research study is voluntary and that I am free to withdraw from the study at any time, without giving any reason.
I also understand that if I decide to withdraw, this will not affect my right to disability support in any way.

3) I agree to take part in this research study.

4) I agree to allow Sally Holgate and the co-therapist to audiotape therapy sessions. Tapes will be confidential and used to monitor my progress and for supervision purposes.

5) I agree to allow Sally Holgate to include material from the CBT therapy sessions in her Doctoral Thesis.

6) I understand that personal details about me will not be included in the thesis or journal articles that would make it easy for readers (other than disability support staff and my personal tutor) to find out who I am.

Name: ....   Date: ....

Signature: ....

Consent taken by...   Date:.............................

Signature:...

GENERAL CONSENT FORM AND RIGHT TO WITHDRAW

(Co-therapist Participants)

Title of research study: Cognitive Behaviour Therapy as a tool for enhancing the student experience of students with Asperger syndrome or High Functioning Autism in a British university.

Name of Principal Researcher: Sally Holgate

Please tick the box if your answer to the following statements is YES.

1) I confirm that I have read and understand the information given in the Participant Information Sheet (Version 1, dated September 2009) for the above study and have had the opportunity to ask Sally Holgate questions about the research study.

2) I understand that my participation in the research study is voluntary and that I am free to withdraw from the study at any time, without giving any reason. I also understand that if I decide to withdraw, this will not in any way affect my usual scheduled work with the student concerned or my position within the Student Enabling Centre.

3) I agree to take part in this research study.

4) I agree that I will only carry out CBT tasks assigned to me by Sally Holgate and under her supervision.

5) I agree to allow Sally Holgate to include material from the CBT therapy sessions in her Doctoral Thesis.

6) I understand that personal details about me will not be included in the thesis or journal articles that would make it easy for readers (apart from

disability support staff and the academic tutors with whom I liaise) to find out who I am.

Name: ....   Date: ....

Signature: ....

Consent taken by...   Date:..............................

Signature:...

Appendix 6

Peter's PSER

PERSONAL STUDENT EXPERIENCE RECORD

0= Not at all

1= Only occasionally

2= Sometimes

3= Often

4= Most or all of the time

In the past week	0	1	2	3	4
1. I have felt frustrated, anxious or depressed about my studies					
2. I have felt totally lacking in enthusiasm towards my university studying					
3. I have thought that doing my degree course is a waste of time					
4. Tension and anxiety have prevented me from studying effectively at home					
5. I have been happy with what I have achieved towards my assignments / exams					
6. I have been able to identify and prioritise what I need to work on most					
7. I have felt unhappy about being a student					
8. I have been able to do most of the study tasks I needed to do					
9. I have felt optimistic about my future					
10. I have felt overwhelmed by the amount of work I should be doing					
11. I have felt despairing or hopeless as a student					
12. I have felt able to express myself assertively if I wished					
13. I have been able to study what I wanted, when I wanted					
14. I have put off working on my university assignments and tasks for no good reason					

15. I have been able to solve problems with my work myself					
16. I have felt I needed to rely on others to help me get my university work done					

Brief intervention summaries (Adam, Bruce, Dawn, Chris and Freddie)

Intervention programme: Adam

Adam	Number of sessions: 12		
Interests: sports, particularly kick boxing			
Goals • *To reduce the amount of time lost to university work through worrying about problems* • *To take greater control of how I spend my time when trying to study at home* • *To concentrate / keep on task for longer periods and in lectures and home study* • *To integrate more effectively and confidently in group work* • *To develop my assertiveness skills and appear less forceful in group working situation and other course related interactions*			

Session	*Session focus*	Key activities	Modification
1	Introductions and agreeing goals for therapy	3 way initial formulation discussion: researcher, student participant and co-therapist	Generation of PSER based on discussion findings
2 and 3	Orientation to CBT	PSER 1 & 2 Formulation discussion with Socratic questions: psycho-education of worry	Collaborative drawing of worry chains resembling actual chain on flip chart. Collaborative production of kick boxing competition examples to enhance understanding of cognitive theory
4 and 5	Managing worries and dealing with uncertainty. Reducing procrastination	PSER 3 & 4 Cognitive challenging and restructuring Identified key "time-losers". Compared / contrasted kick boxing competition uncertainty scenario with study worries	Reviewed and revised worry chain drawing, added thinking errors tags to unhelpful links. Recorded discussion in compare / contrast diagram and circled similarities
6	Managing worries / procrastination Assertiveness	PSER 5 Compared trains of thought for two kick boxing fights, where lost one, won the other. Guided discussion to expose problems with paying attention to multiple worries about dissertation. Coping skill development: discussed and practise an assertive response to key person linked to dissertation. (To practise with co-therapist first).	Collaborative compare and contrast diagram. Related dissertation worries to onion metaphor, where each layer represents a worry to illustrate can't peel all layers at one if focusing on all together. Mapped current worries to layers in diagram, end target in centre.
7	Time management	PSER 6 Coping skills development regarding dissertation production. Identified potential "blockers" and strategies to counteract these. Assertiveness training continued; to practise with co-therapist.	Identified which layer of onion needed to focus on for immediate progress.
8	Time management, worry management	PSER 7 Further cognitive challenging regarding worries. Reinforcement of need to manage worries more	Wrote individual worries on stickers, placed each on an individual onion to demonstrate student's current spread of attention and impact on studies. Re-arranged stickers so key

		effectively. Cognitive re-structuring: identification of unhelpful thoughts associated with studying and identification of more helpful alternatives	aspects should be focusing on now on largest onions.
9	Time management	PSER 8 Extension of assertiveness skills training / preparation for managing a demanding friend.	Listed potential responses, evaluated these and selected best.
10	Crisis incident	PSER 9 Coping skills development for very stressful situation urgently requiring an assertive response.	Graded exposure, practising repeatedly firstly with me until felt less anxious, then with co-therapist on the same day.
11	Time management/ worry management	PSER 10 Reviewed current progress Assertive response development: to deal with co-therapist issue	Used onions and stickers to ground and prioritise work / focus
12	Review	PSER 11 Change interview	Diagrams produced during sessions used for recapping purposes and aid discussion.

Intervention programme: Bruce

Bruce	Number of sessions = 7		Interests: amateur dramatics

Goals

- *To increase my self-confidence when meeting or talking with people I don't know*
- *To be less worried about the prospect of job interviews*
- *To feel more optimistic about my future*

Session	Session focus	Key activities	Adaptations
1	Introductions and agreeing goals for therapy	Guided discussion Initial formulation	Co-therapist attendance and contribution. PSER generation
2	Orientation to CBT	PSER 1 Compared and contrasted thoughts, feelings and actions for past interviews with taking part in an amateur dramatics production. Evaluated the role of scripts in self - confidence.	Use of amateur dramatics production metaphor to compare and contrast with job interview situations. Utilised language of drama / play productions.
3	Guided discovery and experiments to determine best coping strategies for interview situations	PSER 2 Series and comparison of graded exposure interview exercises, with and without double role play and changing loci of attention. Self-predicting performance beforehand and re-scoring after.	Specially designed prediction / score sheets. Incorporated role played known confident actor into the experiments.
4	Graded exposure	PSER 3 Role played and compared interview performances with varying preparation time and scripts to evaluate fluency and confidence.	Co-therapist: translated these exercises to "cold" phone calling
5	Graded exposure	PSER 4 Further interview experimentation with scripts with me. Role plays audio-recorded and played back for additional evaluation. In-house Careers Team provided banks of typical interview questions.	Co-therapist: further cold-calling role plays, using phones and then practising with a primed, unknown colleague of co-therapist
6	Graded exposure	PSER 5 Further role play experimentation, this time with member of Careers Team, who B had met previously.	Cold call to known employer, facilitated by Co-therapist
7	Graded exposure Change Interview	PSER 6 Further role play and evaluation with not previously known member of Careers team.	Further cold-calling practise, facilitated by co-therapist.

Intervention programme: Chris

Chris   *Number of sessions* = 7

Interests   *Popular music*

Goals
- *To increase my self-confidence after recent incidents*
- *To improve my time management and work organisation skills*
- *To manage my angry feelings better*
- *To stop intermittent thoughts, intensity of feelings and behaviour reversal to the time when I was sharing the flat with ------ (student name)*

Session	Session focus	Key activities	Adaptations
1	Introductions and agreeing goals for therapy	Guided discussion Initial formulation	Co-therapist attendance and contribution. PSER generation
2	Orientation to CBT	PSER 1 Translated 2 recent scenarios concerning living in student halls into thoughts, feelings, behaviours and physiological effects. Guided discovery, Socratic questioning, psycho-education regarding anger arousal and excessive emotional responses.	Development of a compact disc (CD) metaphor, each "track" representing a different era of living in student accommodation, with different relationships. Identified "backtracking" tendencies, i.e. to revert to past unhelpful thoughts and behaviours. Drew these out on flip chart paper.
3	Identifying early stages of anger arousal. Assertiveness. Time management Building self confidence	PSER 2 Visual imagery to help gauge / monitor/ reduce levels of anger being experienced. Introduced breathing calming techniques Assertiveness skills development Activity scheduling for vacation. Identified self-image factors that are important to Chris.	Adapted anger thermometer drawing (Taylor and Novaco, 2005) Gaus's problem-solving sheet (Gaus 2007). Practise assertive responses for parent interruptions when trying to work with co-therapist. Flip chart drawing of these
4	Confronting and re-interpreting past trauma event (double session to allow completion)	PSER 3 Cognitive challenging and re-structuring of past and current critical incidents impairing student experience. Psycho-education of trauma management	Drawing out past traumatic, critical incident that appears to be affecting present thoughts, moods and behaviours on flip chart. Drawing alternative interpretations Link to CD back-tracking CD. Further evidence gathering with co-therapist to support revised interpretation.
5	Confronting and re-interpreting current critical	PSER 4 Cognitive challenging and re-structuring regarding	Drawing current critical incident in same manner as week 5 to aid

	incident.	current critical incident, identification of core and intermediary beliefs and values maintaining past trauma / current responses; identifying similar thought patterns with past traumatic event. Evaluating any supporting evidence for existing / re-interpreted accounts.	comparison with past traumatic event. Drawing potential re-interpretations. Link to CD backtracking metaphor. Evidence gathering with co-therapist to support revised account. Academic work-scheduling with Co-therapist
6	Challenging negative core beliefs maintain lo self-confidence / esteem	PSER 5 Cognitive challenging and re-appraisal of belief " I am not intelligent". Identified Chris's interpretation of intelligence and core components of this. Psycho-education regarding agency / choice in engaging with unhelpful beliefs	Adaptation and application of Gaus's (2007) cognitive continuum. Link to CD back-tracking metaphor. Co-therapist: time management: work scheduling
7	Change Interview	PSER 6	Flip chart drawings to aid interpretation of questions, central coherence, articulation and memory.

Intervention programme: Dawn

Dawn	Number of sessions = 9
Interests	*Science, cookery*
Goals	*To think more positively about myself, my work and being a student* *To develop my group-work problem solving skills* *To manage the balance between assessed / non-assessed coursework more efficiently.*

Session	Session focus	Key activities	Adaptations
1	Initial introductions and agreeing of goals of therapy	Guided discussion Initial formulation	Co-therapist attendance and contribution. PSER generation
2	Orientation to CBT	PSER 1 Translated a recent anxiety provoking scenario concerning academic home-study into thoughts, feelings, behaviours and physiological effects to demonstrate the cognitive cycle. Guided discovery of thought train implications and outcomes.	Drawing links between thoughts, feelings, behaviours and physiological sensations, but extending to further loops to demonstrate escalation effects. Experiment with scientific equations metaphor.
3	Balance of time spent on assessed and non-assessed coursework	PSER 2 Problem-solving exercise to analyse and redress unhelpful balance of time spent on coursework.	Experiment with assortment of visual images (drawn on flip chart) to help represent / establish current and desired situations and aid understanding of what is being asked. Application of Gaus's (2007) Problem –solving worksheet).
4	Time management. Group-working problems	PSER 3 Cognitive challenging and identification of thinking errors regarding assumed group leader role. Exposure of rules and beliefs regarding lecturer's setting of coursework. Psycho-education regarding thinking errors.	Coursework and free-time activity scheduling and monitoring with Co-therapist. Discussion with Co-therapist to clarify group-working problems. Complete transcription of this session to evidence to capture key quotes and beliefs regarding group working and roles from Dawn for use in next session.
5	Group-working problems and assumed leader role.	PSER 4 Cognitive challenging to confront mixed beliefs regarding what is reasonable to expect from group members as assumed group leader. Education on 3 leadership styles: mapping rules / beliefs, associated thoughts, feelings and	Production and completion of 3 templates to capture and represent each of the 3 leadership styles, rules, etc. Course-work and free time activity scheduling with Co-therapist.

		likely outcomes against each. Psycho-education about agency and choice in how we perceive and respond.	
6	Managing multiple assignments	PSER 5 Cognitive challenging of recurrent catastrophic thoughts about ability to complete assignments on time. Weighing up evidence for validity of predictions. Problem-solving exercise for managing multiple assignments.	Diagram to capture evidence for and against prediction / hot thought " I will never get all this done on time", and the development of this thought. Gaus's Problem-solving worksheet to evaluate potential alternative courses of action. Activity scheduling with Co-therapist
7	Image of self as a student	PSER 6 Cognitive challenging and re-structuring: Dawn delivered an uninterruptable monologue account of her week. Analysed monologue content against Dawn's perceptions of a "good Masters level student".	Charted positive content of Dawn's monologue (in real time) and also her perceptions of a good Masters student on flip chart to give structure to this information
8	Analysis and diffusion of critical incident concerning difficult feedback from lecturer	PSER 7 Challenging catastrophic thoughts regarding the feedback; reinterpreting "criticism". Categorising each feedback comment made in terms of usefulness. Normalising with other examples of post-graduate feedback. Psycho-education regarding feedback: issue of choice and agency.	Comparison with similar feedback form from a doctoral assignment. Systematic colour coding of all 42 feedback items helpful – unhelpful in the light of revised interpretation. Adding these up to demonstrate positive weighting. Gaus's Problem-solving worksheet: choices in dealing with difficult feedback. Cooking metaphor to illustrate precision of 'ingredients' required in post-graduate writing.
9	Change Interview	PSER 8	Drawings and tables produced in sessions used as props.

Intervention programme: Freddie

Freddie	Number of sessions = 8

Interests   Military history, computer war games

Goals

- *To find a tension reducing safety valve for life in Halls*
- *To develop a strategy for nipping relationship problems in the bud*
- *To reduce the worry that I haven't done enough towards my academic work*
- *To organise my time better for studying*

Session	Session focus	Key activities	Adaptations
1	Initial introduction and agreeing goals of therapy	Guided discussion

Initial Formulation | Co-therapist attendance and contribution
PSER generation |
| 2 | Orientation to CBT | PSER 1
Application of cognitive model to recent crisis resolution meeting about relationship problems in Halls of Residence. Comparison of two scenarios. Identification of alternative ways to cope with situation. | Drew scenarios out on flip chart: colour coded escalations in thoughts, feelings and behaviours as scenarios unfolded.
Discussed potential ways forward in military terms: military strategic planning metaphor.
Co-therapist played advocacy role in Halls of residence crisis meeting. |
| 3 | Social habilitation skills.

Cognitive challenging | PSER 2
Cognitive model analysis of a positive social experience with current "flat-mates". Compared and contrasted with previous session's scenarios. Identification of potential thinking errors in last week's scenarios. Guided discussion to generate / expose social rules operating in current accommodation. | Compilation of colour coded scenario drawing.

Developed '----- (name of Hall of Residence) Convention' to capture overt and hidden / unspoken social rules. Printed out copy to remind.
Use of Talk Blocks to determine Freddie's feelings and needs |
| No session following week: Freddie required to move into new student accommodation. | | |
| 4 | Critical incident debriefing: re-orientation of goals.

Enhancing acceptance and motivation | PSER 3
Reviewed goals: problem-solving exercise to evaluate best courses of action for living with new flat-mates, salvaging relationships with previous flat-mates, incorporating cognitive challenging and re-structuring. | SWOT analysis to provide structure and represent current situation and choices visually.
Drew out a revised "military strategy".
Amendments to "----- Convention" in to accommodate further exposed rules. |
| 5 | Enhancing acceptance of situation.
Enhancing opportunities to socialise | PSER 4
Re-appraisal of current needs. Straight forward approach (Burns, 1999) exchange of negative for positive thoughts.
Recognition of new goals: | Talk Blocks.

Mapped social opportunities and plan for pursuing these on flip chart. |

		to broaden his University social life; to think more positively about new accommodation situation.	
6	Academic / social balance of student life. Studying time management	PSER 5 Review current strategy progress. Problem-solving exercise to address procrastination tendencies and limit amount of time spent crafting sentences.	Problem-solving worksheet (Gaus, 2007).
7	Unexpected critical incident involving ex flat-mates.	PSER 6 Socratic questioning to expose Freddie's fears regarding the upsetting incident. Psycho-education: group-thinking tendencies. Problem –solving exercise: how to best respond, and also how best to invest time socially.	Problem-solving worksheet (Gaus, 2007). Collaborative application of military recruitment metaphor to aid decision of how best to invest time, and with which social groups: drawn on flip chart. Application of military metaphor: the need to "review the intelligence before acting or taking risks"
8	Change Interview	PSER 7	Session drawings and collaborative metaphors used as prompts.

IPA emerging themes development example (Ewan)

Emergent themes	Original Transcript	Exploratory comments
	What have these sessions been like for you? How has it felt to be in these sessions?	
Sense of being on a journey of self discovery	C: It's been a real journey...It's been a real journey of self-discovery.	Experienced overall CBT intervention as a journey of self-discovery. Journey: from where and to what destination: has he yet arrived? (Hesitant – possible difficulty articulating feelings he experienced?) (Repetition of "real journey" – possibly emphasising the scope of self - discovery)
	R: Uh hm. In what sort of respects?	
Developing respect for self and important others	C: ...Respecting myself and my peers.	Developing respect for self and others. Did he not respect self / others before? By peers, who does he mean? To what extent does he respect self / peers now?
Lack of others' understanding of his ASC	R: So it's felt like a journey: have you felt comfortable in the sessions?	
Sense of gain in being understood I relation to his ASC	C: I have felt really comfortable and really calm, like I've got someone now that knows my condition and really helps me.	Reports feeling comfortable and calm Acknowledging having "a condition" Sense of gain in being understood (Repeated use of "really" to emphasise depth of feelings declared) Did he feel no-one understood his "condition" before / outside therapy. In what way is this knowing helpful? Portrays a sense of being helped – in need of help (dependency?) and that being understood in terms of the impact of his Autism is very important to him. "Knows" suggesting absolute knowledge: now knowing suggests for the first time.
	R: Just to think back to your goals. The goal when we started this was to try and regain your confidence in yourself as a student and your will to succeed.,	Information stated in agreed therapy goals

	to try and get that positive spark back that you felt you had when you first started, how are you doing on that now do you think? C:...My, spark...my positive spark is definitely coming back to me, with a little more improvement it will be there effectively, it will be...it will be... it will keep me going.	
Returning enthusiasm / motivation Pitching self-changes in critical timeframe Incompleteness of changes desired New self-beliefs New / enhanced optimism		Returning enthusiasm / motivation for being a student "Positive spark": when was this lost? Critical timeframe: improvements still in progress, implying goal not as yet fully achieved. Changing from negative self-confidence and motivation. Was he confident and motivated in the first instance? "Positive spark" is this a reference to sparking plug? Is it a sense of movement, something sustaining? Expressing need for further improvement ("It will": repetition meaning goal not fully achieved, and possibly an indication of belief / resoluteness in this). Is this belief new? By "keep me going": does this imply to completion of the course?

IPA emerging theme development example: Ewan

Master table of super-ordinate themes and associated subthemes:

an example of one super-ordinate theme

Theme: OVERALL EXPERIENCE OF THERAPEUTIC INTERVENTION

• Experiencing through critical timeframes	**Chris** P3: I wasn't all there, yer P4: On to (name) P5: I used to get quite a sick feeling in my stomach P8: With (name) it went down to about zero...before that it was around 5 P9: I was moving on a bit P9: I know everything has a knock on effect...because it goes in a circle... P10: It was probably a hell of a lot more to do with school than I realised. Er and then there was the stuff with (name) P12: Er...the most helpful things have definitely been the moving on from, from the first track and moving to the second track **Freddie** P8: 'I hope this situation hasn't been damaged too much in (Hall of Residence name) , with the old gang, so to speak P8: It's um, time to move on really, onto the next stage, really. Getting into next year might be of real benefit, get this year done with, get it out of the way P11: I never would have considered it last time round P20: I suppose I was suffering from cabin fever the last time P22: Unlike the first time round **Bruce**: P5: I think I have started how I can make myself more confident now P6; Yer, I think I am doing better on that now, definitely, yer
• Perception of a journey	**Chris**: P3: I wasn't all there, yer P7: I'd say I got back to where I was when I first came to uni (re confidence), but I think that' P9: I was moving on a bit from school and now I just don't seem to care anymore about what other people think: it's something I need to work on a lot more P10: I feel that I am in a better place really, I'm finding it a lot easier really P10:...and anything else I don't know about that's holding me back P11: I haven't really gone back there...I think I have come on in quite a leap from going back... I have moved on from that point now and I don't think I'll be going back to that place any time soon P11: I think to some extent I would have moved on a little bit, but I would have just held on (without CBT)

		P14;: I have moved off now: I have let go P17: but I'm back to where I am, I am better than where I was six weeks ago. **Freddie** P5: yes, it's surprising really, it started from there...then, all sorts of things happened from then P6: Well it showed some faces of me that I never knew existed up until now. Some are quite disturbing but some are quite...re-assuring really...Um...Naturally I am quite keen to move on. **Ewan** P1: It's been a real journey...it's been a real journey of self-discovery () respecting myself and my peers P18: Finding out that the one incident could trigger another one... P5: I am regaining the confidence... and with a little more time I will have it fully and start getting down... P6: I'm only half way through, but with a little bit, but with a little bit more time, that could be more productive. As time goes by...I will start...I will be very effective P18: Finding out that the one, finding out that one incident could trigger another one in quick succession...it's like dominoes. One will fall down first, then the other ones fall down. P2: My positive spark is definitely coming back to me, with a little more improvement it will be there effectively, it will be... it will be... it will keep me going P11: I feel like I am forgetting the past and moving on. **Bruce**: P7. I've got a better idea of how to handle interviews, like, but I suppose the real thing is going to tell, er, tell if it has worked for me
•	Perception of a military strategy	**Freddie** P27: "First of all we need a man, then we need a plan, after that we shall succeed, not otherwise". And once those things are in place...well that's it, really. And then of course I have to make it succeed. R: Uh hm: the plan? F: It won't do on its own. Neither will the person who is implementing it. R: And that's where your role is F: Yer...yer, that's really it.
•	Perception of release	**Chris** P12: It's like it was out of my system...I didn't feel sick any more, it was almost like being released, being released onto paper P14: I'm glad I've done it, because its out now...I just feel so much lighter

Adam

P4: Er, it's been positive, its actually helped me, um...get a lot of worries out that have been happening

P5: I'm not, not worrying as much

P5: I just stopped worrying, I'm worrying less, stress has gone down quite a lot.

P7: Each time coming to these sessions has helped me kind of...relieve that worry

P10: I have been able to park the worries

P13: I've had lots of stuff to worry about (conflicting story)

Dawn

P2: It's been good coming every week, it's like if I have got any concerns I'll let you know, and what's been worrying me, and it's got me to telling it all