VOLUME 2: FOUR PROFESSIONAL PRACTICE REPORTS

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CHAPTER 1 INTRODUCTION

1.1 Background

The work contained in this volume reflects that undertaken during my training. The selection of work was influenced by both personal and professional factors. Professional demands and expectations affected the opportunities available for exploring areas of personal interest. My employing Educational Psychology and Support Service included Advisory Learning Support Teachers, who took the majority of referrals where the main concerns related to difficulties with learning and retention. In consequence, most of the children and young people I worked with presented with complex profiles, including: social, emotional and/or behavioural difficulties, often alongside additional learning needs. Frequently they were experiencing many levels of disadvantage arising from community, family and neurodevelopmental factors.

In addition to individual casework, my role as a trainee educational psychologist involved delivering a range of services, including: providing advice to provisions, delivering training and engaging in small scale research.

During the course of my training, I noted a number of commonalities in the presenting difficulties of children and young people I was working with, including: poor Executive Function (e.g. Hughes and Ensor, 2009), poor affect regulation (e.g. Bell and McBride, 2010), low impulse control (e.g. Stuss and Knight, 2013), poor theory of mind (Hughes and Ensor, 2005) and non-compliance (e.g. Speltz et al., 1990). These appeared to be highlighted as key

areas of concern, across a range of diagnoses and/or environmental adversity including Attention Deficit Hyperactivity Disorder, Autism Spectrum Disorder and maltreatment. With increasing experience I came to conceptualise these factors as being interrelated, and much of my professional development during this period was undertaken with a view to improving my understanding this phenomenon.

The research I undertook for the working of such complex cases, and to support the development of training packages, suggested that atypical brain development and functioning may underpin many of the presentations. In particular, atypical functioning and development of the frontal lobe (Krain and Castellanos, 2006; Lupien et al., 2009 & Lynch et al., 2013), prefrontal cortex (Chugani et al., 2001; Depue et al., 2010 & Schulte-Rüther et al., 2011) and amygdala (Maier, 2013; Pelphrey, 2007 & Tottenham et al., 2011) were highlighted. This informed my developing personal interest in integration of findings from different, related disciplines such as neuroscience, clinical and educational psychology, to better understand this phenomenon. This interest has influenced much of my work and is reflected in the contents of this volume (see Chapters 2 and 4).

In addition, the evidence reviewed emphasised the negative impact of factors associated with low socioeconomic status on development and life trajectories. This bolstered my interest in the application of educational psychology services to address some of these factors. This is reflected in initiatives intended to widen service delivery, for example: to young offenders (Chapter 4) and to the early years (Chapter 5). Drawing together findings from different fields and exploring viable means of service delivery in an economically challenged environment.

1.2 Overview of Chapters

Chapter 2 looks at the construct behind the term 'self-esteem', and its relationship with other factors such as social relationships, special educational needs and academic performance. The validity of its use as a 'soft-outcome' measure in educational settings was evaluated in this context. The analysis raised questions regarding the use of global self-esteem as an outcome measure, and the impact that such a focus may have on well-being.

Chapter 3 presents an account of a complex case of challenging behaviour, approached using the Monsen et al. (2008) Problem Analysis Cycle, undertaken during my second year of training. The child was working with a speech and language therapist and a clinical psychologist, who favoured different attributions to me. This case highlighted the commonalities in the presentation of Autism Spectrum Disorder and attachment difficulties, and the need for careful differential diagnosis.

In chapter 4, as a result of a commission by the local Youth Offending Team, I reviewed some of the neuroscientific research relating to typical and atypical development associated with maltreatment, Attention Deficit Hyperactivity Disorder and Autism Spectrum Disorder. Common areas of atypical brain development and functioning: frontal lobe (Krain and Castellanos, 2006; Lupien et al., 2009 and Lynch et al., 2013), prefrontal cortex, (Chugani et al., 2001; Depue et al., 2010 and Courchesne et al., 2011; Schulte-Rüther et al., 2011), amygdala (Pelphrey, 2007; Mehta et al., 2009; Tottenham et al., 2011 and Maier, 2013;). were highlighted and implications for the nature and timing of interventions discussed.

Chapter 5 provides an account of a small-scale study evaluating the use of single behavioural consultations with a follow up telephone call, using Goal Attainment Scaling and Likert Items to evaluate outcomes. The study was designed to inform decision-making regarding the extension of educational psychology services to early-years provision.

1.3 Implications for Practice

Within my employing Local Authority, this work has contributed to a continuing understanding of the implications of evidence from other disciplines regarding development and the nature and timing of interventions and recommendations. The synthesised findings and their implications for educational psychology practice have been shared within my employing LA, and also more widely through a professional forum.

CHAPTER 2

POLITICAL PERSPECTIVES AND ECONOMIC IMPERATIVES HAVE COMBINED WITH THE RECOGNITION BY EDUCATIONALISTS, PARTICULARLY WITHIN THE SPHERE OF SPECIAL EDUCATIONAL NEEDS THAT TRADITIONAL MEASURES OF PROGRESS OFTEN FAIL TO CAPTURE THE POSITIVE IMPACT OF PROVISIONS. IS THE USE AND SALIENCE OF SELF-ESTEEM AS AN ALTERNATE OUTCOME MEASURE VALID, AND WHAT ARE THE IMPLICATIONS FOR EDUCATIONAL PSYCHOLOGY PRACTICE?

ABSTRACT

Against a wider background of political and societal acceptance of the importance of fostering and protecting self-esteem, there is a concurrent view put forward by educationalists, academics and those working within special schools, that the emphasis on academic attainment as the principal measure of pupil progress and school efficacy provides a distorted view of the purpose of education. They argue for the necessity of evaluating other aspects of the learning and development of children, such as self-esteem. This study looks at the construct behind this often nebulous term, its relationship with other factors, such as poor social relationships, special educational needs and academic performance, and the validity of the focus on self-esteem and its use as an outcome measure. The evidence suggests that self-esteem is commonly used as an umbrella-term, covering two related, but discrete constructs: global self-esteem and domain-specific self-perceptions acquired and maintained by distinct mechanisms. The analysis calls into question both the use of global self-esteem and domain-specific self-perceptions as outcome measures, and the contention that focussing on self-esteem has a positive impact on well-being. These findings are discussed in relation to their implications for the work of educational psychologists.

2.1 Introduction

During the course of the last four decades, the importance ascribed to self-esteem has grown in the UK education system, in line with western culture as a whole. Evidence from studies in the fields of education (e.g. Dockrell et al., 2007), psychology (e.g. Thewissen et al., 2008) and health (e.g. Li et al., 2010) has shown significant correlations with a range of factors, lending credence to this position. Educational psychologists have often been at the forefront of this movement, both in individual case work (e.g. Farrell et al., 2006) and in the design of the Social and Emotional Aspects of Learning programme (DfES, 2003) which has been widely adopted in UK primary and secondary schools as a whole school approach to improving the social and emotional wellbeing of pupils, including their self-esteem (DfE, 2010; Humphrey et al., 2010).

However, notwithstanding the correlational evidence, with factors such as: eating disorders (Button et al., 1996), depression (Orth et al., 2009), earnings (Drago, 2011), relationships with peers (e.g. Asher et al., 1984; Kinnunen, et al., 2008), special educational needs (e.g. Lindsay et al., 2002), level of education and academic achievement (e.g. Muijs, 1997; Guay et al., 2003; Orth et al., 2010), the salience afforded self-esteem may be criticised on a number of fronts. First, there is an apparent lack of clarity about the nature of the concept (e.g. Harter, 1999; Nash, 2005). Second, the directionality of the relationship between self-esteem and the associated factors is subject to some debate. Third, it has been argued that the current emphasis on self-esteem has had a detrimental effect on mental wellbeing (e.g. Crocker and Park, 2004; Ehrenberg, 2000; Twenge, 2006; Twenge et al., 2008).

The evaluation of the impact and outcomes of interventions, and specialist provision for children with special educational needs is an established part of the role of an educational psychologist (Farrell et al., 2006). In my employing local authority, I was asked to assist a specialist provision for children with moderate learning difficulties, better to capture the progress of its pupils. Requests for placements at the provision have to identify an explicit 'learning outcome' for the pupils, selected from an approved list which includes: "The development of confidence or independent learning skills e.g.: organisation, efficacy or self-esteem" (See Appendix I). In addition, self-esteem was cited by the manager of the provision as the most frequently stated desired outcome, after academic achievement, by the pupils' mainstream, commissioning schools. Thus it was suggested as a possible outcome measure, prompting the research discussed in this paper.

This study reviews the available literature in order to answer four, key questions. First, what is the nature of the construct self-esteem? Second, to what extent is the prominence of self-esteem in the UK educational system defensible? Third, is the use of self-esteem as an alternate outcome measure valid? Finally, what are the implications for educational psychology practice?

2.2 Background: The diverse contexts in which self-esteem has been invoked as a salient dimension of human development

In 1980s North America, self-esteem began to be viewed as a 'social vaccine' (Twenge, 2006), able to inoculate populations from a range of societal difficulties. This perspective gains some support from a large body of evidence showing the comorbidity of low self-

esteem and a range of difficulties, including: depression (e.g. Freud, 1968; Blatt, 1974; Battle, 1987; Harter, 1993), self-harm (e.g. O'Connor et al., 2009), obesity (e.g. Sassaroli and Ruggiero, 2005), poor social relationships (e.g. Asher et al., 1984; Boivin and Begin, 1989; Hymel et al., 2008) and low academic achievement (e.g. Humphreys, 1993; Muijs, 1997; Guay et al., 2003). This gave rise to the creation of a task force in California, to raise the self-esteem of the whole population of the state (Swann, et al., 2007). The 'self-esteem movement' (Twenge, 2006), and the initiatives that rose out of it were later taken up across the United States and the UK. However the 'social vaccine' perspective and motivation for promoting self-esteem in education is not its sole driver.

Current political and financial imperatives have made the ability to demonstrate the value of interventions and the effectiveness of educational establishments an increased priority. This is illustrated by the government's Green Paper, Support and Aspiration: A new approach to special educational needs and disability (DfE, 2011), which states that:

> "In creating a self-improving school system, we have made it clear that all schools, including special schools, will be freed from highly centralised approaches to school improvement but will have strengthened accountability for pupils' outcomes (p78)."

An increased emphasis on measurable impact has highlighted the need to ensure that outcomes that capture something of the distance travelled by individuals, or 'soft-outcomes' are not lost amongst more traditional markers of educational achievement. This is particularly the case with children whose expected progress is lower than age-related norms. The ability to chart the impact of interventions on these aspects of the learners' development, in parallel to their academic achievement is important as research suggests that SEN programmes have

little impact on educational attainment at the end of primary school (Keslair and McNally, 2009). Despite not being included in the new Ofsted framework (2012), direct reference to self-esteem was made in the Coalition Government's 2011 Green paper, which states that:

> "Some schools have helped to achieve significant improvements in the outcomes of their pupils with SEN by reviewing the amount of time spent with, and type of support from, teaching assistants. Evidence published in 2009 showed how teaching assistants can have a positive impact on pupils' self-esteem (pp. 63). "

The salience afforded self-esteem within the UK education system was further confirmed by the work of researchers such as Dewson et al. (2000). They identified core and target group specific 'soft-outcomes' in education. The core soft-outcomes fell into four skills categories; key work, attitudinal, personal and practical, with self-esteem included in the attitudinal skills category. Of all the identified 'soft-outcomes', the prominence of self-esteem in education is evident across a variety of settings and levels (Dewson et al., 2000). The introduction of the Social and Emotional Aspects of Learning (SEAL) programme reflected this trend. Described by the Department for Children, Schools and Families as:

> "a comprehensive, whole-school approach to promoting the social and emotional skills that underpin effective learning, positive behaviour, regular attendance, staff effectiveness and the emotional health and well-being of all who learn and work in schools."(DCSF, 2007, pp.4):

improved self-esteem was one of its expected outcomes (Humphrey et al., 2010). By 2010, SEAL was reportedly being implemented in 90% of primary and 70% of secondary schools in England and Wales (DfE, 2010).

Anecdotal evidence provides some support for this approach. ‘Circle time’ is a commonly used component of the SEAL programme (DfE, 2010), with 71% of primary school head teachers surveyed in Wiltshire and Swindon reporting that ‘Circle Time’ raises self-esteem (Dawson and McNess, 1998).

Research showing the comorbidity of low self-esteem with a range of diverse difficulties, including those related to physical health (e.g. Sassaroli and Ruggiero, 2005), mental health (e.g. Freud, 1968; Blatt, 1974; Battle, 1987; Harter, 1993; O'Connor et al., 2009), social skills (e.g. Asher et al., 1984; Boivin and Begin, 1989; Hymel et al., 2008) and academic achievement (e.g. Humphreys, 1993; Muijs, 1997; Guay et al., 2003) appears to provide prima facie evidence to support the prominence given to self-esteem in the UK education system. This position appears to be bolstered by anecdotal evidence for the effectiveness of SEAL (Dawson and McNess, 1998). However, for the prominence of self-esteem to be justified evidence is required of a causal relationship with associated factors, and the impact of interventions must take confounding factors into account. This requires a clear understanding of the construct of self-esteem. However, despite the seeming ubiquity of the word ‘self-esteem’ in both research and western culture, and the salience it is afforded within the UK education system, the concept nonetheless appears to remain somewhat nebulous.

2.3 The Concept

In order to determine the validity of self-esteem as an outcome measure, and the prominence it is afforded, it is necessary to explore the construct to which the term refers, and the associated nomenclature. The terms self-perception, self-concept and self-esteem are often

used interchangeably to refer to facets of self-evaluation (Nash, 2005). However, following Harter (1999), this paper will employ the term self-perceptions to refer to domain-specific self-evaluations (e.g. academic, social or athletic), and self-esteem to refer to global self-evaluations.

In his seminal work The Principles of Psychology, William James (1890) defined self-esteem as a global concept, derived by individuals from the weighing of accomplishments against ambitions, ameliorated by increasing accomplishments or lowering ambitions. Since that time, the construct self-esteem has been the subject of much debate amongst psychologists, who have addressed questions such as dimensionality, stability, impact and the underlying processes by which it is derived.

2.3.1 Dimensionality

According to James' (1890) theory, individuals possess a unidimensional, global sense of their self-worth, which supersedes their domain specific self-evaluations. It is formed from the summation of self-perceptions in different domains, weighted by the importance the individual attributes to each. This perspective continues to influence the way in which the concept is construed. Global measures of self-esteem, such as the Rosenberg Self-Esteem Scale (1989), a ten item, forced-choice Likert scale, are commonly used in contemporary research (e.g. Michalaka et al., 2011; Hubbs et al. 2012). The usefulness of such a unidimensional construct is supported by the work of Shrauger and Sorman (1977). They conducted an experiment in which participants' performance on a series of anagrams was manipulated. Participants' global and domain-specific self-esteem and persistence were

measured. They found that global self-esteem was more closely associated with difference in performance and persistence than domain specific self-esteem.

However, there is a substantial body of evidence that shows that measures of domain-specific self-evaluations or self-perceptions are better predictors of behaviour than measures of global self-esteem (Rosenberg et al., 1995). This discrepancy may be somewhat elucidated by the work of Dutton and Brown (1997). They conducted a study related to a debate among those who argue for global self-esteem; those who view it as a cognitive process, a decision that individuals make about their value (e.g. Coopersmith, 1967; Crocker and Park, 2004; Crocker and Wolfe, 2001), and others who perceive global self-esteem as deriving from emotional processes, the affection an individual holds for themselves (Brown, 1993, 1998; Brown and Marshall, 2001).

Dutton and Brown (1997) conducted two experiments with American college students, looking at the relationship between computer-based word finding tasks, self-esteem, self-perceptions and the students' emotional and cognitive reactions to their performance. They found that while the participants' cognitive reactions to their performance were best predicted by their self-perceptions, their emotional reactions were best predicted by their global self-esteem.

In addition, the unidimensional view of the concept is subject to criticism on three fronts. First, global measures of self-esteem have been shown to engender responses liable to change,

possibly reliant on mood, rather than displaying the degree of stability associated with traits (Andrews and Brown, 1993). Second, the ability of certain populations (such as those with below average cognitive abilities, and children), to make accurate global self-evaluations is not supported by the evidence (Harter, 1999). Finally it may be argued that global self-esteem is not a useful construct, as individuals are able to hold very different self-perceptions in different domains concurrently (Gentile et al., 2009; Stein et al., 2007).

Andrews and Brown (1993) conducted cross-sectional research into the relationship between the Self-Evaluation and Social Support Instrument and the Rosenberg's (1965) global measure of self-esteem with two of the major risk factors associated with depression. They found that the Self-Evaluation and Social Support Instrument was a more successful predictor of depression than the measure of self-esteem, which they attributed to the influence of 'mood-state' on the Rosenberg's (1965) questionnaire. This finding also lends support to the argument that global self-esteem is influenced predominantly by emotional processes (Dutton and Brown, 1997, see above).

Some research suggests that making distinctions between different facets of self-perceptions is necessary with young children, and those with learning difficulties, as they are not able to make reliable judgements about their global self-esteem (Harter, 1999). Measuring and constructing self-esteem, or self-perceptions, in a way which does not exclude populations is important to ensure the generalizability of research, allowing comparative and longitudinal analysis.

Gentile et al. (2009) conducted a meta-analysis of the findings of 115 studies focussed on the gender differences in self-perceptions across 10 different domains. The differences found across six of the domains suggest that it is possible to hold different self-perceptions in different domains. Further, looking at the impact of physical activity on the self-perceptions of 3 410 boys and 5 260 girls, Stein et al. (2007) found a positive association with change in social and athletic self-perceptions in both girls and boys, but not scholastic self-perception. The implication is that diverse self-perceptions may be held concurrently and that they are influenced by different factors.

Thus, there is evidence for the existence of a global sense of self, which the evidence suggests may be related to emotional processes. However there is also evidence for the existence of domain-specific self-evaluations, or self-perceptions, which may be related to cognitive processes. In common with self-esteem, self-perceptions arise from the relationship between an individual's assessment of their actual and ideal self, with higher correspondences correlating with higher self-perceptions (Harter, 1985). They are affected by both how well an individual perceives themselves as doing something, and the importance they ascribe to that skill (Nash, 2005). However, in contrast to the global self-esteem perspective, the multi-dimensional perspective argues that an individual may have very different self-perceptions in different domains, a position supported by the work of researchers such as Gentile et al. (2009) and Stein et al. (2007). Given the evidence for both perspectives, it is probable that both global self-esteem and self-perceptions have some validity, but it may be more advantageous to view them as discrete constructs. A further debate surrounding the construct is its stability; whether it is better construed as having state-like (e.g. Andrews and Brown, 1993), or trait-like (e.g. Judge and Bono, 2001), qualities.

2.3.2 Stability of the construct

Fluctuations in self-esteem have been shown in response to events such as negative feedback (Kernis et al., 1993), and 'subtle social value cues' (Weisbuch et al., 2009) However, it has been argued that short-term fluctuations in our feelings of self-worth in response to life events are not analogous to how people feel about themselves in general (e.g. Brown and Marshall, 2001, 2006). Rather, it has been argued that self-esteem should be viewed as a trait, relatively stable, with a possible genetic component (Neiss et al., 2002). However, self-perceptions and self-esteem have been shown to be less stable facets of an individual than intelligence and personality (Conley, 1984), which have themselves been shown to change over a lifespan (Soto et al., 2011).

The findings of research into self-esteem have produced an equivocal picture of its development. A number of studies have shown an increase in levels of self-esteem occurring in adolescence (e.g. Mullis et al., 1992; Erol and Orth, 2011), while others do not (e.g. Zimmerman et al., 1997; Robins et al., 2002). Similar differences exist in the research focusing on the trajectory of self-esteem in old age, with some studies reporting a drop (e.g. Tiggemann and Lynch 2001; Robins et al., 2002) while others report no significant difference (e.g. Ryff, 1989) or an increase (Gove et al., 1989). However, although its trajectory is a matter of debate, there is substantial evidence from large, longitudinal studies to suggest that it is subject to change over lifespans (e.g. McMullin and Cairney, 2004; Orth et al., 2010; Robins et al., 2002).

Using a sample of data from the Americans' Changing Lives study, Orth et al. (2010) examined 4 separate assessments made over 16 years for a representative sample of 3 617 men and women, aged from 25 to 104 years. Their analyses suggest that levels of self-esteem follow a common trajectory regardless of race (black/white), sex, or level of education. Levels of self-esteem were shown to increase during adulthood, to be at their highest at approximately 60 years, and then drop in old age. The data indicated that the drop in levels of self-esteem that takes place in old age was attributable to changes in physical health and socioeconomic status.

Life-span trends have also been shown by Robins et al. (2002). Taking cross-sectional data over the internet from 326 641 people, with an age range of 9 to 90, they found self-esteem levels to be high during childhood, falling in adolescence, and then slowly increasing during adulthood, followed by a rapid drop in old age. As with Orth et al. (2010), their findings suggest that this trajectory was common across sex, ethnicity and socioeconomic status. Both studies found that while different groups, categorised by factors such as sex, ethnicity and level of education show the same life-span trajectory, their actual levels of self-esteem were different.

Demographic differences in levels of self-esteem have been shown between men and women (e.g. Kling et al., 1999; Robins et al., 2002; Orth et al., 2010), socioeconomic status (e.g. Twenge and Campbell, 2002; Robins et al., 2002) and ethnicity (e.g. Gray-Little Hafdahl; 2000; Robins et al., 2002; Orth et al., 2010). In order to understand the influence of such factors it is necessary to consider the processes through which our self-esteem arises.

2.4 Models of Self-Esteem

A number of models attempt to explain the mechanism by which our self-esteem is determined, including: a top down, affective model, a bottom up, cognitive model, and reciprocal models. Proponents of the bottom up, cognitive model (e.g. Pyszczynski et al., 2004) argue that global self-esteem is determined by our self-evaluations, which are influenced by the evaluative feedback we receive. This position is supported by evidence coming from the field of body image, (e.g. Clay et al., 2005; Shroff and Thompson, 2006; Gothe et al., 2011).

Clay et al. (2005) conducted an experiment with 136 female participants aged between 11 and 16, looking at the impact of viewing ultra-thin and average sized models on body satisfaction and global self-esteem. They found that looking at the models caused reductions in both global self-esteem, measured by the Rosenberg's (1965) self-esteem scale, and body satisfaction. Further, these shifts in self-esteem were entirely mediated by the changes in their body satisfaction. These findings were attributed, in part to the influence of social comparisons.

Social comparison theory (Festinger, 1954; Suls and Wheeler, 2000) asserts that the comparisons we make between ourselves and others are central to the way in which we learn about ourselves and gauge the validity of our thoughts, feelings, and other constituents of self. Individuals are predisposed to making downward social comparisons, with those performing at a level somewhat below their own, allowing for more positive self-concepts (Wills, 1981).

Wood (1989) argues that in the absence of such comparisons, in circumstances where only upward comparisons are available, there may be an adverse effect on our self-esteem.

Evidence to support Social Comparison Theory comes from studies such as Harter (1985), who found that children's self-perception scores are influenced by their comparison group. Silon and Harter (1985) found that the perceptions of scholastic competence of children with IQs in the 50 to 70 range educated in the mainstream were higher than those of SEN children with IQs in the normal range educated in the mainstream (Renick, 1985). Harter (1985) found, by means of interview, that this pattern was the result of differential social comparisons. The children with lower IQs restricted their comparisons to those with similar ability. In contrast, the children with SEN and IQs in the normal range (as is the case for those with statements for specific speech and language difficulties (SSLD)) had social comparison groups made up of their typically developing (TD) peers, leading to their perception of being less scholastically competent.

In contrast, exponents of the top-down, affective model contend that global self-esteem forms in the early years, influenced by early relationships and temperament, and that once formed, it, alongside evaluative feedback, affects our self-evaluations (Brown and Marshall, 2006). Evidence supporting a top down model comes from studies that suggest that individuals with high self-esteem alter their self-evaluations to support their feelings of self-worth (e.g. Brown and Marshall, 2001), show attentional biases which serve to protect self-esteem (Lia et al., 2012), and/or have lower activity in the ventral anterior cingulate cortex (vACC) in response to social feedback than those with low self-esteem (Somerville et al., 2010).

Further support for the existence of attentional biases in individuals with high, versus low self-esteem comes from the work of Lia et al. (2012). They conducted a study measuring the direction of attention using N2pc event-related potentials (the measured brain response that is linked to selective attention). They found that those with higher levels of self-esteem showed lesser N2pc responses to rejection cues not relevant to their given visual detection task than individuals with lower self-esteem.

Some of the differences in findings may be attributable to the different measures (uni or multi-dimensional) employed. However, given the evidence for both models it may be, as Marsh (1990) suggests, that both top-down and bottom-up processes occur simultaneously, with a degree of reciprocity. It may be that top-down processes, account for the demographic differences in levels of self-esteem (see above), whereas bottom-up processes account for the more dynamic associated factors. For those wishing to instigate change, it may be more useful to consider the dynamic factors suggested by research, such as; relationships with peers (e.g. Asher et al., 1984; Kinnunen, et al., 2008), special educational needs (SEN) (e.g. Lindsay et al., 2002); level of education, or academic achievement (e.g. Muijs, 1997; Guay et al., 2003; Orth et al., 2010).

To summarise, therefore, the evidence suggests that the term 'self-esteem' is commonly used to refer to two discrete constructs, global self-esteem and self-perceptions, which function with a degree of reciprocity. Global self-esteem appears to be acquired in the early years, influenced by an individual's relationships and temperament, impacting on our self-perceptions in top-down affective processes (Brown and Marshall, 2006) resulting in

attentional biases (Lia et al., 2012), and differential vACC activity (Somerville et al., 2010). Studies show demographic differences in levels of self-esteem (Kling et al., 1999; Robins et al., 2002; Orth et al., 2010), and fluctuations across lifespans (Robins et al., 2002; Orth et al., 2010).

In contrast, there is also evidence to suggest that domain-specific self-perceptions arise from bottom-up, cognitive processes (Pyszczynski et al., 2004), influenced by social comparisons (Harter, 1985), evaluative feedback in different domains (Stein et al., 2007) and factors arising from an individual's level of self-esteem (Lia et al., 2012; Somerville et al., 2010) .

The extent to which the prominence of self-esteem in the UK educational system is defensible, and the validity of its use as an alternate outcome measure is somewhat dependent on which of the two constructs is being referred to. The evidence suggests that by the time children enter school, their global self-esteem will already have been acquired according to factors outside of the scope of the education system; temperament, early relationships and demography. Thus any school-based interventions are unlikely to have any significant impact, calling into question its use as an outcome measure.

Self-perceptions have been shown to be influenced by attentional biases arising from our global self-esteem, a factor unlikely to be affected by school-based interventions. However, they have also been shown to be influenced by social comparisons (Harter, 1985) and evaluative feedback (Stein et al., 2007), which may be impacted upon by school-based

factors. However, to determine the validity of the use of self-esteem as an alternate outcome measure, it is necessary to examine its relationship with these associated factors.

2.5 Associated Factors - Poor Social Relationships

A number of studies have shown a relationship between self-esteem and social relationships. Boivin and Begin (1989) found that children who are rejected by their partners and have poor relationships with their cohort display lower self-perceptions. Asher et al. (1984) found that children with high social acceptance have higher self-esteem than unpopular children. However the nature and directionality of this relationship is subject to debate.

Hymel et al. (2008) compared self and peer perceptions of three sub-groups of unpopular children across both social and non-social domains of competence. They report that the 'aggressive unpopular' and 'aggressive-withdrawn' children were inclined to overestimate their competencies, whereas 'withdrawn-unpopular' children had negative, but more accurate self-evaluations. This suggests that the impact of social rejection on social self-perceptions may be mediated by one or more other factors, which may be related to aggression.

Looking at adults, Rusbult et al. (2011) conducted a meta-analysis of data drawn from three studies, looking at the connection between self-esteem and reactions to the intermittent deterioration of the close relationships of adults. They found that those with higher levels of self-esteem employed more behaviour that actively destroyed the relationships, and did not passively allow relationships to deteriorate as frequently as those with lower self-esteem and

were less likely to react with passive neglect. No relationship between self-esteem and constructive, positive, problem-solving behaviours was found. This could be construed as those with high self-esteem devaluing relationships which may lead to negative feedback, in order to protect their self-esteem. In addition, the implication of these findings is that aggression displayed by the children who overestimated their competencies in Hymel et al.'s (2008) study was indicative of higher self-esteem.

However, the link between self-esteem and social relationships is not without dispute. Blackhart et al. (2009) conducted a meta-analysis of 192 studies on social exclusion. Their analysis showed that rejection seemed to bring about a significant negative change in an individual's emotional state. However they found no difference between the self-esteem of individuals categorised as rejected, or socially excluded, and the neutral controls.

2.5.1 Associated Factors - Special Educational Needs (SEN)

A growing body of evidence points to a higher incidence of low self-perceptions in children with special educational needs (SEN) such as SSLD when compared to their TD peers (e.g. Drummond, 1976; Lindsay et al., 2002). According to Nash (2005), this may be attributed to a vicious circle, with the child becoming stigmatized, or discredited, which leads to their victimisation, or being singled out, which in turn leads to their being ostracized, or excluded, with a negative effect on their self-perceptions.

Drummond (1976) conducted a comparative study of 55 elementary school children, grades one to four, with SSLD and a TD control. He found that those with speech difficulties are liable to have lower self-perceptions. These findings have been replicated by researchers such as Lindsay et al. (2002) who found that children with SSLD had lower self-perceptions of scholastic competence than their standardization sample.

In contrast, McAndrew (1999) found no significant difference between the scores of fourteen children aged 8 to 14 with SSLD and the standardisation samples provided by the scales he employed. However, this finding may be due to his choice of tests; the Self-Esteem Inventory (Coopersmith, 1981) and the Piers-Harris Children's Self Concept Scale (1984). These are unidimensional measures and thus of disputed reliability and validity (Wylie, 1989). In addition, it may be that by measuring global self-esteem he is tapping into a sense of self-worth established in the early years, when the language skills of many children are limited and thus having SSLD has not yet had an impact.

2.5.2 Associated Factors - Academic performance

Evidence points to a higher incidence of low self-perceptions in children with poor academic performance (Muijs, 1997; Guay et al., 2003). Muijs' (1997) two-year study of 1001 Flemish pupils in years 4 and 5, indicating ages 9 to 11 years, showed a correlation between academic self-concept and academic achievement. Though each a good predictor of the other, achievement was found to be causally predominant.

Though the directionality of the relationship remains disputed, recent research points to reciprocity (Guay et al., 2003 and McInerney et al., 2012). Guay et al.'s (2003) research with 385 pupils in elementary school grades 2, 3 and 4 found the relationship to be reciprocal across the three year groups. This finding is corroborated by studies such as Mclnerney et al. (2012). They conducted research using data from 8 354 students studying in Hong Kong secondary schools. The study was designed to investigate the direction of the relationship between predicted academic self-perceptions and learning strategies and academic achievement. They found a reciprocal relationship between academic achievement, academic self-concept and learning styles.

Van Houtte et al. (2012) analysed a subsample of the 2004 – 2005 Flemish Educational Assessment, a large study conducted in Dutch speaking regions of Belgium. This included 10 schools employing within-school ability streaming, and 56 schools where across-school ability streaming occurs, with schools offering different curricula. In total data from 2 152 vocational and 3 758 academic students was used. They found that while in both cases (within and across school streaming) academic pupils had higher self-esteem than non-academic students; this difference was much more pronounced in students attending schools employing within-school streaming. This suggests that the link between academic performance and self-esteem may be mediated by the available social comparisons.

However, much of the research into the relationship between self-esteem and academic achievement is subject to confounding factors. Further, complicating the above findings, it is probable that SEN, low academic achievement and poor peer relationships are related, the

stigma of low academic achievement in the classroom paving the way for isolation, victimisation and ostracism in the playground. Berghout Austin and Draper, (1984) conducted a study of 145 elementary school children (grades 3 to 6). Social impact and social acceptance or rejection scores, based on the responses of their peers, were correlated with each child's composite score on the Iowa Test of Basic Skills. They found a significant positive correlation between peer acceptance and academic achievement and a significant negative correlation between social impact and achievement.

The evidence suggests that there is a degree of reciprocity in the causal relationship between self-perceptions, self-esteem and related factors, and thus provides little support for its pre-eminence within the UK educational system or its use as an alternate outcome measure. However the evidence for the impact of social comparisons on self-perceptions (Van Houtte et al., 2012) may be an important consideration when considering issues of within-school streaming or specialist provisions.

2.6 Summary

The Education Act (1996)

> "requires that all maintained schools provide a balanced and broadly based curriculum that: i) promotes the spiritual, moral, cultural, mental and physical development of pupils at the school and of society and ii) prepares pupils at the school for the opportunities, responsibilities and experiences of adult life" (DfEE, 1999 p.12).

The need to capture the progress of pupils across the breadth of these curriculum requirements is particularly pertinent for those working within the field of special education, where academic achievement may be low, and less pertinent in some cases in terms of preparation for adult life. In addition, the importance of capturing the impact of interventions and provisions on these aspects of the learners' development is heightened by evidence suggesting that SEN programmes produce only a modest impact on the academic attainment of pupils by the end of primary school (Keslair and McNally, 2009). The prominence of self-esteem as a 'soft-outcome' measure is evident across a wide variety of educational settings and levels in the UK (Dewson et al., 2000). Therefore determining the validity of the construct and reliability of related measures is imperative.

The evidence reviewed suggests that the term self-esteem, as it is broadly applied within education and common culture, appears to encompass two distinct constructs: unidimensional, global self-esteem, and multi-dimensional self-perceptions. There has been some debate among psychologists regarding the comparative legitimacy and value of these constructs; however the evidence suggests that when construed with clarity, and applied appropriately, both have a degree of validity and utility. Global self-esteem and self-perceptions not only differ in terms of dimensionality, but also in the mechanisms by which they are acquired, and maintained.

Empirical data suggest that global-self-esteem is acquired during the early years, through relationships with our care givers, with long-term implications for the way in which individuals perceive and interpret the world, creating attentional biases particularly in relation

to social cues and feedback. These top-down processes can serve to protect or threaten our sense of self over a life-span. In contrast, evidence indicates that self-perceptions are derived from bottom-up processes, arising from the feedback we perceive in different domains, such as academic performance or social relationships, and our available social comparisons. These concurrent processes may account for the degree of reciprocity identified in a number of studies.

Thus it is probable that measures of self-esteem in the school years reflect the sense of self acquired during the early, preschool years, through relationships with caregivers and temperament, which have been shown to impact on our attentional biases. In addition, they are likely to provide indirect measures of the factors associated with self-esteem such as available social comparisons, social relationships, health related factors and academic achievement.

Assessments in education fall into two categories; summative, or formative (Black and William, 1998). Summative tests provide evidence of achievement, or distance travelled for individuals, from which information about the efficacy of the teaching and learning experience may be inferred. Formative tests provide evaluative information for provisions, allowing the more effective planning of future interventions. Measuring the impact of early life experiences is difficult to justify within the school system, being neither formative, as results are not used to plan relevant interventions, nor summative of in school learning. While data regarding the associated factors may provide useful information for school improvement or interventions, they may be more appropriately assessed by less indirect measures.

Using self-esteem or self-perceptions as 'soft-outcome' measure of specialist provisions is open to further criticism. It could be argued that by providing children with a new comparison group of children with similar strengths and difficulties, specialist provisions are likely to have a positive impact on self-perceptions, without recourse to specific remedial input. However, when pupils leave such provisions and enter a social world with a wider range of available comparisons, any gains may be lost. Following Nash (2005), interventions or provisions for children with special educational needs may have a positive impact on self-perceptions if they reduce the importance the pupils ascribe to skills known to impact on their self-perceptions, such as academic achievement and peer relationships. Thus taking self-perceptions as a measurable 'soft' outcome may be beneficial to the provisions, but may not reflect their quality. The implication of this research for schools is that using formative or summative measures of self-esteem and self-perceptions is difficult to defend.

In addition, the evidence outlined above suggests that measures adopted to improve self-esteem in schools will not be effective. Self-esteem interventions, or programmes designed to raise self-esteem through materials such as 'I am special', are unlikely to have any significant impact as they do not target the underlying sense of self driving top-down processes, such as early relationships, nor do they target the factors associated with bottom-up processes such as social relationships, academic achievement or social comparisons.

Further criticism for the salience it is afforded within education also comes from a number of academics and researchers who argue that the emphasis on self-esteem may have had a deleterious effect on mental wellbeing (Crocker and Park, 2004). This is supported by evidence showing that as self-esteem has risen, there has been a concurrent rise in materialism

(Crocker and Park, 2004; Twenge, 2006), narcissism (Twenge et al., 2008), depression (Ehrenberg, 2000; Twenge, 2006), a move from internal to external locus' of control (Twenge et al., 2004) and the notion of the 'fragile self', requiring protection and support from professionals (Furedi, 2004; Ecclestone, 2004). Recurring intelligence related praise has been shown to cause stress, demotivation and a decline in performance (Dweck, 2007).

Thus the evidence does not support the salience afforded self-esteem on the grounds of it being a 'social vaccine', nor as a measure of success by institutions. Therefore, how we engage with this process is an important consideration for professions working within the field.

2.7 Implications for Educational Psychology Practice

Educational psychologists may work with schools and young people to improve self-esteem on a number of levels. Macro, systemic work may be targeted nationally, or at local authority and whole school levels. This can be seen in the introduction of the SEAL programme (e.g. Wigelswoth et al., 2012). Individual work, focussed on the needs of a specific child, where low self-esteem is considered to be a factor is also common practice (e.g. Farrell et al., 2006). The evidence reviewed above has a number of implications for both levels of work.

The role of educational psychologists is, in part to improve the mental health of children and young people. There is evidence to indicate that this can be achieved through interventions targeting the factors associated with self-perceptions through bottom-up processes. Research

suggests that modelling positive emotional and social skills (Blakemore and Frith, 2005), teaching literacy and numeracy (Tett and Maclachlan, 2007) physical activity (Babyak et al., 2000) and providing settings with favourable social comparisons (Van Houtte et al., 2012) have a positive impact on mental health. In addition, the evidence suggests that interventions designed to foster positive relationships with caregivers in the early years may have a lasting impact on our self-esteem, encouraging protective attentional biases. In focusing on these areas, educational psychologists are likely to have a greater positive impact on the well-being of children.

In addition, as applied psychologists we are in an ideal position to help those working in the fields of education and social policy to develop a clearer understanding of the constructs self-esteem and self-perceptions, and the implications of the available evidence. There may be opportunities to work with provisions and local authorities to identify more appropriate outcome measures, develop evidence-based interventions to improve mental wellbeing and employ resources more effectively. In addition, there may be a role for educational psychologists to apply knowledge surrounding the impact of demographic features on self-esteem to target resources, and inform social policy.

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APPENDICES

APPENDIX I Specialist Resource Base Request for Support Guidance Notes

Part 1a – Request for Support Guidance Notes
(Behaviour/ ASD/ Learning/ Language Specialism)

These guidelines have been drawn up to assist schools when considering and making requests for support to specialist resource bases.

To make a request for support to a specialist resource base, the Specialist Resource Base Request for Support Form (at the end of these notes) should be completed and sent to the local Single Area Panel. The Single Area Panel is the admissions authority for specialist resource base placements.

What does the specialist resource base provide?

Specialist resource bases provide short-term teaching and support to meet the needs of individual pupils and offer opportunity for assessment and planning around individual needs, whilst promoting positive behaviour.

Each specialist resource base specialises in one of the following:

- ASD (Autistic Spectrum Disorders) / Social communication difficulties
- Behaviour difficulties
- Learning difficulties
- Speech and language difficulties

In order to assist the SRB request for support process, the person making the request is asked to gather as much relevant information as possible and complete the Request for Support form. This form includes a request for background or baseline information, the perceived purpose of the placement and the learning 'hopes' as described by the pupil, parent/carer and school staff.

Below is a list of possible evidence that you may wish to include with your request. This is not a definitive list and you are encouraged to use other relevant sources of information to illustrate the intended purpose of this request for support.

Please note - An evaluated and reviewed Individual Education Plan (IEP) must be included with the Request for Support form.

A CAF may be attached should the multi-agency meeting have been carried out.
If stating a diagnosis this must be accompanied by a professional report indicating the diagnosis

Attainment Information

- National Curriculum and P-scale Levels
- Test results – Reading, Spelling, Writing, Comprehension, Numeracy, Listening Skills, Attention, Language.
- Reports from School Support Team or other advisory services/ A consultation record from the School Support Team (SST) or Speech and Language Therapist (SLT)
- Information that indicates whether the pupil has acquired early skills, developed them to fluency, is able to generalise and adapt these skills. (As described by the Learning Hierarchy.)

Adjustment Information – i.e. what interventions have already been tried and what were the outcomes? The SAP needs to see evidence that professional advice has been sought and applied (reports ideally within the past 12 months)

- Learning Support Assistant timetable.
- Level of differentiation, examples of teacher planning.
- Strategies used to support access to learning.
- Programmes or schemes currently used to support learning.
- Class timetable and information on how school-specific resources have been used to support the pupil in the classroom.

Cognitive Functions

- A cognitive functions checklist is available from the school support team, which looks at the three stages of cognition or thinking, defined by Feuerstein as input, elaboration and output.
- An indication of how the pupil manages to take in information, process and retrieve this and then later access that information.

- Describe if the pupil is able to identify similarities or differences, use concepts to explain differences and make connections between information in order to generalise.

Confidence as a Learner

- Describe the pupil's approach to learning and resilience or willingness to approach new challenges.
- Self esteem test results.
- Describe level of engagement, passivity, avoidance and view of themselves as a learner.

Learning Priorities

Ask the pupil, parent/carer and school staff to identify the perceived next learning step both in school, at home and in their social life. This may include progress on a computer game, a sport skill, independent skill as well as an academic learning target. The pupil's view of the purpose of the placement is going to be critical.

Type of Placement Request

Please indicate the specialism you consider to be appropriate and whether you are requesting an attainment, cognition or confidence placement. Placements may require the attendance by currently employed mainstream Learning Support Assistants who will learn alongside the pupil.

Part 1b - Summary Profiles
(Behaviour/ ASD/ Learning/ Language Specialism)

Autistic spectrum disorders/ social communication difficulties

It would be expected that school-based interventions have not been effective in enabling the child/ young person to respond appropriately to interventions from external professional(s) and that the request for support to a specialist resource base is supported by the professional involved.

The child or young person would have experienced:

- Significant difficulties in the triad of Communication, Socialisation and Flexibility of thinking which prevent the child/ young person from actively engaging in mainstream education, even with a high level of additional support.
- High levels of anxiety related to confusion and/ or fear of what is happening in the immediate environment such that the ability to learn is severely compromised.
- Extreme difficulties in the understanding and acceptance of age-appropriate social rules governing, for example, turn-taking, collaborative activities and the sharing of adult attention.
- Lack of awareness, to a greater or lesser extent, or even apparent disregard of personal safety and that of others.
- A strong and obtrusive adherence to routines and rituals which makes any change of routine very challenging and may even provoke defiance or other negative reactions.
- Considerable, persistent and pervasive problems in establishing and sustaining relationships with peers.
- Ego-centric behaviour that fails to take into account consideration for others in relation to what would be viewed as age-appropriate behaviour in any particular situation.

- The absence of other primary reasons or causes for these difficulties.

The child or young person should be known to the Consultant Community Paediatrician and the School Support Team.

The placement request should identify an explicit 'learning outcome' for the child or young person, which may relate to:

1. Progress in developing social and communication skills and flexible thinking

2. Decrease in levels of anxiety

3. Ability to follow an individualised curriculum

Behaviour, emotional and social development difficulties

It would be expected that school-based interventions have not been effective in enabling the child/ young person to respond appropriately to interventions from external professional(s) and that the request for support to the specialist resource base is supported by the professional involved.

The child or young person would demonstrate a combination of these traits on a daily basis:

- Significant difficulty in interacting positively with peers and/ or adults.
- Use of inappropriate language and/or demonstrates inappropriate attitudes towards others.
- Behaviour, which impedes the achievement of self and others.
- Extremes of behaviour including aggression when challenged or corrected by an adult.
- Inappropriate behaviour at a level, which meets the criteria for fixed term exclusion from mainstream school.

The placement request should identify an explicit 'learning outcome' for the child or young person, which may relate to:

1. Ability to respond assertively rather than aggressively in a range of situations

2. Ability to accept direction from adults in a positive manner, including on-task behaviour in relation to learning activities

3. Ability to relate positively to peers in both structured and unstructured situations.

Learning difficulties

It would be expected that school-based interventions have not been effective in enabling the child/ young person to respond appropriately to interventions from external professional(s) and that the request for support to the specialist resource base is supported by the professional involved.

The child or young person would have experienced:

- Persistent difficulty with the acquisition of a specific skill, necessary to access the curriculum, despite ongoing support and targeted intervention at school action plus.
- An identifiable barrier to learning which has contributed to their lack of 'adequate progress' as defined in the Code of Practice (2001) page 52.
- Difficulties with independent learning skills, (including fluency, generalisation and organisation) or present with low self-confidence as a learner.

- Opportunities to work in a small group or one to one context and not having responded positively to this method of teaching.

The placement request should identify an explicit 'learning outcome' for the child or young person, which may relate to:

1. The acquisition of a specific curriculum based skill eg: letter sounds, number bonds.

2. The development of confidence or independent learning skills eg; organisation, efficacy or self-esteem.

3. Targeted opportunity for support staff to develop specific strategies or adjustments that will enable the pupil to have greater access to learning in their own class room

<u>Speech and Language communication difficulties</u>

The child or young person would have experienced:

- Significant expressive language disorder: more than one standard deviation below norm for age (eg telegrammatic language, word-finding difficulties)

- A severe speech disorder (ie. unintelligible out of context to most listeners).

- Proven ability to benefit from intensive, daily SLT

- Verbal comprehension within age-appropriate range; NB. If outside age-appropriate range, there must be potential for the child/ young person to make accelerated progress in comprehension due to intensive SLT, such that s/he will achieve comprehension within age-appropriate limits

- Child's difficulties must be primarily speech/language based, rather than secondary to general learning delay, emotional or behaviour difficulty

The placement request should identify an explicit 'learning outcome' for the child or young person, which mayrelate to:

1 To maximise the potential for the development of the child's receptive and expressive language skills.
2 Facilitate the development of the child's speech sound skills so as to increase the child's level of intelligibility.
3 To develop linguistic skills to a level where the child no longer requires or would benefit from intensive speech and language therapy and can access a full curriculum in a mainstream setting.

CHAPTER 3

AN ACCOUNT OF A COMPLEX CASE OF CHALLENGING BEHAVIOUR, APPROACHED USING THE MONSEN ET AL. (2008) PROBLEM ANALYSIS CYCLE

ABSTRACT

Disruptive and challenging behaviour in the UK education system has a substantial impact on the lives of the pupils concerned (Department for Education (DfE), 2011), and the effectiveness of the education system (Youth Justice Board, 2004). Behaviour management is a significant aspect of the role of the educational psychologist (Farrell et al., 2006). However despite an increasing body of evidence suggesting the efficacy of interventions, particularly when based on functional assessments (e.g. Harvey et al., 2009), the level of behaviour-related exclusions (DfE, 2011), suggests that outcomes are not always good. The following is an account of a complex case of challenging behaviour, approached using the Monsen et al. (2008) Problem Analysis Cycle. Issues surrounding the impediments presented by time limitations, joint-working and different perspectives on attributions are considered.

3.1 Introduction

In 2009, there were 3.95 million full time equivalent (FTE) children in state-funded primary schools in England (DfE, 2011). Of these 39,510 were given a fixed term exclusion in school year 2008 to 2009 due to problems with behaviour, with many more being permanently excluded (DfE, 2011) or managed moved, where pupils are given a place in an alternative mainstream school as their current school feels it is unable to meet their needs.

Disruptive and challenging behaviour has a significant impact on teaching and learning in UK schools. In a survey of teachers' estimates of teaching time lost due to disruptive behaviour, 55% of those surveyed estimated a loss of between 10% and 30%, with 7% of teachers surveyed estimating more than 50% of time lost (Youth Justice Board, 2004).

However, challenging behaviour is not evenly distributed throughout the population. Data provided to the DfE by primary schools in England, the rate of permanent exclusions was approximately 3.5 times higher for boys than for girls, with the length of exclusions nearly 3 times higher for boys than for girls (DfE, 2010). Pupils eligible for free school meals are approximately 3 times more likely to be given permanent or fixed term exclusions than those who are not (DfE, 2010). What is not clear from this data is causality. Psychological theories such as the frustration-aggression model (Dollard et al., 1939; Berkowitz, 1989) and social learning theory (Bandura, 2006), pervasive developmental disorders (Lecavalier, 2006) and attachment difficulties (Buist et al., 2004) offer alternate causalities.

This report is an account of a complex case undertaken during my second year of training using The Problem Analysis Cycle (Monsen et al., 2008) as a framework for intervention with CM, a Year 1 child presenting with challenging behaviour. Reported behaviours included: violence, directed at both staff and peers; non-compliance, hiding under tables and crying. Such incidents were occurring several times each day in school. At the time he was enrolled in a large primary school judged as satisfactory by Ofsted in 2010, and where 23 % of parents disagreed with the statement: 'the school deals effectively with unacceptable behaviour' (Butt, 2010). His Special Educational Needs Coordinator (SENCo), who was also his

grandmother, reported that similar behaviours had been displayed since toddlerhood, with sometimes shocking levels of violence at home, but occurring somewhat less frequently. However, this was not reported by CM's parents, and from the point of referral, different attributions for the cause of CM's difficulties had been expressed.

3.1.1 Case study – a pen portrait

CM was first referred to my employing Educational Psychology and Specialist Support service (EPSS) in his reception year; his school reported concerns with "strange behaviours" and "difficulty relating to other pupils and joining in." He had been assessed by a speech and language therapist (SaLT), due concerns about his level of understanding, who had noted a presentation 'suggestive of Autism Spectrum Disorder'. Due to staffing issues CM's initial referral was not taken up and he was re-referred in the autumn term of 2010 when he was in year 1. His difficulties were cited as: aggressive and defiant behaviour, an egocentric point of view and poor social skills. In addition to the request for intervention, I received a telephone call from the school SENCo.

The SENCo informed me that she was the child's grandmother. She reported that CM's parents were shift workers, his mother was managing two jobs, and child care was shared between parents and a child-minder on a somewhat ad hoc basis. Changing shift patterns and periods of parental depression had precluded the development of a routine. He was not required to assist in the home, and was reportedly mostly autonomous. Compliance while visiting relatives was gained through the promise of toys; however she reported that she had witnessed several aggressive outbursts in his home. Food was given on demand, and was left

out for him to graze on at will. As a result, CM had displayed a number of angry and aggressive outbursts at school, resulting from being asked to eat when he was not hungry, and not being given food at non-meal times. This description suggested a permissive parenting style: warm, with few demands or expectations placed on him (Shaffer & Kipp, 2007).

In summary, CM was male and in receipt of free school meals. He had a sister, two years his junior. His mother had a history of depression and neither parent has had the time to establish routines or relationships. In working with him, his school and family, I was aware of the implications of these factors (see below). In addition, evidence suggests a relationship between permissive parenting, internalising and externalising behaviours (Calkins and Degnan, 2006; Cheevers et al., 2010), poorer self-control (Mauro and Harris, 2000) and social responsibility (Lerner et al., 2003), which could account for much of CM's reported challenging behaviour. However, the possibility of his having Autism Spectrum Disorder had been raised by professionals, such as his SaLT, as a possible determining factor.

3.2 Background

The importance of developing effective strategies for dealing with challenging behaviour in the English education system is highlighted by national statistics and the professional experience of educational psychologists. Farrell et al., (2006) sent questionnaires to the parents of children thought to have special educational needs (SEN), referred to an educational psychologist. Of these referrals, 47% were seen as being a result of their social, emotional and behavioural difficulties. The prevalence of behaviour-related referrals indicates that supporting schools to manage challenging behaviour is a central component of the work

of an educational psychologist. However, the rate of exclusions suggests that developing effective strategies remains a challenge.

CM's case was complicated by the dual role of the SENCo, who was also his grandmother. In addition, the failure to reach agreement between CM's parents, school and the professionals about causal attributions hampered the development of a consistent and coherent approach and had a serious impact on outcomes.

Difficulties faced in identifying the underlying factors behind CM's behaviour included the presence of both social and economic associated factors, and the commonalities in his behaviour and the behavioural characteristics of children with attachment difficulties and ASD.

3.3 Challenging Behaviour

Challenging behaviour may be construed as arising from intrinsic or extrinsic factors, or a combination of both. Extrinsic factors may be environmental, such as economic status (Kelly et al., 2010), or in accordance with behaviourist theories (Skinner, 1974), through escape conditioning and the contingent usage of punishment and rewards (Eisenberg et al., 1992). Intrinsic factors may include disorders such as ASD. Challenging behaviour associated with attachment difficulties may be understood as a reflection of both intrinsic and extrinsic factors, with early interactions with caregivers impacting on the child's developing brain (Van

Voorhees & Scarpa, 2004). These differing theoretical perspectives are further elaborated below.

3.3.1 Challenging Behaviour – Definition

The term 'challenging behaviour' is used to describe behaviour judged in need of targeted intervention additional to, or substantively different from the universal provisions made by schools to support children's learning of culturally accepted, age-appropriate behaviour.

In 2007, the Royal College of Psychiatrists, British Psychological Society and Royal College of Speech and Language Therapist stated that:

> "Behaviour can be described as challenging when it is of such an intensity, frequency or duration as to threaten the quality of life and/or the physical safety of the individual or others and is likely to lead to responses that are restrictive, aversive or result in exclusion."(Royal College of Psychiatrists, British Psychological Society and Royal College of Speech and Language Therapist, 2007 pp10)

However it is important to note that the quality and nature of a school's behavioural policy, ability to identify triggers and work proactively as opposed to reactively are likely to impact upon the intensity, incidence and extent of behaviours considered socially inappropriate, and the likelihood of restrictive or aversive responses and/or exclusion. Thus different behaviours may be described as challenging by adults within different settings, and the role of schools in both defining and influencing appropriate / inappropriate behaviour should be acknowledged.

According to his school, CM's behaviour fitted the definition cited above, as incidents occurred daily, and though they varied in length had, at times lasted until he was removed from the premises (several hours). The reported incidents were of different intensities, ranging from non-compliance to violence directed toward other children and members of staff. Such outbursts frequently led to temporary exclusions, but by the time of my involvement, a number of discussions had taken place about the possibility of CM's permanent exclusion from school.

3.3.2 Challenging Behaviour - Attributions - Economic Factors

Evidence of the impact of economic factors comes from the Millennium Cohort Study (Kelly et al., 2010). Their data showed the prevalence of socio-emotional difficulties by family income. At 5 years, 2% of the children in the richest families had high SDQ (Strengths and Difficulties Questionnaire) (Goodman, 1997) scores, compared to 16% from the poorest; an eightfold difference. However, statistical adjustment for home learning, family routines and psychosocial factors 'explained' approximately 60% of the income gap in difficulties (Kelly et al., 2010).

The mediating mechanisms by which low socioeconomic status impacts on behaviour vary, and studies have implicated factors such as: lack of bedtime routine (Hale et al., 2009), higher levels of stress (Evans, 2003), poorer parental scaffolding (Hughes and Ensor, 2009), access to material resources and responsiveness (Bradley, 2001) and an absence of structure and routine (Evans and English, 2002). A lack of routine and structure had been raised in relation

to CM's home life, and the reported parental depression may have led to a reduced responsiveness (Gondoli and Silverberg, 1997) (see Section 2.1.1).

3.3.3 Challenging Behaviour – Attributions – Behaviourism

The behaviourist perspective is that behaviour is learned and through interactions with the environment. According to behaviourist theories (e.g. Skinner, 1974), operant conditioning and reinforcement play a significant role in the development of challenging and antisocial behaviour (Eisenberg et al., 1992), which serves one of two functions: to avoid, or escape something or to obtain consequences (O'Neill et al., 1997). Such behaviours may be socially motivated, to obtain or escape consequences from a person in their environment, or non-socially motivated, to obtain or escape stimuli (consequences not related to an individual), or both (O'Neill et al., 1997). Escape conditioning (a form of operant conditioning) occurs when an individual learns that a particular behaviour (for example throwing pens) will stop, or enable them to escape from an aversive stimulus (for example a teacher presenting a difficult task) (Patterson, 1995). Escape conditioning can develop into avoidance conditioning, whereby an individual learns to avoid the aversive stimulus (for example school refusal) (Hefferline et al., 1959).

Antecedents, the stimuli that occur just before a behaviour are another key component of the behaviourist view of behaviour (Skinner, 1974). According to this perspective, antecedents may act as a cue to behaviours, and may be manipulated to prevent challenging behaviour. If the function of a challenging behaviour is escaping aversive stimuli, making the stimuli less aversive may reduce the occurrence of the behaviour. An example of such an antecedent

based strategy is offering a choice rather than giving a direction during activities (Cole and Levinson, 2002).

Within the behaviourist paradigm, social cognitive theory (SCT) (Bandura, 1986), a development of social learning theory (Bandura, 1977) proposes that learning, including the learning of behaviours, arises out of Reciprocal Determinism, a reciprocal interaction between an individual, their environment and behaviour. A key aspect of SCT theory is that behaviours can arise out of Observational Learning: the reproduction of actions they have seen performed by others. Reinforcement occurs through the external and internal consequences of a behaviour, and this effects the likelihood of it being maintained. Expectancies, the anticipated consequences of a behaviour, learned through observation or prior experience, combined with the value an individual places on the expected consequence shape the decisions individuals take about their behaviour (Bandura, 1986). The contention that in addition to the environment, an individual's self-regulation can influence their own outcomes is where SCT contrasts with other behaviourist theories (Bandura, 2001). In addition, behaviour is perceived as being influenced by a person's self-efficacy: their confidence in their ability to behave in a particular manner (Bandura, 2001).

The implication of behavioural psychology and SCT for CM is that the behaviour he demonstrates may be learned either through his own interactions with the environment, or through the observation of the behaviour of others within his environment. The behaviours serve a function and have been reinforced to be maintained. In addition he may have a degree of influence over his behaviour which is moderated by his feelings of self-efficacy.

3.3.4 Challenging Behaviour - Attributions - Attachment

Patterson (1986) reported that between thirty and forty per cent of the variance in occurrence of antisocial behaviour is accounted for by family interactions and parenting methods. As noted above, this may be a result of learning, as theorised by Bandura (1977; 1986). However, converging evidence suggests that the quality and nature of a child's attachments has a significant impact on both their behaviour and regulatory systems.

Reports of clinicians working with children with significant social, emotional and behavioural difficulties suggest that this is commonly attributable to difficulties with attachment (e.g. Sadiq et al., 2012). This clinical perspective was also reflected in the findings of Speltz et al. (1990), who compared the attachment behaviour of 50 preschool children, half of whom had been referred to a child psychiatry clinic for a Disruptive Behaviour Disorder, and half were matched comparison children without problem behaviours. Employing a separation and reunion rating system, they found that 84% of the pre-schoolers with behavioural difficulties were categorised as showing insecure attachment, compared to just 28% of the matched comparison group. However it is important to note that this study was conducted as a pilot, and therefore was subject to a number of limitations. The authors acknowledged the influence of care-giver reports on referrals to clinics, allowing the possibility that the referral reflected parental tolerance as opposed to the level of disruptive behaviour. In addition, they noted that differences evident within the separation, reunion procedure may reflect the threshold at which a child's attachment behaviour system is activated as opposed to the quality of their attachment.

The impact of not developing a secure attachment can be seen at a biological level, in brain development. Typically developing children, who experience appropriate and responsive care, develop progressively more complex mechanisms for regulating their levels of stress and arousal. One such mechanism is the hypothalamic-pituitary-adrenal axis (HPA) (Wismer Fries et al., 2008). The HPA axis is a three stage system resulting in the release of adrenal corticosteroids; it produces and regulates cortisol (Herman and Cullinan, 1997).

Childhood experiences have been shown to play a part in determining the reactivity and basal rhythms of the HPA (Tarullo & Gunnar, 2006). Relevant factors include; parental depression (Dougherty et al., 2011), maltreatment (Van Voorhees & Scarpa, 2004) and attachment (Gunnar and Donzella, 2001; Ahnert et al., 2004).

Abnormal functioning of the HPA is associated with a range of difficulties including; anxiety, depression, memory deficits, aggression and failures in the inhibition of responses (Van Voorhees, & Scarpa, 2004), emotional difficulties, hyperactivity and, or impulsivity in boys, but not girls (Hatzinger et al., 2007).

There is evidence to show that children who have not developed a secure attachment with a consistent, predictable caregiver, are at risk of a range of factors related to challenging and difficult to manage behaviour, including: having a poorly developed theory of mind (Fonagy & Target, 1997), exhibiting 'externalising' behaviours such as non-compliance, immature and negative behaviours and aggression (Speltz et al., 1990), engaging in self-harm and

unprovoked violence (Fonagy & Target, 1995) and difficulties integrating their remembered experiences with their judgements about their meanings (Fonagy, 1996). The range of functioning associated with poor attachments is further elucidated in Figure 1, below.

	Domains of functioning hypothesised to be associated with attachment security
Narrow View	Trust, confidence and harmony in relationship with parents and significant others Emotion Regulation Self-reliance (versus dependency), ego-resilience, personal efficacy Relational intimacy Interpersonal (social) competence Relationship-based developmental disorders
Broad View	The above plus: Sociability with unfamiliar adults and peers Understanding of and orientation towards others
Very broad view	The above plus: Language and cognitive competence Play competence, exploratory skill Communication style Other outcomes influenced by self-confidence and ego functioning

Table 1. Different views of the domains of functioning associated with attachment security, (Prior & Glaser, 2006 pp.160)

CM displayed difficulties in line with the very broad view of the domains of functioning impacted upon by poor attachment security. However, determining accurate attributions for his behaviour and difficulties was complicated by the fact that these descriptors are also commonly associated with ASD (Moran, 2010).

3.3.5 Behaviour and ASD

In 1979, Wing and Gould identified a 'triad of impairments', three areas of difficulty that, along with 'repetitive behavioural patterns', now underpin the diagnostic criteria for ASD (Diagnostic and Statistical Manual of Mental Disorders (DSM) IV (APA, 2000) and International Classification of Diseases (ICD) 10 (WHO, 1992): these were impairments in social interaction, social communication and social understanding and imagination (Wing and Gould, 1979). In addition to these impairments, individuals with ASD often experience difficulties with sensory sensitivities, attention, behaviour and eating (Wing, 1996). Though not currently part of the diagnostic criteria for ASD, anxiety also commonly arises from the core areas of impairment identified by Wing ASD (White et al., 2009).

ASD is a heterogeneous disorder, which evidence suggests has a number of different aetiologies (Happe and Ronald, 2008) including genetic (Muhle et al., 2004) and non-genetic causes (Freitag, 2006). Theoretical perspectives regarding the phenomenology of ASD are an area of continuing development. However, evidence suggests that the behaviours associated with ASD (see above) are a symptom of neural and cognitive impairments and abnormalities (Baron Cohen, 2008; Herbert et al., 2004; Pelphrey et al., 2007).

3.3.6 Challenging Behaviour – Attributions – Application

The possible explanations for CM's challenging behaviours outlined in Sections 2.3.1 – 2.3.5 above, informed several stages of the working of the case. In Phase 2 of the Problem Analysis Cycle (Monsen et al., 2008) (outlined in greater detail in Section 2.5) they guided the formulation of the initial guiding hypotheses and the data collection undertaken to test these. In Phase 3, they underpinned the thematic analysis of the data, while in Phase 5 they informed the strategies included in the intervention plan.

3.4 Functional Assessment of Behaviour

The use of function-based interventions to reduce challenging behaviour is well supported by evidence (e.g. Harvey et al., 2009), with better outcomes than non-function based interventions (Newcomer and Lewis, 2004) in many populations, including children with autism (Machalicek et al., 2007), emotional behavioural difficulties (Evans et al., 2003) and in mainstream schools (Kern et al., 2004; Reid and Nelson, 2002; Sasso et al., 2001).

There are a number of approaches to collecting data for a functional assessment of behaviour; however Hanley et al.'s (2003) meta-analysis of published studies found the ABC (antecedent, behaviour, consequence) approach to be 'best practice', with additional methods, such as observation providing useful further information. Analysis of the data is performed to formulate behavioural hypotheses based on the operant functions of the behaviour, identified through the environmental antecedents, and the resulting changes in the environmental conditions (Gresham et al., 2001).

This approach is based on operant learning theory, which proposes that behaviours arise as a function of their consequences: positive or negative reinforcement. Thus interventions are based on strengthening reinforcers for adaptive, replacement behaviours and reducing reinforcers for maladaptive behaviours (Gresham et al., 2001).

The use of operant conditioning in schools has been criticised as being counterproductive (Kohn, 1993). Kohn (1993) argued that the use of extrinsic rewards in education reduces intrinsic motivation. However this position is not supported by evidence (Flora, 1999).

A further concern is that inaccurate assessments of antecedents and consequences, and/or the inappropriate application of behaviourist techniques could lead to the reinforcement of undesired behaviours, or the failure to introduce and reinforce desired behaviours. An example of this is an inadvertent provision of negative reinforcers for avoidance or escape behaviours through the use of strategies such as time-out, or stopping children from going out at break-times. In addition, there is evidence, largely from animal studies, to suggest that its ability to impact upon biologically and evolutionarily determined behaviours is limited (Genovese, 2005).

3.5 The revised, six-phase, Monsen et al. (2008) 'Problem-Analysis' Cycle

To facilitate a structured approach to this case, I employed the six-phase Monsen et al. (2008) reworked 'Problem-Analysis' Cycle, which has been employed by educational psychologists working in a number of settings (Annan et al, 2013).

It is open to criticism on a number of fronts. First, it employed insights from Newell and Simon's (1972) problem-space theory which came out of research into the solving of well-defined, unfamiliar problems. Therefore its relevance to the ill-defined problems faced by educational psychologists, where the initial, 'problem state' is frequently inaccurately or differentially described, and the 'goal state' is often unclear, and/or different for different stakeholders, may be questioned. In addition, evidence suggests that it is the level of domain-specific expertise held by a problem-solver that predicts success in solving ill-defined problems (Wiley, 1998).

However, Shin et al. (2003) found that the ability to reason with and understand the data, and devise precise arguments is also a good predictor of success. The Monsen et al. (2008) reworked 'Problem-Analysis' Cycle provides a framework for such a process. Additional strengths include: that it accounts for different levels of analysis (biological, cognitive, affective, eco-systemic and social), prioritises areas for intervention, emphasises collaboration between stakeholders, and provides prompts to ensure that practitioners are looking to evidence rather than tradition. In addition, the creation of an interactive factors framework can provide a useful tool to enable discussion with schools and parents.

3.5.1 Phase 1 - Background information, role and expectations

Phase one of Monsen et al.'s (2008) 'Problem-Analysis' Cycle comprises of gaining clarity from the 'problem-owners', and those with an interest in its solution, about the nature of the concern and negotiating a brief with them (Monsen and Frederickson, 2008). This was done through a consultation involving CM's teacher, SENCo and mother.

This phase was somewhat complicated by the differing attitudes and attributions regarding CM's challenging behaviour of those concerned. The SENCo (CM's grandmother) favoured environmental attributions (see above). In contrast, his mother felt that there was something 'wrong' with CM, perhaps ASD. She sought a diagnosis, and to some extent expressed a desire for some kind of cure, to be provided by health professionals. His teacher felt she had tried everything that she could be reasonably expected to try, without success. In common with CM's mother, she wanted a professional to 'fix' the problem and appeared very reluctant to engage in changing her approach again. In addition she could see some aspects of his behaviour that she felt to be consistent with ASD, but also acknowledged that there were factors within the home which may equally contribute to CM's unacceptable behaviour within school. She presented as being exhausted and exasperated by the situation, and her tolerance and sympathy appeared low.

However, notwithstanding these difficulties, some common goals were identified: developing a clearer understanding of CM's behaviour and difficulties, and creating a behaviour management plan (see Appendix V). This formed my agreed brief. It was apparent that the school would struggle to implement a behaviour support plan without assistance. However,

due to the level of need in the school and the limited time allocated to it by the educational psychology service in which I was employed, it was clear that I would not be able to provide the level of on-going support required. Therefore it was agreed that the Behaviour Support Service would be asked to provide more long-term assistance with implementing the recommendations and strategies provided by me. CM's teacher and mother agreed to complete ABC monitoring sheets over a 7 day period, in order to inform functional assessment of CM's behaviour within the home and classroom settings (Harvey et al. 2009).

3.5.2 Phase 2 - Initial guiding hypotheses

Phase Two of Monsen et al.'s (2008) 'Problem-Analysis' Cycle comprises two parts: development of 'initial guiding hypotheses', which then inform 'active investigation' of the needs in context. During Phase Two, Part One, a 'problem map' is developed, and the problem is broken down into potential sub-problems encompassing, as relevant, biological factors, environmental and management factors, cognitive factors, behavioural factors and affect (Monsen and Frederickson, 2008) (see Appendix I).

Six 'initial guiding hypotheses' were derived from the 'problem map', with reference to relevant literature, and decisions about how to collect data to refute or confirm them made (see Appendix II.). At this juncture I considered that as CM's difficulties appeared to be explicable without recourse to a diagnosis of ASD, it was appropriate to investigate these alternative explanations before following a formal diagnostic pathway. However the possibility of an ASD diagnosis was included within my problem solving framework, as this perspective was likely to be a 'sub-problem', if not an underlying difficulty (see Appendix II).

During Part Two of Phase Two, data are collected. In this case, information gathering methods included: consultations, observations, discussion with the child, completion of The Childhood Autism Rating Scale (CARS) (reference required here), ABC monitoring and a home visit.

3.5.2 (i) Observation (Literacy and Break time)

During the observation, narrative notes were taken, and in parallel, the CARS (Schopler et al., 1988) was completed. (Use of the CARS is outlined in Section 2.5.2 (ii)below). The lesson started on the carpet with a review and instructions for the following activity. CM paid little attention, looked into the distance and shuffled around. However, while his behaviour did not stand out, I noted that the teacher used his name a number of times, providing negative comments about his behaviour. This was not the case with other inattentive pupils.

At the end of the carpet session, it appeared that CM did not know what to do. He stood near his table. The teaching assistant (TA) told him to sit down, and CM started to get upset. He had tears in his eyes, and went under the table. The TA ignored this, and CM started to jolt the table up, knocking pencils onto the floor. Some children complained and the TA spoke sternly to him. CM jolted the table again. His teacher told him not to be silly. CM spent approximately 5 minutes more under the table, occasionally throwing pencils. His behaviour was ignored and in the end he came out and looked at what some of the other children were doing. Finally he sat down and picked up a pencil. The task was to draw a scene from a story, depicting a snowy day. He drew a circle, but spent most of his time watching others. At the end of the lesson his teacher asked why he had not completed the picture, and told him that he

would have to colour it in during break time. CM said that as it was a snowy day, everything was covered in snow and he could not see anything, so it was finished. His teacher was obviously annoyed, and CM appeared defiant. He was kept in at break-time with a TA, when he cried and did not colour his picture.

The salient points which I abstracted from this session were:

- CM did not attend to the teacher, which may reflect poor receptive language, lack of interest or difficulties with attention;
- CM appeared to be perceived negatively by his teacher, with reprimands preceded his challenging behaviour;
- the negative attention CM gained from his peers and his teacher appeared to be a function of his challenging behaviour;
- CM appeared to understand the impact of his behaviour on others; and
- CM did not appear to know what to do, which may explain his non-compliance and the extended period he spent looking at what his peers were doing.

3.5.2 (ii) The Childhood Autism Rating Scale (CARS)

The Childhood Autism Rating Scale (CARS) (Schopler et al., 1988) is a 15-item rating scale, completed by a professional, which can be used as part of a multi-method, multi-professional process for identification of autism in children aged 2 and over. It was selected to test the hypothesis that CM's difficulties arose from autism spectrum disorder (ASD), and was the only such assessment resource held by the educational psychology service. Research

conducted by Schopler et al. (1988) suggests that the CARS has acceptable validity and reliability for diagnostic purposes. This finding is supported by evidence from numerous comparative studies (e.g. Nordin & Gillberg, 1999; Saemunson et al., 2003), resulting in the CARS being described as the 'gold standard' for assessing autism (Goldfischer, 2002). However, as a diagnostic scale, the CARS has limitations, with research suggesting that it may over-diagnose young children with learning difficulties as having autism (Lord, 1995).

The results of the CARS suggested that CM showed 'mildly abnormal emotional responses', 'moderately abnormal adaptation to change', 'moderately abnormal listening response', and 'moderately abnormal fear or nervousness'. His overall score of 22 fell well within the 'Non-Autistic' range, suggesting a different aetiology for his difficulties. Moran (2010) provides an alternative explanation for his presentation: sub-clinical attachment problems. Such an explanation was lent support by other data gathered.

3.5.2 (iii) Consultations – Teacher

After the lesson observation I had a consultation with his teacher. The following points were noted:

- CM's behaviour during the observed lesson was described as quite typical, but had not shown him at his 'worst', when he could reportedly 'be violent';
- his teacher interpreted CM's explanation about not having coloured the snowy picture as reflecting his ASD traits, reflecting his literal understanding of instructions;

- CM reportedly often lost break times as a result of (sanctions for) his behaviour, or not completing work;
- the teacher considered that CM was very bright, had understood instructions but had chosen not to do the work;
- the teacher judged that CM's behaviour on the carpet was significantly worse than the rest of the class; she did not appear to have noticed that other children had been similarly disengaged;
- CM's teacher appeared closed to applying new strategies, saying that she had tried everything and nothing had worked; and
- CM's teacher and TA had completed several ABC monitoring sheets, and reported there was a lot more they could have written had they had the time (see Section 2.5.3).

3.5.2(iv) Consultations – CM's SENCo (Grandmother)

Managing the relationship with CM's SENCo was difficult, as I there were clear ethical complications arising from her dual role as SENCo and grandparent, in that it would be usual to be more circumspect in information sharing with extended family members than with those who hold parental responsibility and with core school staff (acting in loco parentis). In some ways, the grandmother's role as SENCo risked compromising the levels of confidentiality which CM's mother might otherwise have expected.

Recognising these tensions, I attempted to restrict interactions to addressing her experiences of CM as his SENCo. However, she had a number of observations she wanted to share as a

grandmother. However, on reflection I realise that I could have mediated this role conflict more effectively. I rationalised this in two ways: that it was in the child's best interests for information to be shared as fully as possible, and that parents were aware of the dual role of the grandmother/SENCo when they gave their consent.

The following points were noted by the SENCo / CM's grandmother:

- She was quite upset by the monitoring sheets completed (where – in the home, it is to be assumed: specify!), feeling them to be dishonest, reporting that she had been present on a number of occasions when unreported incidents had occurred. She said that she thought CM's parents don't want people to think there is a problem at home;
- was concerned that his parents tried to appease CM when he was aggressive or otherwise challenging, and that this reinforced his challenging behaviour;
- reported that her relationship with CM's parents had become very strained as she had tried to talk to them about their parenting and CM's need for rules, routines and discipline;
- She noted that CM spent a lot of time crying in school, and that, while he did not cry as much at home, he rarely seemed to be 'child-like happy';
- CM spent a lot of time out of the classroom, having been sent out;
- there had been a number of incidences of violent behaviour at play times, directed toward both pupils and Mid-Day Supervisors;
- the head teacher had reportedly begun to say that she did not know whether they would be able to keep CM in school due to the risks to other children and staff;

- CM had begun talking at around 18 months (suggesting age-appropriate expressive language development – and perhaps therefore countering suggestions that CM may have autism); and
- CM's sister had begun to display similarly challenging behaviour (perhaps reflecting the impact of the shared environment, but equally, of course, perhaps reflecting shared genetic risk).

3.5.2 (v) Consultations – CM

CM was sitting outside his classroom crying when I went to meet him for a consultation. When asked why he was upset, he stated that he was scared of his teacher. He appeared to be of very low mood, with very low self-esteem. He described himself as a 'goody-baddy', because each day he starts off being good but he turns out to be bad. He recounted crying in his bedroom at home, and punching himself in the head 'loads of times' because he 'always does something bad'. CM said he liked being at home better than being at school because 'my sister hurts herself'. When asked what he meant, he replied: 'she touches the toaster when it is too hot.'

I was concerned for his emotional well-being, as I judged his low mood and negative self-talk to be atypical, resembling depression and of a level where a referral to the Child and Adolescent Mental Health service appeared appropriate.

3.5.2 (vi) Consultations – parents

Both parents came to the consultation. CM's mother seemed emotionally distressed. I described what I had observed, and reported some of the concerns raised by school staff. CM's parents stated that

- they were worried about CM in school; he did not want to go in the morning;
- CM's (home) monitoring sheet had very little on it as there had reportedly been very little (i.e. very few instances of poor behaviour) to report;
- CM could be anxious and shy sometimes in new settings;
- he did not like lots of noise or busy places; the parents believed this might be why CM did not like school;
- at home, they had effective strategies to deal with his behaviour;
- CM began speaking at approximately 18 months, and hit other developmental milestones within a 'normal' timeframe;
- his parents confirmed CM's account of hitting himself and crying at home; and
- his parents agreed to a CAHMs referral

3.5.2 (vii) Home visit

On arrival, CM's mother stated that she was happy for me to continue my involvement. However, she made it clear that she had had a number of discussions with a clinical psychologist, and that they both felt CM's behaviour was due to ASD. She was not sure, therefore, that there was much I would be able to do. I explained that whatever the underlying

causes of CM's behaviour, he would need a behaviour management plan. During the home visit, I noted the following:

- The home was clean and tidy
- there was a lack of toys or other indicators that two children lived in the house;
- children clung to their mother, pulling at her clothes and legs, with the younger (at 4 years) helping herself to breast milk. However, while allowing them to pull her and cling to her, their mother offered little by way of attuned responses;
- CM escalated behaviours to obtain parental attention; having offered no feedback on low-level inappropriate behaviour, CM's mother finally responded by shouting; and
- apart from a television, the home appeared to present few opportunities for the children to occupy themselves in a positive activity.

The information gathered from these multiple methods of data collection (see above) were integrated and analysed as part of Phase three of the 'Problem-Analysis' Cycle (Monsen et al., 2008) (see Section 2.5.3).

3.5.3 Phase 3 - Identified problem dimensions

Phase three of Monsen et al.'s (2008) 'Problem-Analysis' Cycle comprises of the identification of the 'problem dimensions', and the evidence for each is collated (see Appendix III). In this case, Phase Three involved conducting a thematic analysis of observation and consultation notes, performing a functional behavioural assessment using the

ABC Records maintained in the school and home settings, and cross referencing the information derived from these analyses with the CARS scores.

The functional behavioural assessment of the data showed two types of antecedent events that preceded most of the challenging behaviour displayed by CM: unstructured time (such as transition periods and break times) and at the start of classroom tasks. The following hypotheses were proposed:

- If presented with tasks he does not understand, then CM engages in challenging behaviour to avoid these.
- If presented with bustling environments, then CM engages in challenging behaviour to avoid these.
- If CM is feeling anxious and is presented with unstructured time, then CM engages in challenging behaviour to avoid it and gain 1:1 adult attention.

Both CM's avoidance and attention-seeking behaviours appeared to be driven by a need to feel safe, secure and in control. These hypotheses draw on both behaviourism (Skinner, 1974) and research into behaviours arising from attachment difficulties (Speltz et al., 1990). Children with attachment difficulties have been shown to exhibit a range of challenging behaviours (e.g. Fonagy & Target, 1995; Speltz et al., 1990; Sadiq et al., 2012) (see Section 2.3.4).

While attachment difficulties may have predisposed CM toward behavioural responses judged inappropriate and/or problematic in the school setting, analysis of the monitoring data suggested that CM had learned that challenging behaviour allowed him to avoid situations that he found difficult: this (functional) behaviour seemed to have been negatively reinforced regularly. This learning on CM's part may be explained in terms of escape and avoidance conditioning (Skinner, 1974). Supporting evidence for this hypothesis includes his observed noncompliance during the classroom observation, which allowed him to avoid work he found difficult and resulted in his avoiding going outside at break-time and increased adult attention: both reinforcers contributing to his feelings of security and safety. Further, according to SCT the desire to avoid challenging situations or tasks may reflect a weak sense of self-efficacy (Bandura, 1977b).

The initial guiding hypothesis that CM's challenging behaviour reflected an Autism Spectrum Disorder appeared poorly supported by the data gathered through completion of the CARS, observations, ABC monitoring and consultations. Further, CM's presentation appeared to be more in line with needs arising from sub-clinical attachment difficulties (Moran, 2010), captured in the first problem dimension listed in Table 1 and possibly contributing to his language difficulties. The possibility of CM having ASD was initially raised by a SaLT. However, a correlation between attachment difficulties and speech and language difficulties has been shown in research such as Raaska et al. (2013). They found that of their sample of 689 international children adopted into Finland, aged between 6 and 15 years, 29% had language difficulties and 8% had severe language difficulties. This is much higher the prevalence of language difficulties in the general population, reported as 10% and 2% respectively. In addition, they found an association between the children's symptoms of

reactive attachment disorder and their language or severe language difficulties. Further evidence suggesting an association between Reactive Attachment Disorder comes from the work of Sadiq et al. (2012). They found that their sample of 35 children with attachment difficulties, aged between 5 and 8 years, had significant difficulties with their use of context, rapport and social relationships, as measured by the Children's Communication Checklist (Bishop, 2003). Further, in excess of 60% of the children met ADI-R clinical criteria on the Use of Language and Other Social Communication Skills subscale, and 46% met clinical criteria on the Reciprocal Social Interaction subscale.

3.5.4 Phase 4 - Integrated Conceptualisation

Phase Four of Monsen et al.'s (2008) 'Problem-Analysis' Cycle comprises two stages. Stage One consists of assimilating all of the 'problem dimensions' into a single statement accounting for causality, potential links between elements and influencing factors. Precedence is assigned to the factors perceived to need urgent action, or as contributing to other dimensions of the problem. The following single statement was formulated:

> *CM's relationship with his parents may have led to difficulties with self-regulation and anxiety and contributed to his language and social difficulties; combined these factors make the school environment confusing, frightening and difficult to manage for CM, and he responds with aggression and defiance in an attempt to change environmental factors and feel more in control.*

In determining the precedence of factors, the impact on CM's ability to remain within his school and his mental well-being were considered. CM's externalising behaviour (see Appendix III) was identified as the greatest threat to his school placement, and his internalising behaviour (see Appendix III) was identified as the greatest threat to his mental wellbeing.

Stage 2 of Phase Four involves the reworking of the interactive factors framework, including all the 'problem dimensions', the connections between the factors identified and the integrating hypotheses. In addition, suggested interventions are added, and their anticipated impact on the 'problem dimensions' indicated (see Appendix IV).

3.5.5 Phase 5 - Intervention plan and implementation

Phase Five of Monsen et al.'s (2008) 'Problem-Analysis' Cycle comprises the creation of a manageable action plan with the 'problem-owner' and other involved parties. Roles, responsibilities, methods and timescales are clarified (Monsen and Frederickson, 2008).

The hypothesised primary causes of CM's internalising and externalising behaviours (his relationship with his parents) appeared to be beyond the scope of my influence, as his parents maintained that there were few difficulties within the home, and were beginning to disengage from the school due to a breakdowns in their relationship with the SENCo (CM's grandmother). In addition, two of the identified factors were deemed to require specialist interventions from other professionals. First, CM's receptive and expressive language

difficulties were judged to be at a level which warranted re-referral, by the school to their Speech and Language Therapist. Second, his internalising behaviour was to be addressed through his referral to the clinical psychology team.

Therefore the scope of my intervention at this time was aimed at reducing his externalising behaviours, identified in Phase Four as the greatest threat to his school placement. Thus I created a behaviour management plan using the functional behavioural assessment described above. In its creation, proactive strategies to teach alternate, pro-social means of communication were highlighted as important elements of a successful intervention (Sugai et al., 2000). In creating a behaviour plan, strategies based on reinforcement were combined with those designed to manipulate his environment to reduce stressors and remove triggers (see Appendix V). The hypotheses and strategies generated were agreed by the Behaviour Support Worker (BSW), from the Specialist Behaviour Support team.

The next step was to meet with the teacher and SENCo as 'problem-owners', and parents, to stress our common goal: to reduce CM's externalising behaviour within the school setting, allowing him to stay in school, and to agree roles, responsibilities and monitoring arrangements. The meeting appeared to be successful, with all parties agreeing to the behaviour management plan. The BSW arranged to meet with the teacher to observe a lesson, talk through strategies and arrange a session in which she could model these. The SENCo agreed to collect incidence data for CM's challenging behaviour (e.g. aggression and non-compliance) including the antecedents and consequences, through on-going ABC monitoring recorded by a TA, to determine the impact of the strategies. It was stressed that behaviour

change can be a slow process, and that we may need to alter our hypotheses and strategies as more data was collected. A weekly meeting with the BSW would review progress and the plan, and a further meeting with all parties was arranged to discuss early outcomes and other issues arising from the plan in four weeks. It was agreed that this would be my final meeting if there was evidence of the plan having an acceptable level of impact.

3.5.6 Phase 6 - Monitoring and evaluation of outcomes

Phase Six of Monsen et al.'s (2008) 'Problem-Analysis' Cycle addresses the monitoring and evaluation of the intervention(s) implemented, and examines the further development of the issues identified during the working of the case.

Responsibility for monitoring the behaviour management plan was largely devolved to school staff and the BSW. However, two weeks before our 'final' meeting, I was contacted by the BSW who raised concerns about CM's teacher's ability and will to implement the plan. In addition I was notified that the clinical psychologist had referred CM for a multi-disciplinary assessment of ASD. As a result of the changing situation, I telephoned the SENCo. She reported that there had been some 'issues' with the teacher, but that she felt confident that she could address these. She expressed concerns about the prospect of a diagnosis, particularly in light of anticipated implications for engaging CM's parents and teacher in implementing his behaviour support plan.

At the review meeting CM's parents appeared bolstered by the initiation of the diagnostic process. They raised the issue of CM perhaps needing a special school, and were not, therefore, convinced of the need to work on his behaviour in his current school. CM's teacher expressed her view that the strategies were not workable in a busy classroom, and had concerns that some of them, such as allowing CM to leave the classroom early, may look like a reward to his peers. The SENCo explained that she had seen similar strategies work in the past. However, the teacher felt that she had trialled them for a week and that there had been little difference in CM's behaviour. The BSW explained that changing entrenched behaviours takes time and that the strategies had not been given enough time to have an impact.

It was apparent that little progress had been made in reducing CM's challenging behaviour, and that the common goal identified in the previous meeting had ceased to be the aim of his parents or teacher. At this point I made the following points:

- CM's challenging behaviour needs to be addressed whether or not a diagnosis of autism is offered;
- this method of addressing challenging behaviour is commonly used with children with ASD;
- CM's level of aggression would present difficulties in whatever setting he ;
- CM's class would become more manageable and less exhausting to teach if his challenging behaviour is addressed; and
- the approach to his challenging behaviour needs to be both consistent and persistent.

The outcome of the meeting was that the teacher and BSW agreed to work together on restarting the behaviour management plan, with the SENCo agreeing to collate data as before. I informed school staff that if there were any significant changes, they could contact me, but that I would next review this case at the termly planning meeting (indicate in parentheses here what time-scale this would involve). I reminded them that ultimately, the responsibility to support CM and address his challenging behaviour was theirs. The SENCo said she felt that they could do it, and that the behaviour management plan was appropriate and feasible.

After the meeting the head spoke to me and said that she felt the situation may only be resolved when CM moves to a different class in the autumn term, as his current teacher had had him for two years and was exhausted.

3.6 Outcome

Before the next planning meeting I moved into a different division within the local authority, and CM's case passed to a colleague. I maintained contact with the SENCo, from whom I learned that CM had been diagnosed with high-functioning autism. There remained on-going issues with CM's challenging behaviour; however, the behaviour support plan was reinstated in the Autumn term, with a new teacher, and there were significant improvements. There continued to be concerns about CM's mental health, but since being diagnosed with ASD, he was no longer eligible for support from the clinical psychologist. He continued to receive speech and language therapy.

3.7 Reflection

The literature reviewed for this paper suggested four ways of conceptualising CM's challenging behaviour: as arising from needs commonly associated with socio-economic factors, (Kelly et al., 20101), attachment difficulties (Sadiq et al., 2012), behaviourist theories, including social cognitive theory (Bandura, 1986; Skinner, 1974), and ASD (e.g. Baron-Cohen, 2008; Wing and Gould, 1979). It was my contention that CM's behaviour could be accounted for by behaviourist (including SCT) theories and attachment theory, and was likely to have been impacted upon by factors associated with low socio-economic status. However, this view was not shared by the SaLT and clinical psychologist involved in his case.

The way in which humans make attributions about behaviour is subject to biases, such as the Fundamental Attribution Error (FAE) (Ross, 1977). This bias may impact on educational psychology practice, by increasing the likelihood that internal, dispositional factors such as ASD are considered to afford preferential explanatory value cf. external, environmental influences such as economic factors and the behaviour of others. It is possible that such a bias contributed to CM's diagnosis. By forcing practitioners to give consideration to a range of factors, and the evidence that may support or refute the hypotheses they generate, the revised 6-phase Monsen et al. (2008) Problem Analysis Cycle provides a means of reducing the influence of biases such as the FAE within the process of assessment, psychological formulation, hypothesis development and testing and diagnosis.

This work with CM highlights the benefits of applying problem-solving frameworks, such as making the work of educational psychologists more efficient and effective (Wicks, 2013).

This is something I will incorporate into my future practice as an educational psychologist However, as highlighted by Kelly (2006), the Monsen et al. (2008) Problem Analysis Cycle framework is time consuming, making it difficult to employ routinely.

This was a difficult case, complicated by the dual role of the SENCo and the different and indeed incompatible attributions of the professionals involved. In addition, despite having the appropriate skills, BSWs are often viewed as para-professionals. Thus, when teachers are not motivated, or find it difficult to implement strategies, the BSW's advice is often ignored. I have found that weekly contact by telephone, or e-mail with both teacher and BSW, has improved both the fidelity of interventions and their outcomes.

The commonalities in the presentation of ASD and attachment difficulties (Moran, 2010), were highlighted to me during my work with this case, and I became concerned that the diagnostic process, in which I was routinely involved, was not rigorous enough to ensure accuracy. This informed my decision to focus on this area for my Volume 1 research, for which I piloted a questionnaire generated from the Coventry Grid (Moran, 2010) with CM's teacher (see Volume 1, Kendall-Jones, 2013).

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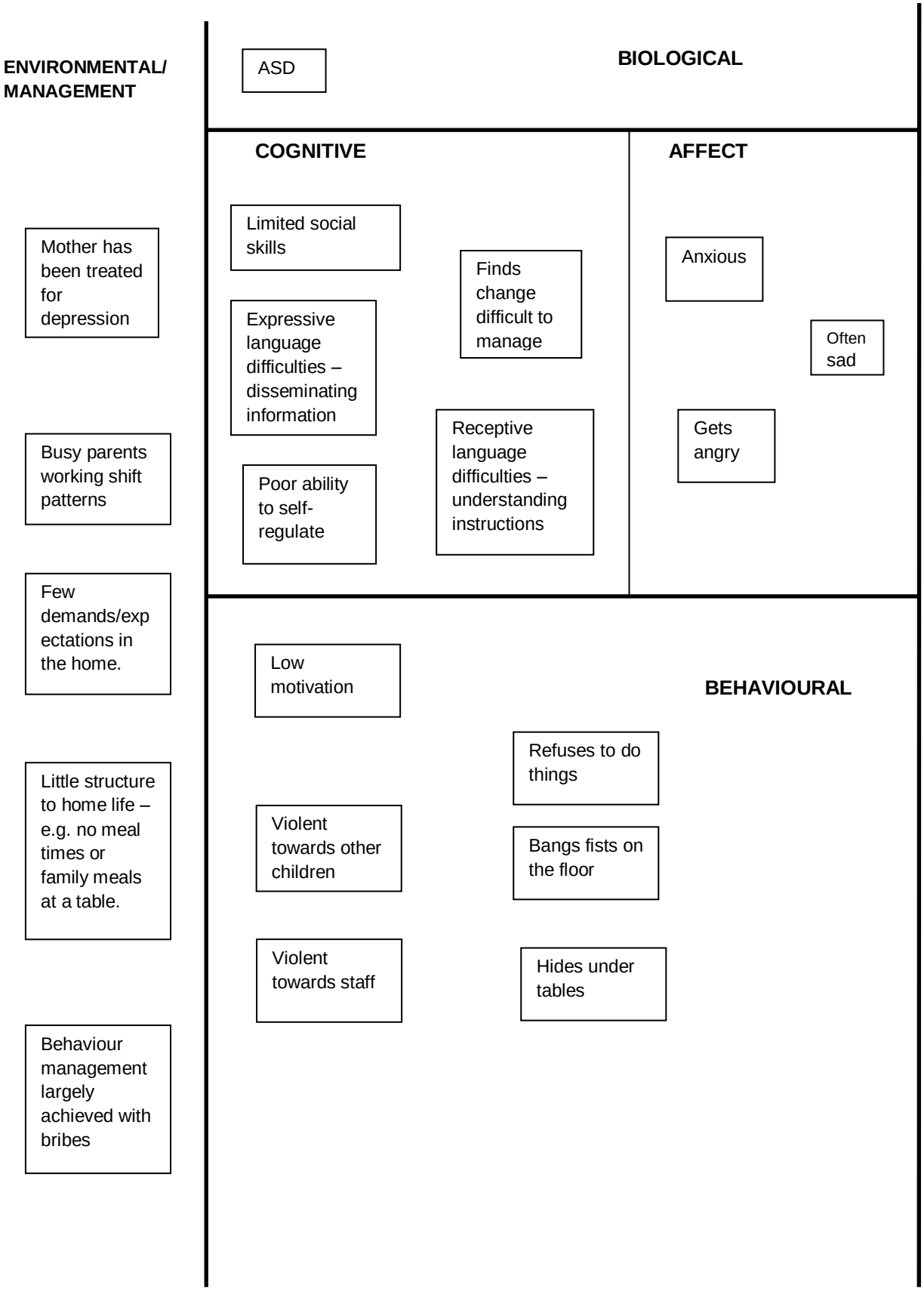
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APPENDIX I . Phase 2 Problem Map



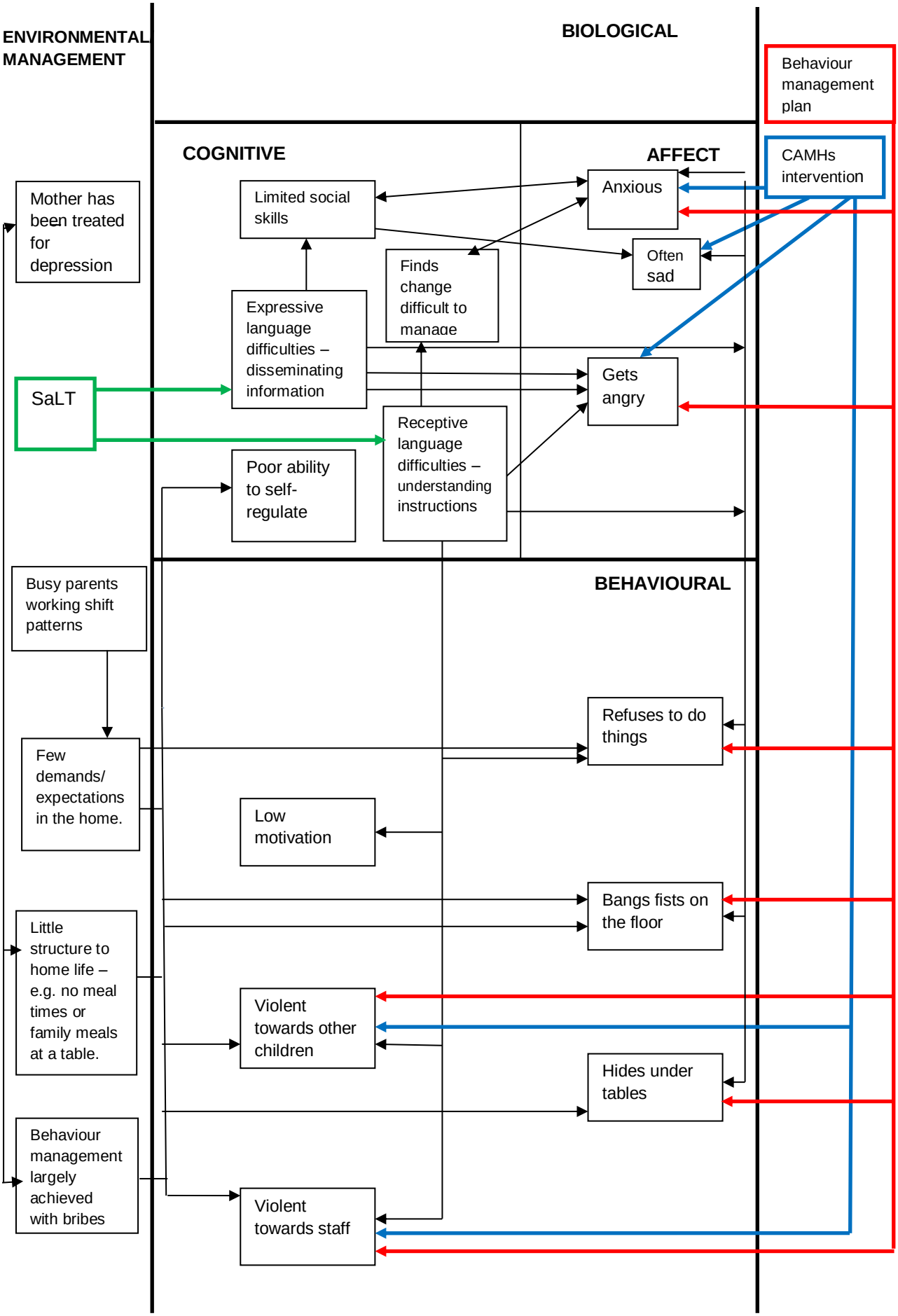
APPENDIX II. Phase 2. Initial Guiding Hypotheses, with relevant references and methods of data to be considered.

Initial Guiding Hypotheses	References	Data to be considered
If CM has experienced permissive parenting, then he may exhibit externalising behaviours such as: defiance, hyperactivity and aggression, internalising behaviours such as: anxiety, sadness and social withdrawal, poor self-regulation and social responsibility and self-reliance.	Cheevers et al. (2010)	• Consultation with SENCo (grandmother) • Consultation with parents • Home visit • Consultation with teacher • CARS • ABC monitoring
If CM has receptive language difficulties, then he may experience: difficulties with following instructions and directions, verbal reasoning, answering questions, turn-taking, have sensitivity to non-linguistic noises, be easily distracted, and exhibit pragmatic difficulties.	SESS (2005) Lindsay et al. (2007) Conti-Ramsden (2012)	• SaLT report • Consultation with SENCo (grandmother) • Consultation with teacher • ABC monitoring • CARS
If CM has expressive language difficulties, then he may experience: difficulties with peer relationships and social language, imaginative play and literacy.	SESS (2005) Lindsay et al. (2007) Conti-Ramsden (2012)	• Observations • Consultation with SENCo (grandmother) • Consultation with teacher • Consultation with parents • ABC monitoring • CARS • SaLT report
If CM struggles to understand and comply with the demands of school, then he may become frustrated, leading to aggression.	Geen (2001)	• Observations • Consultation with SENCo (grandmother) • Consultation with teacher • ABC monitoring
If CM is failing to meet expectations, then he may be experiencing poor self-perceptions	Stein et al. (2007) Harter (1985)	• Classroom observation • Discussion with CM • Consultation with parents • Consultation with teacher • Consultation with SENCo (grandmother)
If CM has ASD, then he may experience impaired social communication, social interaction and restricted behaviour patterns.	Wing & Gould (1979)	• SaLT report • CARS • Classroom observation • Discussion with CM • Home visit • ABC monitoring

APPENDIX III. Phase 3 - Identified Problem Dimensions With Evidence

Problem Dimensions	Evidence
CM's relationship with his parents has led to externalising behaviours (defiance, and aggression) and internalising behaviours (anxiety, sadness, social withdrawal and poor self-regulation)	• Consultation with SENCo (grandmother) • Consultation with parents • Home visit • Consultation with teacher • CARS • ABC monitoring
CM has receptive language difficulties, impacting on his ability to follow instructions, engage in verbal reasoning and answering questions, in addition he is somewhat sensitive to non-linguistic noises, is easily distracted, and exhibits some pragmatic difficulties.	• SaLT report • Consultation with SENCo (grandmother) • Consultation with teacher • ABC monitoring • CARS
CM has expressive language difficulties , contributing to poor peer relationships and social language.	• Observations • Consultation with SENCo (grandmother) • Consultation with teacher • Consultation with parents • ABC monitoring • CARS • SaLT report
If presented with tasks he does not understand, then CM engages in challenging behaviour to avoid them	• ABC monitoring • Observations • Consultation with SENCo (grandmother) • Consultation with teacher
If presented with bustling environments, then CM engages in challenging behaviour to avoid them	• ABC monitoring • Observations • Consultation with SENCo (grandmother) • Consultation with teacher
If CM is feeling anxious and is presented with unstructured time, then CM engages in challenging behaviour to avoid it and gain 1:1 adult attention	• ABC monitoring • Observations • Consultation with SENCo (grandmother) • Consultation with teacher

APPENDIX IV. Phase 4 Interactive Factors



APPENDIX V. Phase 5. Behaviour Plan

Behaviour Plan CM

To help CM to behave more in line with social expectations it is important to think about the function of his behaviour, rather than the behaviour itself. By removing the need or reward for these behaviours they should reduce over time. This is unlikely to happen straight away, as many of these behaviours may be entrenched. However, if we can achieve a consistent response and approach at home and at school, strategies are more likely to be successful.

CM Avoids:

- Bustling activities with groups of children
    - Going between the carpet and a table
    - Getting food/drink
    - Washing his hands
    - Getting his coat
    - Changing for P.E.
    - P.E.
- Unstructured time with other children
    - Lunch time
    - Break time
- Work he finds difficult

CM seeks:

- 1:1 interaction with adults
    - Support with tasks in class
    - Lunch/break time completion of work

Both CM's avoidance and seeking behaviours appear to be driven by a need to feel safe, secure and in control. The goal is to support CM to feel this way without recourse to the above. He needs clear boundaries, routine and positive reinforcement of behaviour we want to encourage both in school and at home.

Antecedents	Behaviour	Function	Proactive Strategies	Reactive Strategies
Transition periods, and unstructured times e.g. at the end of an activity/session lunch/break times	Covers ears Goes under the table Refuses to do as asked, does not move from seat Cries Curls up into a ball Violent and aggressive behaviour	Avoidance of imminent bustling activities with other children, e.g. going between the carpet and the table, or going to wash his hands	Remove the need for CM to avoid such activities e.g. ➢ Ask him to go slightly before/after other children ➢ When the above is not possible, provide concurrent distracting activities that he might enjoy (e.g. see how many paces it takes you to get to…) ➢ Offer some help with starting the activity e.g. giving him a helping partner, offering to walk with him etc. ➢ Provide Count downs	Ensure that as far as possible, CM is not rewarded for these behaviours. For CM, the rewards include: ➢ 1:1 time with adults ➢ Avoidance of work/lunchtime/break time outside with the other children ➢ Avoidance of an activity, e.g. washing hands In the first instance try: ➢ Redirection ➢ Distraction ➢ Hurdle Help If this does not work: Avoid punishment terms, or escalating problems with confrontation or insistence. Instead, highlight natural consequences, e.g. if we spend this time together now e.g.: If you don't wash your hands then you won't be able to eat the snack because it is not hygienic. Try Redirection Hurdle Help again. If this does not work: Ensure that expectations and consequences are clear and then move away. Use planned ignoring far as is safe to do so.
At the start of or during activities	Refusing to do work Cries Whining/ Moaning Making noises to himself Not returning to class after going to the toilet	Avoidance of work he finds challenging Gain 1:1 support for the work Avoid play time/ lunch time breaks with other children	Remove the need for CM to employ these avoidance strategies e.g. ➢ Check understanding ➢ Break down tasks into staged instructions ➢ Provide support in class when possible at times he is	Ensure that as far as possible, CM is not rewarded for these behaviours. Rewards for CM include the functions listed. In the first instance try: ➢ Redirection ➢ Distraction ➢ Hurdle Help If this does not work: Avoid punishment terms, or escalating problems with confrontation or insistence.

Antecedents	Behaviour	Function	Proactive Strategies	Reactive Strategies
		Get 1:1 adult interaction during play time/ lunch time breaks	known to struggle ➢ Give lots of praise for progress in this area, not just the desired behaviour. ➢ Hurdle Help for tasks Provide CM with alternative way to spend breaks/lunch times that he can access in a constructive manner e.g. ➢ As a reward for staying with a task, he could be a 'special break time helper' ➢ Lunch/ break time clubs Ensure that CM gets lots of positive 1:1 adult interaction at points not related to these behaviours.	Instead, highlight natural consequences, e.g.: If we spend this time together now, then I won't have the time to spend with you then (at break etc.). Try Redirection Hurdle Help again. If this does not work: Ensure that expectations and consequences are clear and then move away. Use planned ignoring far as is safe to do so.

CHAPTER 4

THE DEVELOPMENT OF BRAIN STRUCTURES AND FUNCTIONING AND YOUTH OFFENDING.

ABSTRACT

The typical human brain develops predictably and hierarchically, becoming mature in its third decade. In infancy and early to mid-adolescence there are peaks in synaptic density during which environmental factors or targeted interventions may have life-long impacts on the brain and associated functioning. Individuals with neurodevelopmental disorders, such as Autism Spectrum Disorder (ASD) and attention deficit hyperactivity disorder (ADHD), or who have experienced maltreatment show atypical brain development in regions such as the amygdala, and the frontal lobe which increase the risk of offending behaviour. Data from neuroscience regarding the sequence of development, timing of sensitive and critical periods of plasticity and factors associated with myelination and pruning can contribute to the delivery of appropriate interventions by youth offending teams and other professionals, including educational psychologists.

4.1 Introduction

This report arose out of research conducted for four, three hour training sessions commissioned by the county's Youth Offending Team (YOT). The request was for training focussed on evidence from neuroscience regarding child and adolescent brain development, particularly regarding those with ASD, ADHD or who had experienced maltreatment, and the implications of these findings for practice. However, notwithstanding the request for training,

there is no means of referral of individuals by YOT, or for those serving custodial sentences into my employing Local Authority's (LA's) Educational Psychology Service.

The local provision reflects a national picture of educational psychologist (EP) involvement with youth justice, youth offending teams and young offenders, which varies greatly according to Local Authority. Of the principal educational psychologists (PEPS) surveyed by Farrell et al. (2006), 31 reported EP service involvement with YOT, and 80 reported a desire for EP service involvement with YOT. However this involvement does not typically extend to those held in custody. A PEP, responding to Farrell et al.'s survey, suggested that the reason EP involvement with YOT is desirable is their understanding of a wide range of related issues, such as general development and attachment, and their ability to form hypotheses to understand complex needs and work with others to engage them in carrying out interventions that 'make a difference'. These skills may improve the capacity of those working within the secure estate to recognise, manage and meet the needs of individuals with developmental and neurodevelopmental problems and mental illness (see Section 3.8).

However, the prevalence of neurodevelopmental disorders and Special Educational Needs (SEN) among children and young people in custody (see below) suggests that many would have been seen by Educational Psychology services before and during their offending behaviour, and may continue to require such support. Further, in 1991 the UK government ratified The United Nations Convention on the Rights of the Child (UNCRC). Articles 37 and 40 within UNCRC establish the requirement that children and young people involved in the criminal justice system must be treated in an age appropriate manner, taking into account their

'specific developmental needs'. This includes interventions that 'promote care, guidance and support' (OCC, 2012). However, in many cases this remains an aspiration, as illustrated by the numbers of Youth Offending Teams currently screening for neurodevelopmental difficulties (see below), the prevalence of such difficulties among the population of children they work with (see below), and a recent report by the Ministry of Justice, which notes that:

> "Currently, education varies across the different types of establishments in the youth secure estate, and quality is patchy. Frequently, young people do not get the required hours of education. (MOJ, 2013)"

Educational psychologists would be ideally placed to provide assessments and recommendations for appropriate support. However this is not supported by current policy or funding streams. Despite the remit of educational psychologists to work with children and young people from 0 to 25 years (House of Lords, 2013), and the compulsory education contained within many youth sentences, clause 69 of the Children and Families Bill (2013) states that SEN provision will not extend to children in custody (House of Lords, 2013). There are approximately 19 395 000 under 25s resident in Britain (ONS, 2011). During 2012 an approximate average of 21 134 (approximately .11% of the under 25 population) were serving custodial sentences at any given time and therefore potentially excluded from EP provision (see above). Of these, approximately 2 040 were under 18; 6 272 were aged between 18 and 20, and 12 822 were aged between 21and 24 years (Ministry of Justice, 2013; Berman and Dar, 2013).

Therefore, as with the commissioned training, this report focuses on the salient neuropsychological evidence for YOT and those working within the secure estate (as opposed

to educational psychologists working with young offenders), and the implications for their practice. The report concludes with reflections on areas in which educational psychologists may develop their practice with youth offending and the implications of the evidence reviewed for other areas of educational psychology.

4.2 Background

Child development includes: physical cognitive, language, social, emotional, identity and moral development. Each of these areas is underpinned by the development of associated brain structures and functions. Understanding typical and atypical child development is important for accurate YOT formulations and assessments and for determining appropriate interventions. Neuroscience can offer evidence to provide a greater understanding of the mechanisms by which risk factors can lead to offending behaviour, and also provide data which may improve the impact of interventions.

4.3 Neuroscience

Understanding the brain's structure and functions is a developing field, heavily dependent on the use of technology. Neuroscientific evidence comes largely from studies employing techniques such as: event-related potentials (ERP), structural magnetic resonance imaging (sMRI); functional magnetic resonance imaging (fMRI); and near infra-red spectroscopy (NIRS).

Data regarding brain activity may be gathered using methods such as ERP, fMRI and NIRS. ERP are gathered through the use of multiple sensors on the scalp which measure minute changes in the brain's electrical activity produced when groups of neurons fire at the same time in response to stimuli. From this data, inferences can be made regarding the location of electrical activity (Oates, 2012). Blood oxygenation is another indicator of brain activity which can be measured. FMRI provides information regarding neural activity through the measurement of cerebral blood oxygenation. However, while this technique is effective with adults, infants and children, fMRI scans can only be given to babies during sleep due to the need to remain still (Oates, 2012). An alternate means of gathering data from waking babies is NIRS. NIRS gathers data regarding changes in the oxygenation of the blood in babies' brains through a cap with light detectors and emitters measuring changes in light absorption, thus providing a map of functional activity. However, this method cannot be employed with children and adults, as their skulls are too thick.

Data regarding the structure and volume, but not activity of the brain, may be gained through the use of sMRI. SMRI produces images of the brain's anatomy through the use of a scanner; a powerful magnet which aligns and systematically alters the magnetization of the body's atomic nuclei. The scanner is able to detect a rotating magnetic field, produced by the nuclei from which an image of the scanned area can be constructed (Squire and Novelline, 1997).

It is important to note that neuroscience is a relatively new area, heavily reliant on modern technology such as imaging techniques. Our understanding of brain structure and function is likely to undergo several stages of refinement. Notwithstanding this caveat, there has been

considerable research over the last two decades and the data it has generated has been largely consistent with psychological theory in many areas (Prior et al., 2011).

The functioning of the brain is influenced by many factors, including: sleep, anxiety, stress, hormones and neurotransmitters. Several studies have addressed the impact of these on development (e.g. Astill, 2012; Barnett et al., 2011; Hines, 2011 and Pechtel, 2011), which are beyond the scope of this paper to discuss. This paper focuses on neuroscience and neuro-imagery as until relatively recently there had been a view that neuroscience was not relevant to the work of educational psychologists, as it only restated what was already known (Goswami, 2004). This perspective has begun to shift (Pickering and Howard-Jones, 2007), however there continues to be a considerable gap between current science and applied educational psychology (Goswami, 2006; Hruby, 2012). In addition, there is some evidence to suggest that employing neuro-imagery positively influences the perceived credibility of research on cognition (McCabe and Castel, 2008). Therefore, its use may improve the impact of associated training, such as the commissioned package from which this study arose (see Section 3.1).

4.4 Profile of Young Offenders (Risk Factors)

The minimum age for criminal responsibility in England and Wales is 10 years (United Nations, 2008), lower than the 14 or 15 years typical of most of Europe (Aebi and Delgrande, 2011). The term 'young offender' is employed here to refer to children and young adults aged between 10 and 25 years, therefore including individuals at very different stages of

development. It is interesting to note that most young offenders do not have fully mature brains and that for some the development of the cortex will occur in custody.

This paper focuses on the risk factors ASD, ADHD (OCC, 2012) and maltreatment (YJB, 2008) however, there are many other known risk factors including: low socioeconomic status, school exclusion, truanting (MORI, 2004) and other neurodevelopmental disorders (OCC, 2012).

4.4.1 Neurodevelopmental Disorders – Prevalence among Young Offenders

A comparison between children and young people in custody and those in the general population reveals a much higher prevalence of neurodevelopmental disorders among those in custody. With estimated prevalence rates among youths in custody ranging between 11.7% for males and 18.5% for females (OCC, 2012) and other studies showing 45% for both groups (Young, 2010) ADHD has been associated with offending behaviour (Harpin and Young, 2012). Studies suggest that young offenders with ADHD start engaging in criminal behaviour earlier than young offenders without ADHD (Rösler, 2004) and are more likely to reoffend (Young et al., 2009). The prevalence of ASD among young people in custody is also much greater than within the general population, and has been reported as being as high as 15%, compared to between .6 and 1.2% (OCC, 2012).

However, despite the perception reported by the YOT in my employing authority of the predomination of ASD and ADHD, evidence suggests that other neurodevelopmental

disorders: Generalised Learning Disabilities, Specific Learning Difficulties (e.g. dyslexia) and Communication Disorders are of much greater prevalence among children held in the secure estate (see Table 1). While it is acknowledged that the figures will reflect comorbidity, the prima facie implications are that a significant number of youths in custody are affected by a neurodevelopmental disorder.

Neurodevelopmental disorders	**Prevalence - general population**	**Prevalence - Youths in custody**
Generalised Learning Disability (IQ <70, onset prior to adulthood, significant difficulties with everyday tasks)	2 – 4 %	23 – 32%
Specific Learning Difficulties (e.g. dyslexia)	+/- 10%	43 – 57%
Communication Disorders	1 – 7%	60 – 90%
ADHD	1 – 9%	11.7% for males, 18.5% for females
ASD	.6 – 1.2%	15%
Foetal Alcohol Syndrome (FAS)	.1 – 5%	10.9 – 11.7%

Table 1. Prevalence of neurodevelopmental disorders among the youth of the UK (OCC, 2012)

4.4.2 Maltreatment

Figures published by the Youth Justice Board in 2007 suggested that 71% of children and young people held in custody in England and Wales had been in social care or involved with social services (YJB, 2007). This contrasts with data for the general population. A survey conducted for the NSPCC, employing a random probability sampling technique using the Postcode Address File, to collect data from 2 869 individuals aged between 18 and 24 suggested that 16% of the UK population had experienced maltreatment as children (Cawson et al., 2002).

Further evidence of the relationship between maltreatment and offending behaviour comes from a study conducted by Pitts (2004). Pitts (2004) studied the relationship between children being placed on the child protection register and subsequent prosecution for offences in three groups of 20 children in London. The three cohorts were comprised of: those on the child protection register (CPR) who had also been involved with a YOT and had committed two or more offences; those on the CPR, but with no YOT involvement; and those not on the CPR but with YOT involvement who had committed two or more offences. He found that children who had been on the CPR and involved with a YOT began offending much earlier, committed a greater number of offences and more serious offences than those who had not been on the CPR.

4.5 Typical Brain Development

Notwithstanding individual differences, 'normal' typically developing brains develop predictably, from the bottom up (Perry, 2009). Brain organisation develops sequentially through increasingly complex structures, starting with the brainstem, then the diencephalon, limbic system and finally the cortex, which mediates the most complex functions (Nelson and Bloom, 1997). The development of more complex higher regions is dependent on accurate and reliable input from the less complex lower regions (Knudsen, 2004). Atypical development of the lower regions results in atypical development of the higher regions (Perry, 2009).

At birth, the typical human brain is approximately 400 grams, increasing to approximately 1100 grams by age three years and 1500 grams by adulthood (National Research Council,

2000). Much of this change in the human brain arises from the processes of synaptic and axonal pruning and myelination (Walsh, 2011). Pruning is a process by which weaker synaptic connections are eliminated (Gopnic et al., 1999). In contrast, myelination refers to the production of myelin sheaths around axons with stronger connection. Myelin is a white fatty material (hence the term 'white matter') which provides electrical insulation, thus improving the speed of nerve impulses (Morell and Quarles, 1999). The strength of connections is influenced by the environment and experience, with connections undergoing either myelination or pruning according to use. This process is illustrated simply by Hebb's Law, which states that: "Cells that fire together, wire together." (Hebb, 1949).

4.5.1 Plasticity

A key concept in brain development is plasticity. Brain plasticity is age dependent, both in terms of the degree and type of response to experiences. Plastic changes can underpin improved functioning, but also maladaptive behaviours and dysfunction. Many factors, including: sensory and motor experiences; psychoactive drugs; gonadal hormones; parent-child relationships; peer relationships; early stress and diet have been found to induce such plastic changes in the synapses (Kolb and Gibb, 2011).

The development of the human brain is punctuated by 'sensitive periods', during which the impact of experience on the brain is greater and therefore abilities and capacities are more easily formed. 'Critical periods', shorter than sensitive periods, are windows of time during which changes in brain function are thought to be largely irreversible (Knudsen, 2004). Experiences that occur during sensitive or critical periods are thought to cause fundamental

changes in the architecture of neural circuits, producing stable and 'energetically preferred' patterns of connectivity. Plasticity may occur well beyond the end of sensitive periods; however, changes are thought to be constrained to alterations in the patterns of connectivity within the brain architecture that was formed during the sensitive and critical periods (Knudsen, 2004). The implication of the existence of critical and sensitive periods in brain development is that the related regions of the brain are more vulnerable to adverse experiences, with an increased risk of atypical structural and functional changes occurring in the particular neural networks (Perry, 2009). However they are also periods in which well-targeted interventions may be expected to have greatest impact.

The density of synapses (the structures through which neurons communicate) is indicative of the plasticity of the region or system within the brain. At the point of over production, the environment impacts upon the selection of those that are retained and myelinated, therefore there is greater potential for experience to effect the strength of connections. (Huttenlocher, 2002). As the density of the synapses peaks at different ages in different regions, there are multiple periods of sensitivity for the acquisition of different functions. However, the first two years and early to mid-adolescence appear to show significant peaks in density (Knickmeyer et al., 2008; Lenroot et al., 2007) (see below).

4.5.2 Infant Brain Development

Evidence from neurological and psychological studies suggest that the first two years of life may be a critical period in brain development (e.g. Huttenlocher, 2002; Knickmeyer et al., 2008; Lenroot et al., 2007; Nelson et al., 2009). From birth to two years, there is a dramatic

increase in brain volume, with synapse formation peaking between 1 and 2 years (Kolb and Gibb, 2011). Knickmeyer et al. (2008) used sMRI scans to study the development of healthy children, scanning 84 children at 2–4 weeks, 35 children at 1 year and 26 children at 2 years of age. They found that the total brain volumes increased by 101% between the two week and 1 year scans. Most of the hemispheric growth was of grey matter, which had increased by 149% by the year 1 scan, with hemispheric white matter only increasing by 11%. In addition they found that the volume of the cerebellum increased by 240% by the first year scan, and the volume of the lateral ventricle increased by 280% in the first year. The authors suggest that the significant changes that take place during the first two years of life may indicate that this is a critical period of development during which environmental or genetic factors may produce enduring effects on brain structure and function (Knickmeyer et al., 2008). This is supported by the findings of Nelson et al. (2009).

The Bucharest Early Intervention Project (Nelson et al., 2009), studied the outcomes of children who had experienced extreme deprivation and maltreatment in Romanian orphanages and provides insight into sensitive periods for effective interventions. While initially all of the institutionalised children showed lower cortical activity than controls who had never been institutionalised, those who were fostered out of the orphanages before their second birthday showed activity similar to controls at 42 months and very similar levels of cortical activity by 8 years. In contrast, those children who were fostered out of institutions after their second birthday had activity comparable to children in institutions during the subsequent assessments (Nelson et al., 2009). This is in line with the findings of Stroufe et al. (2005) which indicate that the nature of care received by infants, in terms of sensitivity and responsiveness is a

significant predictor of brain development, particularly social and emotional functioning (Sroufe et al., 2005).

4.5.3 Adolescent Brain Development

Located deep inside the cerebral hemispheres, the limbic system, comprised of the thalamus; hypothalamus; cingulate gyrus; amygdala; hippocampus; and basal ganglia, is almost completely developed by the onset of adolescence (Casey et al., 2006). It's is involved in the processing of emotional information and risk-taking and engages our flight, fight, or freeze behaviours (Bell and McBride, 2010). It is critical for the experience of pleasure, the formation of memories and appears to play a key role in stress response (Higgs and Mitchell, 2007).

In contrast, the cortex goes through substantial growth and pruning during early to middle adolescence. This process starts in the back areas of the cerebral cortex and later moves to the frontal areas (Gogtay et al., 2004). Lenroot et al. (2007) conducted a very large longitudinal paediatric neuroimaging study, taking 829 MRI scans from 387 subjects, aged between 3 and 27 years. They found that cerebral grey matter volume follows an inverted u-shaped developmental trajectory which peaked at 10.5 years in girls and 14.5 years in boys (Lenroot et al., 2007). The process of increasing brain cell numbers and connectivity, and pruning appears to be completed between the ages of 15 and 17 years (Gur, 2005). However it is not until the early twenties that myelination (an increase in white matter) is complete and the brain may be considered 'mature' (Gur, 2005).

The thinning of the cortex correlates with behavioural development, with thinner regions suggesting improved functioning in all areas except phonological processing (Kolb and Gibb, 2011). The immaturity of the prefrontal cortex in typically developing adolescents and young adults may explain the higher levels of risk taking behaviours they exhibit (Spear, 2010). Involved in executive function, judgement, deductive reasoning and affect regulation, the prefrontal cortex continues to develop into our 20s (Bell and McBride, 2010). Evidence of an association between the functioning of the frontal lobe and such behaviours comes from studies such as Eshel et al. (2007). Employing an fMRI during a financial decision-making task, they found reduced frontal cortical activity in adolescents as compared to adults, which correlated with an increase in task-related risk-taking.

It has been argued that such risk-taking behaviours in adolescence arises out of changes in the balance between the functions of the limbic system, such as social emotional processing and the functions of the prefrontal cortex, such as cognitive control (Eshel et al., 2007). Bell and McBride (2010) described the brains of adolescents as being:

> "…underdeveloped with respect to affect regulation. Metaphorically, emotions and their expression are the "gasoline" that propels the lives of adolescents and adults, and judgment steers the vehicle on course and applies the brakes when necessary to manoeuvre through life. In other words, youth are neurodevelopmentally predisposed to being "all gasoline, no brakes, and no steering wheel" (Bell and McBride, 2010 pp. 565)."

Thus even in typically developing individuals it may not be reasonable to expect behaviours to be guided by higher order cognitive functions until the third decade.

4.5.4 Summary

The key aspects of brain development in considering interventions with children and young people are that:

- brain development is sequential and hierarchical
- infancy and adolescence are periods of increased synaptic density when development is more readily impacted upon by external influences
- frequently activated connections are strengthened and therefore more likely to become myelinated,
- infrequently activated connections are more likely to be pruned
- adolescence is a period in which the behaviour of typically developing individuals may be more influenced by the functions of the limbic system than the cortex.

These factors have implications for the timing and nature of interventions, suggesting that they will have most impact during periods of greatest synaptic density (infancy and adolescence) and if they are appropriately targeted, reflecting the sequential and hierarchical nature of brain development (see Section 3.7).

4.6 Atypical Brain Development Associated with ADHD

As stated above, the offences perpetrated by young people with ADHD tend to be opportunistic and reactive as opposed to planned and they are less likely to understand the seriousness of their actions. This is in line with neuroscientific research which points to atypical brain development in associated regions. Individuals with ADHD have smaller overall brain volumes than their typically developing peers (Krain and Castellanos, 2006), with other reported differences including: atypical frontal lobe (Krain and Castellanos, 2006), prefrontal cortex (Depue et al., 2010) and amygdala (Maier, 2013).

However, it is important to note that there is a continuing debate regarding the nature of and validity of ADHD as a construct. It has been argued that ADHD is a social construct, created by a disordered society (Graham, 2008). Further, the neuroscientific evidence suggesting atypical brain development in children with ADHD has been critiqued by researchers such as Baumeister and Hawkins (2001), who argued that:

> "the complexity of many of these studies and the methodological variation among them make it difficult to discern whether these inconsistencies are apparent or real" (Baumeister and Hawkins 2001, pp. 2).

Notwithstanding this criticism, Barkley (2002) published a paper: 'International consensus statement on ADHD', in which 75 eminent researchers and medical doctors contended that scientific findings relating to ADHD were valid.

4.6.1 Atypical Brain Development Associated with ASD

ASD is associated with atypical functioning in brain regions including: the frontal lobe (Lynch et al., 2013), the medial prefrontal cortex (Schulte-Rüther et al., 2011), the amygdala (Pelphrey, 2007) and the cortex (Minshew, 2007). Differences have also been shown between the microstructure of the corpus callosum of individuals with autism and those of typically developing controls, which has been associated with poorer nonverbal cognitive performance (Alexander et al., 2007).

However, despite the large and increasing body of evidence suggesting measurable differences in the functioning and structure of the brain in individuals with ASD, to date there is no valid biomarker for the disorder (Walsh et al., 2011).

4.6.2 Atypical Brain Development Associated with Maltreatment

The influence of a child's environment and experiences on neurological development has been well documented. Maltreatment has been linked to the pruning of links between the anterior cingulate, orbitofrontal cortex and amygdala through the hypothalamus (Schore, 2003) and impaired functioning of the frontal lobe (Lupien et al., 2009).

Studies with children who have been institutionalised show differential brain development in a number of areas. Atypical function and structure of the cortex has been reported in a number of such studies, showing a reduction in both brain metabolism in the prefrontal cortex

(Chugani et al., 2001) and cortical activity (Nelson et al., 2009) in institutionalised children as compared to controls. In addition, a number of studies have showed that institutionalised children have significantly lower volumes of white and grey matter with comparatively large amygdala volumes than children who have not experienced institutionalisation or maltreatment (Mehta et al., 2009; Tottenham et al., 2011). Further, lower levels of cortical activity have been found in children who have been institutionalised, compared to those who have not (Nelson et al., 2009).

In addition maltreatment in childhood has been linked to a smaller corpus callosum (the neurons that transmit signals between the left and right hemispheres) volume, impaired cerebellar vermis (located in the centre of the cerebellum and inhibits structures in the limbic system) function, reduced functioning in the limbic system and pathways in the right brain and abnormalities in the concentration and function of neurotransmitters (Heide and Solomon, 2006).

Further, evidence suggests that the impact of maltreatment is determined by age at the time of the experience. De Bellis et al. (2002) found that the earlier a child experiences maltreatment, the smaller their brain volumes, with the most profound volume difference in the size of the prefrontal cortex.

However, it is important to note that understanding, interpreting and evaluating evidence regarding the impact of maltreatment on development is complicated by differences in types and definitions of maltreatment and abuse how this has been evidenced (Rees, 2010).

4.6.3 Summary

Atypical structures and functioning have been reported in many regions of the brain in individuals who have experienced maltreatment, or who have a diagnosis of ASD or ADHD (see Table 2). As noted above, these findings are not unequivocal; however the data is largely consistent with psychological theory (Prior et al. 2011). Common to all three are differences in the prefrontal cortex, frontal cortex and amygdala.

Risk Factor	Associated Brain Regions Include:
ADHD	• **frontal lobe** (Krain and Castellanos, 2006) • **prefrontal cortex** (Depue et al., 2010) • **amygdala** (Maier, 2013).
ASD	• **frontal lobe** (Lynch et al., 2013) • **prefrontal cortex** (Courchesne et al., 2011; Schulte-Rüther et al., 2011) • **amygdala** (Pelphrey, 2007) • cortex (Minshew, 2007). • corpus callosum (Alexander et al., 2007).
Maltreatment	• **frontal lobe** (Lupien et al., 2009) • **prefrontal cortex** (Chugani et al., 2001) • **amygdala** (Mehta et al., 2009; Tottenham et al., 2011). • links between the anterior cingulate, orbitofrontal cortex and amygdala through the hypothalamus (Schore, 2003). • cerebellar vermis (inhibits structures in the limbic system) • limbic system • pathways in the right brain • neurotransmitters (Heide and Solomon, 2006). • cortical activity (Nelson et al., 2009) • white matter • grey matter • corpus callosum (Heide &Solomon, 2006).

Table 2. Risk factors for youth offending and associated brain regions.

The prefrontal cortex is one of three areas that make up the frontal lobe. It is associated with Executive Function, judgement, deductive reasoning and affect regulation (Bell and McBride, 2010). Both atypical prefrontal cortex structure and function, and immature prefrontal cortex are associated with lower levels of executive function, higher levels of risk taking

behaviours, poorer judgement and poorer affect regulation than typically developed mature prefrontal cortex structure and function (Bell and McBride, 2010; Spear, 2010).

In addition to the functions of the prefrontal cortex, the frontal lobe is associated with memory, motor functions, impulse control, sexual behaviour, spontaneity, reasoning, expressive language, social behaviour and higher-level cognition (Stuss and Knight, 2013). Dysfunction of the frontal lobe is associated with increased risk-taking, memory, attention and socialisation difficulties (Kimberg and Farah, 1993), impaired executive function, poorer judgement and affect regulation (Bell and McBride, 2010; Spear, 2010).

The amygdala has been shown to moderate other areas of the limbic system, such as the hypothalamus (Baron-Cohen et al., 2000). It is associated with emotional responses (Pelphrey, 2007), aggression, autonomic fear responses (Bell and McBride, 2010), arousal social behaviour and perception (Todd and Anderson, 2009). Dysfunction is associated with a range of difficulties, including: reduced social and emotional processing ability (Adolphs, 2003; Adolphs, 2010) and impaired Pavlovian fear conditioning; and therefore potentially the use of punishment as a deterrent (Amunts et al., 2005).

4.7 Implications for Practice

Evidence suggesting that brain development is sequential and hierarchical (Knudsen, 2004; Perry, 2009) has implications for both the timing and type of intervention used. Interventions may have more impact when focused on improving the functioning of impaired lower,

innervating brain systems before targeting higher level functions. For young offenders who may be experiencing difficulties with the functioning of both the amygdala and the cortex, such as those who have experienced maltreatment or have ASD or ADHD, interventions may be more successful if they target amygdala function first.

The implication of evidence suggesting that infancy is a period of increased synaptic density, when the development of the limbic system (including the amygdala) is more readily impacted upon (Knickmeyer et al., 2008; Perry, 2009) is that preventative interventions may be most effective in the first two years of life. However, a challenge this data presents is that at the point when a child is old enough to enter the criminal justice system, at 10 years of age or older, it may be too late to effect significant change in this region. Targeting young infants at risk of future offending behaviour may be possible, however such practice is ethically questionable.

Evidence suggesting that adolescence is a period of increased synaptic density, when the development of the cortex is more readily impacted upon by external influences (Gogtay et al., 2004; Lenroot et al, 2007), indicates that in typically developing adolescents, interventions that focus on the function of the cortex, such as cognitive behavioural therapy may be appropriate. Further, in preadolescent boys, the use of such interventions might not be appropriate as their cortex may have yet to undergo the considerable increase in synapses associated with early and mid-adolescence.

The implication of evidence suggesting that frequently activated connections are strengthened and therefore more likely to become myelinated whereas infrequently activated connections are more likely to be pruned (Gopnic et al., 1999; Walsh, 2011) is that interventions may need to be both repetitive and intensive in order to provide sufficient levels of activation to effect change (Diamond and Lee, 2011).

Evidence suggesting that adolescence is a period in which the behaviour of typically developing individuals may be more influenced by the functions of the limbic system, than the cortex (Bell and McBride, 2010; Eshel et al., 2007), implies that their capacity to apply knowledge, including accurate assessments of risk, control of their impulses and fight or flight responses may be limited. Therefore interventions reliant on the application of such learning during periods of arousal may have limited impact.

Finally, evidence suggesting that amygdala dysfunction impairs Pavlovian fear conditioning (Amunts et al., 2005) implies that the fear of punishment may not be a deterrent to engagement in offending behaviour for those with atypical amygdala function.

4.8 Role for Educational Psychologists with Young Offenders

Notwithstanding the significant proportion of children and young people in custody in England and Wales with neurodevelopmental disorders and the legal obligation to take such difficulties in to account to provide appropriate care, guidance and support, it is

acknowledged that neither the YOTs working within communities, nor those working within the secure estate have the capacity to do so.

A 2009 survey, conducted by the Association of Youth Offending Team Managers and the Prison Reform Trust gathered data from more than half of the YOTs in England and Wales. It revealed that only 37% of YOTs used screening tools for the identification of learning difficulties; 36% screened for communication difficulties; 28 % screened for autism spectrum disorder and 35% screened for specific learning difficulties (HM Government, 2009). Given the reported prevalence rates for such developmental disorders (see above), it is therefore likely that several young offenders do not have their needs accurately identified. Educational psychologists commonly screen for such difficulties within schools and would therefore be ideally placed to extend their services to YOTs.

The same survey found that less than 25% of respondents reported that a member of their YOT team held a special educational needs qualification, only 9% had a designated Children With Disabilities team member, and fewer than 42% had been trained to identify special educational needs that required further intervention or assessment (HM Government, 2009). Educational Psychology Services would be ideally placed to provide the training necessary for YOT teams to increase their capacity to meet the needs of children with special educational needs, as this is a significant part of their role in educational settings.

Within the secure estate there is a similar lack of capacity, acknowledged in a report published by the OCC, which stated that:

> "there is a limited understanding of child and adolescent development and limited recognition, understanding and management of developmental and neurodevelopmental problems within the secure estate, leading to wide variations in the ways in which the youth justice system provides services for young people with mental health needs, learning disabilities and speech, language and communication difficulties." (OCC, 2011 pp. 64).

The nature of custody is such that the range of recommendations and interventions may be limited. In addition the Children and Families Bill (2013) states that SEN provision will not extend to children in custody (House of Lords, 2013). However the prevalence of neurodevelopmental disorders and maltreatment among young people incarcerated in England and Wales suggests a high level of need that educational psychology services would be ideally placed to fill, particularly as they may subsequently provide continuity and planning for reintegration into education after release. It could be argued that there are ethical reasons for the professional body, the Association of Educational Psychologists, to engage in a national debate regarding SEN provision in the secure estate.

In addition, by broadening the age range of educational psychology services' remit and increasing the need for authorities to take a holistic view towards calls on the public purse (Children and Families Bill, 2013), the anticipated legislation may provide an opportunity for educational psychologists to convince Local Authorities that extending support to young offenders could improve outcomes for young people and provide savings for adult services.

4.8.1 Implications of the Evidence for Wider Educational Psychology Practice

The evidence reviewed for this paper has implications for many aspects of the role of educational psychologists. Interventions delivered to children and young adults, and recommendations made for support within settings, need to account for the same features of typical brain development as the work of the YOT: sequential and hierarchical development; sensitive and critical periods of plasticity; the impact of activation on the process of myelination and pruning and the impact of the balance of limbic versus cortical development during adolescence.

An understanding of atypical brain development in children who have experienced maltreatment or have neurodevelopmental disorders is important for planning appropriate interventions and support. In addition, improving the understanding of teachers, teaching assistants and other school-based professionals may facilitate the implementation of systems and structures to better manage the associated behaviours within provisions.

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CHAPTER 5

BEHAVIOURAL CONSULTATIONS IN A CHILDREN'S CENTRE: AN EVALUATION

ABSTRACT

Educational psychology services have a remit to work with ages 0 to 25 (Children and Families Bill, 2013). However, in my employing service, discussed in this paper, the provision has been focussed on school aged children of 5 to 16. This work formed part of wider research designed to inform decisions about the future provision of services in the early years in this Local Authority. Behavioural consultations were delivered to parents at a Trailblazing Sure Start Children's Centre, and evaluated through Goal Attainment Scaling and Likert items during a follow-up telephone conversation, designed to answer the following questions: Do outcomes of consultations effect change for families? Do outcomes of parental consultations have an impact on children's wellbeing? Does the consultation process have an impact on parental confidence? What are the common features of Children's Centre consultations? The results suggest that the consultation process had a positive impact on parental confidence, affected positive change for families and improved children's wellbeing. The range of themes was narrower than anticipated, and the focus of parental concerns differed from those of professionals.

5.1 Introduction

Whilst there is much evidence to support an increased emphasis on educational psychology interventions in the early years, in primary and preschool settings (Kelly and Gray, 2000), access to educational psychology services - both within and across the three geographically defined divisions of my employing Local Authority (LA) - has suffered from the disruption caused by a series of structural reorganisations. Service delivery to the early years is currently patchy: while one area offers a relatively high level of support, accepting referrals from private nurseries and day-care centres, this has not been the case in the other two. In the largest, City and Central division, occasional referrals for pupils attending nurseries attached to schools are taken, but this has been the extent of the offer. While this has long been recognised as inadequate by the educational psychology service, it lacked the funding to effect change.

In 2012, my colleagues and I were advised that money had been provided for the delivery of a service to the early years. However without a tradition of provision it was considered that some research into a suitable mode of delivery, in terms of methods, outcomes and costs, was appropriate. Two initiatives, aimed at two different preschool age groups, were to be trialled;

i) The Northamptonshire Baby Rooms project, developed by Northamptonshire Educational Psychology Service (Lawrence, 2011), and

ii) a consultation model (Farrell, 2009) which had been used in a number of services, including one with which I had been involved (see Section 4.1.2).

The Northamptonshire Baby Rooms Project is aimed at sharing knowledge with parents about infant learning and development, completing activities, and making resources which may be taken away and used in Early Years settings over three sessions (Lawrence, 2011). The consultation model meanwhile was aimed at providing a self-referral forum for parents or carers. Issues of concern could be discussed with a member of the educational psychology service within a framework of joint investigation, joint solution-building, joint planning and intervention, and joint evaluation and review. The Baby Rooms Project targets parents with babies and young infants, whereas the consultations were primarily targeted at the parents of toddlers and preschool children. The aim of the trials was not to select one intervention over the other, but rather to determine if each would be well received and with measurable, positive outcomes, allowing them to be delivered within other Children's Centres across the county.

As there was a training requirement necessary for The Northamptonshire Baby Rooms project it was decided that I should trial of the consultation model. This paper is a record of a small study which formed part of that wider research. It was designed to answer the following questions:

a. Do outcomes of consultations effect change for families?
b. Do outcomes of parental consultations have an impact on children's wellbeing?
c. Does the consultation process have an impact on parental confidence?
d. What are the common features of Children's Centre consultations?

Goal Attainment Scaling (Kiresuk & Sherman, 1968) (see Section 4.4.1) and Likert items (Burns and Burns, 2008) (see Section 4.4.2), were used to gather the data used.

5.1.1 Background

5.1.1(i) The Consultation Model

The consultative approach arose out of the work of Caplan in Post war Israel, where the scale of mental health difficulties in the population outstripped the capacity of clinicians to provide a traditional model of intervention (Caplan, 1970). Similar drivers are at force in contemporary educational psychology services in England and Wales. A report commissioned by the Department of Education found that in the Midlands, there was an average of 4700 pupils in mainstream schools per educational psychologist in 2000 (Kelly and Gray, 2000). In the same report, the use of a consultation model was highlighted as good practice, and was suggested as a means of reducing the time spent by educational psychologists on Stages 4 and 5 of the then Code of Practice (now known as statutory assessment and statementing (DfES, 2001)) (Kelly and Gray, 2000). Since then, consultation models have been reportedly adopted by many Educational Psychology Services across the UK (Farrell, 2009).

The ways in which consultations are construed and implemented vary (Watkins, 2000). Within my employing Local Authority they have been adopted by some educational psychologists but, in line with Watkins'(2000) findings, there is significant variation in their design and implementation. Such variations make reliable research into the efficacy of consultations as a mode of practice difficult (Zins, 2002), and confound efforts to draw on evidence for model selection.

There is broad agreement that consultations are tripartite, including the consultant, consultee and the focus of the consultation (subject or system), and that the purpose of consultations is to resolve problems (Dougherty, 2009), effecting improvements in both the focus of the consultation and the consultee (Zins & Erchul, 2002). Models of consultation include: behavioural (Noell, 2005), conjoint behavioural (Wilkinson, 2005), and collaborative (Denton et al., 2003).

Idol (1990) suggests that there is both an artful and scientific base to consultations. The artful base refers to the 'process skills of consultation': how to engage in successful decision-making, and how to interact, communicate and problem-solve with others. Idol and West (1987) highlighted the need for consultants to have good interpersonal communication and interpersonal problem-solving skills. Evidence suggests that the consultant's interpersonal skills are an important factor in the success of consultations (Horton and Brown, 1990). In contrast, the scientific base to consultations is the knowledge held by the consultant (e.g. behaviour change techniques); opportunities to benefit from this scientific base are typically the main reason consultation is sought by a consultee (Idol, 1990). (See Sections 4.1.2 (ii) & 4.1.3 for further consideration of the 'scientific base' of behavioural consultations).

5.1.1 (ii) Behavioural Consultations

I selected behavioural consultations for use in this study as they have been shown to be effective in a wide variety of cases (Kratochwill and Pittman, 2002), including: reducing problem behaviours of young children with Foetal Alcohol Spectrum Disorders (Olson et al., 2005), ameliorating emotional and behavioural problems (Sheridan et al., 1996), supporting

academic difficulties, improving social skills and reducing externalizing behaviours (Reddy et al., 2000). Further, a number of interventions shown to improve executive functioning in preschool children employ strategies based on behavioural psychology, such as the Incredible Years (Webster-Stratton and Reid, 2002), and the Chicago School Readiness Project (Diamond and Lee, 2011).

In behavioural consultations, consultants work with the consultee to identify and modify environmental factors influencing the subject of the consultation to reduce problem behaviours and support the employment of alternate, prosocial behaviours (Hundert, 2006). The stages of this process typically include:

1. *the identification of the problem:* consultants gather information from the consultee regarding the background and environment, antecedents and consequences, previous interventions, additional needs and difficulties;
2. *hypothesis-building and/or the identification of influencing factors*: consultants draw on operant conditioning techniques (Skinner, 1938), rooted in the behaviourist paradigm, such as antecedent management, positive and negative reinforcement, ignoring (extinction), shaping, environmental cues and modelling (see Section 4.1.3);
3. *problem-solving in collaboration with the consultee*: operant conditioning techniques and principles inform problem-solving and develop a plan (Kratochwill and Bergan, 1990); and
4. *the implementation of a plan and an evaluation of its impact* (Fuchs et al., 1990; Hundert, 2006): the plan is implemented by the consultee and subsequently evaluated.

In behavioural case consultations, throughout Stages 1 to 3 outlined above, the consultant and consultee engage in a collegial relationship, in which the consultant is afforded the role of content expert, with professional, psychological knowledge and expertise, and the consultee is afforded the role of the expert in the given situation, such as their home environment. This process may be carried out over several sessions, but briefer versions have been shown to be as effective as extensive interventions at 18 months post-consultations (Hundert, 2006).

5.1.2 Operant Conditioning (Skinner, 1938)

A key component of behavioural consultations is the use of operant conditioning (Skinner, 1938). The basic principle behind operant conditioning, or instrumental learning, is that behaviours with positive consequences are generally repeated, and those with negative consequences are not. Behaviours are viewed as the second stage in what Skinner described as the three-term contingency (see Figure 1).

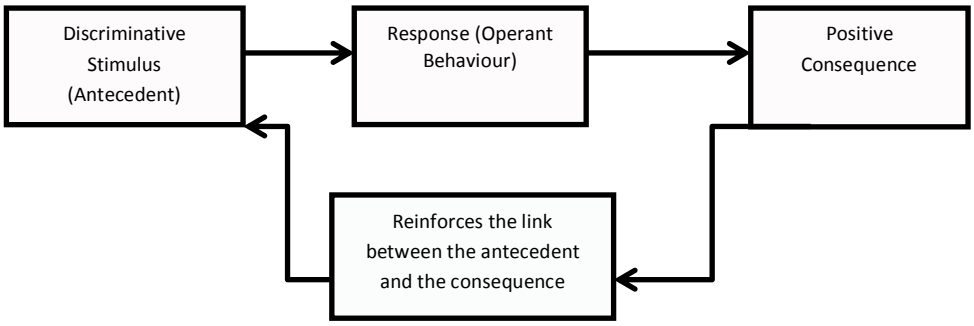


Figure 1. The Three-Term Contingency (Carlson et al., 2000)

The three-term contingency describes how responses are cued by the discriminative stimulus, due to positive consequences that occurred following a response to that discriminative

stimulus in the past (Carlson et al., 2000). Operant behaviours are typically followed by consequences that can be divided into positive reinforcement, negative reinforcement, positive punishment, negative punishment (response costs) and extinction. In behavioural consultations using operant conditioning principles, the behaviour-environment interactions are elicited from the consultee and are analysed by the consultant in line with the three-term contingency (Stages 1 and 2, see above). Next, a collaborative problem-solving process is engaged in to formulate a plan to manipulate the behaviour-environment interactions, drawing on operant conditioning techniques (outlined below) (Skinner, 1938).

Positive reinforcement is the presentation of a stimulus after a behaviour that increases the occurrence of the behaviour. ***Negative reinforcement*** is the removal of a stimulus after a behaviour that increases the occurrence of the behaviour. ***Positive punishment*** is the presentation of an aversive stimulus after a behaviour, thereby decreasing the occurrence of that behaviour. ***Negative punishment (cost response)*** is the removal of a pleasant stimulus after a behaviour, thereby decreasing the occurrence of that behaviour. ***Extinction*** is the stopping of a behaviour which has previously been reinforced, through the removal of the reinforcement, often achieved by ignoring the behaviour. ***Shaping*** refers to a process whereby behaviours that approximate the desired behaviour are reinforced, moving from successive approximation to successive approximation in small, easily transitioned steps towards the desired behaviour (Martin, 1998). Desired behaviours may be a chain of related behaviours, such as eating with cutlery. Building such chains of behaviour is referred to as ***Chaining***. After defining the target behaviour, a task analysis is performed. ***Task analysis*** is the process of breaking down target behaviours into component parts, which may then be taught through forward or backward chaining. In ***forward chaining***, the first component is

taught first and reinforced, when that has been learned, the first and second components are taught together and reinforced, adding elements from the chain until the target behaviour is achieved. ***Backward chaining*** is a similar process, however the last component is taught first, and elements are added to the chain in reverse order (Miltenberger, 2012). The use of such techniques to change behaviour is supported by a large body of evidence (see Appendix II).

5.1.3 Children's Centres

Sure Start Centres were part of the Labour government's policy to reduce social exclusion (DfEE, 1999), by working with parents and children in 'disadvantaged families' to promote the emotional, physical, intellectual and social development of children in readiness for school entry (DfEE, 1999b).

The term 'disadvantaged families' has been employed in research to refer to families experiencing a range of difficulties relating to the child, adults or community involved. Children with low birth weights, disabilities, long-term illnesses, special educational needs, behavioural difficulties, poor housing, experiencing poor parenting, who are on the child protection register or are looked-after would be considered 'disadvantaged'. Families in which parents have experienced domestic violence, addiction, mental or physical illnesses, are single and/or teenage parents may also be viewed as disadvantaged (Speight et al., 2010). In addition, those belonging to groups such as minority communities, newly arrived families, those with English as a second language, at risk of family breakdown, workless households, living in poor housing and/or disadvantaged areas might also be viewed as disadvantaged

(Lord et al., 2007). However, it is acknowledged that many families falling into one or more of the above categories would not consider themselves to be disadvantaged and that they do not experience the possible implications discussed in Section 4.3.

The Sure Start programme was announced in 1998 in the Comprehensive Spending Review. £540 000 000 was to be spent between 1999 and 2002 on up to 150 000 children (Glass, 1999). The stated aim of the programme was:

> "To work with parents and children to promote the physical, intellectual and social development of pre-school children - particularly those who are disadvantaged - to ensure they are ready to thrive when they get to school."(p. 79, H.M. Treasury, 1998)

This aim was to be achieved through improving health, the ability to learn,

> "In particular by encouraging stimulating and enjoyable play, improving language skills and through early identification and support of children with learning difficulties." (p. 79, H.M. Treasury, 1998)

and improving social development:

> "In particular by supporting bonding between parents and children, family functioning and through early identification and support of children with emotional and behavioural difficulties." (p. 79, H.M. Treasury, 1998)

Attitudes to the Sure Start Programme have been mixed (e.g. Coe et al., 2008; Gewirtz, 2001; House of Commons Children, Schools and Families Committee, 2010). It has been criticised

as being part of a Labour Government strategy to alter the attitudes of parents, ostensibly by transforming working class families into middle class families (Gewirtz, 2001). Further, evidence of the impact of Sure Start on outcomes for children and families has been questioned.

Early studies (Belsky, 2006) found that the effect for 3 year old children of non-teenage mothers, the largest group accessing these services, was positive with regards to social competence and behaviour, outcomes which appeared to be mediated by a reduction in negative parenting resulting from the impact of Sure Start. However, for the children of teenage mothers, there appeared to have been a negative impact in terms of the children's social competence, behaviour and verbal ability. In addition, children of single and unemployed parents displayed poorer verbal abilities in Sure Start areas than in other, comparison communities (Belsky, 2006).

However later studies provide more consistently positive outcomes, particularly in terms of the social development, prosocial behaviour, self-regulation and independence of 3 year olds; attributed to less 'negative parenting' and improved home learning environments resulting from Sure Start (House of Commons Children, Schools and Families Committee, 2010).

Evidence of the beneficial effects of the Sure Start programme comes from studies such as Melhuish et al. (2008). They employed a quasi-experimental design to compare 14 outcomes for 5883 three year olds and their families, drawn from 93 disadvantaged Sure Start Local

Programme (SSLP) areas with 1879 three year olds and their families drawn from 72 comparable areas who took part in the Millennium Cohort Study. They found that for five of the 14 outcomes:

- 'social development and social behaviour';
- 'greater independence';
- (reduction in) 'negative parenting';
- 'home-learning environment'; and
- 'using more services for supporting child and family development',

the families in the SSLP areas fared better than those in the comparison areas. This was a large study. However, it has been criticised on a number of grounds (Kane, 2008): first, for the use of a quasi-experiment as opposed to a randomised control trial; and second, for the comparison of data collected by two different groups of researchers: both factors which reduce the confidence in which findings may be held (Kane, 2008).

5.2 Selected Children's Centre Demographics

The Sure Start programme began with the opening of 60 Trailblazer Sure Start Children's Centres. The first Centres to open, they were located in areas with the highest levels of deprivation, taking geographical factors and links with other government initiatives into account (Roberts, 2000).

The Centre selected for this research was a Trailblazer Sure Start Children's Centre, opened in 2000. It was the first Sure Start Children's Centre in the city. The area served by this Children's Centre was identified by the Index of Local Deprivation as being in the top 10 - 20 percent nationally across a number of indices (Ofsted, 2010a), including: the Income Deprivation Domain; the Employment Deprivation Domain; the Health Deprivation and Disability Domain; the Education, Skills and Training Deprivation Domain; the Barriers to Housing and Services Domain; the Crime Domain and the Living Environment Deprivation Domain (Neighbourhoods Statistical Release, 2011). Rates of teenage pregnancy and low birth weight were also taken into account (DfES, 2002).

The educational psychologist working in the local primary school reported a high level of deprivation and need for additional support amongst the children on entry to school, particularly with regards to SEN and speech and language development. This level of deprivation, and need for additional support was further reflected in an Ofsted report, which noted that:

> "The proportion of pupils eligible for free school meals is above average. The proportion of pupils with special educational needs and/or disabilities is high. The proportion of pupils with statements of special educational needs is also well above average. Few pupils are from minority ethnic groups and only a very small proportion has a first language other than English. Building on previous specialist provision, a Language Development Centre, a specialist resource base for up to 10 pupils, was established in September 2010. (pp. 3, Ofsted, 2010b)"

Between 2005 and 2010, the Centre's budget was cut by 37 per cent, resulting in cuts in and changes to its delivery of services (Ofsted, 2010b). Notwithstanding the difficulties this presented, it was rated as outstanding at its last inspection (Ofsted, 2010b). Through discussion with the relevant educational psychologist, the social worker based at the Centre and HB, the Early Years Specialist educational psychologist, I became aware that the area served by the centre had been identified as being 'hard to reach', as it had been difficult to engage parents who described feelings of distrust and suspicion towards such professionals in the Local Authority.

The centre was deemed appropriate for trialling the consultation model by my service, due to the combination of the high levels of deprivation in the area, number of children with disabilities and/or special educational needs and the quality of the centre, which has been recognised as able to deliver services effectively to a community with a reputation as being hard to reach.

5.3 Anticipated Difficulties

The social and economic disadvantages of the area in which the Children's Centre is located are associated with a range of negative implications for the outcomes of the children which it serves. Research suggests that socially and economically disadvantaged children may have poorer outcomes in areas including: health (Roberts, 1997; Pickett and Pearlin, 2001; Stamatakis et al., 2005), wellbeing (Davis, 2010; Wilkinson, 1994), children's social and emotional competence and cognitive abilities (Gershoff et al., 2003; Mayer, 2002), behaviour (Bor et al, 1997; Brooks-Gunn and Duncan, 1997; Dearing, McCartney, & Taylor, 2001),

language development (Feinstein, 2003; Hoff, 2003; Schoon, 2010), executive function (e.g. Hughes and Ensor, 2005; Sarsour, 2010), social skills (Bradley et al., 2003), academic achievement (Bradley et al., 2003; Malecki & Demaray, 2006; Marks, 2006), and early motor skills (Bradley et al., 2003). However, these outcomes are not shared by all children experiencing such disadvantage, and the mechanisms by which this occurs are not clear.

While social and economic disadvantage do not deterministically lead to poorer outcomes for children, low socioeconomic status (SES) families have been shown to differ from families of higher socioeconomic status on a range of factors that may contribute to the findings listed above. These include: level of parental education, an absence of structure and routine (Evans and English, 2002), lack of bedtime routine (Hale et al., 2009), single parent families (Sarsour et al., 2010), increased noise in the background and crowded environments (Evans, 2006), absence of parental scaffolding (Hughes and Ensor, 2009), higher levels of stress (Evans, 2003) and poorer parental responsiveness and access to material resources (Bradley, 2001). Determining which factors underlie the significant differences in outcomes is important in formulating appropriate interventions.

5.3.1 Risk Factors

There is some evidence that a number of factors associated with poverty (e.g. with a household income of below 60% of the national median in the UK (Parekh, et al., 2010)) do not significantly mediate the impact of socioeconomic status on outcomes (Sarsour et al., 2010).

Sarsour et al. (2010) studied 60 American families from diverse socioeconomic backgrounds and with school age children (mean age 9.9). They found that the relationship between children's poorer working memory and socioeconomic status was 'mediated' by enrichment factors and family companionship, and the association between children's lower inhibitory control and socioeconomic status was partially 'mediated' by parental responsiveness and family companionship. However, factors more directly associated with socioeconomic disadvantage, such as access to learning materials and the physical environment did not significantly mediate its impact on outcomes.

Further evidence suggesting the factors mediating the relationship between low SES and poorer outcomes are related to family interactions as opposed to direct markers of poverty comes from studies looking at executive function. Rhoades et al. (2011) found that the effects of SES on executive function are mediated by the quality of parent-child interaction at 3 years, while Hughes and Ensor (2009) found it to be mediated by the level of chaos within the family and parental scaffolding.

However, an alternative theory on the way in which SES influences outcomes for children is through stress. Studies show that low SES children are exposed to increased levels of stressors (Goodman et al., 2005) and have elevated levels of cortisol (a stress hormone) (Evans, 2003). It has been argued that higher levels of stress hormones, over long periods of time, may have a negative impact on brain areas, such as the prefrontal cortex, involved in the stress response system. Many aspects of executive function are attributed to the prefrontal

cortex (Johnson, 2012); therefore chronic stress may negatively affect its development and functioning (Blair, 2010; McEwen & Gianaros, 2010).

Thus evidence suggests that the children accessing the selected Trailblazer Children's Centre may be experiencing a range of cognitive, social, language and behavioural difficulties, which may be attributable to chronic stress, poor-quality parent-child interactions, 'chaotic' families, poor parental scaffolding, poor parental responsiveness, and lower levels of family companionship and enrichment factors. This study aimed to evaluate the impact of consultations with parents on remedying or alleviating such difficulties.

5.4 Evaluation

The final stage of behavioural consultations is their evaluation, undertaken jointly between the consultant and consultee. For the purposes of this trial I decided to use these evaluations as a means of assessing the overall effectiveness of the consultation model, by means of Goal Attainment Scaling (Kiresuk & Sherman, 1968) and Likert items (Burns and Burns, 2008).

5.4.1 Goal Attainment Scaling (GAS) (Kiresuk & Sherman, 1968)

Goal Attainment Scaling (GAS) provides a means of assessing intervention outcomes against individualised criteria. It was originally developed for use in the evaluation of mental health education outcomes (Kiresuk & Sherman, 1968), and was later recommended by Frederickson (2002) as a method of evaluating impact within educational psychology services. GAS has

been used to evaluate the impact of a number of educational psychologist interventions (e.g. Baxter & Frederickson, 2005; Imich & Roberts, 1990; Sladeczek et al., 2001) including consultations (Sladeczek et al., 2001) and consultations in early years settings (Sheridan, 2006).

The use of GAS involves the selection of three problem areas, and then transforming these into goals. The evidence to be used to track progress towards each goal is identified, and a baseline descriptor, against which any progress may be measured, is established. Next the level of outcome expected post-intervention is identified for each goal, as are four other potential outcomes. These are coded as: expected outcome (0), somewhat more than expected (+1), much more than expected (+2), somewhat less than expected (-1) and much less than expected (-2). Post-intervention, the level of outcome (-2, -1, 0, 1 or 2) is determined.

This method of evaluating outcomes may be criticised on a number of fronts. First, it relies on consultee report and offers no independent measures of behaviour change; therefore it is unable to provide an objective measure of performance, nor indeed does it seek to do so (Kuipers et al., 2003). Second, there are likely to be many confounding factors in the lives of the families concerned, and this method does not capture or account for those. Finally, as goals are determined by individual consultees, the differences between both their selected goals and levels of expected achievement present a challenge to the validity of its use to evaluate interventions (Ottenbacher & Cusick, 1993).

In addition to the numerical analysis of GAS scores, I conducted a thematic analysis of the GAS data using the first five phases of the six phase process outlined by Braun and Clarke (2006). First, I read the data looking for patterns. Next I reread the data and began to group goals, generating initial codes. Phase three involved combining initial codes into overarching themes. In phase four I reviewed the themes, and then in phase five defined them. After phase one, I had to make a decision whether to classify the themes according to parenting issues, reflecting the outcomes assessed in Melhuish et al.'s (2008) study (see Section 4.1.4), or in line with the perspective that the consultee is the content expert (Kratochwill and Bergan, 1990). I elected to classify themes reflecting the consultee's perspectives.

The thematic analysis conducted in this study was an attempt to understand the several realities constructed by the consultees, in line with a social constructionism (Creswell, 2003). This reflects the pragmatist perspective adopted for this research, whereby the 'research question' was viewed as being central and data collection and analysis was selected on the basis of the insights they could afford, without loyalty to other paradigms (Creswell, 2003).

5.4.2 Likert Items

Likert items are questionnaire items for which respondents are asked to identify the degree to which they agree or disagree with a statement on a rating scale, thus conveying the strength and direction of their views (Burns and Burns, 2008). Five point scales are commonly used, employing the options: strongly disagree; disagree, neither agree nor disagree; agree and strongly agree (Dawes, 2008).

Forced choice Likert items make use of the same options, but do not allow participants to provide a neutral answer, such as 'neither agree nor disagree' (Allen & Seaman, 2007). They are employed in an attempt to reduce the impact of central tendency bias (Poulton, 1979) (see below) on responding. Thus I used forced choice Likert items to ascertain the parents' perceptions of the impact of the consultations in this study.

5.4.2 (i) Likert Items Used in this Study

I used Likert items to gather data to answer research questions:

(a) do consultations effect change for families;

(b) do outcomes of parental consultations have an impact on children's wellbeing; and

(c) does the consultation process have an impact on parental confidence?

The wording of the Likert item designed to capture data relating to research question (a) was relatively straightforward. I wanted to ascertain whether the consultations were perceived as useful, independent of the level of outcome. The item therefore stated: 'the advice given during consultation with the trainee educational psychologist was useful'.

The wording of the Likert item designed to capture data relating to research question (c) was closely related to the wording of the research question, stating: 'the consultation with the trainee educational psychologist had a positive impact on my confidence as a parent'. The rationale for including this item comes from both theory and research. Bandura (2006) argued

that a person's feeling of efficacy in their ability to carry out tasks is an important aspect of behaviour change. Therefore an individual's confidence as a parent may influence the impact of interventions reliant on their ability to change aspects of their parenting behaviour. Further, perceived competence (or confidence or self-efficacy) in parenting ability has been shown to mediate the association between parenting and outcomes for children (Coleman and Karraker, 1998; Coleman et al., 2002; Bor and Sanders, 2004).

However, the wording of the Likert item designed to capture data relating to research question (b): 'do outcomes of parental consultations have an impact on children's wellbeing' was less direct. The concept of wellbeing is not well defined (Dodge et al., 2012) and has been described variously, as being subjective (Diener, 1984) or both subjective and objective (Argyle, 2001), and as being uni-dimensional (Hills and Argyleor, 2001) or multi-dimensional (Seligman, 2011). This item was intended to provided a measure of uni-dimensional, subjective wellbeing (Argyle, 2001). Subjective wellbeing (SWB) has been taken as being synonymous with happiness by several researchers (e.g. Argyle, 2001; Bradburn, 1969; Pollard & Lee, 2003).

This perspective is not without criticism. Seligman's (2011) 'dynamic' theory of wellbeing, argues that wellbeing is 'flourishing', a broader concept than those based purely on happiness, which he argues are not complex enough. However, Deiner (1984) stated that SWB is sometimes called happiness in 'colloquial terms' and I wanted the item to be understood and framed in everyday, conversational language. Therefore I selected the wording: 'the

consultation with the trainee educational psychologist had a positive impact on the happiness of my child'.

5.4.3 The Implications of Biases on GAS and Likert Items

Both the GAS and Likert items have been criticised on the basis that they are open to response biases, in particular social desirability bias and central tendency bias (Salkind, 2010). Central tendency bias (Poulton, 1979) is the tendency of participants to avoid giving an extreme answer, rather selecting responses close to or at the centre of the available options (Brace, 2008). Social desirability bias is a difficulty faced in all research based on self-report. It is the predisposition of participants to provide answers that they believe will be viewed positively (Fisher, 1993). I took a number of measures to reduce the impact of such biases on responses (see below); however it was not possible to remove the risk entirely, and it is therefore likely that this research was to some extent skewed by such biases.

Central tendency bias (Poulton, 1979) has been shown to be more evident when participants are asked multiple questions. Thus by keeping the number of items to a minimum I hoped that the risk would be reduced. In addition, the use of forced choice responses would limit the ability to provide a middle or neutral option. However, this method has itself been criticised on the grounds that forcing a decision from people who are unsure about their thoughts may create a measure that is unreliable (Clark-Carter, 2004).

Social desirability bias was a particular issue with the method of data collection employed in this research. This would have been reduced by collecting data anonymously. However, the risk of attrition was considered to be high due to low levels of engagement with services, and staff in the Children's Centre advised that there may be difficulties arising from low literacy levels among some of the parents. Therefore it was considered (by staff from the Children's Centre and me) that a telephone conversation was the most likely means of being able to gather data from a 'hard to reach' community.

5.5 Current Study

The study reported here was designed to answer the following questions.

a) Do consultations effect change for families (reviewed at 6 weeks post consultation)?

b) Do parental consultations have an impact on children's wellbeing (in the view of parents)?

c) Do consultations have an impact on parental confidence?

d) What are the common features of Children's Centre consultations?

The project ran over a seven month period from February 2012. I offered behavioural consultations during a weekly Weigh and Play session held in a private room off the main session area. The consultations were advertised by means of poster and leaflets, both designed and made available by the Children's Centre. Parents were self-referred (see Section 4.5.1 for further sample details). I collected data during consultations and subsequently by telephone. The children forming the focus of the consultations were aged between 2 and 4 years.

5.5.1 Sample

The sample was a convenience, volunteer sample (Clark-Carter, 2004) of a population attending Weigh and Play sessions at the Trailblazer Sure Start Centre. This form of non-probability sampling may be criticised as being unlikely to be representative of the population (Portney and Walkins, 1993). The total size of the population varied across weeks but was formed of a core of approximately 45 families. I held consultations with 18 parents, 14 of whom agreed to participate in the study. Area demographics suggest a high level of social deprivation and teenage pregnancy (see above) (Ofsted, 2010b). However the level of teenage pregnancy was reflected in neither the population nor the sample. This may be due to the provision of targeted interventions for this group. The study comprised of an initial conversation, a single consultation and follow up telephone call (see Section 4.5.2). It was not possible to speak to two of the participants for the final stage. Therefore for the main study questions n=12. Data from the two lost through attrition were not included for the identification of consultation themes on ethical grounds, as this was taken as passive withdrawal from the study.

5.5.2 Procedure

5.5.2 (i) Consultation: Stage 1.

My observations and discussions had led me to the hypothesis that the general mistrust of outside professionals ascribed to the target population stemmed from differences in power, status, goals and stories within the community about the misuse of power leading to heavy handed interventions and occasionally the removal of children. In an attempt to negate some of these differences, normalise the use of external professionals, identify common goals (wanting the best for our children) and create an atmosphere in which the parents felt it was

safe to say they needed help, I made authentic disclosures (Rogers, 1957) about my own parenting and occasions I had had to seek advice from a health visitor. Opportunities for self-deprecation, in areas not linked with my professional role, were actively sought. I joked about how poor I am at parking and cooking. These strategies were informed by work I had conducted in a similarly hard to reach community in a different local authority, where I had employed them with some success. Conversations were held informally in the Weigh and Play snack area, not in the context of a consultation.

5.5.2 (ii) Consultation: Stage 2.

At the start of each consultation, I asked parents for permission to include them in the study. It was made clear that this was in no way a prerequisite for support, however if they decided to take part their telephone numbers would be required. Consultations lasted between 45 and 60 minutes. Those participating in the study completed a GAS form. In cases where several issues were discussed, three main goals were negotiated both as the focus of their energy and for evaluation. Although the final selection of goals was left to the participants, I advised the selection of achievable targets, both in terms of scale and areas in which the consultee reported adequate levels of influence to effect change. For example, changing the behaviour of a toddler while in the care of a grandparent was advised against, as I considered that factors relating to the interactions with the grandparent may have more of an impact on outcomes than the child's interactions with its mother in this area.

The format for the consultations was flexible, but conformed to the following structure:

1. Introduction – approximately 2 minutes of problem-free 'chat', not related to the subject of consultation, designed to put the consultee at ease.
2. Outline of study – approximately 5 minutes explaining the research questions, scales, how information would be gathered, reported and anonymised, requesting consent, and explaining that participation was not required for the consultation to proceed. Telephone numbers were collected if consent was given.
3. Listening – approximately 5 – 10 minutes of listening to the consultee's issues, without interruption, prompted by the statement:

"Could you explain what has brought you here today? If you could give me as much information as possible, that would be helpful. Useful information might include: what, when, where and how frequently it (the behaviour which forms the basis for concern) happens, who is present, and what happens afterwards. Information about strategies you have tried, and if they worked or not would also be useful." Notes were taken throughout the listening stage.

4. Questions – approximately 10 – 15 minutes of consultant questions and consultee answers, relating to the information provided in stage 2. These were focused on ascertaining the function, cues and reinforcement of the behaviours.
5. Identification and agreement of the GAS goals – approximately 5 minutes.
6. Plan intervention – approximately 10 – 15 minutes, consisting of suggested strategies from the consultant (see Appendix III), revised, elaborated or adapted after consultee feedback on feasibility.
7. Conclusion – approximately 5 minutes summarising what was discussed, goals and strategies and reminding the consultee that there would be a phone call after 6 weeks to gather feedback.

I offered weekly consultations, although there were a number of breaks due to trips organised by the Centre, a party at the group, and school holidays during which the centre was open but the number of attendees was greatly reduced. The number of consultations available to each participant was not limited, but no-one elected to have more than one.

Follow-up telephone conversations were short, typically between 5 and 10 minutes, and consisted of restating the goals of the research, confirming continued consent, and gathering data. However in one instance, the parent took the opportunity to gain further advice.

I provided feedback through two meetings, one at the Educational Psychology Service with HB (the Early Years Specialist educational psychologist), and one at the Children's Centre with SG (the parent representative), EC (the centre manager) and two members of staff who had taken an active interest in promoting the initiative.

5.5.3 Scales

I used Goal Attainment Scaling (GAS) to collect data pertaining to Research Question a., with Likert items to capture data pertaining to Questions a., b. and c. Research Question d. would be answered through the thematic analysis of the GAS data.

To address the issue of irregular attendance, I reviewed the GAS form, and the Likert items were completed via follow-up telephone call approximately six weeks later. The time-lapse

was decided to meet the needs of the educational psychology service and my course requirements, both of which provided deadlines.

The Likert items presented were:

1. The consultation with the trainee educational psychologist had a positive impact on my confidence as a parent.
2. The consultation with the trainee educational psychologist had a positive impact on the happiness of my child.
3. The advice given during consultation with the trainee educational psychologist was useful (see Section 4.4.2 (i) for rationale).

Participants were asked to rate the degree to which they agreed with each statement, choosing from the following four options:

1. Strongly Disagree
2. Disagree
3. Agree
4. Strongly Agree

The tendency to provide socially desirable answers may have been reduced by measures allowing participants to respond anonymously. However, this would have increased the risk of attrition. Therefore the decision was made to provide the following statements:

a. ‘there is no right or wrong answer’
b. ‘I know, as a parent, that I do not always get it right’
c. ‘I won’t be offended, I am still training and this will help me to improve what I do. It is a learning experience for me’

These statements were made after a short problem-free “chat” and before data collection.

5.6 Results

5.6.1 Research Question (a) Do consultations effect change for families?

In order to address Research Question (a) I calculated the mean scores for the GAS goals. Outcomes that were somewhat more than the expected level for each goal were scored as 1, much more 2, somewhat less -1, and much less -2. Overall, the mean score for all GAS goals generated was .86.

Figure 2 shows that the most frequent score was 1, an outcome somewhat more than the expected level, with an occurrence of 17. With an occurrence of 9, the score of 0, the expected level of outcome, was the next frequent score. 8 GAS goals were scored at 2, much more than the expected level of outcome and 2 goals were scored at -1, somewhat less than the expected level of outcome. None of the GAS goals were scored at -2.

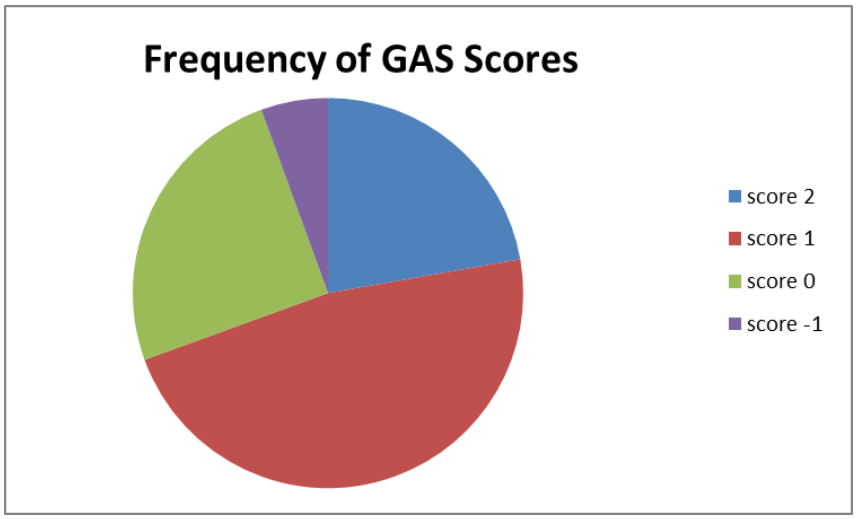


Figure 2. Frequency of GAS Scores.

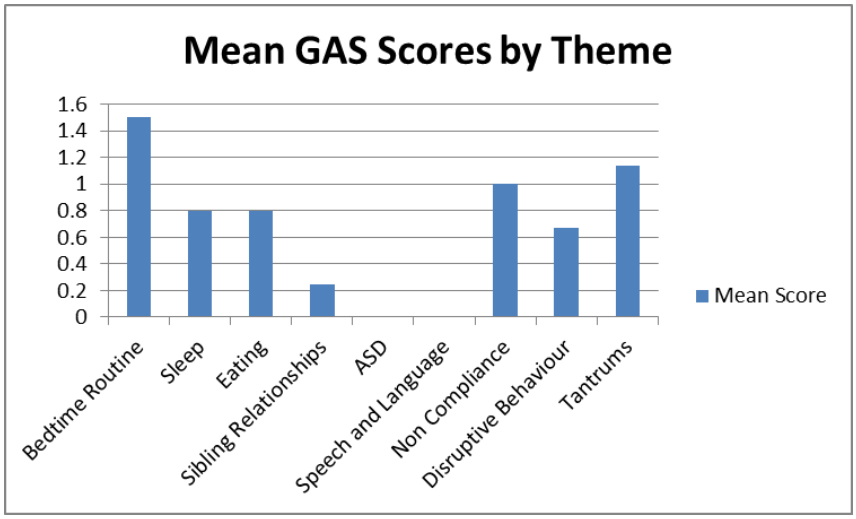


Figure 3. Mean GAS Scores by Theme

Figure 3 shows the mean GAS scores given for goals within each theme. With a mean score of 1.5, goals related to bedtime routines appeared to have the best outcomes. Goals within the areas of ASD and speech and language had the poorest outcomes, with a mean score of 0.

In recognition that the consultations may have been perceived as useful, despite not providing positive outcomes within the given timescale, I calculated the mean score for Likert item 3., 'The advice given during consultation with the trainee educational psychologist was useful'. At 3.67 (2dp), the mean score for this item fell between agree (3) and strongly agree (4). The parent with goal scores of -1, somewhat less than the expected level of outcome, provided a positive score (3) for this item.

5.6.2 Research Question (b) Do parental consultations have an impact on children's wellbeing?

In order to address Research Question (b) I calculated the mean score for the Likert item 2,' The consultation with the trainee educational psychologist had a positive impact on the happiness of my child.' The mean score was 3.42 (2dp), falling between agree (3) and strongly agree (4).

5.6.3 Research Question (c) Do consultations have an impact on parental confidence?

In order to address Research Question (c) I calculated the mean score for the Likert item 1, 'The consultation with the trainee educational psychologist had a positive impact on my confidence as a parent'. The mean score was 3.33 (2dp), falling between agree (3) and strongly agree (4).

5.6.4 Research Question (d) What are the common features of Children's Centre consultations?

To address research question (d) 'What are the common features of Children's Centre consultations?' I completed a thematic analysis of the GAS forms. This revealed a relatively small number of recurring themes. There were nine in total, pertaining to:

- bedtime routine;
- sleep;
- eating;
- sibling relationships;
- ASD;

- speech and language;
- non-compliance;
- disruptive behaviour; and
- tantrums.

The themes bedtime routine, sleep, eating, sibling relationships, ASD, and speech and language presented as clear categories, with the labels used mentioned in each goal included in the theme (with the exception of sibling relationships, where the terms brother/sister were used). However, other data were less clearly defined. Though a tantrum may be described as disruptive behaviour, I classified them as discrete themes, with tantrums including behaviour that was perceived to be more out of control and related to immediate frustrations. In contrast, disruptive behaviour included behaviours in which the child was perceived to be more in control of themselves and, when motivated by frustration, the causation appeared to be less immediate. In addition, tantrums were less purposefully directed towards external objects or people. When tantrums included hitting out, it was at people in the immediate vicinity. I classified goals relating to the refusal to follow rules and instructions, without other behaviours consistent with the tantrums or disruptive behaviour themes as non-compliance.

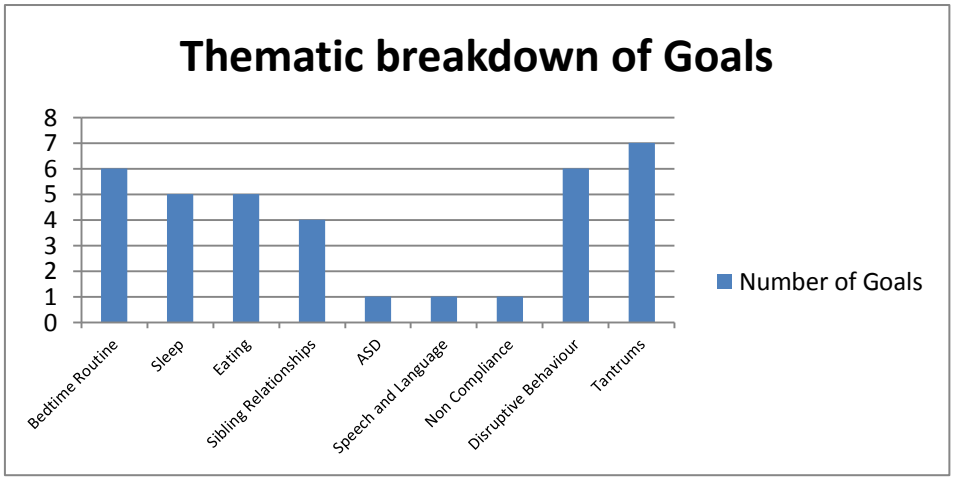


Figure 4. The Thematic Breakdown of Goals.

Figure 4 shows the frequency of the themes identified by the GAS. Tantrums were the most frequently occurring theme and this is likely to be a reflection of the age of the children attending the Weigh and Play, who were toddlers in the main. It was interesting to note that speech and language difficulties were identified by only one parent as an issue, despite being highlighted by professionals as a key area of concern. The thematic analysis therefore revealed a difference in perspective between parents and professionals.

5.6.5 Post-hoc Analysis

I conducted a further thematic analysis of the GAS forms, focussing on the advice I had provided. In total, the advice fell into 9 different areas. However these were not paired with the themes identified above. The distribution of the advice is detailed below. The advice given fell into the following areas; routine, praise, increased attention and play, ignoring behaviours (extinction), teaching replacement behaviours, initiating family mealtimes, not providing alternative food, reducing the amount of television watched and other (see Figure 5).

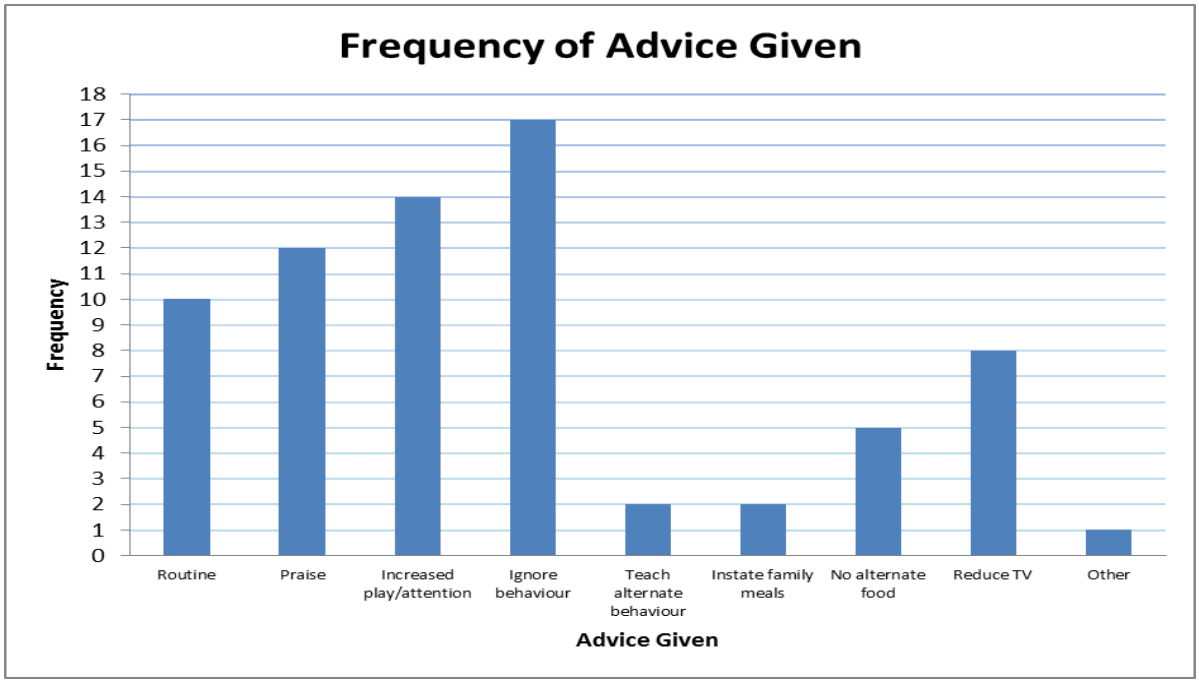


Figure 5. Frequency of Advice Given

As Figure 5 shows, advice described as 'other' was provided on one occasion and was very family-specific. For reasons of confidentiality, further description of the nature of this advice was not provided.

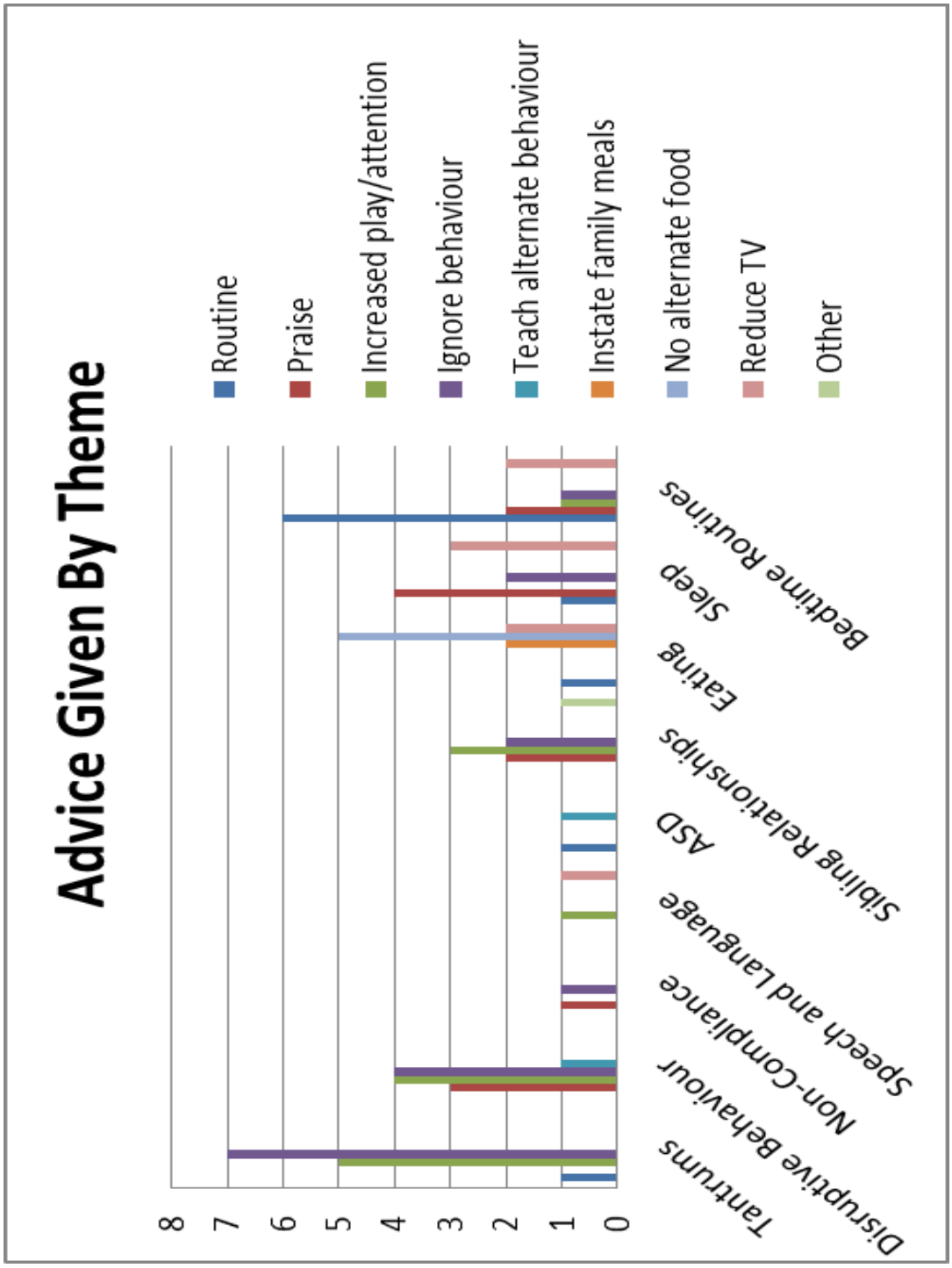


Figure 6. Advice given by theme.

Figure 6 shows the frequency with which I provided each type of advice by theme. Instating family meals and not providing alternative food were only given as advice to one theme, difficulties surrounding eating. In contrast, providing a routine was given across the greatest number of themes (5).

5.7 Discussion

5.7.1 Research Question a. 'Do consultations effect change for families?'

The mean scores provided for the 36 GAS goals (.86) showed that the level of change achieved between the consultation and follow up telephone call was greater than initially expectations. Outcomes in line with expectations would have produced a score of 0. The theme 'bedtime routine' (mean = 1.5) produced the highest GAS score, while 'ASD' and 'speech and language' produced the lowest GAS scores (mean = 0). This difference may reflect the different complexities of the themes, as issues related to both low scoring themes are broad and impact on many areas of life, whereas bedtime routines tend to be a comparatively localised difficulty. It is possible that very brief, one consultation interventions are not sufficient to significantly address such complex issues. Further, some difficulties arising from ASD and/or speech and language difficulties may fall beyond the scope of behaviourist techniques.

The positive results could be interpreted as a measure of the impact of the consultations, however the quality of the advice provided, the ability and motivation of the parents to implement the advice, the impending evaluation, and other unknown changes in the lives of the participating families are likely to have had an impact on the outcomes. Finally, as

Ottenbacher and Cusick (1993) point out, the variance in both the goals and level of expectations of the individual consultees calls the validity of the use of GAS to evaluate interventions in this manner into question.

5.7.2 Research Question b. Do parental consultations have an impact on children's wellbeing?

The mean score for the Likert item asking: 'The consultation with the trainee educational psychologist had a positive impact on the happiness of my child' fell between agree and strongly agree. This suggests that parents perceived their children's wellbeing as having improved as a result of the process, a six week period from consultation to evaluation. However whether these results can be attributed to the consultation or the process as a whole may be disputed, and may have been influenced by the ability and motivation of the parents to implement the advice, the impending evaluation, and other unknown factors in the participating families' lives.

A further issue in the interpretation of this result is the extent to which the responses were influenced by the social desirability bias (Salkind, 2010). This is the predisposition of participants to answers in a way they believe will be viewed positively (Fisher, 1993). Notwithstanding the statements intended to reduce the likelihood of biased responding (see Section 4.5.3), the lack of anonymity afforded the participants may have made it difficult for them to respond negatively, particularly regarding the wellbeing of their children. This poses a threat to the validity of the finding (Fisher, 1993).

5.7.3 Research Question c. Do consultations have an impact on parental confidence?

The mean score for the Likert item 'The consultation with the trainee educational psychologist had a positive impact on my confidence as a parent' fell between agree (3) and strongly agree (4). This implies that the parents felt that their confidence had grown over the course of the intervention. However, isolating the factors that contributed to this feeling is not possible. It could be that engaging in a process of change was enough to cause this change.

5.7.4 Research Question d. What are the common features of Children's Centre consultations?

Having considered classifying the themes according to parenting issues I had identified during the consultations, which reflected the outcomes assessed in Melhuish et al.'s (2008) study (see Section 4.1.4), such as 'negative parenting', I elected to classify the themes in line with the perspective that the consultee is the content expert (Kratochwill and Bergan, 1990), in accordance with parental report and the issues as they perceived them. Key to this decision was the desire to share the data gathered with the community, through the parents' representative and children's centre staff, providing the opportunity for further development. I was concerned that the implied criticism of themes identified according to parenting issues may have led to some disengagement, and felt that providing advice linked to themes as the parents perceive them, would increase the likelihood of techniques being adopted throughout the group, through peer-support.

However, analysis of the advice given (see Figure 5.) shows that eight reoccurring types of advice were provided with one additional type (labelled other) provided once. Six of the nine

types of advice were spread across several themes (see Figure 6.), with more than one type of advice provided for each theme. One type of advice, labelled ‘other’ was provided on one occasion and was very family specific. Advice to instate family meals, and not to provide alternative food were only provided in relation to the theme ‘eating’. The types of advice provided largely reflected the parenting issues I had identified.

Out of a total of 36 goals, nine themes had emerged:

- bedtime routine;
- sleep;
- eating;
- sibling relationships;
- ASD;
- speech and language;
- non-compliance;
- disruptive behaviour; and
- tantrums.

Of these, 7 were related to tantrums, 6 were related to bedtime routines and disruptive behaviour, and 5 were related to eating and sleeping. Only one goal related to speech and language development, and none were related to cognitive development.

This reflects a difference in perspective and priority between the professionals working within the community and the parents in this study. From discussions with relevant professionals,

and information drawn from the local primary school's Ofsted report (2010b), speech and language and cognitive development were expected by me and the professionals surveyed as likely to be the focus of parental concern.

However, while the Ofsted data and observations by the Children's Centre staff suggest that these issues are prevalent within the population attending the Weigh and Play, and indeed were evident in my incidental observations between consultations, they were not presented by parents as an issue. It is interesting to note that the areas of concern raised by the parents may be considered those most disruptive to family life, whereas those raised by professionals may be considered to have a greater impact on school performance.

5.7.5 Limitations

Taken as a whole, the results suggest that the intervention had a positive impact on parental confidence, effected change for families and impacted on children's wellbeing. However it is not clear from the data that this arose as a result of the consultations, knowing that goals would be reviewed, or other factors. In addition, the process of self-referral is likely to have led to a sample of parents motivated to make changes, which may have occurred had they not engaged with the consultations.

The methodology was open to bias, in that there was no attempt to account for compounding factors, the time-scale was relatively short term and did not provide information addressing questions of maintenance, while the relationship between parental perceptions and actual

change is unclear, and no objective, or secondary subjective, measure of outcomes was provided.

5.7.6 Future Studies

Important information regarding the impact of single behavioural consultations could be gathered from future studies employing more objective, secondary measures pre- and post-intervention. Additional evaluation at 18 months would provide data regarding maintenance and allow comparison with behavioural consultations carried out over a greater number of sessions (e.g. Hundert, 2006).

The contrast between the areas of concern raised by the parents and professionals in this study raises interesting questions regarding the values placed on different outcomes and the degree to which this impacts on the ability of professionals to work collaboratively with parents, leading to parents being construed as being 'hard to reach'. Studies investigating links between the different perspectives and engagement may provide valuable information for improving service delivery.

5.7.7 Reflections

Despite the limitations of this study, discussed above, it has produced some initial findings which provide useful indicators for future practice. Reflecting on the first-order change (Watzlawick et al., 1974) brought about by the consultations, I believe that both the cohort of parents who accessed the consultations, and the wider Weigh and Play group will be much

more likely to engage with the educational psychology service in the future, as a result of both the perceived positive impact of the intervention and lack of negative impact of involvement with the service. However, I believe that their willingness to participate was largely due to the mode of service delivery, and the efforts made to break down the barriers of power inequalities and mistrust of Children's Services. These barriers have developed and been maintained over generations and will not be changed by discrete projects, but will require a more fundamental shift in the relationship with the service, attitudes of parents and professionals, the mode of service delivery and means of access. I believe parents are unlikely to actively seek out support from professionals in the future. Therefore future work with this group may need to be initiated by the Educational Psychology Service, or other professional group.

The project also confirmed potentially significant variances in focus between those who see issues relating to child development and wellbeing as primary targets for interventions, and those who see behavioural issues as the primary targets, even allowing for the fact that such behavioural issues may themselves be indicators of underlying issues of development or wellbeing. Awareness of this difference in focus could be employed to improve engagement with services.

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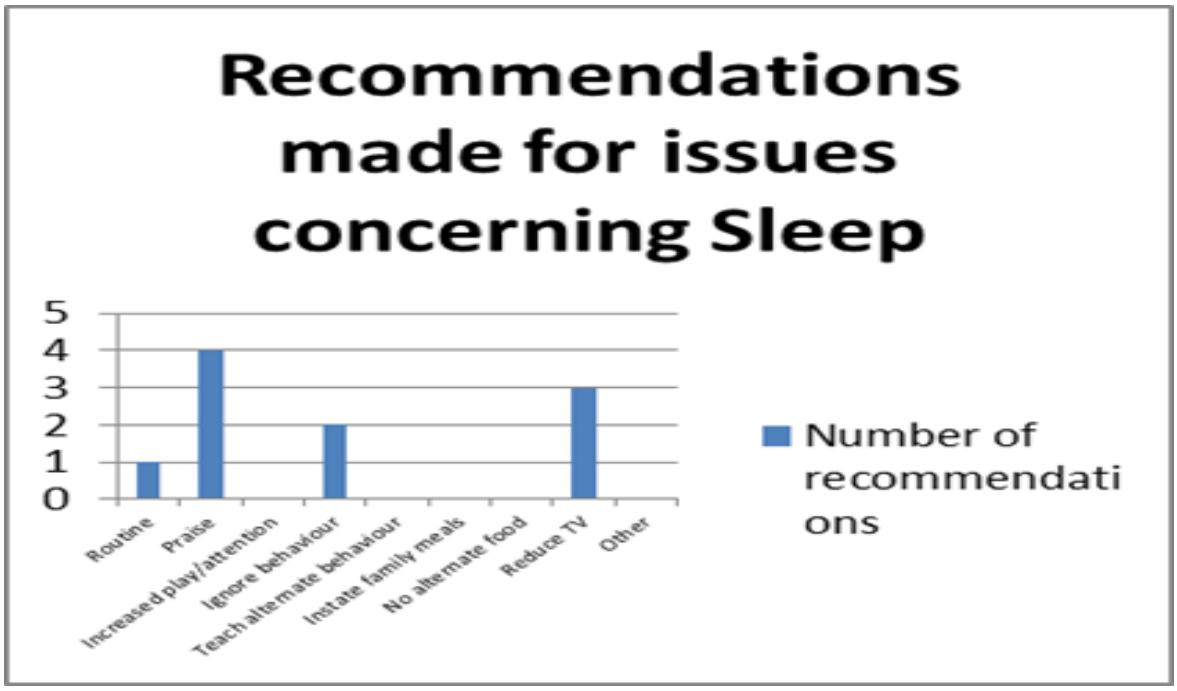
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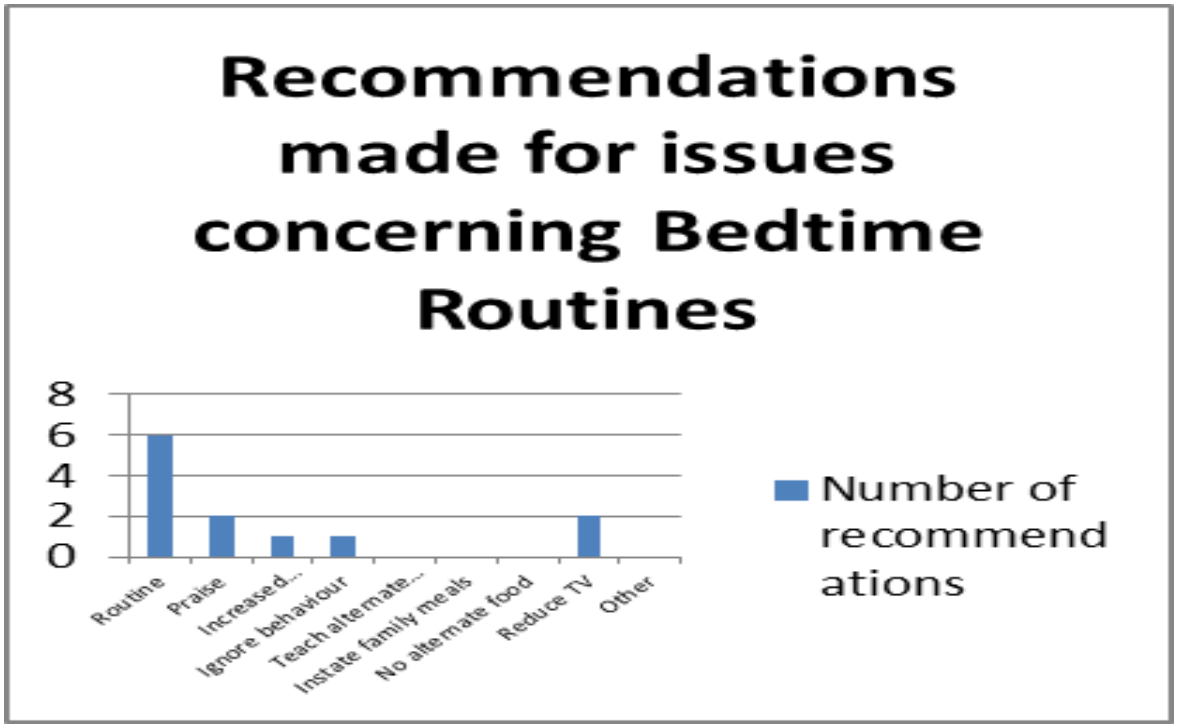
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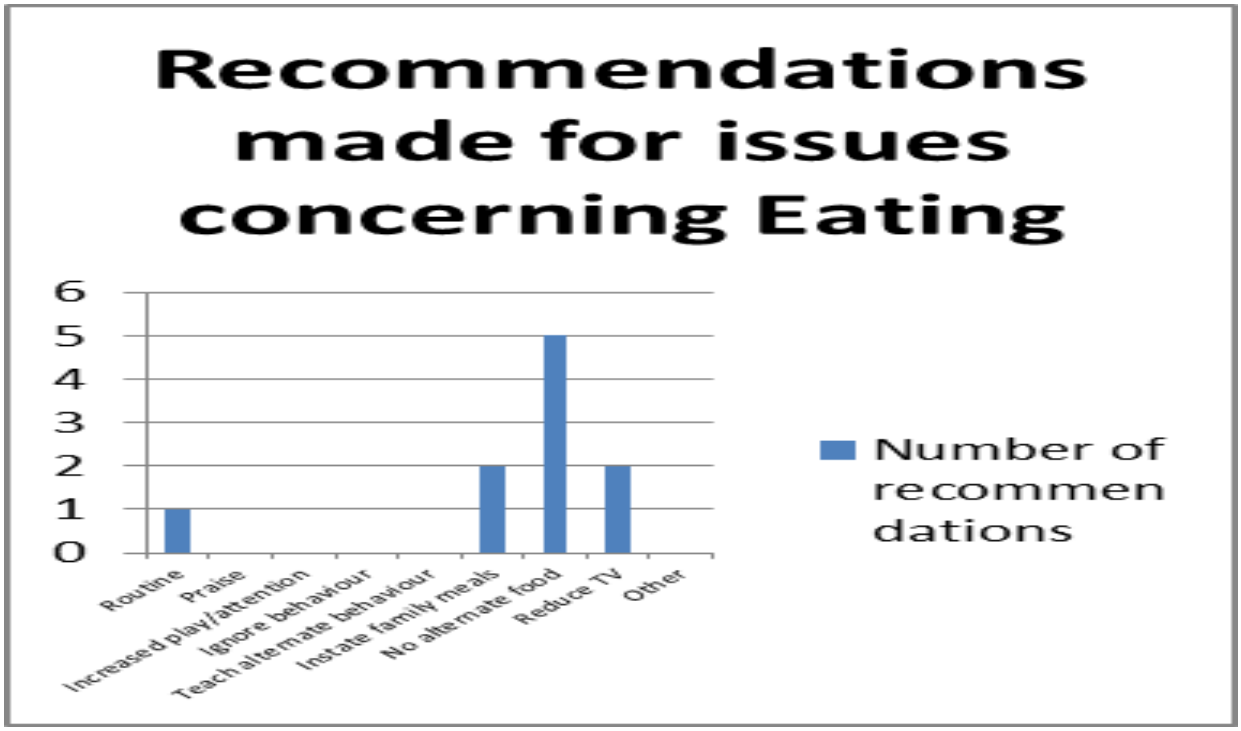
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APPENDICES

APPENDIX I. Breakdown of Recommendations by Theme

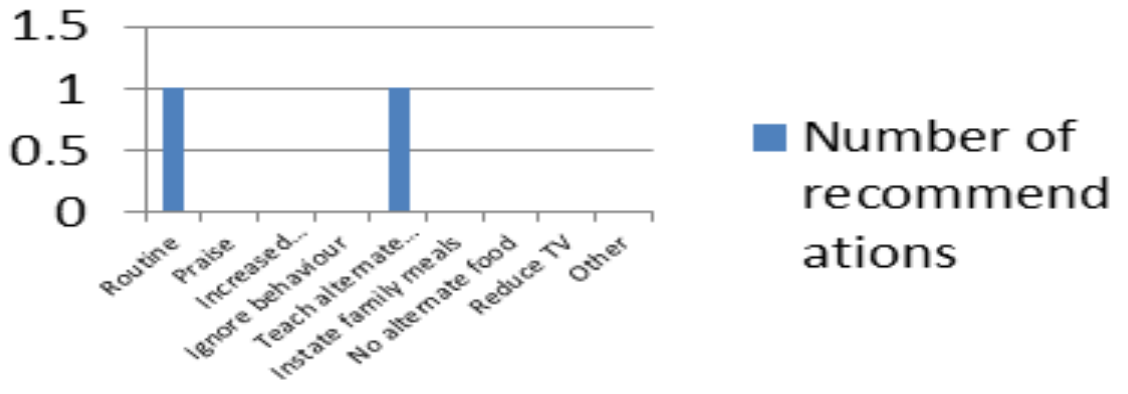




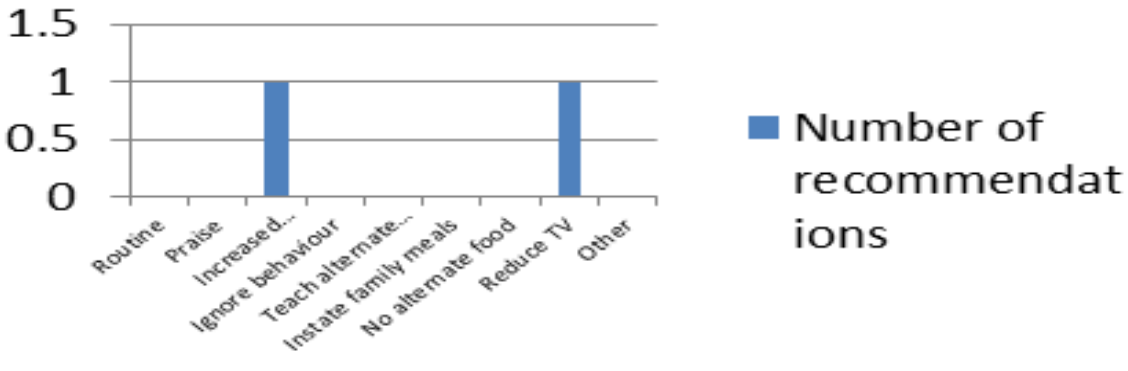

Recommendations made for issues concerning Eating
6
5
4
3
2
1
0
Routine
Praise
Increased play/attention
Ignore behaviour
Teach alternate behaviour
Instate family meals
No alternate food
Reduce TV
Other
Number of recommendations

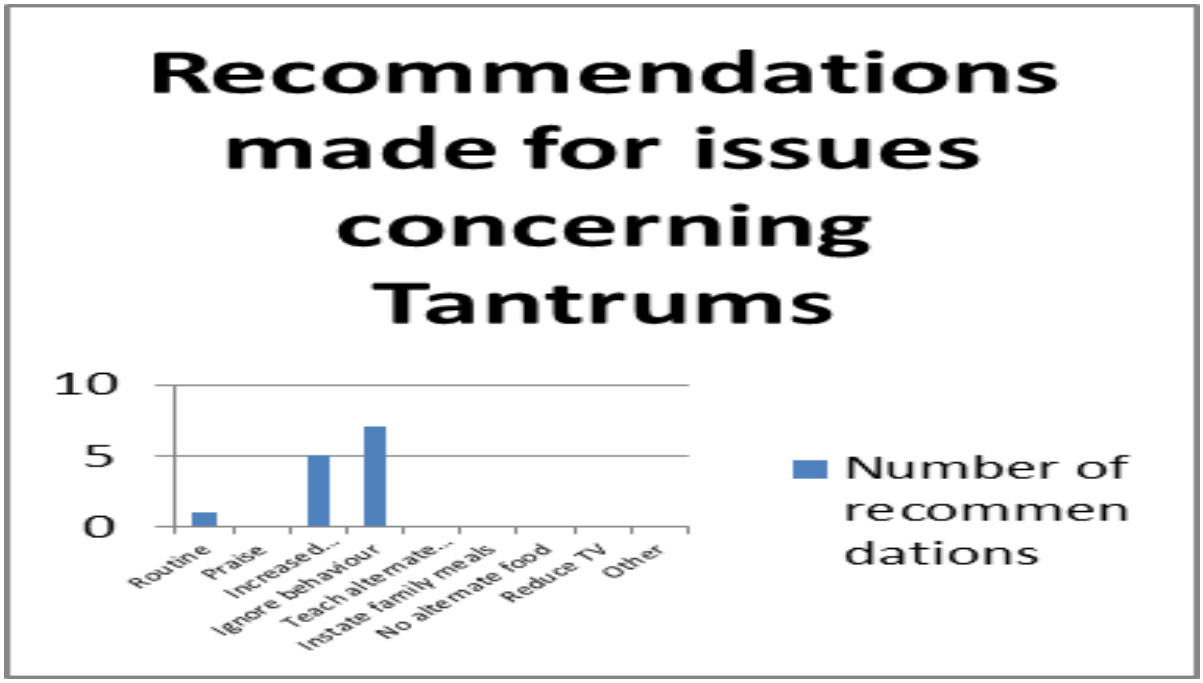

Recommendations made for issues concerning Sibling Relationships
4
3
2
1
0
Routine
Increased...
Teach...
No...
Other
Number of recommendations

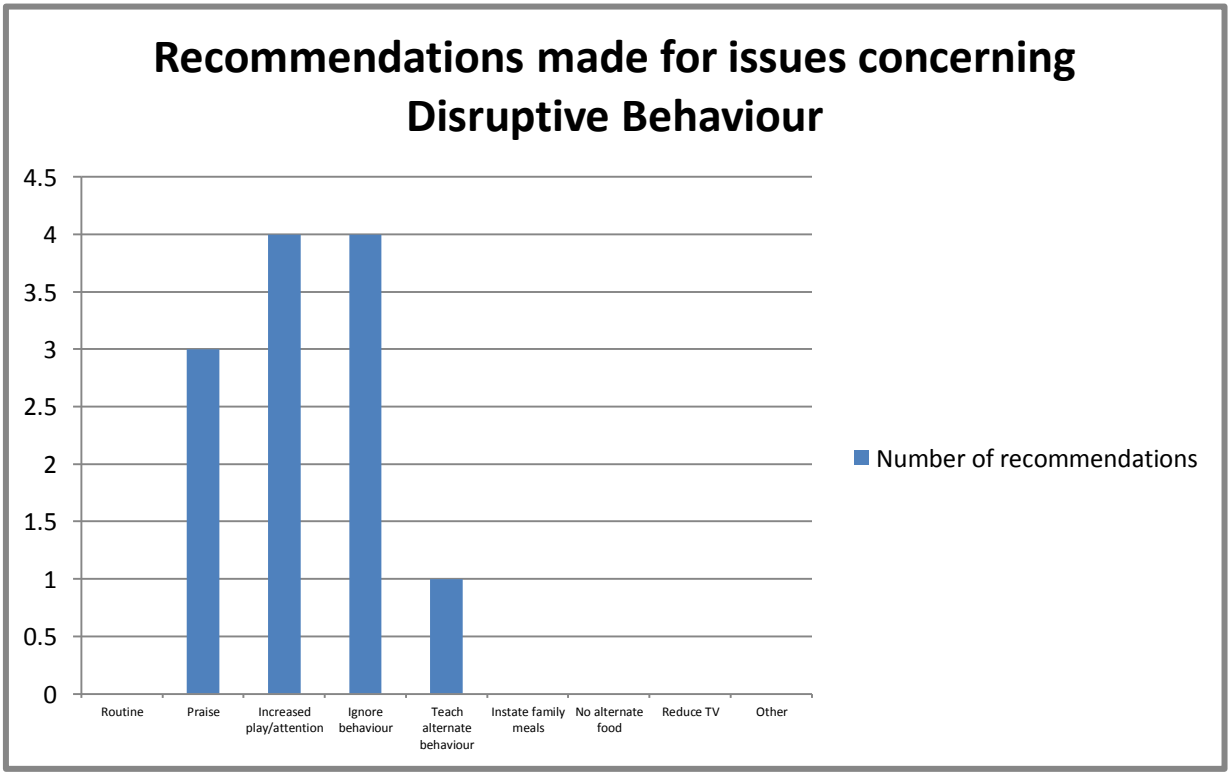
Recommendations made for issues concerning ASD



Recommendations made for issues concerning Speech...




Recommendations made for issues concerning Tantrums
10
5
0
Routine
Praise
Increased...
Ignore behaviour
Teach alternate...
Instate family meals
No alternate food
Reduce TV
Other
Number of recommendations


Recommendations made for issues concerning Disruptive Behaviour
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
Routine
Praise
Increased play/attention
Ignore behaviour
Teach alternate behaviour
Instate family meals
No alternate food
Reduce TV
Other
Number of recommendations


Recommendations made for issues concerning non-compliance
1.5
1
0.5
0
Routine
Praise
Increased play/attention
Ignore behaviour
Teach alternate behaviour
Instate family meals
No alternate food
Reduce TV
Other
Number of recommend ations

APPENDIX II. Evidence Supporting the Use of Operant Conditioning by Behavioural Type

Behaviour	**Evidence**
Tantrums	• Vollmer et al. (1996) • Wilder et al. (2006)
Bedtime Routine	• Stremler (2006) • Adams & Rickert (1989)
Sleep	• Freeman (2012) • Mindell (2009)
Eating	• Piazza et al. (2003) • Raat et al. (2013)
ASD	• Machalicek et al. (2007) • Matson (2012)
Speech and Language	• Mace & West (1986) • Leung (1999)
Noncompliance	• Reimers et al. (1993) • McKerchar & Abby (2012)
Disruptive behaviour	• Broussard & Northup (1997) • DePaepe, Shores, Jack, & Denny (1996)
Sibling Relationships (including aggression)	• Hassiotis, A. & Hall, I., (2008) • (Newcomer and Lewis, 2004).

APPENDIX III. Recommendations

Recommendations made	Behaviourist techniques
• Routine • Increased play/attention • Instate family meals • Reduce television	Stimulus Control
• Praise • Increased play/attention	Positive Reinforcement
• Ignore behaviour • No alternate food	Extinction
N/A	Negative Reinforcement
N/A	Positive Punishment
N/A	Negative Punishment