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The Assessment of Emotional and Behavioural Difficulties in Young Children – The Neurocognitive risk factors

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**ABSTRACT**

Children with Emotional and Behavioural Difficulties (EBD) are a cause for concern at an individual, educational and societal level. Young children with disruptive, noncompliant behaviour are at risk of exclusion from educational settings, with reduced opportunities for successful academic and social experiences. This study investigates the assessment of EBD in young children, with particular reference to the neurocognitive risk factors in the areas of ADHD (Attention Deficit Hyperactivity Disorder) and Antisocial Behaviour. With reference to ADHD, this study investigates the performance of children on a range of Executive Function (EF) tasks. With reference to Antisocial Behaviour, this study investigates the performance of children on an emotion recognition task.

Foundation stage children (reception age – 5 years) were rated on a measure of ADHD (Du Paul, 1991) and Antisocial Behaviour (Frick and Hare, 1996; 2002) and formed into groups on the basis of their ratings. A range of EF tasks (NEPSY) and an emotion recognition task (DANVA) were administered in a between-subjects design study. Statistical analysis highlighted that the control group (low in Antisocial Behaviour and ADHD) performed significantly better on one EF measure (Visual Attention – accuracy). The results are interpreted with reference to the neurocognitive basis of behaviour.

Implications for the profession of Educational Psychology are discussed, with particular reference to assessment of EBD and the use of specific assessment tools, and recommendations for future research offered.
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Chapter 1. **INTRODUCTION**

1.1. **Background**

Children with emotional and behavioural difficulties (EBD) are a cause for concern at an individual, educational and societal level. The publication of six circulars in 1994 by the DfEE, 'Pupils with Problems', three of which dealt with EBD, reflected government concern. Recent government legislation has emphasised the need for inclusion of all children and more recently discussed the provision of extra funds to encourage schools to include children previously excluded.

Recent legislation has placed the responsibility for recognising and intervening with special educational needs at pre-school level into the hands of the early years settings, as part of a focus on early intervention work, with a view to the prevention of difficulties. It is therefore increasingly important that individuals working with young children are confident in their understanding and use of the new DfEE Code of Practice published in January 2002. Behaviour is just one part of this document and an area where early intervention is key. It will be important for support staff, such as Educational Psychologists, to work closely with settings in order to minimise the effects of any difficulties and to prevent their further development.

Children with EBD often appear to be grouped together and discussed in unitary terms. Research into the neurocognitive basis of EBD, however, suggests that there are specific brain networks associated with certain types of EBD, which in turn may have implications for more specific assessment and subsequent intervention. This particular study will explore two areas within this body of research: Attention Deficit Hyperactivity Disorder (ADHD) and Antisocial Behaviour.
There appear to be multiple developmental routes to the display of behaviour difficulties. One route, perhaps associated with executive dysfunction, incorporates a risk factor that is associated with ADHD. It has been suggested that the impulsivity component of ADHD may be due to early dysfunction in a neural circuit that includes anterior cingulated (e.g. Pennington and Ozonoff, 1996). A second route involves the neural systems that mediate empathy and fear. Empathy and fear dysfunction has been associated with Antisocial Behaviour, and a dysfunction within a neural circuit that includes the amygdala, or the orbitofrontal cortex or both (e.g. Blair and Frith, 2000). The anterior cingulate, amygdala and orbitofrontal cortex are all interconnected and it could be expected that a dysfunction in one may impact on the others, which in turn may explain the complexity of the relationship between ADHD and Antisocial Behaviour.

It has been argued that intervention should be provided to high risk children early, as the presence of behaviour symptoms is the single best predictor of risk of future problems (e.g. Moffitt, 1993), and therefore it will be important to identify young children at risk of developing difficulties associated with ADHD and Antisocial Behaviour. Little work has been completed with young children in this area. This study will explore the relationship between observed behaviour, and measures of ADHD and Antisocial Behaviour, with a mainstream group of five year olds. It will investigate whether there is a relationship between performance on executive function tasks (associated with ADHD), performance on emotion recognition tasks (associated with Antisocial Behaviour), and measures of behavioural difficulty, with young children.
Chapter 1 will provide an overview of some of the significant literature in this area, incorporating the assessment of EBD, behaviour difficulties in young children, and neurocognitive risk factors with reference to ADHD and executive functioning, as well as Antisocial Behaviour and emotion recognition.

Chapter 2 will describe a pilot study undertaken for the purpose of exploring the relationship between observed behaviour, a measure of ADHD, and a measure of Antisocial Behaviour, in a population of young children. The results will be used to form the four groups for the main study.

Chapter 3 will describe the main study, incorporating a description of the design, participants, procedure and measures.

Chapter 4 will present the results obtained in the main study.

Chapter 5 will discuss the results, incorporating a summary of the main findings, the constraints and limitations, and conclusions. In addition, the implications for the psychological knowledge base, EP practice and future research will be considered.

Chapter 6 will conclude the research and reflect on the learning resulting from it.

**Research Methods**

As part of this research a literature review was conducted. The literature was accessed from a number of sources over the past four years, incorporating the use of both electronic bases and manual search techniques. For example a number of university libraries were visited (UCL, London Institute of Education) and their databases were explored. The primary search terms incorporated key vocabulary and authors relevant to the research areas. An Internet search by author name, key terms and journal was undertaken. Both education and psychology databases were explored (e.g. PsychLit, PsycINFO, ERIC), in addition to more general search engines, (e.g.
Key journal articles, reports or books were obtained from libraries directly, with a focus on the more recent articles due to the large volume of research, particularly in the area of ADHD. Articles were also sourced from the British Library.

The literature reviewed is introduced with a discussion focused on behavioural problems in young children, followed by assessment of EBD. More specific research in the area of ADHD is reviewed, in relation to adults and then children. This is followed by research in the area of Antisocial Behaviour, with a particular emphasis on children and emotion recognition. The relationship between ADHD and Antisocial Behaviour is explored and summarised.

1.1.1. Behavioural problems in young children

It appears only relatively recently that there has been research on the significance of behaviour problems in children under the age of 6 years. This is with regard to their potential as indicators of more long-term difficulties, and to recognise the developmental and theoretical implications of problem behaviour prior to school entry (Campbell, 1990). There is a growing body of prospective evidence indicating that behaviour problems identified in pre-school years often persist, and that serious disruptive behaviour problems in adolescence have a history which began in the pre-school years, (Campbell, 1995; Moffitt, 1993).

Studies of prevalence conclude that approximately 10-15% of pre-school children have mild to moderate problems, and approximately 11% of three year olds have moderate to severe problems (Campbell, 1995). However, there is evidence of
differences between settings. McGuire and Richman (1986) investigated the prevalence of behaviour problems in three types of pre-school group setting. Six hundred and thirty seven, 2-4 year olds were assessed using the Pre-school Behaviour Checklist (PBCL) screening questionnaire. Significantly more children in day nurseries (34.9%), rather than nursery classes (10.8%) or playgroups (3.3%), were identified with behaviour problems. Boys, those with speech or severe health problems, and younger children in day nurseries, were more likely to be reported to have behaviour difficulties. The available information suggests that the particular day nurseries in this study were designed for children with social needs, which can be expected to have skewed the results of this study to a certain extent.

As studies of pre-school behaviour have generally relied on checklists they have probably included children showing transient problems reflecting short-term stress or a difficult developmental transition, as well as those showing early emerging and more serious problems. As with checklists the focus is on describing behaviours that are observable. If children are going through a particularly bad week or phase, the behaviour being rated may not be typical for them but may be at the forefront of the observer's mind. Therefore the use of checklists may lead to an over-estimate of the level of significant behaviour difficulties in a pre-school population. However, checklists can be helpful for sharing information, making reliable observations, undertaking prevalence studies and looking at variation.

It has been suggested that the presence of externalising behaviour symptoms is the single best predictor of risk of future conduct disorder and anti-social behaviour (Moffitt, 1993). For example, claims have been made that in non-clinic populations
of children as young as 4-5, 50% or more with troublesome externalising symptoms will develop persistent psychosocial problems, (Campbell, 1995).

Pupils with teacher ratings on a hyperactive-impulsive subscale at the end of the reception year tended to have high scores two years later when rated by teachers (Merrell and Tymms, 2001). This English study involved a large, single cohort (n=4148) of children from a representative sample of schools, e.g. in relation to type and KS2 SATS results. Behaviour was assessed at the end of reception year, and data on attainments was collected at both the beginning and end of reception and Year 2.

The study used a behaviour checklist based on DSM-IV criteria but this did not appear to be an established or published scale as such. One disadvantage to the checklist used was it employed a ‘yes’ or ‘no’ response, and therefore may not be able to discriminate more subtle differences between children, although it indicated overall degrees of difficulty. In addition, it was ordered as in the DSM-IV, and therefore items focused on similar aspects of behaviour were clustered together rather than randomly arranged. This could have affected the recording, as what was being measured would be more obvious to observers.

The advantage of measuring behaviour at the end of the reception year was that teachers were more familiar with children’s behaviour than at the beginning of reception. However, behaviour ratings for the whole sample were only collected at one point, and not at the same time as data on attainments were collected. This did provide predictive information regarding behaviour ratings and future attainment but limited the analysis in terms of the course of behaviour, specifically whether children
described as difficult in reception continued to be so in year 2. The authors justified
the decision to apply the behaviour rating scale once by demonstrating its stability
with a small sample. They reassessed a sample of 113 randomly selected children in
Year 2, which resulted in a correlation of .64 for the total score, .58 for the
inattentive subscale and .60 for the hyperactive-impulsive subscale. Pupils with high
teacher ratings on the scale at the end of reception year tended to have high scores
two years later. It would have been interesting to know if this pattern was continued
for the whole sample, as it may have implications for looking at extreme sub-groups
if evidence suggests difficult behaviour persists from a young age.

The proportion of children meeting the criteria (i.e. six or more observed behaviours
in either inattention, hyperactivity/impulsiveness or both) for any of the three
subtypes was 11.2%. This is a similar result for the prevalence figures for pre­
schoolers with behaviour difficulties generally but higher than the ADHD figure
suggested in DSM-IV of 3-5% of school age children. However, reception age
children in England may not be classed as school age in America, and the DSM-IV is
an American classification system. In addition a diagnosis requires difficulties across
different settings over a sustained period, and this was based on one setting.

One recent study (Stevenson and Goodman, 2001), suggested that the presence of
specific behaviour problems during the pre-school period, and not family and social
circumstances, places the child at increased risk of being convicted of an adult
offence. This study was based on a random sample of children born in 1969-1970
living in one London borough and who had participated in a longitudinal study until
age 8. Of the original 955 children, 127 were untraceable or refused to participate.
The families of a sample of the 828 children had been interviewed about the children’s behaviour and development at age 3 and additional demographic variables were obtained.

Juvenile and adult convictions were traced when aged 23-24 (1993) and classified into violent, (i.e. those with an aggressive or violent component), and non-violent offences. Of the 828, 9.8% had been convicted of an adult offence, and 26 had committed 38 violent offences. Only 28 had juvenile convictions, which raised questions regarding how traceable the data was. Most of the offences were committed by males, 18.3% of the sample against 2.3% for females, reducing to 6.5% and 0.2% respectively for violent convictions.

A number of behaviours at 3 years were significantly related to an increased risk of adult conviction: soiling, daytime enuresis, activity, and management difficulties, e.g. non-compliance. Behaviours it could be argued which could easily overlap at the age of three and be related to social and family factors, e.g. in behaviour management or toilet training approach, despite no link being found in this research. The relationship between bowel and bladder control disappeared when gender and social development were controlled for, suggesting they are more common in boys and related to more general delay. Two behaviours were significantly related to adult violent offences: daytime enuresis; and tantrums, but management difficulties were non-significant.

The association between temper tantrums at age three and adult violent crime is maintained, when adverse circumstances such as family stress and social disadvantage, are controlled for. Social development, gender, and total behaviour
score, were found using logistic regression to be significant predictors of being convicted of an adult offence. It could be argued, therefore, that intervention should be provided to high-risk children as early as possible. However, others argue that little attention has been given to the question of ‘accuracy of risk assessment’.

Bennett, Lipman, Racine and Offord (1998) undertook a literature review, which indicated that no critical examination of the predictive accuracy of externalising behaviours in a representative population of young children had been conducted at that time. If the presence of externalising behaviour is used as a criterion for determining risk status, evidence for predictive accuracy is required, (Bennett et al. 1998).

Bennett et al. (1998), a Canadian team, reviewed available research on kindergarten-1st grade children and asked the question whether measures of externalising behaviour predicted conduct disorder and antisocial behaviour. The reason for focusing on young children was due to the importance of early intervention in preventing conduct disorder. Studies with adults and adolescents with conduct disorder and antisocial behaviour had indicated that disruptive behaviour was evident from a young age.

Predictive accuracy of behaviours present in kindergarten and first grade, from thirteen studies, was assessed. This was based on five characteristics: sensitivity, specificity, positive predictive value, negative predictive value, and accuracy. Sensitivity is the proportion of individuals with an outcome, such as conduct disorder, in which the risk indicator of external behaviour symptoms was present. Specificity is the proportion of individuals without the outcome for whom the risk
indicator was not present. Positive predictive value (PPV) is the proportion of those classified as high risk, e.g. a high score on a measure of behaviour difficulty that develops the outcome, e.g. conduct disorder. Negative predictive value (NPV) is the proportion of those at low risk, e.g. a low score on a measure of behaviour difficulty that do not develop the outcome, e.g. no reported difficulties.

Only two of the studies reported their results in terms of sensitivity, specificity and positive and negative predictive values, although Bennett et al. argue that another eleven provided sufficient data for the necessary calculations. They themselves highlighted differences between studies that made comparisons difficult, e.g. in the checklists used and choice of informant. Only seven of the studies had at least an 80% follow-up rate, and therefore it could be that the data lost from all the studies may skew the results if it represents the most difficult data, affecting the reliability of the predictive accuracy. For example, if the missing participants were children who had left the schools due to difficulties. This, however, is speculation, as specific information regarding the missing participants was not available. In addition, the follow-up period ranged from 1-7 years, making comparisons in relation to duration difficult due to the small numbers of studies at each stage.

Only seven of the studies showed that later behaviour outcomes were statistically significantly predicted by early identification. Sensitivity varied from 28 – 100%, with two thirds below the 50% mark, and those higher than 60% were associated with low levels of specificity. Specificity varied from 58 to 97%, only exceeding 90% in two cases. PPV only exceeded 50% under conditions of high prevalence and between 27 and 47% with low prevalence. Therefore the positive predictive value of
early externalising symptoms in non-referred populations appears to be ‘modest’ at best. This evidence indicates that the level of mis-classification for any targeted interventions is likely to be substantial. Bennett et al. highlighted the need for an accurate method to identify high-risk children in early childhood before behaviour difficulties become established. A few of the studies in their investigation indicated that early intervention might be effective in preventing later behaviour difficulties, although there has been a lack of studies with non-referred populations.

An accurate risk assessment method will help ensure that all children in need receive early intervention strategies and avoid those not in need receiving unnecessary intervention. Due to the poor predictive accuracy of existing approaches, using a variety of checklists, alternative approaches need to be designed and evaluated. One approach could be to include other types of information about risk, not just behavioural symptoms, e.g. neuropsychological functioning. This could also provide some differentiation between children with behaviour problems who at present in the research are all treated as a homogenous group, which could be argued is part of the reason for the poor predictive value of existing studies. However, it is recognised that there may need to be a trade off between the negative effect of labelling misclassified high risk children and the impact of missing children in need of intervention.

Data on age related changes suggest that many annoying or difficult behaviours (as defined by adult caregivers) are age appropriate, reflecting developmental change or age related conflict or frustration (Campbell, 1995). It is important, therefore, to conceptualise potentially symptomatic behaviour from a developmental perspective. Isolated behaviour rarely reflects psychopathology - a group of behaviours need to be
present before it becomes a clinically significant problem. Non-compliant behaviour is relatively common among 3-4 year olds and often explainable by a number of factors (Rushton, 1995). These include a lack of understanding of the institution or behavioural boundaries, a familiarity with displaying emotional outbursts, being the centre of attention, or being overwhelmed by the environment. Aggressive behaviour, such as tantrums, biting, hitting, fighting, shouting, swearing and threatening behaviour, are not uncommon and often displayed in specific settings, e.g. tantrums whilst shopping.

Teachers are traditionally one of the most important sources of information regarding children’s emotional and behavioural functioning, (Verhulst and Akkerhuis, 1989). Teachers have the opportunity to compare children with a large group of peers, and this may highlight difficulties in academic and social skills not evident to parents. Different informants have different relationships with children, seeing them under different conditions, and often disagreeing over the presence and severity of emotional and behavioural problems, (Achenbach, McConaughy and Howell, 1987).

Various studies have reported ‘low’ to ‘moderate’ parent-teacher agreement on emotional and behavioural difficulties in children assessed by rating scales, (Verhulst and Akkerhuis, 1989). One study using the ‘Behavior Problem Checklist’ with 1008 children from kindergarten to the eighth grade found a significant correlation of $r = .28$ between teachers and mothers, and $r = .29$ between teachers and fathers. Parents reported more problems than teachers. One using the ‘Conner’s Parent and Teacher Rating Scales’ found an average rating of $r = .41$ between parents and teachers with 350 randomly selected 3-17 year olds. Many of the studies that Verhulst and
Akkerhuis reviewed were relatively old and the checklists employed based on earlier versions of the DSM. This has been upgraded to reflect existing research evidence and therefore comparisons with existing ratings were limited. Verhulst and Akkerhuis, (1989), found similar results using the ‘Achenbach Child Behavior Checklist’ (CBCL), with 2076 parent rated Dutch children between 4 and 16, and 1162 teacher rated Dutch children 4-12. Of the 94 correlations completed on the test items, only 13 were significant for the 4-5 year old boys and 22 were significant for the girls, \( p < .01 \), a necessary statistical level due to the high number of calculations and therefore higher risk of false positives. For the 6-12 year olds, the number was higher, 64 for boys and 53 for girls. This may reflect the differing expectations for older children, especially in the more formal school setting.

The total problem score correlation between parents and teachers for 4-5 year olds was \( r = .25 \) and \( r = .35 \) for 6-12 year olds, not statistically significant. Factors such as class size, socio-economic school factors, and teacher’s personality may be important determinants of variations in teachers’ scores. Teachers have a unique contribution in the reporting of problems with academic and social skill - both important areas of functioning likely to be related to later adaptive functioning. To involve teachers, therefore, in the ratings of behaviour within this present study will be important. The finding that parents perceived more problems in their children than teachers could reflect an advantage of having a comparison peer group to help in the normalisation of behaviour.

It has been suggested that a number of studies have established the stability of adult ratings of behaviour problems in very young children, and early externalising
problems, e.g. attention and aggression, appear to be associated with a range of negative outcomes (Campbell, 1995). One epidemiological study of 3 year olds in London identified 14% of the sample achieving more than the cut-off of 10 on a 22-item ‘Behavior Screening Questionnaire’, with problems persisting for 63% of this group at age 4 and 62% at age 8, according to maternal reports. This was reinforced at 8 with teacher ratings although it is unclear from Campbell’s paper what the sample size was. Her review of the studies, many of which were her own, examined the relations between adult ratings of problem behaviour and observation of children in both normal and problem groups as defined by checklist scores. Findings generally supported the validity of adult ratings. One example involved two cohorts of ‘hard-to-manage’ 3 and 4 year olds, e.g. discipline problems and inattention. The first identified by parent complaint continued to have problems at home and school at 4 years, although this was based on parent ratings and laboratory observation rather than teacher rating per se. At ages 6 and 9, teacher ratings were able to distinguish the group from controls. The second cohort of boys selected on the basis of teacher ratings of DSM-III ADD symptoms, in addition to parent-identified problem boys. The teacher-identified boys were then matched demographically with boys from the same pre-school. When followed up at 5 years 42% of the problem group met DSM-III criteria according to maternal report. Unfortunately there were no teacher ratings. Overall, a number of pre-school children identified as having problems continued to do so as rated by adults (Campbell, 1995). This suggested that an adult’s rating score is identifying important aspects of the behaviour of young children.

Rapid developmental changes occur in the social, emotional, cognitive and linguistic domains during the pre-school period (Campbell, 1995). It should not be surprising,
therefore, that pre-school children with behaviour problems often show delays in language development and overall cognitive functioning, given the wide range in development. One study found that a small group of hyperactive three year olds performed more poorly on several measures of cognitive and language functioning, for example as assessed on the Reynell Developmental Language Test. In contrast, those described as 'hard to manage' by parents, but who were not difficult to assess, did not differ. Thus the difficulty with cognitive and language assessment is related to a delay in development rather than behaviour difficulties per se. It will be important therefore to have some measure of cognition and language in any study designed to explore the specifics of behaviour difficulties.

1.1.2. Assessment of EBD

In order to know how to intervene with a difficulty, it is important to understand the nature of the difficulty, as not all children described as having difficulties in the area of behaviour are the same, any more than children with learning difficulties are all the same.

The 1988 Education Act may have contributed to the rise in problem behaviour in schools with its emphasis on results and league tables, (Farrell et al., 1996). Children with EBD do not traditionally appear to improve test results, by either being under-achievers themselves or by disrupting the education of others. There is the additional issue that EBD is difficult to define, with a variety of causes and an interaction of the home and school with a child’s genetic predisposition, (Farrell, 1995).

Research suggests that children referred for EBD assessment are predominantly boys
who display - acting out, disruptive behaviour, (Farrell, Harraghy, and Petrie, 1996). Farrell et al. surveyed EP assessments of EBD and found a climate of increasing concern regarding EBD, with an increase in the number of referrals. Their conclusions were drawn from a small number of unpublished studies that surveyed EP opinion but with different designs, such as number of participants. Therefore, despite similar conclusions, the implications were limited for the profession. A subsequent study (Rees, Farrell and Rees, 2003) also surveyed how EPs deal with EBD referrals, and incorporated 107 EP’s across 16 LEAs. This could potentially reflect a wide range of practice, although generalisations to the remainder of the profession need to be cautious. One important factor highlighted from this research is the lack of an absolute definition for EBD in the field of education, which in part explains the difference in practice regarding the recognition and assessment of EBD, although there are clearly children who have difficulties associated with their behaviour. This highlighted the importance for EPs to adopt a strategy for assessment, which is seen to be objective and systematic, and grounded in psychological theory.

The Criteria for Statutory Assessment as introduced and outlined in the Code of Practice (DfEE, 1994b), and in the updated Code (DfES, 2001), was intended, in part, to help EPs and others adopt a consistent approach to assessment, so that all children with emotional and behavioural difficulties may be dealt with more equally. However, there was a lack of any quantifiable criteria, and as a result the implications of the code have been interpreted locally in terms of statutory assessment and provision. In addition, the revised code does not recommend how EBD is assessed. There appear to be no recognised and widely used objective tests amongst EPs, as it
has been suggested that EBD cannot be measured in the same way as reading, for example (Farrell et al., 1996). Farrell’s research shows that professionals appear to rely on opinions about whether a child has a problem, which may be informed by a rating scale but appears for many to be more dependent on their view about what is normal or acceptable. This in turn would be based on their own personal experience rather than a psychological research base. Farrell et al. (1996) argue it should be professional skills and knowledge from psychology, which are the main influence, as this is the justification for EPs having a key role in assessment of these children. The latest survey of EP practice in this area (Rees et al., 2003) was undertaken as it was unclear which particular methods of assessment were currently being used.

Rees et al. used a postal questionnaire that included both open and closed questions about an EP’s ‘most recent EBD referral’. 18 LEAs were approached incorporating both rural and inner city services, and responses were received from 16 that resulted in 107 case studies (students) distributed evenly across the school phases. Only 6% of the sample was pre-schoolers as the criteria set for inclusion included the fact that they were in school or due to start - 88% were male, which is a similar pattern to earlier research in this area, with 92% of the students referred by the school.

There were over 200 reasons given for the referrals, clearly with some children having more than one. Acting out behaviour was cited in 52 cases, aggression/violence in 24, and non-compliance/challenging behaviour in 10, disruptive behaviour in 8 and attention seeking in 8. It appears that the categories were produced from the referrer comments alone, as difficulties such as ‘neurological problems’, and ‘not working hard’ and ‘risky behaviour’ were not included in the
above categories. However, it could be argued that the behaviour observed is similar even if the language used to describe it is different. This idea reinforces earlier comments regarding the lack of an agreed definition with reference to EBD.

The survey results highlight continuing wide variation in EP assessment practice, which in part is attributed to stage of schooling. 41% of the EPs used cognitive testing, 51% reading tests and 24% affective measures. In 73% of cases EPs observed the students, reflecting a popular assessment tool. In 89% of cases EPs interviewed the students, with a number of others stating that they would like to, but this was not possible. Statements of SEN had been produced in 28% of cases, which may have impacted on the assessment tools used in those cases, due to the nature of the headings of psychological advice and dependence on EPS policy.

One difference between this and past research is that a higher number of children referred to the EPS were remaining in their educational settings rather than being removed. This may reflect the relatively low numbers of statements and move towards inclusion. An alternative explanation is that children with lower levels of need are being referred initially with the focus on early intervention, or in schools becoming less tolerant as the push to increase attainments continue. The limitation of a postal questionnaire is that further information cannot be obtained to clarify such issues.

There was no association between the methods employed and the length of time since qualification. This could be a concern if modern assessment materials are not being used as part of the assessment process. It could be a positive factor suggesting the
profession is effective in updating its skills, and therefore there is not a significant
difference between newly qualified and not. It appears, however, that a number of
EPs always use set tests and likewise a number never use tests, suggesting the
assessment methods are EP rather than child/situation specific. This is a concern if
the methods are unrelated to the specific issues, and difficult to defend in legal
forums, if not supported by contemporary psychological research. This research
highlights the continued lack of consensus amongst EPs regarding EBD assessment,
and this diversity in practice could make the profession potentially vulnerable. The
advantages of a targeted intervention programme are only achieved if an accurate risk
assessment method is available to classify children into high and low risk groups.
This appears to be absent in practice at present.

Research on identified behaviour problems in children has highlighted their potential
as indicators of more long-term difficulties, and that serious disruptive behaviour
problems in adolescence have a history that began in the pre-school years, (Campbell,
1995; Moffitt, 1993). Children with EBD, especially disruptive, noncompliant
behaviour, are at risk of exclusion from educational settings, with reduced
opportunities for successful academic and social experiences. Educational
psychologists have a role in supporting these children and the potential to intervene
early to alleviate future difficulties. A growing body of research suggests there are
neurocognitive risk factors associated with EBD, with specific difficulties associated
with specific neurocognitive functioning. This research was reviewed, particularly in
relation to ADHD (Attention Deficit Hyperactivity Disorder) and Antisocial
Behaviour.
1.2. Neurocognitive risk factors for EBD

1.2.1. Introduction

Research has highlighted biologically based developmental pathways into emotional and behavioural difficulties, challenging the notion that the cause of some children’s difficulties is exclusively social in origin. The two areas of brain functioning and dysfunction, which will be of particular relevance to this piece of research, are ‘anterior cingulate dysfunction’ and ‘amygdala dysfunction’. Anterior cingulate dysfunction is associated with attention problems and impulsiveness (Attention Deficit Hyperactivity Disorder), and amygdala dysfunction with problems in responding to the sadness and fear of others (Antisocial Behaviour). This in turn is associated with heightened levels of instrumental aggression and an absence of guilt.

A broad body of research exists that will be discussed, suggesting there are a number of tasks able to tap these individual neurocognitive systems. The goal of this research would be to see whether performance on these tasks is associated with measures of behavioural difficulty with younger children, with a view to the future, early identification and intervention of appropriate programmes to aid social inclusion. The discussion will focus initially on the area of ADHD, with a review of the research with adults and children, as well as a consideration of some of the methodological issues. Research in the area of Antisocial Behaviour with adults and children will also be reviewed, particularly the area of empathy and non-verbal processing. As the two aspects of behaviour of particular relevance to this research, the relationship between Antisocial Behaviour and ADHD will be discussed. Based on the reviewed research, a summary will be provided and a number of research hypotheses identified.
1.2.2. ADHD-research and review

1.2.2.1. Introduction to ADHD

ADHD is a diagnostic category of the American Psychiatric Association (APA) and Hyperkinetic Disorder is a diagnostic category of the World Heath Organisation. ADHD in the Diagnostic and Statistical Manual of Mental Disorders 4th Edition (DSM IV, 1994) guides American and Australian practice. ADHD is diagnosed by either six or more symptoms of inattention (from a list of eight), or six or more symptoms of hyperactivity-impulsivity (from a list of nine), that have existed for at least six months to a degree that is maladaptive and inconsistent with developmental level. Its equivalent within the UK is Hyperkinetic Disorder (HK) in the International Classification of Diseases 10th Edition (ICD - 10, 1990). The research diagnosis of hyperkinetic disorder requires the definite presence of abnormal levels of inattention, hyperactivity and restlessness that are pervasive across situations and persistent over time and that are not caused by other disorders such as autism or affective disorders. This is a narrower diagnosis and a sub-group of ADHD. Inattention is a required criterion for HK but not for ADHD. Therefore children with HK should fall within mixed inattention/impulsive sub types of ADHD.

It has been argued that a child who has symptoms of both ADHD and Conduct Disorder (CD) is more likely to be diagnosed with ADHD in USA and CD in Britain (Babinski, Hartsough and Lambert, 1999), which makes some research comparisons difficult. In practice in the area where the research for this thesis was conducted, the term used among professionals appears to be ADHD rather than HK, suggesting the DSM-IV may be more influential than the ICD-10. This, in part, could be a reflection of some of the existing measures available, e.g. the Conner’s rating scale, which is
based on the DSM-IV criteria and the diagnostic instrument commonly used by professionals in the area where the research for this thesis was conducted.

Hyperactivity is a behaviour trait, it is argued, with a strong genetic component, which is present in a child population as a continuum of severity, with defining features of impulsiveness, inattention and over-activity (Overmeyer & Taylor, 1999). Children with extreme degrees of this behaviour are given different diagnoses in different places with different cut offs. Both HK and ADHD require pervasiveness across situations and HK requires absence of other psychiatric disorders, therefore the prevalence of HK is much lower than ADHD. ADHD has been described as a chronic disorder of childhood, with a prevalence rate of 1-7% (Hinshaw, 1994), although the prevalence varies with definition (Pennington & Ozonoff, 1996), with a sex ratio of 3:1, males to females. As much of the research has relied on referred samples, there is much more knowledge regarding ADHD in males than females.

There appears to be limited evidence of prevalence in the UK. A recent survey of a shire county, (Holowenko & Pashute, 2000), based on a questionnaire completed by head teachers regarding the number of children in their schools who had a previous clinical evaluation and diagnosis, identified a prevalence rate of 0.4%, with a ratio of boys to girls of 9:1. Interestingly, schools’ estimates are higher at 1% when they gave a subjective estimate of the incidence of ADHD within their schools and therefore there is a possibility that it is under diagnosed. These results need to be treated very cautiously, however, as they are very reliant on the knowledge of the head teacher, and it cannot be assumed that every child with a diagnosis is known to them. In addition, one conclusion of the study was the request of schools to know more about
the signs and symptoms of ADHD, suggesting their estimates of prevalence in this study would be unreliable. International estimates of prevalence range from 1-6% of the child population (Tannock, 1998; Cantwell, 1996). This degree of variation is not surprising given the continuing debate in the field regarding both theories and assessment.

Cognitive deficits, particularly impairments in attention and executive function (EF), are hypothesised to be a core part of ADHD and to play a major role in the difficult adaptation of children with ADHD (Seidman, Biederman, Faraone, Weber and Ouellette, 1997). Definitions of each of these processes will be given. Distinguishing among aspects of attention is difficult, as they need to be evaluated in relation to some activity and therefore pure measures are difficult to obtain (Korkman, Kirk, and Kemp, 1998). Aspects of attention have been defined in different ways (Korkman et al., 1998), although many include elements such as arousal and vigilance, selective attention, sustained attention, attention span or divided attention, and inhibition and control of behaviour. This is summarised in the following definition quite well.

‘Attention is not a single entity but the name given to a finite set of brain processes that can interact, mutually and with other brain processes, in the performance of different perceptual, cognitive, and motor tasks. Although there is no completely agreed-upon taxonomy of attention, a good case can be made for the relative independence of at least three components of attention: selection, vigilance, and control. At the most general level, all three aspects of attention serve the purpose of allowing for and maintaining goal-directed behaviour in the face of multiple, competing distractions.’ Parasuraman (1998, p.3)
The term ‘executive function’ was initially defined within the context of cognitive theory (Korkman et al., 1998). However, the Executive Function (EF) domain is distinct from cognitive domains such as sensation, perception, and many aspects of language and memory. It overlaps with domains such as attention, reasoning, and problem solving. In developmental neuropsychology the term executive function is used to indicate planning and flexible strategy employment; the ability to adopt, maintain, and shift cognitive set, to use organised search strategies, and to monitor performance and correct errors; the ability to resist or inhibit the impulse to respond to salient, but irrelevant aspects of a task, and working memory (Korkman et al., 1998). Executive functions interact with, direct, and modulate attention processes, (e.g. sustain arousal and vigilance in the search for, selection of, and attention to, relevant information).

A number of researchers have suggested that children with ADHD perform poorly on tasks of vigilance and sustained attention, motoric inhibition, EF (such as complex problem solving and organisation) and verbal learning and memory (e.g. Pennington and Ozonoff, 1996; Oosterlaan, Logan and Sergeant, 1998). This pattern of deficits is similar to that found in adults with frontal lobe damage, and thus has generally been interpreted as supporting the hypothesis that ADHD may be a brain disorder primarily affecting the prefrontal cortex or the regions projecting to the prefrontal cortex. Although links from adult brains to child brains need to be very tentative, as adult brains are not simply larger versions of child brains, due to their complex nature and the impact of experience, (e.g. information processing), and this is especially true in relation to adults with brain damage. Emerging neuroimaging literature points to abnormalities in the frontal networks in ADHD, the networks that
control attention and motor intentional behaviour. It has been argued that there is a vague definition of frontal functions, i.e. cognitive functions that appear specific to the frontal lobes. It is not clear whether these are independent of other brain processes, as it is not only pre-frontal damage that causes EF deficits (Pennington and Ozonoff, 1996). There appears to be a convincing correlation between pre-frontal lesions and EF deficits but not a perfect one-to-one relation. Pennington and Ozonoff argue that existing case studies provide good support for the application of the frontal metaphor to conduct disorder (CD) and mixed support for ADHD.

EF deficits correlate with (and possibly cause) disruptions in complex behaviour, which is seen in various developmental disorders, implying these disorders involve pre frontal cortex (PFC) dysfunction. The goal of neuropsychological studies of developmental disorders has been to find the primary neurocognitive deficit in each disorder - that which is universal, specific, necessary and sufficient to cause the symptoms. At present an executive deficit, as currently operationalised, i.e. impaired performance on clinical EF tasks such as Wisconsin Card Sorting Task (WCST), Tower of Hanoi, cannot be primary in developmental disorders because it lacks specificity. It, therefore, may be a non-specific secondary effect of growing up with a developmental disorder. Pennington & Ozonoff (1996) argued that there is a need for a longitudinal study, beginning prior to onset of a developmental disorder, to prove whether EF deficits are primary or secondary. If EF deficits do not precede and predict the disorder, but other deficits do, then it would be argued that they are secondary. It is possible that tasks may tap multiple EFs and each group may perform badly on tasks but in different ways, and different disorders may be distinct in either their level or profile of EF deficits. Pennington and Ozonoff argued for more fine-
grained EF measures, to test for profile differences between different developmental disorders.

More than half of children with ADHD qualify for a co-morbid diagnosis, and causal relationships between them are largely unknown, (Pennington and Ozonoff, 1996). Cognitive studies have been one approach to clarifying this relationship and aim to provide a test of the construct validity of the diagnostic concept based on symptoms. However, empirical research regarding the identification of the underlying neuropsychological dysfunction in ADHD has produced less consistent results than expected (Seidman et al., 1997). Seidman et al. argue that some discrepancies are likely due to methodological differences across studies, including the use of small and mixed sex samples, variations in diagnosis or diagnostic procedures, and a limited set of neuropsychological measures. They argued that neuropsychological deficits were most pronounced on the WCST, the Stroop test and the Rey Osterrieth Complex Figure Test. This supported the position of Pennington and Ozonoff, who also found significant results with the WCST and the Stroop test, indicating a degree of consistency. It is important to remember that neuropsychological tests are only indirect measures of brain function, and therefore inferences about the nature of associated brain impairment must be made cautiously.

Cognitive models within the field of ADHD are receiving interest in current research (Tannock, 1998). There are two types: those attempting to account for a specific set of processes or problems as part of ADHD (Sonuga-Barke, 2002), and those that pertain to the specific disorder of ADHD (Barkley, 1999). Response inhibition appears to be a central feature in current models. Oosterlaan, Logan and Sergeant
(1998) investigated whether impaired response inhibition (RI-as measured by the Stop task) was unique to ADHD. They completed a meta-analysis of eight studies using 6-12 year olds and found consistent and robust evidence for a RI deficit in ADHD, but this did not distinguish children with ADHD from CD, or both. There is an overlap in symptomology between these and therefore the result is not particularly surprising. They argue that poor RI in ADHD may be part of a general impairment in EF, which may be attributable to a frontal lobe dysfunction (Pennington and Ozonoff, 1996 et al.), and that it is important to investigate to what extent early emerging impairment in RI predicts the onset of externalising behaviour disorders later in childhood.

Research on the relationship between childhood ADHD, childhood conduct problems, and later adult criminal activity (Babinski, Hartsough and Lambert, 1999), found that both hyperactivity-impulsivity (ref: DSM-IV) and early conduct problems independently as well as jointly, predict a greater likelihood of having an arrest record for males. The predominantly Hyperactive-Impulsive (H-I) sub-type contributed to the risk of criminal involvement over and above the risk associated with early conduct problems alone. The early identification of a sub-group of individuals at risk for subsequent chronic offending could provide a target group for prevention efforts in early childhood. Babinski et al. support the suggestion by Power and Du Paul (1996) that individuals with a history of H-I are at a much higher risk for antisocial outcomes than those with only the inattentive symptoms. They suggest those with a history of conduct problems alone may be at risk of more serious crime, e.g. against people. Those with H-I alone, at risk of less serious crime, e.g. public disorder, property crimes, related to their impulsivity and an inability to delay
1.2.2.2. Children and ADHD

Children with ADHD have been found to achieve lower grades at school than peers. This has also been found with pupils who are rated as inattentive, hyperactive or impulsive, without having a diagnosis of ADHD (Merrell and Tymms, 2001). Merrell and Tymms argue a behaviour rating scale could be a useful tool for raising the awareness of teachers to young children with behavioural problems of inattention, hyperactivity and impulsivity that are at risk of similar outcomes.

Pupils with high teacher ratings at the end of Reception (5 years) tended to have high scores two years later. The behaviour of 4148 children from a nationally representative sample of schools (in relation to size) in the UK, was assessed at the end of Reception Year, and 113 were randomly selected and reassessed by the Year 2 teacher at the beginning of the second term of Year two, using a rating scale based on the DSM-IV criteria for ADHD (American Psychiatric Association, 1994). The sample included children with scores ranging from 0-18 (out of a possible 18) and the positive correlation between the total scores on the rating scale at the end of Reception and middle of Year 2 was strong at 0.64. This suggested that the behaviour rating scale used was a useful tool for identifying children with behaviour problems.

The percentage of the original sample meeting criteria for ADHD was 11.2, 2.5% combined type, 5.8% predominantly inattentive, and 2.9% predominantly hyperactive-impulsive. A larger proportion of boys met the criteria, with the overall ratio of 2.3:1; for the combined type, 4.2:1; for the inattentive type, 2:1 and 2.3:1 on
the hyperactive-impulsive. These are consistent with figures from International research on prevalence (Tannock, 1998), but higher than suggested by Holowenko and Pashute’s (2000) survey of head teachers and DSM-IV (American Psychiatric Association, 1994). However, some children with high scores would not necessarily receive a diagnosis as the ratings were based only on teacher perception, and the behaviour has to be exhibited across different settings for clinical diagnosis. One important finding was that the attainments and rate of progress of children with high scores on the behaviour rating scale in reading and mathematics were found to be significantly lower at the start of Reception, end of Reception and end of KS1, than those with zero scores on the rating scale. This could be because any children scoring zero on the behaviour rating scale have particularly good learning behaviour, e.g. good attention, and it would have been interesting to compare children at different points on the scale to explore whether the effect was as strong. It does, however, reinforce the concern regarding the impact of behaviour difficulties.

From the research review undertaken for this thesis there appeared to be relatively few published studies regarding Executive Functions in school-aged children, although this appears to be changing. Results so far suggest a developmental progression of EF abilities throughout the school-aged years, with task performance varying depending on the age of the child and the nature of the task (Weyandt & Willis, 1994). Weyandt and Willis suggest that EF may emerge earlier in life than previously thought, and that it is important that developmentally appropriate neuropsychological tasks are used with children. They questioned the validity and clinical utility of tasks currently used with children, and whether they are able to differentiate between different groups. Their study used the Du Paul ADHD rating
scale with a group of 6-12 year olds. Children were considered ADHD on the basis of: a diagnosis from a paediatrician/psychologist using DSM [it is unclear from the paper whether this was III or IV]; a teacher and maternal rating of at least 1.5 SD above the mean for the child’s age on the Revised Conner’s Teacher Rating Scale; a maternal endorsement of at least 8 of the 114 items on the Du Paul ADHD Rating scale; average or above intelligence as assessed by the Raven’s Coloured Progressive Matrices, and enrolment in a regular class and not receiving special education services.

Weyandt and Willis found children considered ADHD displayed deficits in two of the six EF tasks (Tower of Hanoi; Matching Familiar Figures Test), relative to normal controls, but did not differ on non-EF tasks (i.e. the Peabody Picture Vocabulary Test –Revised [a receptive vocabulary test] and the Boston Naming Test [an expressive vocabulary test]). Although they did not differ on four of the EF tasks (verbal fluency; visual search; WCST; mazes), it is possible that either EF deficits are not unique to children with ADHD, that the tasks used are not valid measures of EF, or that clinical groups may differ from controls only in terms of particular aspects of EF.

Measures of EF may be useful in the evaluation of ADHD but may not be sufficient as children with developmental language disorder performed better than children with ADHD on only one measure of EF (Weyandt & Willis, 1994). EF tasks require further evaluation to determine whether they are characteristic of other child clinical populations, and thereby lack discriminatory power. It has been suggested that the capability for Response Inhibition and the underlying inhibitory process develop
early in childhood, (Oosterlaan, Logan & Sergeant, 1998; Solanto, Abikoff, Sonuga-Barke, Schachar, Logan, Wigal, Hechtman, Hinshaw & Turkel, 2001), although all the studies were restricted to children 7-8 years and over.

Eighteen studies published in refereed journals of EF in ADHD were reviewed (Pennington and Ozonoff, 1996), which met their criteria of an explicit test of the frontal hypothesis of ADHD using cognitive measures and/or, the use of commonly accepted EF measures in a study of ADHD, and inclusion of a control group. None of the eighteen studies were with children younger than six. Seven of the studies were with six year olds and over, a further three were with seven year olds and over, and a further two were with eight year olds and over. Fifteen found a significant difference between children with ADHD and controls on one or more EF measure. Sixty EF measures were used across studies. Forty EF measures found worse performance in the ADHD group. None of the EF measures were significantly better in the ADHD group. There were clear differences across EF tasks in their sensitivity to ADHD. Verbal tasks do not appear very sensitive to ADHD. Wisconsin Card Sorting Task was only significant in 4/10 studies. All three studies, which used the Tower of Hanoi task, showed a significant result, appearing sensitive to ADHD. In addition the Stroop, MFFT errors, Trailmaking Test, part B appears sensitive to ADHD.

It may be that EF deficit in ADHD is mainly in motor inhibition, but not exclusively so - as ADHD groups also perform worse on two working memory measures (Sequential Memory task, Self-Ordered Pointing task). The specific profile of EF deficits awaits further experimental analysis, but there appear to be deficits on several EF tasks, e.g. measures of vigilance (6/8-GDS) and perceptual speed (Coding,

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Symbol Digit), consistent with previous research. Overall it appears that cognitive tests are better at excluding normal children from the ADHD category than at confirming ADHD in children diagnosed by adult report. Evidence from the 3/18 studies, which used a within-task design, does not provide conclusive support for a differential EF deficit in ADHD. They suggest it is possible that there is a core deficit in motor inhibition with some general cognitive inefficiency; however, this review highlighted the need for more research with discrete EF tasks to confirm profile differences between disorders.

1.2.2.3. Young children and ADHD

When searching for research in this area, young children were defined broadly as less than seven years. This would effectively be a pre-school population in some countries as there is a later start to formal education.

Although part of the diagnosis for ADHD with reference to the DSM-IV is onset prior to seven years of age, Gordon (1998) suggests that clinicians are wary of diagnosing ADHD in pre-schoolers for a number of reasons: pre-schoolers are naturally inattentive and distractible; there are few demands for them to attend and exhibit self control, and therefore a lack of observable symptoms; with a limited school history there are limited opportunities to show a consistent pattern of symptoms and impairment; children vary in when their abilities develop; with limited verbal skills they are less informative; within a child different abilities develop at different rates; the benefit of early diagnosis with reference to extra services is questioned; knowledge about ADHD in pre-schoolers is very limited; the range of diagnostic technology that is available to older children is not available for younger
children. Gordon, however, also argues that pre-schoolers should be evaluated because: symptoms can appear early in life; identification of ‘at risk’ children would be worthwhile, even if not diagnosed; they may have other developmental delay; some show significant level of impairment during pre-school years; impulsive youngsters can wreak havoc on parents, pre-schools and child care people.

In her review of pre-school research on children with behaviour difficulties, Campbell (1995) only located one study assessing sustained attention in pre-school children identified as showing problems. Children designated as hyperactive performed more poorly on both standard versions of a Continuous Performance Task and a pre-school vigilance task. It is argued that the age of onset is usually as a toddler, between 3 and 4 years (Pennington and Ozonoff, 1996) and it appears to be becoming clearer that ADHD is a chronic disorder across the lifespan.

Clarifying the relationship between general and specific cognitive impairments, and the everyday behaviour problems shown by young children, is an important goal for future research. A number of EF tasks for pre-school children have been adapted to tap into inhibitory control, attentional set shifting and working memory (Hughes, Dunn and White, 1998). Hughes et al. found small but significant differences in all three domains in children described as ‘difficult to manage’. Executive dysfunction was manifest very early in development in children with externalising problems. However, this impairment was much less evident when differences in verbal ability and social background were taken into account, and so further work is needed to confirm this finding.
The profile of the association between EF and ADHD is uneven, and not all aspects of EF are deficient in ADHD, with less being known about the preschool period. The association between EF (planning [Tower of London], working memory [Noisy Book], and inhibition [Puppet Says…]) and ADHD symptoms was explored with a sample of 160 children (3y0m-5y6m) from the Salisbury area (Sonuga-Barke, Dalen, Daley & Remington, 2002). No association between planning or working memory and ADHD or CP (conduct problems) was found, but there was a significant negative association between inhibition and ADHD of -0.3 and CP of -0.25 (corrected for multiple tests).

70% of the sample were randomly selected from pre-schools and 30% identified by their health visitor (3-4y) or teacher (4-5y) as having ADHD-type problems. The higher end of the ADHD range was intentionally over sampled in this study. This appears to have been done on the basis of Health Visitor and teacher perceptions, and therefore it could be argued that the more hyperactive type of ADHD would have been more likely to be over sampled rather than the inattentive, for example. The symptoms of ADHD and CP were assessed using a structured clinical interview (Parental Account of Childhood Symptoms) designed to assess the core symptoms of ADHD and CP. Trained interviewers rated the parent descriptions with reference to criteria, therefore the level of difficulty was reliant on interpretation of parent comment rather than the parent specifically saying yes or no to direct questions. Assessments of the children reportedly took 30 minutes for both the BAS and the EF tasks. The short form BAS was used for a measure of IQ, although the paper states it was designed for over 7s, and therefore would be inappropriate for the sample. The BAS II (a later version of this test) does contain tests appropriate for a younger age
but there is no evidence in the paper that this version was used.

Following multiple-regression analysis, only age and ADHD behaviour predicted significant proportions of variance in inhibition. This offers some evidence that inhibition is distinct from other EF measures, and supports the inhibitory deficits as the precursor to later more general EF problems (e.g. Barkley, 1997). There was, however, a skewed sample in this study, and the results may be saying more about the more hyperactive child than all children with ADHD, especially as parents are more likely to endorse ADHD symptoms in their children than teachers (Phillips, Greenson, Collett, and Gimpel, 2002).

Although there is a risk of over labelling behaviours, which are typical for young children, children do not always grow out of such behaviours (e.g. Campbell, 1995). Phillips et al. (2002) suggested that pre-schoolers present with a different symptom pattern than school aged children, from their investigation of using an ADHD rating scale for school age children (5-18 years, developed in accordance with DSM-IV criteria), with a pre-school sample (3-5 years). Of the 414 children sampled, 249 were rated by their parents (46% return rate), and 315 their teachers (81% return rate). 77% of the sample was enrolled in a Head Start program and the others in a community pre-school population. The population, therefore, may not have been completely representative of the normal population, e.g. in terms of socio-economic status, as these programmes are aimed at lower socio-economic status communities.

The pre-school ratings were compared with a normative sample for 5-18 years. Parents rated the level of ADHD behaviours as higher in pre-school for boys, than the
normative sample rated the behaviour of boys of elementary level. The behaviour of girls was not rated differently amongst parents at either stage. The teachers of each sample did not rate the ADHD behaviour of boys or girls as significantly different. The results suggest that children between 3-5 years display levels of hyperactive, impulsive and inattentive behaviours at a higher rate in the home setting than in a school setting. This, of course, could simply be a reflection of the different expectations in each setting. Teachers, in their ratings, have experience of a wider range of children, and therefore this may impact on how they perceive behaviour, especially with reference to difficulties. There are, however, no clear dividing lines between normal and abnormal levels of activity, attention and impulsivity.

The study identified a lack of research regarding the symptoms and identification of ADHD in a pre-school population. Phillips et al. (2002) suggested that the ADHD rating scale is an appropriate tool to use with younger children and the DSM-IV criteria on which it is based appeared to remain appropriate, although identified there are few psychometrically sound instruments and a lack of national norms against which to test the clinical utility of measures.

1.2.2.4. Methodological issues and ADHD

Inattention, impulsivity, motor restlessness and disruptiveness are found in all children to some degree, therefore a diagnosis of ADHD and other disruptive behaviour disorders is based more on assessment of developmentally inappropriate intensity, frequency, and/or duration of the behaviour rather than its mere presence. Such judgements increase the possibility of observer bias, when for example; different culturally determined standards for normal behaviour may influence ratings
of observed behaviour (Mann et al. 1992). Different cultural perceptions of symptoms may complicate comparisons of epidemiological studies of disruptive behaviour disorders in different countries, especially if rating scales of behavioural observations are used as the primary diagnostic tool (Mann et al. 1992).

With reference to EF measures, from the above review of research, a number of tasks have been associated with different research studies and different neuropsychological batteries have been used to assess attention deficits in ADHD. The consistent finding across studies is that individuals with ADHD do not have a generalised cognitive impairment, but they do manifest specific deficits (Swanson et al., 1998). From a review of eighteen studies (Pennington and Ozonoff, 1996) it appeared that tests of executive function (e.g. the Stroop Matching Familiar Figures, Tower of Hanoi, and Trails B tasks) were the best suited for a characterisation of a deficit relatively specific to ADHD. The validity of laboratory tests for assessing a disorder defined on subjective behavioural ratings has been questioned, (Barkley, 1991) and in an assessment of a clinical sample, Continuous Performance Test measures were only slightly better than chance in distinguishing ADHD from non-ADHD disorders (Weyandt and Willis, 1994). The Stop task and the Start task have both been reviewed (e.g. Pennington and Ozonoff, 1996). These reviews of performance deficits on Stroop, Stop and Start tasks suggest that some ADHD children may have EF deficits. It has been argued that the Wisconsin Card Sorting Task is not a particularly useful measure for detecting subtle EF deficits, and the results are less consistent than those for other EF measures in a number of developmental disorders (Pennington and Ozonoff, 1996). The Stop task only measures one form of Response Inhibition - the ability to inhibit an ongoing response. Overall, a number of tests
exist, some more applicable to young children and many overlapping in the skills they are measuring.

Checklists can be helpful for sharing information, making reliable observations, undertaking prevalence studies and looking at variation (Stevenson and Goodman, 2001). With reference to ADHD, many of the studies reviewed previously (e.g. Verhulst and Akkerhuis, 1989) were relatively old and the checklists employed based on earlier versions of the DSM, which have been upgraded to reflect existing knowledge. The DSM-IV (1994) re-established the use of multiple domains of symptoms and multiple subtypes of the disorder, merging the DSM III symptom domains of impulsivity and hyperactivity into one (hyperactivity-impulsivity) and expanding the symptoms of inattention in a separate domain (inattention), specifying two domains of symptoms. Pupils with teacher ratings on a Hyperactive-Impulsive factor of a behaviour checklist based on DSM-IV criteria at the end of Reception year, tended to have high scores two years later when rated by their teachers (Merrell and Tymms, 2001), demonstrating the stability of the rating scale.

Du Paul (1991) compared parent and teacher ratings on an ADHD questionnaire and found them internally consistent, stable across time, and highly related to criterion measures of classroom performance. They supported the reliability and criterion-related validity of currently employed diagnostic criteria for ADHD (DSM-IV) and did not support the idea of three separate factors of inattention, impulsivity and hyperactivity, as in DSM III. Their ADHD rating scale was found to have adequate psychometric properties as a screening and assessment instrument. In practice locally, the term used among professionals appears to be ADHD rather than HK, suggesting
the DSM-IV may be more influential than the ICD-10 in the local area where the research for this thesis was conducted. Therefore any research undertaken locally needs to be related to the DSM-IV diagnostic criteria, which appears to be influential in a number of studies.

As a result of the above information the present study will utilise the Du Paul Questionnaire (ADHD) and a number of EF tasks suitable for younger children: 'Tower' and 'Visual Attention'.

The positive predictive value of early externalising symptoms in non-referred populations appears to be 'modest' at best. The level of mis-classification, therefore, for any targeted interventions is likely to be substantial. The need for an accurate method to identify high-risk children in early childhood has been highlighted as a few studies suggest early intervention may be effective in preventing later behaviour difficulties, although there have been a lack of studies with non-referred populations (Bennett, et al. 1998). One recent study suggested that the presence of specific behaviour problems during the pre-school period, and not family and social circumstances, places the child at increased risk of being convicted of an adult offence (Stevenson and Goodman, 2001).

Research into the neurocognitive basis of EBD suggests specific brain networks are associated with certain types. Executive dysfunction has been associated with ADHD and it has been argued that intervention should be provided to high risk children early, as the presence of behaviour symptoms is the single best predictor of risk of future problems (e.g. Moffitt, 1993), and therefore it will be important to identify young children at risk of developing difficulties associated with ADHD. This study
will attempt to ascertain whether it is possible to discriminate identifiable sub-types among young children who were identified by adults as having different levels of behavioural difficulties.

1.2.3. Antisocial Behaviour

1.2.3.1. Introduction to Antisocial Behaviour

Antisocial Behaviour is generally considered to be a severe developmental disorder (Blair, 1999) that persists across the lifespan. The antisocial personality is characterised by egocentricity, absence of empathy, absence of guilt, superficial charm, shallow emotions, absence of anxiety, and absence of lasting relationships (Cleckley, 1988; Hare, 1998). Antisocial individuals commit more crimes and spend more time in prison before 40 years (Hare, 1998). The concept of Antisocial Behaviour has a long and prominent history in clinical psychology (Frick, O'Brien, Wootton and McBurnett, 1994). It is defined in both adults and children by high scores on clinically based rating scales: the Antisocial Process Screening Device for children (Frick, 1995; Frick and Hare, 1996; 2002) and the Revised Psychopathy Checklist for adults (Hare, 1998).

Most theoretical models of behaviour difficulties consider Antisocial Personality Disorder (APD) and Antisocial Behaviour as analogous and interchangeable constructs, (Frick, 1995) but this has been questioned, (Hare, 1996). Hare perceived them as two distinct and replicable factors, which have unique associations with other variables. APD is associated with adverse family background factors, e.g. socio-economic status and low intelligence. Antisocial Behaviour is positively correlated with narcissism and negatively correlated with measures of anxiety. There
is an interaction between APD and Antisocial Behaviour, in that antisocial individuals who also exhibit Antisocial Behaviour features show an especially severe and chronic pattern of behaviour difficulty (Hare, 1996).

Factor analyses of behaviours rated on the Antisocial Process Screening Device (APSD) with children (6-13 years) highlighted two independent factors: an antisocial behaviour factor (unstable/antisocial lifestyle traits), reflected by aggression and offences; and an emotion dysfunction factor (affective-interpersonal traits), reflected by emotional shallowness and lack of guilt. High scores on the former are related to a diagnosis of conduct disorder and the latter more closely reflecting the neurocognitive impairments that are thought to lead to Antisocial Behaviour (Frick et al. 1994; Blair and Frith, 2000).

1.2.3.2. Hypothesised neurocognitive impairment underlying Antisocial Behaviour

Recent neuropsychological and cognitive theories suggest a number of explanations in terms of neurocognitive impairment, such as an impairment in executive functioning, primarily implicating dorsolateral prefrontal cortex; an impairment in executive emotion processing, primarily implicating orbito-frontal cortex; or an impairment in emotion processing, primarily implicating the septal-hippocampal system and the amygdala (Blair and Frith, 2000).

1. Impairment in executive functioning

A number of studies have explored the performance of individuals with antisocial behaviour on measures of executive functioning (e.g. Pennington and Ozonoff,
Conduct Disorder, Antisocial Personality Disorder, and Antisocial Behaviour are not specifically associated with poorer performance on general measures of executive functioning. Although the situation is complicated by high co-morbidity between Conduct Disorder and ADHD, those children with Conduct Disorder who do not show features of ADHD do not show impairments on these tasks. Therefore executive dysfunction does not appear to be directly implicated in the development of Antisocial Behaviour (Blair and Frith, 2000).

2. Impairment in executive emotion processing

It is well established that there is a dysfunction within a basic emotion system in individuals with Antisocial Behaviour, Conduct Disorder, and Antisocial Personality Disorder and the dominant proposal is that the emotion system, which is impaired is fear (e.g. Patrick, 1994). The ‘fear’ position stresses the aspects of behaviour related to stimulation seeking and insensitiveness to punishment. The suggestion of general under-arousal has been challenged and no unitary accounts of the fear impairment theory have been able to explain all the data. The theory cannot explain why psychopathic individuals show appropriate skin conductance responses to basic threat stimuli but not to threat stimuli produced to visual imagery (Patrick et al., 1994). In addition, a fear impairment theory assumes that socialisation is achieved through the formation of conditioned fear responses to punished behaviours. However, the extent to which antisocial behaviour is inhibited in normally developing individuals by punishment has been questioned. Studies have shown that moral socialisation is better achieved through the use of empathy induction than through punishment (Blair and Frith, 2000).
3. Impairment in emotion processing

Impairment in emotion processing is the theory, which has been described as the ‘empathy’ position, as it stresses the aspects of behaviour related to reduced sensitivity to the emotional signals of others, particularly sadness and fear (Blair and Frith, 2000). The role played by emotional processes in Antisocial Behaviour has implications for understanding the relationship between language, affect and behaviour (Hare, 1998). It is important to be able to discriminate safety from danger, good from bad, and our decisions are based on our experience and knowledge - both cognitive and emotional. Adult psychopaths appear to have difficulty in processing affective information. Noncriminals and nonpsychopathic criminals were found to be sensitive to affective manipulations in a lexical decision task (Hare, 1998), for example, they responded faster to emotional words, e.g. corpse, torture, whereas psychopaths (as defined by the PCL-R scores) responded at the same rate to both emotional and neutral words, e.g. carpet, ounce. One explanation suggests that psychopaths do not process the semantic and affective aspects of words, but process and use them in terms of dictionary meanings. This suggests that they are insensitive to the emotional polarity of events and it was hypothesised that they would treat positive and negative events as if they were affectively similar.

The ‘confusion of emotional polarity’ was explored in three experiments (Hare, 1998). In the first, psychopathic and nonpsychopathic criminals had to select from a series of 56 triads, formed from different combinations of eight words (e.g. foolish, hateful, shallow, cold, warm, loving, deep, wise), from which one triad was warm, loving and wise, and the task was to select the two words that best went together. Psychopaths made little use of emotional polarity when compared with
nonpsychopaths, appearing to base their judgments on learned associations than emotional significance. Due to concerns that results could be based on familiarity of phrases rather than the perception of semantic and emotional relationships, a linguistically more complex experiment was completed.

In the second study, criminals were presented with emotional target phrases and had to select the emotionally matched phrase from a choice of four. For example, a target phrase was ‘A man thrown overboard from a sinking ship’, an emotionally matched phrase was ‘A man running from a monster’, and non-psychopathic criminals had little difficulty in matching the emotional polarity of the target phrase. Psychopaths, however, frequently chose a phrase that was opposite in emotional polarity, e.g. in the above example ‘A man surfing on a large wave’, which has similar descriptive characteristics but different emotional tone. They did, however, recognise an emotional content, e.g. fear, excitement, but saw them as similar in polarity. Hare argues that psychopaths recognise events as arousing but find it difficult to order them along a good-bad continuum. In the third experiment pictorial representations of these phrases were used and there were no significant differences between the groups. One explanation suggested that the task was too obvious and required more subtle emotional meanings to reveal differences between groups.

Psychopaths appear to misinterpret the emotional significance of events (Blair et al., 1995). In a task requiring the attribution of emotions in stories, the guilt stories, (as opposed to happy, sad and embarrassed), produced a significant difference between psychopaths and nonpsychopaths. The psychopaths attributed little guilt but indifference, or a positive emotional state instead, especially in relation to intentional
harm. The ability to comprehend and experience a wide range of emotions, or to attribute the expected emotions to individuals causing harm to others, is not shared by psychopaths (Hare, 1998).

One important fact to bear in mind in much of this research is the skewed nature of the subject population, who, being criminals, could reflect a certain ‘type’ of psychopath and likewise a lack of ‘normal’ controls against which to compare results, as the control group were also criminals. This is especially true given the confusion with diagnosis between those classed as psychopaths and those classed as having an Antisocial Personality Disorder. It has been argued that psychopaths have little difficulty in the domains of business, politics, law enforcement, government, academia and other social structures (Hare, 1996). Although they are described as egocentric, cold-blooded and remorseless, this does not automatically equate with a criminal record.

The empathy position, however, does not explain the absence of the potentiated startle reflex in psychopathic individuals or the passive avoidance data, (Blair, Colledge, Murray and Mitchell, 2001). Recently the fear and empathy positions have been integrated within the expanded, neurocognitive Violence Inhibition Mechanism model (Blair and Frith, 2000).

1.2.3.3. The Violence Inhibition Mechanism Model

The VIM model was prompted by the work of ethnologists who noted that submission cues displayed to an aggressor of the same species terminate attacks, and the VIM is considered to be a functionally similar mechanism in humans where sad
facial affects function as a human submission response inhibition, i.e. the VIM is thought to be activated whenever distress cues, the sad and fearful expressions of others, are displayed. This model suggests that psychopathic behaviour may develop, under certain environmental conditions, as a result of a deficit within, or a failure to develop VIM. This in turn would predict an absence of, or reduction in response to, the distress cues of others. In normally developing individuals, it is suggested the display of distress cues would result in autonomic arousal, and the interruption/inhibition of ongoing behaviour (Blair, 1995; Blair, Jones, Clark, and Smith, 1997).

The development of Antisocial Behaviour is represented as a consequence of the lack of VIM, together with either unspecified cognitive or environmental factors, i.e. for individuals to present with Antisocial Behaviour they need to have a socially, although not necessarily economically, disadvantaged childhood environment (Blair and Frith 2000). Although these social pointers are not justified as they are not specified.

According to the model, moral socialisation occurs through the combined activation of the VIM and representations of acts that cause distress cues, i.e. children initially find the pain of others’ aversive, and then through socialisation, thoughts of acts that cause pain to others is aversive. A failure in the conditioning process is the cause of the difficulty of the psychopathic individual to be socialised. An early index of appropriate moral socialisation, and thus the developmental integrity of the VIM, is the demonstration by the child of the moral/conventional distinction (Fisher and Blair, 1998).
1.2.3.4. Children and Antisocial Behaviour

There is very little published work investigating children with Antisocial Behaviour (Blair, 1999). The concept of Psychopathy has been quite important for understanding antisocial behaviour in adults and there has been a growing interest in extending the concept to children, with a view to early identification and intervention, when the traits are perceived to be more malleable (Barry, Frick, DeShazo, McCoy, Ellis & Loney, 2000).

One measure of childhood Antisocial Behaviour, the Antisocial Process Screening Device (Frick at al., 1994, 2002) appears to outline a syndrome in children, which is similar to the adult form of Psychopathy (Frick, O’Brien, Wootton and McBurnett, 1994). The APSD rating scale included the ‘callous-unemotional personality features’ (CU) and ‘impulsive-antisocial behaviour pattern’ (I-CP) that make up Hare’s Psychopathy Checklist- Revised (PCL-R).

From the age of 3.5 years, children distinguish in their judgements between moral (victim-based) and conventional (social disorder-based) transgressions (Smetana, 1981; 1990). Research suggests that normal, abused and neglected, and rejected 4-5 year olds distinguish between moral and conventional transgressions and rules. They judge moral transgressions to be more generalisably wrong, serious, independent of rules and authority, and punishable than conventional transgressions, (Smetana and Braeges, 1990). Blair (1997) suggests that the VIM is a pre-requisite for the development of the moral/conventional distinction. Only one previous study has investigated the validity of the VIM as an explanation for a child with psychopathic tendencies. Blair, (1997), using a child’s performance on moral/conventional
distinction and emotion attribution tasks, found that children with antisocial
tendencies (as measured using the APSD) performed more poorly on the
moral/conventional distinction task, and were less likely to attribute the emotions of
guilt or remorse.

Normally developing children best discriminate in their judgements between two
types of transgressions when they are asked to imagine situations where there are no
rules prohibiting the transgressions, and children with psychopathic tendencies are
less likely to make a discrimination under these conditions (Blair, 1995). Blair (1997)
explored the moral/conventional distinction and emotion attributions of two groups
of children at a school for children with EBD. This revealed that the children with
psychopathic tendencies as defined by the APSD made significantly less of a
moral/conventional distinction than the controls, as predicted. Secondly the children
with psychopathic tendencies did not make significantly less reference to the welfare
of victims, against predictions, although there was a strong trend in the predicted
direction. Thirdly, the children with psychopathic tendencies were significantly less
likely to attribute moral emotions (e.g. guilt and sympathy) to story protagonists, as
predicted. The children with psychopathic tendencies and controls attributed
happiness, embarrassment and fear similarly, suggesting that the former do not have
a global inability to experience emotion, assuming experience can be assessed
through the ability to attribute emotions. The findings also indicated that the children
with psychopathic tendencies did not suffer from a general inability to feel fear, in
line with skin conductance data but not the startle reflex data obtained from adult
psychopaths. This appears to be the first study to demonstrate similarities between
Antisocial Behaviour in children and adults at the cognitive level, where it had been
previously demonstrated at the behavioural level (Frick et al. 1994).

In addition to the moral/conventional distinction, two further indices of VIM have been developed. The first, the emotion attribution task, assesses an individual’s emotion concepts. Individuals with VIM dysfunction should show an aberrant concept of guilt, as this emotion is assumed to rely on intact VIM functioning (Blair, 1995). Studies with children and adults with Antisocial Behaviour have shown this impairment in the ability to attribute guilt, but not other emotions, to story characters (Blair, 1997). A second measure of VIM functioning is the extent to which individuals show an arousal response to distress cues. One of the outputs of the VIM is thought to be an arousal response (Blair, 1997), implying that an individual with VIM dysfunction should not show arousal to distress cues, as confirmed with individuals with Antisocial Behaviour (Blair, 1997).

It has been argued that Antisocial Behaviour can be measured in children using the APSD (Fisher & Blair 1998). The Psychopathy Screening Device identifies two key factors in the behaviour of adult psychopaths, one associated with impulsiveness and conduct problems, and the other with interpersonal and motivational aspects (Hare, 1998). Frick et al. (1994) suggest that extending the findings from adult Antisocial Behaviour to children could be important as longitudinal studies consistently indicate adult Antisocial Behaviour has its roots in childhood (e.g. Moffitt, 1993).

Frick et al. (1994) explored whether callous-unemotional (CU) traits could highlight a unique and potentially severe sub-group of children with conduct problems. Using a clinic-referred sample of 120, 6-13 year olds they proposed that conduct problem
behaviour is a heterogeneous outcome and there are multiple aetiological pathways that lead to the development of conduct problems. They argued that a CU trait is one pathway, associated with a unique set of causal factors. It is suggested that the development of conduct problems in this group is relatively independent of parental socialisation practices - the child is more likely to violate parental and societal norms, and the rights of others. Frick’s research suggests extending the two-factor model of Psychopathy, (as developed by Harpur, Hare and Hakstian, 1989; see Hare, 1998), to children could be important in understanding antisocial youth. The factor of callous and unemotional traits seems to be at least partially independent from conduct problem behaviours, and research into why these two factors are separate could be important in understanding whether there are unique pathways to the development of conduct disorder. This in turn could potentially aid early interventions and alter the negative long-term outcomes of Antisocial Behaviour, i.e. chronicity and ‘cost’, both financial and social. An area of difference between Frick’s work with children and Harpur’s work with adults was that a grandiose sense of self worth, failure to accept responsibility for an action, and boredom susceptibility, were all associated with the impulsiveness-conduct problems factor in children but Antisocial Behaviour in adults. This may reflect a developmental difference in manifestation of Antisocial Behaviour in children or it may be a reflection of the populations they studied - the adults in prison possibly being more deviant than the child clinic sample. A third reason could be that the child study relied on parent/teacher report and did not include interview or self-report data that the adult study did.

Research is needed to further test the concept of Antisocial Behaviour as an
independent construct from conduct problems, to help clarify the unique characteristics of these two psychological factors in children. Antisocial Behaviour is a difficult concept to apply to children, because of its negative connotations, especially in terms of prognosis and response to treatment.

As discussed, Antisocial Behaviour can be measured in children using the Antisocial Process Screening Device and an alternative way of interpreting the affective-interpersonal traits, which this highlights as important in the development of Antisocial Behaviour, is to consider them due to a deficit in the neuropsychological systems modulating empathy (Blair, 1995). Empathy is a concept, which has been defined in a variety of ways, but recently there has been an attempt to characterise it more precisely in terms of information processing and anatomical terms (Stevens et al. 2000).

Miller and Eisenberg (1988) argued there is a considerable body of research in which the role of empathy or sympathy, defined primarily in affective terms, has been examined in relation to moral and positive social behaviour. Such affective processes appear to be positively associated with moral development, with sympathetic and empathic reactions playing an important role in the reduction or inhibition of aggressive behaviour. They reviewed the available literature, defining empathy as an emotional response evoked by the affective state or situation of the other person. This emotion is either identical or similar to the state of the other. They argued, however, that in the literature it was often not possible to clarify whether the authors were referring to empathy, sympathy or both.
Most theorists believe empathy, although characterised by its affective component, involves cognition as well as affect. Miller and Eisenberg suggest from the review findings that picture/story methods of assessing empathy are less valid than other methods, and their association to aggression appeared more consistent with expectations for older children. The results of their review indicated that, overall, empathy was negatively related to aggression, externalising and antisocial behaviours. However, estimates of the common correlation were within the low to moderate range. They argued the results were affected by the age of subjects, mode of assessing empathy, or method of assessing negative behaviours. They argue that the inhibition of aggressive and antisocial reactions is often mediated by factors other than empathic responding, although suggest the construct of empathy remains an important area for research.

1.2.3.5. Emotion recognition and Antisocial Behaviour

It has been argued that the fear-based and empathy-based accounts of Antisocial Behaviour may not be incompatible (Blair and Frith, 2000). It is now widely believed that the amygdala is the locus for fear conditioning and it has also been implicated in processing the facial affects (emotions) of others.

The right hemisphere plays an important role in processing facial expressions of emotions and a number of studies have used facial emotional tasks with psychopaths (see Hare, 1998). When pairs of faces, which differed in emotional expression, were shown to inmates, the psychopaths showed little cerebral asymmetry, as measured by reaction times to photographs of faces depicting emotional expressions. There was no significant difference in reaction times to faces presented to the left visual field than
to the right visual field, suggesting both hemispheres are able to access the neural structures necessary to process the information. This finding is in contrast to non-psychopaths, whose reaction time was quicker when faces were presented to the left visual field, suggesting the right hemisphere plays an important role in visually processing facial expressions of emotion. One study involved the mental rotation of visually presented material, which drew on right parietal resources in non-psychopaths and the frontal cortex in psychopaths, suggesting differences in the organisation of the psychopath’s cerebral resources. It has also been found that psychopaths were less likely to use frontal and temporal regions of the brain while they performed verbal and emotional tasks.

Functional imaging studies have shown that the amygdala is involved in processing sad and fearful expressions. Work with adult patients with acquired amygdala lesions indicates that they are impaired in the recognition of fearful, and frequently sad, facial expressions (Stevens et al. 2000). Blair and Frith (2000) suggest that at least one locus of dysfunction at the anatomical level in a psychopath is within the amygdaloid body, as mentioned earlier, as there is an overlap of impairments between individuals with Antisocial Behaviour and individuals who have acquired lesions to the amygdala. If individuals with Antisocial Behaviour have amygdala dysfunction, it could be predicted that they will show difficulty not only processing sad expressions but also fearful ones.

Children with Antisocial Behaviour show reduced skin conductance response to sad but not angry expressions (e.g. Blair et al, 1999). This has been interpreted as indicating that children with Antisocial Behaviour show a reduced response to the
sadness of others. Three groups of boys: one high scoring on the APSD (EBD school); one low scoring on APSD (EBD school), and a control group of low scorers from mainstream education, were presented with three different types of stimuli. These consisted of: distress cues (e.g. a crying face), threatening stimuli (e.g. an angry face), and neutral stimuli (e.g. a book). The slides were obtained from the International Affective Picture System, with the exception of two of the distress cue slides. The distress cue and threatening stimuli were matched for stimulus intensity. Two teachers completed the APSD scale for each child in the EBD school (n= 42) and the highest and lowest scoring 16 children were assigned to the two groups, following task completion.

The control group were reportedly matched for age and BPVS and without EBD, although the specific number and method of selection are omitted from the paper. In addition, the age range of the groups appeared to be quite different from an exploration of the results table. The age range of the antisocial tendencies group was 9 years 11 months-16 years 1 month, for the EBD without antisocial tendencies 8 years 6 months-17 years 6 months, and the control group 11 years 9 months-14 years 4 months, a narrower range. Likewise with the BPVS scores, with the control group range of 80-99 (standardised), the children with antisocial tendencies 73-115 and the other group 69-124. Each viewed a series of 28 colour slides presented in random order, 18 of which were stimulus slides, each presented for 8 seconds. There was no main effect for group but there was a main effect for stimulus type. Children with antisocial tendencies were significantly less responsive to the distress cues than the control group. They were, however, less responsive to the threatening stimuli when compared to the other EBD group without antisocial tendencies. The children with
antisocial tendencies showed significantly greater responses to the threatening stimuli than the distress cues, but did not show significantly greater responses to the distress cues than the neutral stimuli. The children with antisocial tendencies showed a significantly greater response to the angry face than to the distress cues suggesting that children with antisocial tendencies, like adults, are not generally unresponsive to human expressions (Blair et al., 1997).

In addition, children with antisocial tendencies have been found to show selective recognition difficulties for sad and fearful expressions but not for angry, disgusted, surprised, or happy expressions (Blair and Coles, 2000; Stevens, Charman and Blair, 2001). Blair and Coles is one of the few studies to investigate the relationship between expression recognition and behavioural problems, and the only one sourced that uses a mixed, normal mainstream school population. A set of standardised pictures of facial expressions (the expression recognition hexagon stimuli) was presented to participants who had to name one of the six emotions illustrated (sadness, happiness, anger, disgust, fear and surprise).

This correlation design used 55 participants between the ages of 11-14 who attended a mainstream school in London, 31 male and 24 female. Their behaviour was then rated by two members of staff on the APSD, which showed that the ability to recognise sad expressions was inversely related to overall score ($r = -0.340$), and level of callous-unemotional factor ($r = -0.385$) but it was non-significant for the impulsive behaviour-conduct problems. The ability to recognise fearful expressions was inversely related to the APSD overall score ($r = -0.449$), the callous-unemotional factor ($r = -0.406$) and the impulsive-conduct problems factor ($r = -0.409$). BPVS score was not
a significant predictor of APSD score but was related to total recognition expression score ($r = .365$), although disgust was the only specific emotion with a significant correlation ($r = .373$). The range of APSD scores were from 0-29 and ten of the lowest scoring (0-4 range) and 11 of the highest scoring (13-29 range) results were compared in a group analysis. There were no significant group differences for age or BPVS. There were significant group differences for total expression recognition score, although sadness was the only specific emotion with a significant correlation.

This was a relatively small study but provided some evidence, using a normal population, that children’s ability to recognise the emotions of sadness and fearfulness was inversely related to their level of behavioural problems as measured by the APSD. It suggested that children who show behavioural problems are less likely to recognise sad and fearful expressions.

Children with antisocial tendencies have also been found to be less sensitive to sad and fearful expressions (Blair, Colledge, Murray and Mitchell, 2001). Using a male EBD population from three EBD schools resulted in the formation of two groups on the basis of their APSD scores. This was supplemented by an unspecified number of children from a local comprehensive school with statements of special educational needs, although they do not clarify if the statements are for EBD. Of the 132 boys screened using the APSD, almost all were described as from homes of low socio-economic status, a factor that could imply more about who gets statements than Antisocial Behaviour, as traditionally there are a higher proportion of children with statements from areas considered of lower socio-economic status. The population from which the sample was drawn, therefore, was skewed, for both EBD and socio-
economic status. Participants with APSD score, on the basis of combined teacher ratings, above 28 (n= 20) formed the antisocial tendencies group, and those below 20 (n= 31) formed the comparison group. The BPVS was administered and no significant group difference was found. The task (Pictures of Facial Affect Series) involved photographs of varying intensity of six different emotional expressions (happiness, surprise, fear, sadness, disgust, and anger) presented via computer screen. The children had to say aloud which emotion they thought was being shown as soon as they thought they knew what it was. For each of the emotions there were three presentations, each of three seconds.

There was a significant group difference for sadness, the children with antisocial tendencies needing more stages before they could recognise sad expressions. There were no significant group differences for happiness, anger, disgust and surprise, as predicted. The children with antisocial tendencies made more errors for fear and sadness, but when these were analysed separately, the group difference for sadness disappeared. Blair et al. argue that IQ and age was not associated with better performance as would be expected in relation to task difficulty. They did not, however control for IQ but for a measure of receptive language, which is useful in relation to following instructions. However, it cannot be equated with IQ, although it appears to be used like this in some of the research in this area. This study provides some evidence for the neurocognitive VIM model that would predict that children with antisocial tendencies would have selective impairments in the processing of sad and fearful expressions.
The ability of high scorers on the Antisocial Process Screening Device to recognise emotional facial expressions and emotion in vocal tone was investigated (Stevens, Charman and Blair, 2000). Stevens et al. found that children with Antisocial Behaviour as defined by the APSD were significantly poorer in the recognition of sad and fearful facial expressions and sad vocal tone. They were not significantly poorer in the recognition of happy and angry facial expressions (which rely on neural circuits not reliant on the amygdala) and fearful, happy and angry vocal tones. The results of this study were predicted on the basis of the neurocognitive VIM model, with one exception – the absence of a group effect for fearful vocal affect, which could not be explained. A measure of IQ or verbal ability was not controlled for in this research and may have been a significant factor. It would seem important in future investigations to obtain a measure of this.

One important factor, which has been missing from much of the reviewed research, is the use of either an appropriate control group or a normal population against which to test the theory. If, as has been suggested by Hare, adults with antisocial tendencies can be very successful in different professional fields, the fact that existing research predominantly uses prison or EBD populations could provide evidence regarding a sub-group in relation to Antisocial Behaviour. The lack of research with a normal population is a problem that should be remedied in future investigations.

The reviewed research shows that adults and children with Antisocial Behaviour have been reported to lack empathy (DSM-IV; Hare, 1998). In particular, they have been reported to be less likely to affectively respond to the emotions of others, in particular, the distress of others (Blair et al., 1997). The processing of emotional
expressions is important for normal socialisation and interaction, and reduced responsiveness to expressions of sadness and fear have been implicated in the development of Antisocial Behaviour (Blair, 1995). Recently, a model of affective empathy, The Violence Inhibition Mechanism (VIM) model has been developed (Blair, 1995; Blair et al., 1997).

With the VIM model, it is suggested that the amygdala is the primary locus of dysfunction in antisocial individuals (e.g. Blair and Frith, 2000). The suggestion is that the amygdala is crucial for associating the aversive unconditioned stimulus of another’s distress with representations of the act that has caused the distress and it is this process that allows socialisation (Blair et al., 2001). The amygdala appears to be involved in the forms of fear and empathic processing that are impaired with individuals with Antisocial Behaviour (Blair and Frith, 2000). Patients with amygdala lesions, and psychopaths, show impairments in aversive conditioning and reduced potentiation of startle reflex by visual primes (e.g. Patrick, 1994). Adults and children with Antisocial Behaviour show reduced skin conductance response to sad but not angry expressions (e.g. Blair et al, 1999). In addition, children with antisocial tendencies have been found to show selective recognition difficulties for sad and fearful expressions but not for angry, disgusted, surprised, or happy expressions (Blair and Coles, 2000; Stevens, Charman and Blair, 2001). Children with antisocial tendencies have also been found to be less sensitive to sad and fearful expressions (Blair et al., 2001).

This research proposes to employ the Antisocial Process Screening Device to explore differences in the recognition of emotion among a normal population of young
children. This is because no such research was found in the literature review undertaken for this study, and the weaknesses of the existing research, with the lack of appropriate control group, reducing its applicability to a normal population.

1.2.4. The relationship between ADHD and Antisocial Behaviour

Previous studies have shown that ADHD and CD are highly co-morbid (Colledge and Blair, 2000), although there appears to be a lack of research that has examined co-morbidity between ADHD and antisocial tendencies.

Fisher and Blair (1998) found a direct relationship between performance on a card-playing task (an EF task), and performance on the moral/conventional distinction task (an early index of appropriate moral socialisation), with poorer performance on both tasks associated with greater levels of behavioural disturbance. One possible explanation is that performance on both tasks is mediated by the same cognitive system and/or the same neural substrate - or two separate neural processes, which occur proximally in the brain. There was no significant correlation for BPVS score, suggesting that receptive language ability was not a mediating factor. It was, however, a small (39), skewed (EBD) population (9-16 years).

One study identified a higher than chance level of co-morbidity of ADHD and antisocial tendencies (Colledge and Blair, 2000) in a study of 71 boys (9-16 years) who attended EBD special schools. They employed a correlation design using teacher and residential staff ratings of the Antisocial Process Screening Device, Du Paul’s ADHD rating scale and Conner’s Abbreviated Symptoms Questionnaire and revealed a significant correlation ($r = .624$) between total ADHD score and total APSD score.
Neither age nor BPVS was correlated with any of the APSD and ADHD scores. The association between these measures did not appear to be due to an association between ADHD and the affective interpersonal disturbance (the Callous-Unemotional factor) linked to Antisocial Behaviour, as partial correlations revealed that the intercorrelations were principally due to the association between the impulsivity impairment associated with ADHD and the antisocial behaviour component (Impulsive-Conduct Problems) of Antisocial Behaviour. Sixteen of the twenty-two boys who met the criteria for antisocial tendencies (cut-off score 25 on the APSD) also met the criteria for ADHD according to the Du Paul ADHD rating scale (1991). The highly significant inter-correlation between ratings of ADHD and antisocial tendencies was in line with previous research investigating the comorbidity of ADHD and CD. This extends previous research by indicating that the affective callous-unemotional factor of Antisocial Behaviour was not associated with the components of ADHD independently of their association with the impulsive-conduct problem factor of Antisocial Behaviour. However, there appear to be no correlation studies with children as young as five years and therefore this will be investigated in a mainstream sample.

The relationship between ratings of ADHD and Antisocial Behaviour may be a reflection of the skewed population of the research, but it could be due to the connected neural systems hypothesised to be associated with specific difficulties, e.g. the amygdala with Antisocial Behaviour, the anterior cingulated with Impulsivity and the orbitofrontal cortex with Inattention. The suggested relationship between ADHD and Antisocial Behaviour is illustrated in Figure 1.1.
There appear to be multiple developmental routes to the display of antisocial behaviour. One route, perhaps associated with executive dysfunction, incorporates a risk factor that is associated with ADHD and antisocial behaviour. It has been suggested that the impulsivity component of ADHD may be due to early dysfunction in a neural circuit that includes anterior cingulate. A second route involves the neural systems that mediate empathy and fear. Antisocial Behaviour has been associated with a dysfunction within a neural circuit that includes the amygdala, or the orbitofrontal cortex or both. The anterior cingulate, amygdala and orbitofrontal cortex are all interconnected and it could be expected that a dysfunction in one may...
impact on the others, which in turn may explain the complexity of the relationship between ADHD and Antisocial Behaviour.

1.3. Summary

It appears only relatively recently that there has been research on the significance of behaviour problems in children under 6, for their potential as indicators of more long term difficulties, and to recognise the developmental and theoretical implications of problem behaviour prior to school entry (Campbell, 1995). There is a growing body of prospective evidence indicating that behaviour problems identified in pre-school years often persist and that serious disruptive behaviour problems in adolescence have a history which began in the pre-school years, (Campbell, 1995; Moffitt, 1993).

Inattention, impulsivity, motor restlessness and disruptiveness are found in all children to some degree, therefore a diagnosis of ADHD and other disruptive behaviour disorders is based more on assessment of developmentally inappropriate intensity, frequency, and/or duration of the behaviour rather than its mere presence. From a review of the sourced research a number of tasks have been associated with different research studies and different neuropsychological batteries have been used to assess attention deficits in ADHD. The consistent finding across studies is that individuals with ADHD do not have a generalised cognitive impairment, but they do manifest specific deficits (Swanson et al., 1998). From a review of eighteen studies (Pennington and Ozonoff, 1996) it appeared that tests of executive function were the best suited for a characterisation of a deficit relatively specific to ADHD. Overall a number of tests exist, some more applicable to young children and many overlapping in the skills they are measuring.
Checklists have been helpful for sharing information, making reliable observations, undertaking prevalence studies and looking at variation (Stevenson and Goodman, 2001). Pupils with teacher ratings on a hyperactive-impulsive factor at the end of Reception year tended to have high scores two years later when rated by their teachers (Merrell and Tymms, 2001). Du Paul (1991) compared ratings on an ADHD questionnaire and found them internally consistent, stable across time, and highly related to criterion measures of classroom performance. The reliability and criterion-related validity of currently employed diagnostic criteria for ADHD was supported. Their ADHD rating scale was considered to have adequate psychometric properties as a screening and assessment instrument. Internal consistency was established, with Cronbach’s alpha coefficients of .96 for total score, .90 for inattention-hyperactivity and .95 for impulsivity-hyperactivity were achieved with teacher ratings. Test-retest reliability of teacher ratings was established with random sub-samples of children at two-week intervals, with correlations of .94 for total score and inattention-hyperactivity, and .95 for impulsivity-hyperactivity.

As a result of the above information the present study will utilise the Du Paul Questionnaire (ADHD) and incorporate a number of EF tasks suitable for younger children.

Research into the neurocognitive basis of EBD suggests specific brain networks are associated with certain types. Executive dysfunction has been associated with ADHD (e.g. Pennington and Ozonoff, 1996), and it has been argued that intervention should be provided to high risk children early, as the presence of behaviour symptoms is the single best predictor of risk of future problems (e.g. Moffitt, 1993), and therefore it will be important to identify young children at risk of developing difficulties
associated with ADHD. This study will attempt to ascertain whether it is possible to discriminate identifiable sub-types among young children who were identified by adults as exhibiting emotional and behavioural problems.

Reviewed research shows that adults and children with Antisocial Behaviour have been reported to lack empathy (DSM-IV; Hare, 1991). In particular, they have been reported to be less likely to affectively respond to the emotions of others, in particular, the distress of others (Blair et al., 1997). The processing of emotional expressions is important for normal socialisation and interaction and reduced responsiveness to expressions of sadness and fear have been implicated in the development of Antisocial Behaviour (Blair, 1995). Recently, a model of affective empathy, The Violence Inhibition Mechanism (VIM) model has been developed (Blair, 1995; Blair et al., 1997). As regards the VIM model, it is suggested that the amygdala is the primary locus of dysfunction in antisocial individuals (e.g. Blair and Frith, 2000).

The suggestion is that the amygdala is crucial for associating the aversive unconditioned stimulus of another’s distress with representations of the act that has caused the distress and it is this process that allows socialisation (Blair et al., 2001). The amygdala appears to be involved in the forms of fear and empathic processing that are impaired with individuals with Antisocial Behaviour (Blair and Frith, 2000). Patients with amygdala lesions, and psychopaths, show impairments in aversive conditioning and reduced potentiation of startle reflex by visual primes (e.g. Patrick, 1994). Adults and children with Antisocial Behaviour show reduced skin conductance response to sad but not angry expressions (e.g. Blair et al, 1999). In
addition, children with antisocial tendencies have been found to show selective recognition difficulties for sad and fearful expressions but not for angry, disgusted, surprised, or happy expressions (Blair and Coles, 2000; Stevens, Charman and Blair, 2001). Children with antisocial tendencies have also been found to be less sensitive to sad and fearful expressions (Blair et al., 2001).

This research proposes to employ the Antisocial Process Screening Device to explore differences in the recognition of emotion among a normal population of young children. This is because no such research was found in the literature review undertaken for this study, and the weaknesses of the existing research, with the lack of appropriate control group, reducing its applicability to a normal population.

Previous studies have shown that ADHD and CD are highly co-morbid (Colledge and Blair, 2000), although there appears to be a lack of research that has examined co-morbidity between ADHD and antisocial tendencies. One study identified a higher than chance level of co-morbidity of ADHD and antisocial tendencies (Colledge and Blair, 2000). This extends previous research by indicating that the affective callous-unemotional factor of Antisocial Behaviour was not associated with the components of ADHD independently of their association with the impulsive-conduct problem factor of Antisocial Behaviour. There is a lack of research exploring the relationship between ADHD and Antisocial Behaviour in young children, however, evidence from studies with adults and older children (e.g. Colledge & Blair, 2000) suggest a significant correlation.
Connected neural systems have been hypothesised to be associated with specific difficulties, e.g. the amygdala with Antisocial Behaviour, the anterior cingulate with Impulsivity and the orbitofrontal cortex with Inattention. There appear to be multiple developmental routes to the display of antisocial behaviour, the anterior cingulate, amygdala and orbitofrontal cortex are all interconnected and it could be expected that a dysfunction in one may impact on the others, which in turn may explain the complexity of the relationship between ADHD and Antisocial Behaviour.

The goal of this thesis was to explore the relationship between observed behaviour and measures of ADHD and Antisocial Behaviour, with a mainstream group of five year olds. It will investigate whether there is a relationship between performance on executive function tasks (associated with ADHD), performance on emotion recognition tasks (associated with Antisocial Behaviour), and measures of behavioural difficulty, with young children. Two questionnaires were utilised (Frick and DuPaul) and children’s scores on the questionnaires used to group them into high scoring, low scoring, or both. The aim of the pilot study, therefore, was to form the four groups for the main study. One group of high scorers on the Frick questionnaire, one group of high scorers on the Du Paul, one group of high scorers on both and a control group of low scorers on both. The pilot also aimed to test the hypothesis that there will be a significant correlation between the ratings of young children on the Du Paul ADHD Questionnaire and Frick’s Antisocial Process Screening Device.
Chapter 2. PILOT STUDY

2.1. Introduction

The goal of this thesis was to explore the relationship between observed behaviour and measures of ADHD and Antisocial Behaviour, with a mainstream group of five year olds. It investigated the relationship between performance on executive function tasks, performance on emotion recognition tasks, and measures of behavioural difficulty with young children.

Four specific hypotheses were identified from the literature reviewed:

Hypothesis one

Young children who are rated more highly on the Du Paul ADHD questionnaire will perform less well on EF tasks than those rated less highly.

Hypothesis two

Young children who are rated more highly on the Frick Antisocial Process Screening Device will perform less well in emotion recognition, specifically in the recognition of both sad and fearful facial expressions than those rated less highly.

Hypothesis three

Young children who are rated more highly on both the Du Paul ADHD questionnaire and the Frick Antisocial Process Screening Device will perform less well on EF tasks, than those rated less highly on ADHD, but better in emotion recognition, specifically the recognition of sad and fearful facial expressions, than those rated highly in the Frick Antisocial Process Screening Device alone.

Hypothesis four
There will be a significant positive correlation between the ratings of young children on the Du Paul ADHD questionnaire and Frick’s Antisocial Process Screening Device (APSD).

Hypotheses 1, 2, and 3 required the identification of four groups of children: one group of high scorers on a measure of Antisocial Behaviour; one group of high scorers on a measure of ADHD; one group of high scorers on both measures, and a control group of low scorers on both measures. The primary purpose of this pilot study was to identify appropriate groups of children. In addition, to explore the relationship between Antisocial Behaviour and ADHD in a mainstream school sample of five year olds, as reflected in hypothesis 4.

Children rated highly on inattention, hyperactivity or impulsivity using a rating scale based on the diagnostic criteria for ADHD (DSM-IV, American Psychiatric Association, 1994) at the end of the reception year (5 years of age) tended to have high scores two years later (Merrell and Tymms, 2001). Indeed a number of studies have established the stability of adult ratings of behaviour problems in young children, (Campbell, 1995). Behaviour rating scales can be useful tools for highlighting children with behaviour problems (Merrell and Tymms, 2001) and was the method employed to form the groups for the main study.

Teachers are important sources of information on children’s emotional and behavioural functioning (Verhulst and Akkerhuis, 1989). Teachers have the opportunity to compare children with a large group of peers, which may highlight difficulties in academic and social skills not evident to parents. For this reason, class
teachers were requested to be the raters in this pilot study. Of course, it should be noted that no source of information is perfect, as class size, socio-economic school factors and teachers' personality, may be important determinants of variations in teachers' scores (Verhulst and Akkerhuis, 1989). For example, different teachers will have different expectations regarding behaviour and what is expected in one setting may not be in another. A teacher with a small class may be less affected by behaviour than a teacher with a larger class.

Different informants have different relationships with individuals and see them under different conditions, often disagreeing over the presence and severity of emotional and behavioural problems (Achenbach, McConaughy and Howell, 1987). For this reason, a second rater was enlisted to provide another view of the children as it has been suggested that assessment is incomplete without data from multiple sources (Verhulst and Akkerhuis, 1989). Therefore, for the pilot study two raters from each school were used, at least one of whom was the class teacher who has a unique contribution to make in the reporting of behaviour and the other adult was the choice of the school, with the criteria that this member of staff would be familiar with the children.

In this pilot study the aim was to highlight children with behaviour difficulties, reflecting tendencies associated with ADHD or Antisocial Behaviour. Those with the higher scores on the rating scales will form the three groups with behaviour problems: one for children with ADHD tendencies; one for children with Antisocial Behaviour tendencies; one for a potential co-morbid group, with both; and a control group with low scores on both, showing little or no tendencies. The low prevalence
rates for children with difficulties in these areas, as reflected in the literature review, would suggest that not many children were expected to achieve very high scores on the rating scales. As a result a relatively large sample of between 150-200 would be required to maximise the chances that the rating scales would discriminate to such an extent to form the four distinct groups, as the aim was to recruit twenty participants in each group to ensure sufficient power.

2.2. Methodology

2.2.1. Research Design

To form the groups for the main study, participants were invited from the foundation stage (reception classes) in a number of mainstream schools with whom the author works as an EP. This method of sample recruitment was decided because as working relationships had already been established, completing research would be easier for both the researcher and school staff. In addition, trust had already been established, which proved important in this potentially sensitive area in securing school participation. Although using schools the author worked in, and therefore an opportunity sample, could have built bias into the study.

The pilot study was to form the groups for the main study. It was predicted that the rating scores for the participants would be significantly correlated. The measures employed were the teachers’ and additional adults’ ratings of the children’s behavioural difficulties as indexed by the Du Paul ADHD Rating Scale-IV (Du Paul, 1998) and the Antisocial Process Screening Device (Frick et al., 1994; Frick & Hare, 1996; 2002).
2.2.2. Sample/participants

Fifteen schools were approached during the normal school planning meeting (September 2001) between the EP and head teacher, which occurs at the beginning of every academic year. Agreement was obtained from thirteen of the schools. The schools were a mixture of ‘first’ and ‘combined’ schools spread across the local area, incorporating both small village schools and larger ‘inner-city’ ones.

Within each school the participants were all the children from the reception classes, i.e. those who had begun full time education in September 2001 and who would be 5 years of age between 1st September and 31st December 2001. Some of the schools had more than one reception class and others a few children as part of a combined reception/year 1 class, dependent on the size of the school. The number of participants from each school ranged from 2 (a small village school) to 28 (a large combined school), with a mean of 13.8.

Of these thirteen schools, only one did not return any questionnaires. Overall, twelve schools produced 166 questionnaires, which formed the sample for analysis and subsequent formation of the groups. Of the 166 children, there were 83 boys and 83 girls. Data regarding the schools in terms of numbers on role, percentage eligible for free school meals, percentage on the SEN register, and percentage with a full Statement are shown in Table 2.1. These appear to highlight the variety that exists in the local area. The national figures suggest the participants appear to be a representative sample, with the exception of percentage on the SEN register, which is low. This may reflect the age of the sample as not many five year olds will be on the SEN register, unless with a significant level of need, e.g. a Statement for SLD. The
National average figure for SEN represents the whole age range and therefore this difference is not surprising. The Key Stage 1 SATS results for 2002, as shown in Table 2.2. Reflect both high achieving and low achieving schools, indicating that the sample was representative of a range of ability.

Table 2.3. Highlights the variety in ethnic origin of the school population as reported by parents and recorded locally, reflecting the local child population in schools. Dual heritage families are recorded separately to single heritage, if the original reporting clarifies this, e.g. there is a category for Asian and White, and Asian. The predominant category is White British, (range 55% - 100%); the next is Asian (range 0%-31%). Overall, data from the twelve schools in the pilot study appears to reflect a representative sample from across the local area and a level of variety among schools.
<table>
<thead>
<tr>
<th>School</th>
<th>Number on roll Jan2003</th>
<th>% Free School Meals</th>
<th>% SEN Register</th>
<th>% Full Statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>C.</td>
<td>45</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>D</td>
<td>135</td>
<td>1.6</td>
<td>0</td>
<td>0</td>
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<tr>
<td>G</td>
<td>130</td>
<td>37.7</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>K</td>
<td>194</td>
<td>17.0</td>
<td>0.5</td>
<td>0.5</td>
</tr>
<tr>
<td>L</td>
<td>84</td>
<td>2.4</td>
<td>13.1</td>
<td>0</td>
</tr>
<tr>
<td>N</td>
<td>25</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>O</td>
<td>33</td>
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<td>0.3</td>
<td>0.3</td>
</tr>
<tr>
<td>P</td>
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<td>5.4</td>
<td>0.6</td>
</tr>
<tr>
<td>R</td>
<td>197</td>
<td>2.5</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>S</td>
<td>51</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>St</td>
<td>403</td>
<td>2.2</td>
<td>11.2</td>
<td>1.5</td>
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<tr>
<td>W</td>
<td>119</td>
<td>17.6</td>
<td>1.7</td>
<td>1.7</td>
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<tr>
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<td>6.8</td>
<td>2.8</td>
<td>.47</td>
</tr>
<tr>
<td>Local Average 2003</td>
<td>11.9</td>
<td>1.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>National Averages 2002</td>
<td>17.1</td>
<td>19.1</td>
<td>1.6</td>
<td></td>
</tr>
</tbody>
</table>

Table 2.1. Comparison data for the child population of the pilot study schools against the local and national average.
<table>
<thead>
<tr>
<th>Key Stage 1 – 2002</th>
<th>Reading</th>
<th>Spelling</th>
<th>Writing</th>
<th>Maths</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>D</td>
<td>60</td>
<td>55</td>
<td>80</td>
<td>80</td>
</tr>
<tr>
<td>G</td>
<td>65.5</td>
<td>48.3</td>
<td>75.9</td>
<td>69</td>
</tr>
<tr>
<td>K</td>
<td>92</td>
<td>74</td>
<td>86</td>
<td>90</td>
</tr>
<tr>
<td>L</td>
<td>91.7</td>
<td>83.3</td>
<td>91.7</td>
<td>100</td>
</tr>
<tr>
<td>N</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>O</td>
<td>97.5</td>
<td>92.6</td>
<td>97.5</td>
<td>98.8</td>
</tr>
<tr>
<td>P</td>
<td>91.7</td>
<td>81</td>
<td>98.8</td>
<td>100</td>
</tr>
<tr>
<td>R</td>
<td>97.1</td>
<td>97.1</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>S</td>
<td>76.9</td>
<td>53.8</td>
<td>69.2</td>
<td>84.6</td>
</tr>
<tr>
<td>St</td>
<td>94.3</td>
<td>85.7</td>
<td>94.3</td>
<td>97.1</td>
</tr>
<tr>
<td>W</td>
<td>65.7</td>
<td>57.1</td>
<td>74.3</td>
<td>80</td>
</tr>
<tr>
<td>Average for sample</td>
<td>86</td>
<td>75.7</td>
<td>89</td>
<td>91.6</td>
</tr>
<tr>
<td>Local Average 2002</td>
<td>80.7</td>
<td>72.4</td>
<td>83.8</td>
<td>88.9</td>
</tr>
<tr>
<td>National Averages 2002</td>
<td>84</td>
<td>78</td>
<td>86</td>
<td>90</td>
</tr>
</tbody>
</table>

Table 2.2. Key Stage 1 SATS results for 2002 by school, local and national average.
Table 2.3. Data to show the ethnic breakdown of the population of the schools as reported by parents and recorded by the LEA (%)
2.2.3. Procedure

Initial steps involved careful planning to ensure the process for schools was made as simple as possible and to minimise any work they would have to do. By going through this process the chances of school involvement would probably be increased, given the acknowledged heavy workload on teachers. This involved producing a letter for schools they could give to parents to ensure they were kept informed and had the opportunity to withdraw their child if they wanted to. Schools were given a choice of letters, one with the psychological service heading and the other with space to allow for their own heading (see Appendix 1). In addition, a further letter was provided for the Reception Class teacher to explain what the research was about, as some were not present in the meeting when the research was initially discussed (see Appendix 1).

Schools were approached during the normal school planning meeting between the EP and head teacher, which occurs, at the minimum, at the beginning of every academic year. Agreement was obtained at this meeting and confirmation followed up in writing as part of the normal planning minutes. At the meeting a clear description of the procedure was given and schools were requested to complete the questionnaires in the week following their delivery. A specific date was given at the meeting and confirmed in writing on the planning minutes. In addition, a copy of the form, which would require completion was shared with the head teacher and left at the school. If the school had any objections they could refuse involvement and no pressure was brought to bear on the schools. Schools were asked to provide two raters, one being the class teacher and the other an adult who was familiar with the child. The choice of the second rater was left to the school, and in ten schools (73.4 % of the
questionnaires), the questionnaires were also completed by ‘learning support assistants’ (including ‘classroom assistants’, ‘teaching assistants’ and ‘nursery assistants’). In one school the head teacher (10.8% of questionnaires) was the second person to complete a questionnaire for a group of pupils, and in a further school the second rater was a nursery nurse (14.5% of questionnaires).

The forms (two per child in the reception class) were posted to schools to arrive in the week beginning the 8th October 2001, for completion the following week, just prior to half term. An explanatory letter (see Appendix 2) was included to remind schools what was required and a self addressed envelope provided for the internal mail system for the return of the forms. Class teachers and one other adult familiar with a child (e.g. classroom assistant, head teacher) were asked to complete the forms independently by rating the frequency that best describes the child’s behaviour since the beginning of the school year. They were also asked to provide demographic information (i.e. name of child, age, name and position of respondent).

2.2.3.1. Ethical Considerations

As the research areas covered were potentially sensitive, especially in relation to the links with Antisocial Behaviour, a number of measures were undertaken.

Established questionnaires in the respective research fields were employed. They contained some questions which were potentially sensitive, e.g. ‘uses or ‘cons’ other people to get what he/she wants’, but unlikely to cause significant distress to adults completing the questionnaires.
To ensure informed consent a meeting was arranged with the head teacher of the schools to give an outline of the research, details of the questionnaire and letters, address any issues raised and obtain agreement to proceed further. The head teachers were asked to inform the reception staff about the study, including the commitment required completing the questionnaires (which varied greatly dependent on the size of the classes), and potential disruption by the withdrawal of children in the main study. In addition an explanatory letter was left with the head teacher to give to the Reception teacher (an example is in Appendix 1b). The teachers of the involved classes were sent an additional letter from the researcher regarding the main purpose of the research at the same time as the questionnaires (an example is in Appendix 2). In addition, parental letters were designed for schools to send to parents to obtain parental permission (an example is in Appendix 1a), and parents were offered the opportunity to withdraw their child from both the pilot study and main study. With both the teacher and parent letters, direct contact with the researcher was encouraged and a telephone number was provided for any questions. There were no adverse consequences for schools or parents for not participating in the research, and no pressure applied to participate.

The questionnaires were completed as validly as possible, with time given for completion and controlled for the time of year. Two independent raters were used and the process was explained, (e.g. two questionnaires for each child). The procedure for completion of the questionnaire was written at the top of each sheet and gone through previously with the head teacher.
Following completion of the group formation, head teachers were sent brief letters (an example is in Appendix 3), highlighting the number of children who would be in the main study and a date for completion, with an assurance that this would involve work for the researcher but not for the school.

Confidentiality was assured, and anonymity guaranteed e.g. participant numbers rather than names were used. No participant, adult or school is recognisable from the data reported in the research, and the names of towns and local authority disguised.

These considerations follow those set out by the BPS (2000): that participants should have confidence in investigators; that there are no foreseeable threats to their psychological well-being; that adults were informed of the objectives of the research and the activities were clearly explained to children, and consent obtained; there was no pressure for children or schools to remain in the research, and they could have withdrawn at any time. All information obtained has remained confidential and is non-identifiable in the thesis.

2.2.4. Measures

The following two rating scales, the ADHD Rating Scale – IV (DuPaul et al. 1998), and the Antisocial Process Screening Device (Frick et al., 1994; Frick & Hare, 1996; 2002) were printed front and back respectively on an A4 sheet for ease of completion and a title ‘Behaviour Rating Scales’ created (an example is in Appendix 4). The original headings of each separate form became sub-headings. In addition the demographic information part of the APSD, which formed the back sheet, became surplus and was deleted, as demographic information was collated from the front
sheet, such as the child's age, sex and the rater's position in the school. One question on the APSD was removed ('engages in illegal activities'), as it did not seem appropriate for the age of the children involved, even though it was originally completed on six year olds.

The ADHD Rating Scale – IV (DuPaul et al. 1998), a behaviour rating scale (school version) was utilised. This is based on the DSM-IV (Diagnostic and Statistical Manual of Mental Disorders, 4th edition, American Psychiatric Association, 1994) criteria and contains eighteen scale items. The scale comprises two factors: Inattention and Hyperactivity-Impulsivity, which combine to produce a total score. Respondents are asked to indicate the frequency of behaviours on a four-point Likert scale ('never or rarely', 'sometimes', 'often', and 'very often'). Inattention is represented by the odd numbered items, e.g. 'has difficulty sustaining attention in tasks or play activities' and Hyperactivity-Impulsivity by the even numbered items, e.g. 'fidgets with hands or feet or squirms in seat'. Alternating items in this way was designed to reduce response bias. This scale provides measures of Inattention and Hyperactivity-Impulsivity. The higher the total scores, the higher the frequency of ADHD behaviours exhibited. With reference to internal consistency of the scale (school version), for total scores the manual reports an alpha coefficient of 0.94; for the Inattention factor, 0.96; for the Hyperactivity-Impulsivity factor, 0.88. The Pearson product-moment correlation coefficients for test-retest reliability data of teacher ratings four weeks apart were: Total score=0.90, Inattention=0.89 and Hyperactivity-Impulsivity= 0.88. With reference to validity, teacher ratings on the scale discriminated between children representing different ADHD subtypes from...
control groups (75-78%, \(p < .0001\), for Inattention; 78%, \(p < .01\) for Hyperactivity-Impulsivity).

This research utilised The Antisocial Process Screening Device (Frick & Hare, 1996; 2002), a 20 item rating scale (school version) that measures two factors, Callous-Unemotional and Impulsive-Conduct Problems, which combine to produce a total score. This is designed to measure Antisocial Behaviour and was modelled after the Psychopathy Checklist-Revised (PCL-R: Hare, 1991), which is a reliable measure of Antisocial Behaviour in adults. Constructs from the PCL-R were made into items on the APSD rating scale, incorporating both the callous-unemotional personality features, e.g. 'is concerned about the feelings of others' and the impulsive-antisocial behaviour pattern, e.g. 'engages in risky or dangerous activities'. Respondents are asked to indicate the frequency of behaviours on a three-point Likert scale ('not at all true', 'sometimes true', and 'definitely true'). The higher the total scores the higher the frequency of Antisocial Behaviour behaviours exhibited. The general reporting convention for the Psychopathy Checklist (PCL-R) is: <15 low, 15-24 medium, 25+ high and 30+ very high. With reference to internal reliability of the scale, for total scores, alpha coefficients ranged from 0.85 to 0.93 (.927); for the Callous-Unemotional factor, 0.70-0.79 (.786); for the Impulsivity-Conduct Problems factor, 0.64-0.81 (.814). The figures for teachers are in brackets, reflecting higher values. With reference to validity, associations between the APSD scale and the DSM-IV Symptoms were reflected in the following significant correlations \((p < .001)\): 0.650 for ODD; 0.562 for CD; 0.637 for Impulsivity-Hyperactivity and 0.633 for Inattention.
2.3. Results

No respondents omitted any of the items on the ADHD side of the rating scale and only one respondent failed to answer a few questions on the Antisocial Behaviour side of the rating scale. There was a 90% return rate for the rating scales as twelve of the thirteen schools returned their questionnaires. Only one parent, to my knowledge, actively withdrew their child by signing the slip provided.

For the purposes of this research, the total raw scores for each side of the questionnaire were used separately for statistical analysis. Preliminary analyses were performed to check for violations of the assumptions of normality. These highlighted that the scales were not measuring characteristics normally distributed within the population from which they came. This was as expected as both the scales employed measure difficulties that are not normally distributed in the population. Therefore the relationship between the two attention scores for each child (as measured by the Du Paul) was investigated using Spearman’s Rank Order Correlation. There was a positive correlation between the two scores \( r = .776, n = 166, p<0.01 \).

The relationship between the two empathy scores for each child (as measured by the Frick) was investigated using Spearman’s Rank Order Correlation. There was a significant positive correlation between the two scores \( r = .526, n = 166, p<0.01 \).

The ratings did appear quite consistent for each child. There did appear to be a slight difference between teachers and support staff, with the latter tending to rate higher, but they appeared to be consistent in this. Likewise the teachers appeared to rate
consistently lower. Therefore for each child an average of the two raters was calculated for each scale.

The relationship between the average of the two ADHD scores (as measured by the Du Paul) and the average of the two Antisocial Behaviour (as measured by the Frick APSD) scores for each child was investigated using Spearman’s Rank Order Correlation. There was a significant positive correlation between the two scores ($r = .431, n = 166, p < 0.01$).

This supports the hypothesis that there will be a significant positive correlation between the ratings of young children on the Du Paul ADHD Questionnaire and the Frick APSD.

As the higher the score the more significant the concern, the results were ranked for:

- The children who scored the highest on the ADHD scale (max. score of 54)
- The children who scored the highest on the Antisocial Process Screening Device (max. score of 38)
- The children who scored highest on both
- The children who scored lowest on both

To produce four groups of reasonably equal size the top 20 scorers on the ADHD scale formed one group (ADHD group), if their Antisocial Behaviour scores were lower than those of the Antisocial Behaviour group. The top twenty scorers on the Antisocial Behaviour scale formed a second group (Antisocial Behaviour group), if their ADHD scores were lower than those of the ADHD group. The lowest twenty scorers on both scales formed a third group (Control group). The children, who
scored as highly on the ADHD scale as the ADHD group, and as highly on the Antisocial Behaviour scale as the Antisocial Behaviour group, formed the Combined group. This resulted in the formation of four groups for the main study of reasonably equal size:

Group 1: 20 children (16 males, 4 females) for the combined group, with an average score of at least 15 on the ADHD scale and at least 12 on the APSD. Nine schools were represented in this group.

Group 2: 18 children (14 males, 4 females) for the ADHD group, with an average score of at least 15 on the ADHD scale and 11 or less on the APSD. Eight schools were represented in this group.

Group 3: 19 children (9 males, 10 females) for the Antisocial Behaviour group, with an average score of at least 12 on the APSD and 15 or less on the ADHD scale. Seven schools were represented in this group.

Group 4: 18 children (9 males, 9 females) for the control group, with an average score of less than 10 on both the ADHD and APSD. Six schools were represented in this group.

(n = 75, 64% males, 36% females)

2.4. Discussion

A relatively small number of issues arose whilst completing the pilot project. Only one rater omitted a few of the questions on the Antisocial Behaviour rating scale, as they commented they were not appropriate to the age of the children involved. This was a school that commented that they only had one rater who knew the children well enough, and therefore this score alone was used for the pilot study to represent both
raters and subsequently became the average. As a small village school with only three reception children this did not have a significant effect on the data collected and the participants did not form part of the main study.

Only one school did not return their forms, which involved nine children. As there was an otherwise excellent return rate I did not try to pursue these, for a number of reasons. One was that I am presently involved with the school on a potential Tribunal case, which was inducing a lot of stress for the staff and animosity towards the LEA. Another was that I am only covering this school whilst a colleague takes maternity leave and I did not want to adversely affect the relationship between the school and the service. This may reinforce the suggestion that schools are more willing to participate in research when relationships are already established, or they could simply have forgotten. Two schools refused to participate. For one this was because they were a teacher short in the reception year. In the other there was a newly qualified teacher in the reception class and the head teacher felt that it would be too much to ask at this stage.

Using reception classes helped to control for the length of time within the more ‘formal’ education system as at the time, locally, entry into formal education was staggered over three terms with children commencing in the term after their fourth birthday. It was too complicated to try and control for the length or type of previous ‘educational’ experience, although all the children would have been eligible for early years funding for the previous academic year. The time chosen for the completion of forms was designed to give staff a chance to familiarise themselves with the children.
It could be argued that this may not have been long enough but the fact that only one rater made reference to this fact is encouraging.

The children who formed the groups were compared on measures such as ethnicity other than white and eligibility for free school meals (Table 2.4. p. 99). These factors do not appear to be influencing the group formation as only 5% of the main study sample fitted these categories and they therefore did not appear to be influential characteristics. The level of registered SEN for the main study sample was 16%, higher than the local schools’ average SEN population of 3%, but less than the national average. The sample of the main study therefore appeared fairly representative for the local area, with variety between schools.

All the children in each setting were rated so staff did not directly select children on the basis of their perceptions. The two rating scales were printed front and back respectively on an A4 sheet. This was for ease of completion. As the scales were completed in the same order, an order effect may have been created. Equally order of presentation was controlled across the groups. The recommended age limits for the scales, was from 5 years the ADHD and 6 years the Antisocial Behaviour. These were above the age of some of the children for which there were standardised figures from the questionnaire manual. These ages are recommended due to the low numbers in the younger age groups with reference to standardisation in the original questionnaire design. They can, reportedly, be applied to younger children.

The aim of obtaining between 150-200 questionnaires was achieved (166) and this final number was sufficient to form the groups needed. It was important to maximise
numbers to ease the discrimination process for the formation of the four groups. The scores on the questionnaires were ranked as described, and four different groups formed on the basis of the scores. The scales do appear to discriminate among participants and the results were not all massed around a mid-point.

There are a number of suggested reasons for the high return rate: the onus on parents to withdraw; expressed genuine interest in research and behaviour; goodwill built up in established patch; clarity of role for school; information/scales ready to see before agreement given; relative ease of school role (although for some reception teachers very hard, dependent on numbers in class); authority person in school (head teacher) on board; prestige for school (e.g. Beacon school keen to put in their literature); time of year (Autumn), with more energy/enthusiasm; did not want to upset EP when needed support over the year; promised confidentiality with the data, which was particularly important for one teacher who was concerned that children could be labelled as having a behaviour difficulty.
<table>
<thead>
<tr>
<th>School</th>
<th>n</th>
<th>SEN registered</th>
<th>Ethnicity (Child)</th>
<th>Eligibility FSM</th>
</tr>
</thead>
<tbody>
<tr>
<td>School a</td>
<td>2</td>
<td></td>
<td>2 white</td>
<td></td>
</tr>
<tr>
<td>School b</td>
<td>13</td>
<td>3</td>
<td>1 black (Ca.)</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>12 white</td>
<td></td>
</tr>
<tr>
<td>School c</td>
<td>5</td>
<td></td>
<td>5 white</td>
<td></td>
</tr>
<tr>
<td>School d</td>
<td>9</td>
<td>2</td>
<td>9 white</td>
<td>2</td>
</tr>
<tr>
<td>School e</td>
<td>2</td>
<td>1</td>
<td>2 white</td>
<td></td>
</tr>
<tr>
<td>School f</td>
<td>17</td>
<td></td>
<td>17 white</td>
<td></td>
</tr>
<tr>
<td>School g</td>
<td>15</td>
<td>2</td>
<td>15 white</td>
<td></td>
</tr>
<tr>
<td>School h</td>
<td>6</td>
<td>1</td>
<td>1 Iranian</td>
<td>5 white</td>
</tr>
<tr>
<td>School I</td>
<td>4</td>
<td></td>
<td>1 black</td>
<td>3 white</td>
</tr>
<tr>
<td>School j</td>
<td>2</td>
<td>2</td>
<td>1 black (Afr)</td>
<td>1 white</td>
</tr>
<tr>
<td>Total</td>
<td>75</td>
<td>12 (16%)</td>
<td>71 white (95%)</td>
<td>4 other (5%)</td>
</tr>
</tbody>
</table>

Table 2.4. Data to show the number, level of Special Educational Needs, ethnicity and eligibility for free school meals of the child population of the sample of schools as reported by schools.
2.5. **Implications for main study**

This pilot project was principally designed to form the groups for the main study. One factor that I have tried to control is school environment by having a control group participant from as many of the schools as possible who have participants in the other groups. This goes some way to trying to take account of the educational environment, although this was only done within the criteria for grouping participants previously discussed.

Research suggests that children who display behaviours associated with ADHD will perform more poorly on EF type tasks. It also suggests that children who display behaviours associated with Antisocial Behaviour will have more difficulty in recognising emotion, specifically sad and fearful facial expressions. The main study has been designed to answer the following research question: Do groups of children who are differentiated by teacher rating of type of behavioural difficulty differ in their score profile on performance measures of EF and emotion recognition? Following the completion of the pilot study hypotheses 1-3 remained.

It is hoped that the four groups will be balanced for verbal ability. However, as preschool children with behaviour problems have been found to show delays in language development and overall cognitive functioning, (e.g. Campbell, 1995), the British Picture Vocabulary Scale (BPVS) will be administered to have some measure of language development across the four groups. If there are any differences between the four groups then they could be expected to be with the control group having higher scores. No significant difference is expected between the four groups on BPVS performance.
Chapter 3. **METHOD**

3.1. **Methodology**

3.1.1. **Design**

A Between-Subjects Design was employed to explore any significant differences between the four groups in the tasks. The Independent Variable (IV) was the group (formed on the basis of their questionnaire scores). The Dependent Variables (DV) the range of performance measures all participants completed. (Executive Function measures of Tower-rule violation; Tower-accuracy; Visual Attention-speed, and Visual Attention-accuracy. Emotion recognition measure of Total Adult faces and Total Child faces).

As a result an Analysis of Variance (ANOVA) was used to analyse the data, as there is 1 IV and more than 2 DV, which are not all directly related. ANOVAS are used when comparing the mean scores of more than two groups. It compares the variance between the different groups with the variability within each of the groups. An F ratio is calculated representing the variance, and if significant, the null hypothesis is rejected. It does not tell us which of the groups differ and therefore post-hoc tests will be conducted. These are designed to help protect against Type 1 errors, are stricter and make it more difficult to obtain statistically significant differences.

The variables were checked for any violations of the assumptions underlying a parametric statistical technique, i.e. to check for violations of the assumptions of normality (Pallant, 2001). Descriptive statistics were employed to summarise the characteristics of the dependent variables in the main study. On the Kolmogorov-Smirnov Test, the Visual Attention-speed Total and Total Child Faces had non-
significant results of $p = .222$ and $p = .084$ respectively, indicating that the assumption of normality was adequately met. The BPVS ($p = .047$), Tower-rule violation ($p = .001$), Tower-accuracy ($p = .001$), Visual Attention-accuracy Total ($p = .001$) and Total Adult Faces ($p = .007$) suggest violation of the assumption of normality. This is quite common in larger samples.

Further results from the preliminary analyses produced satisfactory results (Pallant, 2001), as the Histogram that highlighted the shape of the distribution for each dependent variable was reasonably normally distributed. This was further supported with the Normal Q-Q Plots, a reasonably straight line suggesting a normal distribution. Overall, given the above descriptors for the dependent variables, they suggested the data originated from a reasonably normal population. As a parametric test is a robust approach and can tolerate any minor violations of assumptions with a good size sample (Pallant, 2001), with 20 or almost 20 in each cell it was the most appropriate test to use. A series of ANOVAs was conducted, although this could introduce an inflated Type 1 error (i.e. the more tests run the more likely it is to find a significant result, even if in reality there are no real differences between the groups). To reduce this risk a more stringent alpha value was set by using a Bonferroni adjustment (Pallant, 2001), the normal alpha value of .05, therefore, would be divided by the number of related tests and the resulting new value used as the cut-off for statistical significance (.0125).

3.1.2. Participants

The participants were all aged 5 and attended reception classes across eight different schools. There were 48 (64%) males and 27 (36%) females. This ranged from 2 up to
17 children per school, with no school having more than 23% of the sample. The 75 participants formed four groups on the basis of their behaviour rating scores:

Group 1 (ADHD/AB): 20 children (16 males, 4 females) for the combined group, whose average score was at least 15 on the ADHD scale and at least 12 on the Antisocial Behaviour scale. Nine schools were represented in this group.

Group 2 (ADHD): 18 children (14 males, 4 females) for the ADHD group, whose average score was at least 15 on the ADHD scale and less than 12 on the Antisocial Behaviour scale. Eight schools were represented in this group.

Group 3 (AB): 19 children (9 males, 10 females) for the Antisocial Behaviour group, whose average score was at least 12 on the Antisocial Behaviour scale and 15 or less on the ADHD scale. Seven schools were represented in this group.

Group 4 (C): 18 children (9 males, 9 females) for the control group, whose average score on both the ADHD and Antisocial Behaviour scales was less than 10. Six schools were represented in this group.

(n = 75, 64% males, 36% females)

A letter was used to obtain parental permission for all children who participated in the main study at the same time as the pilot study (see Appendix 1.). Parents were offered the opportunity to withdraw their child or to discuss by telephone any questions they had.
3.1.3. Procedure

Each participant was assessed on an individual basis in a quiet area of his or her school. The assessment commenced after a short period involving the familiarisation of child and EP, where ‘informed consent’ was obtained, relative to the age of the participants. For example, it was explained in simple language that there were a number of games they could play with the EP, which would not last very long. Each child was asked if they were happy to try the games at the beginning of the session and no child refused. No child asked to stop during the sessions. Each task was administered in turn following the standardised instructions without any discussion regarding objectives or expectations. Each child was given the tasks in the same order as they are described below. The procedure was designed to last for less than an hour due to the age of the children involved.

Ethical Considerations

As the research areas covered were potentially sensitive, especially in relation to the links with Antisocial Behaviour, a number of measures were undertaken.

With both the original teacher and parent letters, direct contact with the researcher was encouraged and a telephone number was provided for any questions. There were no adverse consequences for schools or parents for not participating in the research, and no pressure applied to participate.

Following completion of the group formation, Head Teachers were sent brief letters highlighting the number of children who would be in the main study, and a date for completion, with an assurance that this would involve work for the researcher but not
for the school. Schools were encouraged to contact the researcher if they had any concerns or questions.

Confidentiality was assured, and anonymity guaranteed e.g. participant numbers rather than names were used. No participant, adult or school is recognisable from the data reported in the research, and the names of towns and local authority disguised. These considerations follow those set out by the BPS (2000).

Participants were asked if they were happy to take part after they had been given a simple explanation for why I was there. The tasks were completed in an area that was easy for young children to leave, if they chose to do so.

3.1.4. Measures

EF tasks


The following sub-tests from the Executive Function domain were administered. They are designed to create a reliable and valid instrument sensitive to subtle deficiencies that can interfere with learning in pre-school and school age children, and for the study of normal and atypical neuropsychological development.

- **Tower:** This subtest assesses the executive functions of planning, monitoring, self-regulation and problem solving. The children had to move three coloured balls to target positions on three pegs in a prescribed number of moves. There are also rules to which the child must adhere on this timed task.
(Reliability [internal consistency] score of .89 - .90; Construct Validity is reflected in the correlation between the Attention/Executive domain and the Tower subtest [.68]).

Materials: Stimulus Booklet, Tower Model and Balls, Stopwatch

Time Limit: Items 1-4, 30 seconds per item; Items 5-20, 45 seconds per item.

Discontinue Rule: Discontinue after four consecutive scores of 0.

The task is introduced with a picture of squirrels in the Stimulus Booklet and the following instructions were read to the child, with visual prompts to the pictures as appropriate.

‘Once upon a time there were three squirrels who lived in three tree tops over the water. Show me the red squirrel…. blue squirrel…. and the yellow squirrel’. (The tower model is placed in front of the child).

‘Pretend these balls are squirrels. They like to jump from tree to tree like this, (demonstrated by putting the red ball on top of the blue ball), now you do it.’

The child was encouraged to move the balls one at a time. Then one teaching example was done with the following instructions.

‘Here are the rules for playing this game: You can move only one ball/squirrel at a time. You must keep the balls/squirrels on the pegs/trees when you are not moving them. Leave them there until you need to move them. A move is finished when you take your hand off the ball/squirrel.

See this red one, put it where it should go. See, yours looks just like this one.’ (The child is shown a picture to copy each time).
‘Now we are going to do some more. For each one, I will say how many moves you can make’. For each item the instructions are read aloud and then ‘Now make yours look exactly like this with….move/s. Go as quickly as you can’.

Before each item the balls are placed in the standard starting position as shown in the Stimulus Booklet. Timing begins as soon as the instruction is read and stopped when the child has completed an item or the time limit has elapsed. The child moves the balls one at a time to produce the target position shown to them. A performance is correct if the child achieves the target position in the specified number of moves within the time limit for that item. Scores were obtained for the number of correct responses, within the time limit and the correct number of moves (Tower-accuracy). Scores were also obtained for the number of rule violations every time a child breaks a rule (Tower-rule violation).

- **Visual Attention**: This subtest assesses the speed and accuracy with which a child can scan an array and locate a target. The children had to scan the array of pictures and mark the targets as quickly and accurately as possible. There are two arrays administered for each child. Younger children get a simple structured array and a random array.

  (Reliability [internal consistency] score of .68) Construct Validity is reflected in the correlation between the Attention/Executive domain and the Visual Attention subtest [.66]).


Time Limit: 180 seconds per item.
The task was introduced with the cat pages open in front of the child, with the target picture at the top centre of the page in front of the child. The child was provided with a red pencil/crayon and given the following instructions:

'Here is a cat. Down here are more cats. See if you can find all the cats. When you find a cat, make a mark on it like this. Mark all the cats as quickly as you can. Tell me when you are finished. Are you ready? Go'. The time taken is recorded.

A second, similar task with faces is introduced straight after with the following instructions:

'Here you see two faces. Down here are more faces. Now try to find all the faces that look exactly like any of the ones at the top of the page and put a line through every one you find down here. These two faces do not need to be next to each other down here. Try to find all the faces as quickly as you can. Go in this direction without skipping any faces. When you finish this row, go on to the next row. Tell me when you have finished. Are you ready? Go'.

The number of correctly marked cats in the time limit was recorded (Visual Attention- accuracy [cats]), as was the time taken (Visual Attention- speed [cats]).

The number of correctly marked faces in the time limit was recorded (Visual Attention-accuracy [faces]), as was the time taken (Visual Attention- speed [faces]).

Visual Attention-accuracy Total is the combined accuracy scores. Visual Attention-speed Total is the combined speed scores.

Emotion Recognition (Facial Expressions) tasks

DANVA - (The Diagnostic Analysis of Nonverbal Accuracy -2 - Nowicki & Duke, 1994).
The following sub-tests from the receptive tests of the DANVA were administered as a measure of emotion recognition (via facial expression) at different intensities. The stimuli represent the basic emotions of happiness, sadness, fear and anger at both high and low intensity. With reference to test-retest reliability, the DANVA 2-AF manual indicates consistency over time, with $r = .84$, $n = 45$ (Nowicki & Carton, 1992), for college students and .83 for internal consistency for children from 3y8m to 5y 11m (Verbeek, 1996). For the DANVA 2-CF test-retest reliability the manual indicates a range from $r = .74$, $n = 84$ (Nowicki & Carton, 1992) to $r = .66$, $n = 54$ for pre-school children (Verbeek, 1996), and a range of .69 - .81 for internal consistency (Nowicki & Duke, 1994).

- **Emotion recognition - Adult Facial Expressions:** This consists of 24 colour photographs of an equal number of happy, sad, angry and fearful adult facial expressions of high and low intensities, 10 males and 14 females, which the participants had to identify. Each photograph was shown to the participant for 2 seconds and the participant had to say whether the adult looked happy, sad, scared or angry. Each photograph was presented separately, followed by the child photographs.

- **Emotion recognition - Child Facial Expressions:** This consists of 24 colour photographs of an equal number of happy, sad, angry and fearful child facial expressions of high and low intensities, 12 female and 12 male, which the participants had to identify. Each photograph was shown to the participant for 2 seconds and the participant had to say whether the child looked happy, sad, scared or angry. Each photograph was presented separately.
Materials: DANVA2 photo album, (a copy of the photographs used are in Appendix 5).

Specific instructions: 'I am going to show you some people's faces and I want you to tell me how they feel. I want you to tell me if they are happy, sad, angry or scared. Let's start with adults' faces. Is this a happy, sad, angry or scared face?' When the adult photographs are finished the child faces begin after a short break, with the following instructions. 'Now we are going to look at children's faces. I want you to do the same thing that we did with the adult faces. Tell me if they are happy, sad, angry or scared'.

Scoring was on the basis of the number of correctly identified emotions, with a maximum score of 24 for adult faces (Total Adult Faces) and a maximum score of 24 for child faces (Total Child Faces).

**Verbal Ability Measure**

**BPVS** - (British Picture Vocabulary Scale - Dunn, Dunn, Whetton & Pintilie, 1982), was used as a measure of receptive (hearing) vocabulary for Standard English and reflects English vocabulary acquisition. In this test children had to choose one picture out of four possible, which is associated with the target word, which the examiner states, e.g. the examiner said 'bucket' and the child had to choose between four pictures, one of which was a bucket. Another more difficult example was 'dangerous', where the child had to choose the picture that depicted this. This is a reliable test with internal consistency between .79 - .83 for the age group involved in this study.
The BPVS provides an estimate of one major aspect of verbal ability (vocabulary) but is not a comprehensive test of general intelligence. Vocabulary has been found to be associated with school success and contributes to measures of intelligence. Performance should not be equated with innate or fixed ability, as exposure to e.g. Standard English has resulted in marked changes in scores in vocabulary tests. The BPVS- short form allows rapid but individual testing, and will be used as a measure of verbal ability for all participants to check there are no significant differences between the groups that could be associated with verbal ability rather than specific neurocognitive functioning. Raw scores were used for the calculations (BPVS), as all the children were 6 years of age between 1st September and 31st December in the term after testing.
Chapter 4. RESULTS

4.1. Main Analysis

Preliminary analyses were performed to check for violations of the assumptions of normality (Pallant, 2001). Descriptive statistics (Table 4.1. p. 118) were employed to summarise the characteristics of the sample for the main study. Children’s performance spanned a range of possible scores, suggesting individual differences in competencies within the age group studied. Some children had well developed skills and others more limited skills. On the Kolmogorov-Smirnov Test, the Antisocial Behaviour measure scores had a non-significant result of p= .062, indicating that the assumption of normality was adequately met. The ADHD measure scores had a significant value of p= .03, suggesting violation of the assumption of normality. This is quite common in larger samples. With reference to Skewness, there were both small/moderate positive values for attention and empathy. These were not particularly problematic and indicate a positive skew to the left, at the low values. With reference to Kurtosis, values below zero for both Attention and Empathy indicate a distribution that is relatively flat (too many cases in the extremes). This can result in an underestimate of the variance.

However, when an alternative approach to checking normality was employed (Tabachnick & Fidell, 1996) the results suggested that the population from which the main study sample scores are drawn is sufficiently normally distributed to warrant the use of parametric tests, as the Z scores were < 3.29 for both Skewness and Kurtosis, for both ADHD and Antisocial Behaviour measures.
Further preliminary analyses produced satisfactory results (Pallant, 2001). The Histogram that highlighted the shape of the distribution for each group approximated a normal distribution. This was further supported with the Normal Q-Q Plots, a reasonably straight line suggesting a normal distribution. This was also supported by the Detrended Normal Q-Q Plots, where there was no real clustering of points, with most collecting around the zero line. Overall, given the above descriptors for the main study sample, they suggest the data originated from a reasonably normally distributed population.

Children had been divided into four groups according to their ratings on an ADHD and Antisocial Behaviour measure assessed in the pilot study:

Group 1 (ADHD/AB): 20 children (16 males, 4 females) for the combined group, whose average score was at least 15 on the ADHD scale and at least 12 on the Antisocial Behaviour scale. Nine schools were represented in this group.

Group 2 (ADHD): 18 children (14 males, 4 females) for the ADHD group, whose average score was at least 15 on the ADHD scale and less than 12 on the Antisocial Behaviour scale. Eight schools were represented in this group.

Group 3 (AB): 19 children (9 males, 10 females) for the Antisocial Behaviour group, whose average score was at least 12 on the Antisocial Behaviour scale and 15 or less on the ADHD scale. Seven schools were represented in this group.
Group 4 (C): 18 children (9 males, 9 females) for the control group, whose average score on both the ADHD and Antisocial Behaviour scales was less than 10. Six schools were represented in this group.

Levene’s test for homogeneity of variance highlighted the variance in scores in each group can be regarded as homogenous (sig. greater than .05).

4.1.1. Overview of Results

Table 4.2. (p. 119) reports the one-way between-groups analyses of variance conducted on these measures. Participants were divided into four groups according to their results on the behaviour rating scale (Group 1: high on AB and ADHD; Group 2: high on ADHD; Group 3: high on AB; Group 4: Control). There was a statistically significant difference at the $p<.05$ level in Visual Attention-accuracy score for the four groups [$F(3,71)=8.3$, $p=.001$]. Post-hoc comparisons using the Tukey HSD test as highlighted in Table 4.3. (p. 120) indicated that the mean score for Group 4 ($M=27.83$, $SD=5.80$) was significantly different from Group 1 ($M=19.85$, $SD=\_\_\_\_\_\_\_\_\_\_\_\_\_\),$ Group 2 ($M=21.50$, $SD=5.06$), and Group 3 ($M=20.26$, $SD=5.17$).

This main study was designed to answer the following research question:

- Do groups of children who are differentiated by teacher rating of type of behavioural difficulty differ in their score profile on performance measures of EF and emotion (facial expression) recognition?

This was expanded into the following specific hypotheses that will be answered in turn.
**Hypothesis 1.** Young children who are rated more highly on the Du Paul ADHD questionnaire will perform less well on EF tasks than those rated less highly.

- A one-way between groups analysis of variance was conducted to explore the impact of ADHD ratings on executive functioning, as measured by performance on Tower-rule violation.

No significant difference was found on the EF task of Tower-rule violation scores between the four groups.

- A one-way between groups analysis of variance was conducted to explore the impact of ADHD ratings on executive functioning, as measured by performance on Tower-accuracy.

No significant difference was found on the EF task of Tower-accuracy scores between the four groups.

- A one-way between groups analysis of variance was conducted to explore the impact of ADHD ratings on executive functioning, as measured by performance on Visual Attention-speed.

No significant difference was found on the EF task of Visual Attention-speed scores between the four groups.

- A one-way between groups analysis of variance was conducted to explore the impact of ADHD ratings on executive functioning, as measured by performance on Visual Attention-accuracy.

-
There was a statistically significant difference at the \( p < .05 \) level in the EF task of Visual Attention-accuracy scores for the four groups \([F (3, 71) = 8.3, p = .001]\) as shown in Table 4.2. (p. 118).

- Post-hoc comparisons using the Tukey HSD test (post-hoc tests set more stringent significance levels to reduce the risk of a Type 1 error, given the larger number of tests performed) indicated that the mean score for Group 4 (\( M=27.83, SD=5.80 \)) was significantly different from Group 1 (\( M=19.85, SD=5.99 \)), Group 2 (\( M=21.50, SD=5.06 \)) and Group 3 (\( M=20.26, SD=5.17 \)) as shown in Table 4.3. (p. 119)

- To reduce the risk of a Type 1 error further a more stringent alpha value was set (Bonferroni adjustment, Pallant 2001). The normal alpha value (.05) was divided by the number of tests performed, (in relation to EF this is 4). The new value is .0125 and the results remained statistically significant at \( p < .0125 \).

There was a significant difference between the control group and the other three groups on the Visual Attention-accuracy task.

The control group, therefore, performed better on the Visual Attention-accuracy task than the experimental groups.

**Hypothesis 2.** Young children who are rated more highly on the Frick Antisocial Process Screening Device will perform less well in emotion recognition, specifically
in the recognition of both sad and fearful facial expressions, than those rated less highly.

- A one-way between groups analysis of variance was conducted to explore the impact of Antisocial Behaviour ratings on emotion recognition, as measured by performance on the recognition of sad and fearful facial expressions.

No significant difference was found in the recognition of sad and fearful facial expressions between the four groups.

**Hypothesis 3.** Young children who are rated more highly on both the Du Paul ADHD questionnaire and the Frick Antisocial Process Screening Device will perform less well on EF tasks, than those rated less highly on ADHD, but better in emotion recognition, specifically the recognition of sad and fearful facial expressions, than those rated highly on the Frick Antisocial Process Screening Device alone.

- A one-way between groups analysis of variance with planned comparisons was conducted to explore the impact of combined high ratings of ADHD (Du Paul) and Antisocial Behaviour (Frick APSD) on Executive Function tasks.

Planned comparisons indicated that there was a statistically significant difference at the p<.05 level in the EF task of Visual Attention-accuracy [F (1, 71) = 7.49, p = .008], and Visual Attention-speed [F (1, 71) = 6.40, p = .014], between the combined group (group 1) and groups not rated highly for ADHD (groups 3 and 4).

Planned comparisons indicated there was no significant difference between the combined group (group 1) and groups not rated highly for ADHD (groups 3 and 4) with the EF tasks of Tower-accuracy and Tower-rule violation.
• A one-way between groups analysis of variance with planned comparisons was conducted to explore the impact of combined high ratings of ADHD (Du Paul) and Antisocial Behaviour (Frick APSD) on an emotion recognition task. There was no significant difference between the combined group (group 1) and the group rated highly for Antisocial Behaviour (group 2) with the emotion recognition task, specifically in the recognition of sad and fearful facial expressions.

• As pre-school children with behaviour problems have been found to show delays in language development and overall cognitive functioning, (e.g. Campbell, 1995), the BPVS was administered to have some measure of language development across the four groups, to ensure they were balanced. No significant difference was expected between the four groups on BPVS performance and a one-way between groups analysis of variance confirmed there was no significant difference between the four groups, Table 4.2. (p. 119).
## Descriptives

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<tr>
<th></th>
<th>Statistic</th>
<th>Std. Error</th>
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<tr>
<td>Mean</td>
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## Tests of Normality

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<tr>
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<td><strong>Empathy Average</strong></td>
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Table 4.1. The Descriptive Statistics and Tests of Normality for the main study sample
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<th></th>
<th></th>
<th></th>
<th></th>
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<tr>
<td>Group 1 (ADHD/AB)</td>
<td>M</td>
<td>5.25</td>
<td>7.30</td>
<td>19.85</td>
<td>203.60</td>
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<td>5.985</td>
<td>51.679</td>
<td>4.122</td>
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<td>M</td>
<td>6.06</td>
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<tr>
<td>n=18</td>
<td>SD</td>
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<td>3.228</td>
<td>5.056</td>
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</tr>
<tr>
<td>Group 3 (AB)</td>
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<td>20.26</td>
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<td></td>
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<td>.344</td>
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<td>.000</td>
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NB. To reduce the risk of a Type 1 error a more stringent alpha value was set (Bonferroni adjustment, Pallant 2001). This was $p < .0125$ for statistical significance.

Table 4.2. The results of the One-Way Between Groups ANOVA Calculations for the dependent variables
<table>
<thead>
<tr>
<th>(I) Participant Group</th>
<th>(J) Participant Group</th>
<th>Mean Difference (I − J)</th>
<th>Sig.</th>
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<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>- 1.65</td>
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<tr>
<td>1</td>
<td>3</td>
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<td>.995</td>
</tr>
<tr>
<td>1</td>
<td>4</td>
<td>- 7.98*</td>
<td>.000</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>1.65</td>
<td>.795</td>
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<td>2</td>
<td>3</td>
<td>1.24</td>
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<td>2</td>
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<td>- 6.33*</td>
<td>.005</td>
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<tr>
<td>3</td>
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<td>0.41</td>
<td>.995</td>
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<tr>
<td>3</td>
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<td>- 1.24</td>
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<td>3</td>
<td>4</td>
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<td>6.33*</td>
<td>.005</td>
</tr>
<tr>
<td>4</td>
<td>3</td>
<td>7.57*</td>
<td>.000</td>
</tr>
</tbody>
</table>

* The mean difference is significant at the .05 level

Table 4.3. The results of the Tukey HSD post-hoc tests on the Visual Attention-accuracy data
4.2. Supplementary Analysis

Supplementary analysis was conducted to examine the main analysis further with reference to the potentially confounding effect of the impulsivity factor common to both the rating scales that had been used to form the groups, the Hyperactivity-Impulsivity factor of the DuPaul and the Impulsivity-Conduct Problems factor of the Frick. The main study results of the Visual Attention Task may have been due to the overlapping scales and be best interpreted as an effect of impulsivity.

There was a significant difference between Group 4 (control group) and Groups 1, 2 and 3 for the dependent variable: Visual Attention-accuracy, and between Group 1 (combined group) and Groups 3 and 4. One hypothesis to test was that this was due to the impulsivity factor in each scale (Hyperactivity-Impulsivity [H-I] for ADHD and Impulsivity-Conduct Problems [I-CP] for Antisocial Behaviour), which could be contaminating the result. The two factors incorporating Impulsivity could be a confounding factor between the two scales, and the subsequent group formation. If the impulsivity factor in both scales measures the same thing it would be expected that these two factors, H-I and I-CP, would be more highly correlated than the other factors (Inattention [I] in ADHD and Callous-Unemotional [C-U] in Antisocial Behaviour). The Visual Attention-accuracy significant result could be due to Impulsivity.

The hypothesis was that ADHD - H-I would be significantly correlated with Antisocial Behaviour – I-CP. The relationship between the two factors of the ADHD questionnaire (as measured by the DuPaul) and the two factors of the Antisocial Behaviour questionnaire (as measured by the Frick) was investigated using Pearson
product-moment correlation co-efficient (Table 4.4. p. 122). There was a strong positive correlation between the Impulsivity variables \( r = .718, n=75, p< .001 \), with high levels on the ADHD - H-I factor associated with high levels on the Antisocial Behaviour - I-CP factor. There was a medium positive correlation between the ADHD - H-I factor and the Antisocial Behaviour - C-U factor \( r = .357, n=75, p< .005 \), with high levels on the ADHD- H-I factor associated with high levels on the Antisocial Behaviour - C-U factor. There was a strong positive correlation between the Antisocial Behaviour - I-CP factor and the ADHD - I factor \( r = .634, n=75, p< .001 \), with high levels on the Antisocial Behaviour - I-CP factor associated with high levels on the ADHD - I factor.

The hypothesis that ADHD - H-I was significantly correlated with Antisocial Behaviour - I-CP was supported.
<table>
<thead>
<tr>
<th></th>
<th>ADHD-Inattention (ADHD -I)</th>
<th>ADHD-Hyperactivity/Impulsivity (ADHD - H-I)</th>
<th>AB-Callous-Unemotional (AB - C-U)</th>
<th>AB-Imp./Conduct Problems (AB - I-CP)</th>
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<tr>
<td>ADHD-Inattention (ADHD -I)</td>
<td>/</td>
<td>.736 (.000)</td>
<td>.463 (.000)</td>
<td>.634 (.000)</td>
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<td>ADHD-Hyperactivity/Impulsivity (ADHD - H-I)</td>
<td>.736 (.000)</td>
<td>/</td>
<td>.357 (.002)</td>
<td>.718 (.000)</td>
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<td>AB-Callous-Unemotional (AB - C-U)</td>
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<td>.357 (.002)</td>
<td>/</td>
<td>.381 (.001)</td>
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<td>AB-Imp./Conduct Problems (AB - I-CP)</td>
<td>.634 (.000)</td>
<td>.718 (.000)</td>
<td>.381 (.001)</td>
<td>/</td>
</tr>
</tbody>
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Table 4.4. Pearson product-moment correlations between the sub-scales of the ADHD and Antisocial Behaviour (AB) measures.
Chapter 5. DISCUSSION

5.1. Summary of the Main Findings

Children with emotional and behavioural difficulties (EBD) are a cause for concern at an individual, educational and societal level. Recent Government Legislation has emphasised the need for inclusion of all children and more recently discussed the provision of extra funds to encourage schools to include children previously excluded. Children with EBD often appear to be grouped together and discussed in unitary terms. Research into the neurocognitive basis of EBD, however, suggested there might be behavioural types associated with different cognitive processes, and specific brain networks that can be discriminated. This could have implications for more specific assessment and subsequent intervention. This study explored two areas within this body of research: attention deficit hyperactivity disorder (ADHD) and Antisocial Behaviour.

Executive dysfunction has been associated with ADHD and behaviour difficulties. Empathy and fear dysfunction has been associated with Antisocial Behaviour. It has been argued that intervention should be provided to high risk children early, as the presence of behaviour symptoms is the single best predictor of risk of future problems (Moffitt, 1993). It was important, therefore, to clarify whether it was possible to identify young children who may be at risk of developing difficulties associated with ADHD and Antisocial Behaviour. Research has suggested that performance on EF tasks is associated with ADHD and performance on emotion recognition tasks with Antisocial Behaviour. This study was designed to explore whether there was any evidence for this position with a mainstream sample of young children. This study, therefore, explored the relationship between performance on
Executive Function tasks (Tower and Visual Attention), performance on emotion recognition tasks (facial expressions), and behavioural difficulties as indexed by teacher ratings on the DuPaul (ADHD) and Frick (Antisocial Behaviour) questionnaires. The main study was designed to answer the following research question: Do groups of children who are differentiated by teacher rating of type of behavioural difficulty differ in their score profile on performance measures of EF and emotion recognition? The hypotheses tested were: 1. Young children who are rated more highly on the DuPaul ADHD questionnaire will perform less well on EF tasks than those rated less highly. 2. Young children who are rated more highly on the Frick Antisocial Process Screening Device will perform less well in emotion recognition, specifically in the recognition of both sad and fearful facial expressions than those rated less highly. 3. Young children who are rated more highly on both the DuPaul ADHD questionnaire and the Frick Antisocial Process Screening Device will perform less well on EF tasks, than those rated less highly on ADHD, but better in emotion recognition, specifically the recognition of sad and fearful facial expressions, than those rated highly in the Frick Antisocial Process Screening Device alone. These were discussed in turn.

Hypothesis one

Young children who are rated more highly on the DuPaul ADHD questionnaire will perform less well on EF tasks than those rated less highly.

The group statistical analysis for hypothesis one found no significant difference between the four groups on the Executive Function tasks of Tower (rule violation and accuracy), and Visual Attention-speed, and therefore there was no support for the first hypothesis with these tasks.
There was a significant difference between the four groups on the Executive Function task of Visual Attention-accuracy. Children who had the lowest level of behaviour difficulties as measured by the rating scales, (the Control group-group 4), performed significantly better than the other three groups on one measure of executive functioning: Visual Attention-accuracy. This offered some support for a difference in performance on EF tasks between groups rated on a measure of ADHD. Young children who were rated less highly on a measure of ADHD and Antisocial Behaviour (control group) performed better on EF tasks than those who were not (group 1- ADHD/AB, group 2- ADHD, and group 3- AB). Group 2- ADHD performed significantly less well than group 4- Control on EF tasks but not significantly differently from group 1- ADHD/AB and group 3- AB. This offered some support to the hypothesis that young children rated more highly on ADHD will perform less well on EF tasks (specifically Visual Attention-accuracy) than those rated less highly (the control group). This, however, was also true of the group not scoring high for ADHD but high for Antisocial Behaviour (group 3), which was not predicted by hypothesis one.

Overall, this study revealed that poorer performance on the EF task of Visual Attention-accuracy was associated with greater levels of behaviour difficulty as reported by adult ratings. This was true of children with greater levels of behaviour difficulties as indexed by the Antisocial Process Screening Device, as well as ADHD, which was not predicted. This extended existing research in the area of ADHD, and in particular with young children, by suggesting that the EF measure of Visual Attention-accuracy is able to discriminate children with higher ratings of behaviour difficulties than those without. This was not, however, specific to children with
higher ratings on ADHD alone, but also those with higher ratings on Antisocial Behaviour alone and those with higher ratings in both areas. This offered some support for the difficulty of some EF measures in distinguishing ADHD from non-ADHD disorders (e.g. Weyandt & Willis, 1994).

Supplementary analysis of the Visual Attention-accuracy result was conducted due to the potentially confounding effect of the impulsivity factor common to both the rating scales that had been used to form the groups, the Hyperactivity-Impulsivity (H-I) factor of the ADHD measure and the Impulsivity-Conduct Problems (I-CP) factor of the Antisocial Behaviour measure. There was a strong positive correlation between the Impulsivity variables, with high levels on the ADHD - H-I factor associated with high levels on the Antisocial Behaviour - I-CP factor. The main study results of the Visual Attention-accuracy task, therefore, may have been due to the overlapping scales and be best interpreted as an effect of impulsivity. The hypothesis that ADHD - H-I was significantly correlated with Antisocial Behaviour - I-CP, was supported.

Hypothesis two
Young children who are rated more highly on the Frick Antisocial Process Screening Device will perform less well in emotion recognition, specifically in the recognition of both sad and fearful facial expressions than those rated less highly.

This study did not provide any support, from the group analysis, for the relationship between the recognition of facial expressions and ratings of behaviour difficulty. Possible explanations for this will be discussed later in this section.

Hypothesis three
Young children who are rated more highly on both the Du Paul ADHD questionnaire and the Frick Antisocial Process Screening Device (group 1) will perform less well on EF tasks, than those rated less highly on ADHD (groups 3 and 4), but better in emotion recognition, specifically the recognition of sad and fearful facial expressions, than those rated highly in the Frick Antisocial Process Screening Device alone (group 2).

As identified with hypothesis one, there was no significant difference between the combined group (group 1) and the low scoring groups for ADHD (groups 3 and 4) on the Tower task (rule violation and accuracy) and this offered no support for the third hypothesis with this task.

As identified with Hypothesis 2 there was no significant difference between groups on a measure of emotion recognition. The combined group (group 1) did not perform better on a measure of emotion recognition than those rated highly on Antisocial Behaviour alone (group 2). There was no support for the second part of hypothesis three, that there would be a significant difference between the performance of group 1 and group 2 on an emotion recognition task.

There was a significant difference between the combined group (group 1) and the low scoring groups for ADHD (groups 3 and 4), on the Visual Attention-speed and accuracy tasks. Children who had the highest levels of behaviour difficulties as measured by both rating scales, (the combined group-group 1), performed significantly worse than the two groups rated lowly on ADHD on one measure of executive functioning: Visual Attention, both with accuracy and speed. This offered some support to the first part of the third hypothesis that young children who are
rated more highly on a measure of ADHD and Antisocial Behaviour (group 1-ADHD/AB) performed less well on EF tasks than those who were not rated highly on ADHD (group 3-AB, and group 4-Control). Group 1-ADHD/AB did perform significantly less well than group 3 and 4.

As expected, there was no significant difference on a measure of verbal ability (BPVS) between the four groups and they were balanced on this measure.

5.1. **Constraints and Limitations of the Study**

5.2.1. **Methodological issues**

The main study methodology was experimental and the measures chosen appeared appropriate. With reference to ADHD, items from the NEPSY were used as they were published and accessible measures of EF, standardised and validated, specifically designed to include children from a young age (3 years). One of the measures, ‘Tower’, was based on an EF measure which previous studies have found significant results with, in relation to ADHD and EF (Pennington and Ozonoff, 1996). This result was not significant and given the wide range of mixed results in the area, the reliability of EF measures can be questioned. For example, in a review of the research (18 studies) sixty different measures of EF were identified and forty reportedly showed a difference (Pennington and Ozonoff, 1996). The tasks often had different names but there is a possibility that the skills or processes being measured were not distinct. The Tower task, for example, is officially a measure of the EF of planning, but from observation the task has an inhibitory aspect to it, as children need to inhibit motor responses in order to avoid rule violations. The validity of EF comes into question when it is not clear what is being measured.
The emotion recognition task, specifically of facial expressions, may have been too simplistic to highlight any group differences, as it has been suggested that pictorial representation tasks are potentially too easy and do not highlight differences between groups (Hare, 1998). This could be true of the DANVA where the task may have been too obvious for the children. It may require more subtle emotional expressions to highlight differences between groups. More recent research has highlighted a difference in sensitivity to different emotions (Blair et al., 2001) but they used twenty different levels of intensity, whereas the DANYA just had two, high and low intensity.

Due to the low prevalence rates suggested with reference to ADHD such as 1-7% (e.g. Hinshaw, 1994) this would mean a small number of children in the population and therefore not many children were expected to achieve very high scores on the rating scales. As a result, a relatively large sample would be required to maximise the chances of the rating scales discriminating to such an extent in order to form the four distinct groups. It could be that one reason for the lack of significant group difference in other EF measures was related to the relatively small number of participants with high scores, especially on the measure of Antisocial Behaviour. It could be that participants have to score much higher if the rating scales are to discriminate between children with behaviour difficulties, especially the APSD. The APSD was based on the PCL-R (Hare, 1998), with the general reporting convention of <15 as a low score, 15-24 as a medium score, 25+ as a high score and 30+ as very high. Was the sample size large enough to reflect a wide enough range of scores, as the majority of the original sample in the pilot study scored within the low range? If not, this has implications for any future research, with reference to time, accessibility to
participants and cost implications. For these reasons, much larger samples may be unrealistic for unfunded research, although a DfES national study could produce different results. With relatively small samples, the representativeness to the general population may always be limited, with a large national study a clearer picture could be established.

Simple calculations were used to form the groups for the main study. To produce four groups of reasonably equal size the questionnaire scores were ranked and the top 20 scorers on the ADHD scale formed one group (ADHD group), if their Antisocial Behaviour scores were lower than those of the Antisocial Behaviour group. The top twenty scorers on the Antisocial Behaviour scale formed a second group (Antisocial Behaviour group), if their ADHD scores were lower than those of the ADHD group. The lowest twenty scorers on both scales formed a third group (Control group). The children, who scored as highly on the ADHD scale as the ADHD group, and as highly on the Antisocial Behaviour scale as the Antisocial Behaviour group, formed the Combined group. This resulted in Group 1- ADHD/AB: 20 children (16 males, 4 females), whose average score was at least 15 on the ADHD scale and at least 12 on the Antisocial Behaviour scale. Group 2- ADHD: 18 children (14 males, 4 females), whose average score was at least 15 on the ADHD scale and less than 12 on the Antisocial Behaviour scale. Group 3- AB: 19 children (9 males, 10 females), whose average score was at least 12 on the Antisocial Behaviour scale and 15 or less on the ADHD scale. Group 4- Control: 18 children (9 males, 9 females), whose average score on both the ADHD and Antisocial Behaviour scales was less than 10.

An important question is whether the groups were allocated in the best way. Although the method chosen was appropriate, one disadvantage was that it resulted
in groups containing participants with similar scores on individual scales in different
groups. For example, a participant could have the same ADHD score in both group 1-
ADHD/AB and group 2- ADHD, although their APSD scores would be different.
This criticism was partly resolved by undertaking further analysis of the
questionnaire results using correlation rather than group analysis. However, with a
main study sample of 75 out of a pilot study sample of 166, this inevitably limited
how different the four groups could be as nearly half the original sample was used.

Lack of parental ratings could be an important issue as in essence a potentially key
piece of information is missing, although it has been shown that there is only low to
moderate parent-teacher agreement on emotional and behavioural problems assessed
by rating scale (Verhulst and Akkerhuis, 1989). As the profession of Educational
Psychology has moved towards a more consultation based service an EP is often
working with teachers’ perception and this was viewed as essential information. It
would have been interesting to know if there would have been a similar formation of
groups on the basis of parental ratings. It was considered to be beyond the scope of
the present study due to the time implications for a practising EP, and the research
questions. It would also have required further involvement of school staff to
coordinate, but this research was agreed with schools on the basis that they would not
have to do anything other than complete a questionnaire, which it was important to
honour and probably associated with the high return rate of questionnaires.

The use of questionnaires to create the main study sample could have been a potential
weakness. Limitations within their structure suggest they are no substitute for direct
observation or semi-structured interviews (Scott, 1996). The answers are forced
choice and the content generalised statements rather than detailed descriptions of behaviour. The ratings will be influenced by beliefs and values therefore questionnaires can be affected by bias, as can observations. Questionnaires are easy to administer and a useful general screening tool for behaviour, and therefore the appropriate choice for this study.

5.2.2. Neuropsychology

Within clinical neuropsychology there are two distinct areas of specialisation – adult and developmental. One distinguishing factor between the two areas is that children tend to show more generalised effects of brain damage whereas adults display more specific deficits. This can have implications from generalising theory regarding the role of the brain from adult/older children’s research to younger children. This in part may explain the lack of support for emotion recognition and some EF measures, as the results in this study were based on a normal population whereas much of the sourced published research is based on skewed populations, e.g. prisons. This also could explain the differing results in the area of ADHD generally, where many of the research samples are clinic referred. Especially when there is a lack of adequate neuropsychological norms for many measures and minimal research for children with neurological disorders (Cody and Hind, 1999).

In addition, the evidentiary reliability of DSM-IV has been questioned (Campbell, 1999) as diagnostic decisions have been shown to be inconsistent, with different diagnoses given to the same individual. With the increasing number of potential diagnostic categories (DSM-I, 1952-60; DSM-II, 1968-145; DSM-III, 1980-230; DSM-III-R, 1980-300+; DSM-IV, 1994-400+), agreement would be harder. If
disagreement exists between practitioners the clinic and prison populations in the research may have differed, even if they had the same diagnosis.

Diagnosis is frequently on the basis of the DSM criteria, which is presently on its fifth version (DSM-IV), with decreasing periods of time between each version, the criteria for diagnosis for each version changed on the basis of the latest thinking. Therefore, by implication, prisoners classed as psychopaths on the basis of older versions of the DSM may not necessarily meet diagnostic criteria and vice versa. As many of the assessment tools such as the Conner’s and Du Paul, are based on the DSM-IV criteria the research becomes quite circular, in that if groups are formed on the basis of diagnosis and then rated on a tool, which is based on the same criteria, the tools therefore could inevitably appear ‘reliable’ and ‘valid’ measures.

The Antisocial Process Screening Device was developed for children based on Hare’s Psychopathy Checklist- Revised, developed for adults. It was tested on a sample of 95 clinic-referred children between 6-13 (although in research it is used with ages outside this range) and two correlated factors emerged in factor analysis, consistent with findings in adults (Frick et al, 1994). However, designing a scale for children based on adult research may not be the most appropriate method. As it was based on a clinic sample it may only identify a certain sub-group (clinic referred) rather than be representative of normal population. If it had also been standardised against a normal population different factors may have emerged. In addition, ninety-five was a relatively small number from which to develop a checklist, and as these include the age range discussed, there will be a relatively small number of younger children it was based on. Its relevance to a mainstream population, therefore, may be
limited. However, in practice, only one teacher reported an aspect of the questionnaire inappropriate, interestingly the only male respondent.

The correlation between raters in the pilot study on the APSD was .526 (as compared to .776 on ADHD) and therefore the items may not be as clearly observable in young children as the ADHD scale, although there was still a significant level of agreement between observers. The significant positive correlation between the results of the two behaviour measures in the pilot study could suggest that the measures administered in this research may not be able to discriminate between types of difficulty, just between those that do have a difficulty and those that do not.

5.3. Conclusions Drawn from the Data

From a review of the sourced research I was unable to find any studies that investigated the relationship between young children, emotion recognition and behavioural problems.

This study indicated that the measures of behaviour administered in the pilot study of this research were able to discriminate children who were observed to have difficulties with behaviour and those that did not. It indicated from the group analysis, that young children's ability to recognise the emotions of happiness, sadness, fear and anger was not related to their level of behavioural problems as measured by the APSD. This does not offer support for a relationship between Antisocial Behaviour and the recognition of emotion, specifically the recognition of sad and fearful facial expressions. Young children who show antisocial tendencies are not less likely to recognise facial expressions of happiness, fear, anger, and
sadness in adults and children. This lack of difficulty in recognising sadness does not support previous research (e.g. Blair and Coles, 2000).

There was no relationship between the ability to recognise emotional expressions, behavioural problems and level of receptive language. The results, therefore, cannot be accounted for in terms of level of understanding of language. Although fear is often found to be the most difficult expression to recognise (Blair and Coles, 2000), there was no relationship between antisocial tendencies and the recognition of this emotion. Task difficulty could be an explanatory factor for the results. It may be that the task used was not subtle enough and a task allowing for more sensitivity (e.g. Blair and Coles, 2000) may be more appropriate for future research.

The Violence Inhibition Mechanism (VIM) model (Blair, 1995) suggests that a disruption in the neurocognitive system processing sad and fearful expressions can lead to antisocial behaviour, i.e. there was a predicted relationship between a measure of Antisocial Behaviour and performance in emotion recognition. This research provided no support for the VIM, as there was no evidence of a relationship between measures of behaviour difficulty and emotion recognition.

As far as I am aware, this is one of very few studies to investigate the relationship in young children of executive function and behavioural problems. The study indicated: first, from the group analysis, that young children’s ability to perform the executive function tasks of Tower (rule violation), Tower (accuracy), and Visual Attention (speed) was not related to their level of behavioural problems as measured by an ADHD rating scale. This supported recent research that found no association between
ADHD and planning (Tower) with young children of 3 years 0 months-5 years 6 months (Sonuga-Barke et al., 2002). The study indicated: second, from the group analysis, that young children’s ability to perform the executive function task of Visual Attention-accuracy was related to their level of behavioural difficulties as measured by an ADHD rating scale, but not independently of a measure of Antisocial Behaviour. The group with significantly lower scores on both rating scales (the control group), i.e. less behavioural difficulties, performed better on this EF task, than all other groups. Children with behavioural difficulties as measured by both the ADHD rating scale and a measure of Antisocial Behaviour performed better on the Visual Attention task (both speed and accuracy) than children who were rated low on a measure of ADHD.

Supplementary correlation analysis was undertaken to explore whether the Impulsivity factor common to both scales could be measuring a similar aspect and therefore be confounding the results. There was a strong relationship between the impulsivity factors, with high scores on one associated with high scores on the other, whereas the correlation of the impulsivity factor with the Callous-Unemotional factor was lower (medium), although still significant. The Impulsivity factors could, therefore, be confounding the results and has implications for future research, which could benefit from separating these factors for group formation purposes, i.e. have one group with the Callous-Unemotional Factor (reference Antisocial Behaviour) and one group with the Impulsive-Hyperactive factor (reference ADHD). This Impulsivity factor in common could explain why children scoring higher on the Antisocial Behaviour measure but lower on the ADHD measure did not do better in the Visual Attention task than those scoring lower on a measure of ADHD. It could
also explain why children scoring higher on both the Antisocial Behaviour measure and ADHD measure did perform better in the Visual Attention task than those scoring lower on a measure of ADHD. This offers some support for the research (e.g. Colledge and Blair, 2000) suggesting that co morbidity of ADHD and Antisocial Behaviour is associated with impulsivity.

This also highlighted the overlapping skills required for some EF tasks. The Visual Attention – accuracy task involved scanning an array (the number of errors were not important) and locating a target. Although not officially a measure of inhibition, performance could have been affected by impulsiveness, as by being impulsive they could have omitted targets, i.e. subsequently resulting in a lower accuracy score. The task, therefore, could be a measure of impulsiveness, as well as attention. This offers some support to the finding that specific deficits in inhibitory control rather than general EF deficits are associated with ADHD in young children (Sonuga-Barke et al., 2002), with inhibitory deficits suggested as the developmental precursor to more general EF problems.

There was also a strong correlation between the Impulsivity factors and the Inattention factor, although this was stronger between the two ADHD factors. One possible explanation for this result is due to the age of the children, who, being relatively new to formal education, could be perceived to be inattentive and this should be an expected result. The age of the children involved was important, especially in relation to their developmental level and what was age appropriate. Given that the normal needs range is wide, aspects of behaviour difficulty would be age appropriate for some children in this study, e.g. non-conformity (Rushton, 1995), and if a child is not conforming, they are not paying attention, and therefore may be
seen as inattentive. The result was partially predicted by the association between inhibitory deficits and young children (Sonuga-Barke, 2002), as the suggested developmental precursor to the more general EF problems that can lead to ADHD type behaviours.

One possible explanation for the lack of group effect could be because the Impulsivity factor in both scales disguised the effects of the other factors. This supports the idea of future research forming groups on the basis of scale factor scores rather than total scores.

There was no group difference in level of receptive language. The results, therefore, cannot be accounted for in terms of level of understanding of language. Although recent research with young children did find children with higher IQ (BAS short form) and older children (from 3 years up to 5 years 6 months) performed better on all measures (Sonuga-Barke et al. 2002). They did not, however, indicate separate verbal and non-verbal scores, and the appropriateness of the short form to the age group has been questioned.

It has been argued that executive dysfunction does not appear to be directly implicated in the development of Antisocial Behaviour (Blair and Frith, 2000). The results of this study may suggest that it is with certain tasks, although this may be due to Impulsivity rather than executive dysfunction. This could highlight difficulties in the initial rating scales. For example, very few children scored very highly (i.e. 25+) on the Antisocial Behaviour measure. The children scoring higher on the Antisocial Behaviour measure did not perform as well as the control group on EF (Visual
Attention-accuracy) therefore this does not support the lack of executive dysfunction with Antisocial Behaviour. It could be argued, however, this is because there were no participants scoring within the ‘high’ category on the Antisocial Behaviour measure in this research.

An interesting question is why, with young children, were there not more noticeable differences even when there are reported neurocognitive tasks designed to measure differences including the specific age group for this research (NEPSY). Only one of the NEPSY measures (Visual Attention-accuracy), of the four administered was associated with group behaviour ratings. This could be because the tasks are not fine grained enough to highlight differences between individuals sufficient for group discrimination. It could be that the differences are slight at Reception age, and therefore group distinction on the basis of performance would be more difficult. Or it could be in the sampling techniques employed. One explanation could be in the relationship between brain and behaviour. Although Antisocial Behaviour is hypothesised to be associated with a dysfunction in a neural circuit that includes the Amygdala, and ADHD with Anterior cingulate dysfunction, both areas are interconnected, therefore a dysfunction in one could impact on the other. This could explain why children who are reported to have more behaviour difficulties cannot be easily differentiated by tasks designed to tap cognitive systems. Especially as these tasks are only indirect measures of brain function, and therefore inferences about the nature of associated brain impairment must be made cautiously.

An important question is whether performance on certain tasks is associated with measures of behavioural difficulty in younger children, and whether this information
is reliable and valid enough to contribute to the early identification of these children from this research. The validity of laboratory tests for assessing a disorder defined on subjective behavioural ratings has been questioned (Barkley, 1991) and the continued mixed results in this area provided additional support for this position. The tasks reviewed here do not enable an accurate risk assessment method that could ensure children in need receive early intervention strategies, and to avoid those not in need receiving unnecessary intervention.

5.4. Implications for Psychological Knowledge Base

To what extent did the results support the model regarding the suggested relationship between ADHD and Antisocial Behaviour (Colledge and Blair, 2000)?

It has been suggested that some children come to have behavioural difficulties resulting from an executive dysfunction, as seen in some children with ADHD, hypothesised to be associated with Anterior cingulate dysfunction. It has also been suggested that some children come to have behavioural difficulties resulting from reduced responsiveness to sad and fearful expressions, as seen in some children with Antisocial Behaviour, hypothesised to be associated with Amygdala dysfunction.

As has been argued (Pennington and Ozonoff, 1996), there is a need to develop more fine-grained EF measures to test for profile differences between different developmental disorders. The validity and clinical utility of EF tasks used with children has been questioned (Weyand and Willis, 1994). This research appears to provide further evidence, which questions the ability of EF tasks to differentiate between different groups.
The difference in teacher ratings on the ADHD scale for different children suggests that it appeared to discriminate young children on a measure of behaviour. Although in itself not a diagnosis of ADHD it could offer some support that the onset of this type of difficulty could be young (at least 5 years). It is important to be wary in diagnosing ADHD amongst a pre-school population (Gordon, 1998), as they are naturally inattentive and distractible, and they have few demands to attend and exhibit self-control. There is, therefore, a lack of observable symptoms, a limited school history, and therefore limited opportunities to show a consistent pattern of symptoms and impairment. It is therefore difficult to provide evidence for the position that the age of onset re ADHD is 3-4 years (Pennington and Ozonoff, 1996).

A difference has been found previously between children (6-12 years) rated highly on ADHD and performance on the Tower of Hanoi task (Weyand and Willis, 1994; Pennington and Ozonoff, 1996). This was not supported in this research using an equivalent task designed for the age group assessed. One solution could be to design a younger child version of the Wisconsin Card Sorting Task and STROOP test, to see if the research in this area can be supported for younger children. However, with the level of inconsistency in the field, and the reliability and validity of EF measures being questioned, it may be that for applied psychologists, the focus should be on rating scales and more qualitative data, such as interviews and observations.

The Tower task employed in this research would have been affected by poor response inhibition but no group differences were found. Likewise, with Visual Attention - accuracy, where a group difference was found. The support is therefore mixed that the EF deficit is mainly in motor inhibition.
This research provides some additional evidence with the Visual Attention-accuracy results of poorer performance in a vigilance type task, or continuous performance task, found in a review of pre-school research involving children with behaviour problems (Campbell, 1995). There are a wide variety of Executive Function tasks, at least in name if not in execution. The field requires simplification in relation to tasks if they are to have any clinical utility. It is possible that EF deficits are not unique to ADHD, which could explain the mixed research results in this area, and which would be supported by this research. It is possible that the tasks used are not valid measures of ADHD. It is possible that children scoring higher on a measure of ADHD only differ in some aspects of EF, and not all.

This research could be interpreted as offering some support to the position that executive dysfunction is less evident when differences in verbal ability were taken into account, as they were in this study. Not all studies have controlled for verbal ability, and therefore this in part, could be an explanation for the wide variety of research findings. As could the wide variety in the range of tasks used, which are reported to be measuring similar areas.

This study found limited support for the position that higher scorers on the Antisocial Process Screening Device will perform more poorly in the recognition of sad and fearful facial expressions (Blair et al., 2000). This could be because the Antisocial Behaviour group as a whole did not have very high scores on the particular rating scale although they were the highest in the sample. There appeared to be no support for the VIM – Violence Inhibition Mechanism (Blair, 1995), where sad facial affects function as a human submission response inhibition. Individuals with Antisocial
Behaviour have been hypothesised to lack this, and therefore this is one of the reasons they do not inhibit their responses to sad faces. Blair suggested that at this stage the VIM may also require deficits with EF and social factors, although his later research (Blair and Frith 2000) suggests EF may not be linked. This study found no significant differences in emotion recognition to support this position, although children in the Antisocial Behaviour group did score significantly differently to the control group on one measure of EF. It could be argued that this was because they did not score highly enough on the APSD in the pilot study. Or equally, that there is a relationship between Antisocial Behaviour and EF due to the common factor of Impulsivity. Any future research should have different research groups, reflecting the different factors in the behaviour rating scales, in order to minimise the confounding contribution of Impulsiveness present in scales for ADHD and Antisocial Behaviour.

5.5. Implications for Future EP Practice

Psychological assessment is a highly individualised, complex and creative process. The DECP in their 1999 document 'A Framework for Psychological Assessment' recognised that there were some fundamental principles relevant to all educational psychologists (EPs). The importance of a direct link between assessment and intervention was emphasised, with psychological assessment needing to reflect the body of psychological knowledge, using a variety of tools, techniques and approaches. Assessment techniques and materials should be relevant to the presenting problem, and to the purpose of the assessment. Frederickson, Webster and Wright (1991) argued that following the introduction of the National Curriculum, teachers were more able to describe what children can and cannot do in relation to the curriculum and psychologists would have to add something qualitatively different
to consider psychological aspects. It was suggested that the nature of psychological assessment might change. For example rather than simply describing behaviour, psychologists would need to be formulating and testing hypotheses about the behaviour, building on research from all areas of psychology (Frederickson et al., 1991), and avoiding 'within child' explanations with the expectation 'that nothing can be done'. In essence, information would be combined from the child’s environment and their interactions with it, in addition to more cognitive aspects. This has the added benefit of helping parents and teachers to understand, and to provide more appropriate support.

This research is relevant to an EP, due to the potential implications for assessment and intervention. It is recognised that not all children with behaviour difficulties are the same and that there are a variety of causes (Farrell, 1995), and no agreed definition of EBD (Rees et al., 2003). There is, however, increasing concern regarding children with behaviour difficulties amongst EPs due to an increase in the number of referrals (Farrell et al., 1996), and the risk of exclusion from educational settings and more negative long-term outcomes (e.g. Campbell, 1995; Moffitt, 1993). There is a need for greater collaborative working, and shared information between schools and outside agencies (Holowenko and Pashute, 2000), re-emphasised in a recent government green paper ‘Every Child Matters’.

It is important for EPs to be objective, systematic and grounded in psychological theory with assessment (Rees et al., 2003). Research has shown that EP assessment of behaviour is predominantly opinion based (Farrell et al., 1996; Rees et al., 2003); however to justify a key role in assessment, EPs need to apply contemporary
psychological research. EPs have a role to support and intervene with children, and it is important to be able to distinguish ADHD, for example, from other behavioural difficulties and what could be classed as ‘normal development’.

Inattention, impulsivity, motor restlessness and disruptiveness are found in all children, to some degree, therefore a diagnosis of ADHD and other disruptive behaviour disorders is based more on assessment of developmentally inappropriate intensity, frequency, and/or duration of the behaviour rather than on its mere presence. Such judgements increase the possibility of observer bias; different culturally determined standards for normal behaviour may influence ratings of observed behaviour (Mann et al., 1992). Different cultural perceptions of symptoms may complicate comparisons of epidemiological studies of disruptive behaviour disorders in different countries, especially if rating scales of behavioural observations are used as the primary diagnostic tool (Mann et al., 1992).

From this and previous research, it could be argued that the available neuropsychological tasks are not any better than the checklists that already exist. The behaviour rating scale was able to discriminate between children with and without behaviour difficulties as evidenced by the range of scores in this research and the significant correlation between raters. This suggests in itself it can be a useful tool for raising the awareness of, or of focusing teachers of young children with severe behaviour problems, e.g. of inattention, hyperactivity and impulsivity, who have not been diagnosed as having ADHD but nevertheless may be at risk of similar outcomes (Merrell and Tymms, 2001). Young children are frequently observed to be active and impulsive, and it does not necessarily mean that they are not learning, but if
difficulties persist when older then it could be indicative of a more severe problem.

Any diagnosis should consider the behaviour symptoms within the context of the individual with the aim of implementing an effective intervention plan (Merrell and Tymms, 2001). A key question is whether assessment for disruptive behaviour disorders is sufficient to specify intervention strategies? Assessment should inform an intervention, and provide a baseline from which the effectiveness of interventions can be evaluated. As a profession there is a need to establish more research-based practice, re-directing energy away from report writing and statutory assessment to setting up, monitoring, and disseminating, alternative programmes.

‘Assessment for the purposes of clinical or educational practice aims to obtain as comprehensive a picture as possible of the many factors that influence the child across contexts’

(BPS, 1996. p. 63)

So Educational Psychologists have been encouraged to move away from looking at within child factors when assessing a child, to more environmental and systemic factors, such as the school, family or socio-politico contexts - predominantly using a consultation type approach when working with schools. Neuropsychological strengths and weaknesses are often not part of the discussion, in relation to positive interventions for children’s learning and psychological health (Hood, 2003). However, research has suggested that long-term difficulties have a history that can be traced back to early childhood. Specific behaviour problems during the pre-school period, and not family and social circumstances, placed the child at increased risk of
being convicted of an adult offence (Stevenson and Goodman, 2001). In addition, children rated highly on a checklist related to DSM-IV criteria for ADHD in Reception Year continued to have problems in Year 2 (Merrell and Tymms, 2001), which suggests that the children who scored highly on the Du Paul in this research may continue to have difficulties. This could suggest an intervention would be appropriate for this group.

Part of an EP role is in supporting Early Years settings, which have been given responsibility for recognising and intervening with SEN. It is important to be aware of children whose behaviour appears to be impeding academic progress, irrespective of diagnosis, with a focus on reviewing the most effective intervention, as it has been shown that behaviour difficulties can impede academic progress (Merrell and Tymms, 2001).

ADHD is probably best understood as a bio-psychosocial problem, although the research does not tell us the exact nature of the association between neurology, cognition and behaviour. As such, it requires a multi-modal treatment response requiring multi-disciplinary collaboration (BPS, 2000). An EP is in a position to ensure that the links between neuropsychology and intervention strategies are clarified and made explicit. EP’s have an ability to plan, monitor and evaluate interventions based on neuropsychological findings, as well as on their knowledge of schools in terms of practicalities, curriculum and resources. This could be a way forward for an EP service with increasing ‘competition’ between other support services. This challenges the focus on consultation, and an over reliance on teacher perception, to ensure this is only part of the picture.
5.6. **Implications for Further Research**

Present practice and treatment, it has been argued, involves professionals making practical judgements in the absence of a definitive research evidence base (Cooper, 2000). Research should inform clinical judgement but needs to be interpreted carefully.

There is a need to inform the understanding of ADHD, with particular reference to assessment and intervention and the creation of fine-grained tests of EF that are sensitive to ADHD. This could aid the development of more specific profiles of deficits in ADHD, and contribute to theoretical investigation and assessment methods. As a consequence, research on the effectiveness and generalisability of the interventions may be developed, when there is more confidence that groups being compared are similar, and more reliable and valid measures of EF are available, for example.

An important goal for future research is clarity regarding the relationship between general and specific cognitive impairments and behaviour problems of pre-schoolers. However, previous research (Weyandt and Willis, 1994) has indicated that existing EF measures are not sufficient to discriminate children with ADHD and they need to be evaluated further. It could be argued, therefore, that on the basis of this and previous research looking for specific cognitive deficits has not yielded much in the way of consistent results and that a shift in focus to interventions on the basis of checklist scores alone would not be inappropriate. There is a need for more clarity regarding effective early interventions with identified populations, highlighted by measures of ADHD and Antisocial Behaviour, which could minimise the impact of
any behaviour difficulty. Interventions could potentially alter the negative course that some behaviour can take for some individuals (e.g. Campbell, 1995; Moffitt, 1993).

Only two EF measures were employed in this study, planning (Tower) and attention (Visual Attention), and these were selected to tap two dimensions of EF often found to be deficient in ADHD. However, other measures exist, which have been developed and evaluated more recently for this age group, e.g. inhibition ('puppet says', 'stop signal task') and would have been a useful addition to the study. More recent research has started to focus on the more motivational elements of the inhibitory process (e.g. Sonuga-Barke, 2002) and therefore the interaction between executive and motivational processes, and inhibition in young children, may help to illuminate this area further.

The suggested relationship between ADHD and Antisocial Behaviour, (Colledge and Blair, 2000), as illustrated in Figure 1.1. would have to be adapted to reflect any motivational aspects, if the research evidence supported this.

Other research possibilities incorporate the development of a specific cognitive intervention to help develop behavioural inhibition, a specific area of weakness associated with ADHD. In addition, research on environmental factors is needed to prevent over-identification, from starting at the simplest level. For example, are there factors in the classroom contributing to the difficulty, e.g. lack of structure or long periods ‘waiting’, which may be creating some of the difficulty. The area is complex and therefore any one form of intervention is unlikely to be appropriate for all.
There is a lack of longitudinal studies, and it could be beneficial to review the research participants at different stages to assess whether their behaviour ratings are consistent over time, or whether the apparent difficulties were more transitory or part of normal development. This is also argued for severe antisocial behaviour (Moffitt, 1993) with a longitudinal study following a group from an early age, rather than researching older children, who could form a different sub-group, and include those children who only get into trouble for a short period of time during adolescence.

With reference to Antisocial Behaviour, it may have been more worthwhile focusing on the 'cold unemotional' factor, as measured by the APSD rather than the impulsive-conduct problems, as the supplementary analysis provides some evidence that it is a partially independent factor (Frick, 1995), whereas impulsivity does not appear to be specific to Antisocial Behaviour. Another alternative would be to develop an instrument for much younger children, using a much larger sample or a different type of emotion processing, which is subtler. Much of what is known about Antisocial Behaviour is based on prison populations and therefore reflects a skewed sample. In addition, the checklist to define Antisocial Behaviour was originated on a prison population and therefore it could be identifying only a sub-set. Given that individuals with Antisocial Behaviour can reportedly be very successful in life (Hare, 1998), by the nature of their apparent success, they would not, therefore, typically form part of research populations. This could, of course, raise questions regarding the evidence for the existence of such a 'successful' population.

During the 1980s and 1990s, psychology became more accepting of genetic influence (Plomin, 2001) with recognition that genes play an important role throughout
psychology. Equally important, however, is the recognition that individual differences in complex psychological traits are due at least as much to environmental influences. It has been suggested that in the area of psychopathology, the accepted view may be moving too far from environmental determinism to genetic determinism (Plomin, 2001). Developmental psychopathology has become an active area of genetic research; with geneticists arguing genes associated with complex behaviour traits will be identified. It will be important therefore to understand the interaction between genes and environment, which could lead to new interventions. Any research in this area needs to be treated sensitively, especially when the potentially negative long-term effects of some difficult behaviour are considered. However, existing research is highlighting many weaknesses, and few firm conclusions at present.
Chapter 6. **EVALUATION of the STUDY**

This chapter evaluates the study in relation to the contribution it made to the research community, to the profession and to the practice of educational psychology and future research. Reflections on what has been learned, and the personal and professional development opportunities were highlighted.

### 6.1. What this Research has Contributed

This research offered something new to the research community, and to the profession of Educational Psychology by looking at the relationship between behaviour difficulties and the performance on Executive Function and emotion recognition tasks in young children.

This research drew on work in the area of Antisocial Behaviour, with both adults and older children, e.g. by Blair (1995) and others, by exploring the processing of emotion recognition and its relationship to behaviour difficulties as measured by the Antisocial Processes Screening Device (Frick and Hare, 1996; 2002). It built on this work by extending the research to a mainstream population of young children, as previous work had concentrated on skewed populations. It offered no support for the Violence Inhibition Model mechanism (Blair, 1995) and the association between antisocial tendencies and difficulties in processing sad and fearful facial expressions, with a mainstream group of five year olds.

This research also drew on work in the area of ADHD with children, e.g. Pennington and Ozonoff (1996) and others, by exploring performance on EF tasks and its relationship to behaviour difficulties as measured by the DuPaul ADHD scale. It built
on this work by extending the research to a young, mainstream population, as previous research had concentrated on older children, many of whom were clinic populations. It offered limited support for the association between ADHD tendencies and performance on EF tasks.

6.2. Implications for EP Practice

EP’s have a role in promoting child development and learning, through the application of psychology (DfEE, 2000), e.g. through assessment and interventions. All EP’s have a professional responsibility to update their professional knowledge and skills continually post qualification and to maintain competence in a changing world (DECP, 2002) and CPD is an essential part of this process (BPS, 2002).

This research was relevant to Educational Psychology, due to the potential implications for assessment and intervention. A key part of the EP role is psychological assessment, which is highly individualised, although there are some fundamental principles relevant to all educational psychologists (DECP, 1999). It is important there was a direct link between assessment and intervention, with psychological assessment reflected in psychological knowledge. Assessment techniques and materials should be relevant to the presenting problem, and to the purpose of assessment. EP’s should formulate and test hypotheses on the basis of research from all areas of psychology (Frederickson et al., 1991).

It is recognised that not all children with behaviour difficulties are the same and that there are a variety of causes (Farrell, 1995), and therefore two aspects of the literature on behaviour difficulties were explored in this thesis: ADHD and Antisocial
Behaviour. This was relevant to an EP due to increasing concerns regarding children with behaviour difficulties, and their potential for negative outcomes (Campbell, 1995; Moffitt, 1993). It is important that EP’s are objective, systematic and grounded in psychological theory with assessment (Rees et al., 2003) and this research had the potential to contribute to this, by its application of contemporary psychological research to a mainstream group of children.

EP’s have a role to support and intervene with children. This research was, however, unable to distinguish ADHD, for example, from Antisocial Behaviour with the EF and emotion recognition tasks administered. It could be argued, therefore, that these neuropsychological tasks were not any better than the checklists that already existed. The behaviour rating scale was able to discriminate between children as evidenced by the range of scores in this research, suggesting it can be a useful tool for raising the awareness of, or of focusing teachers on, young children with severe behaviour problems, e.g. of inattention, hyperactivity and impulsivity, who have not been diagnosed as having ADHD but nevertheless may be at risk of similar outcomes (Merrell and Tymms, 2001). However, it could not discriminate between young children with ADHD and Antisocial Behaviour, due to the confounding factor of Impulsivity present in both measures, reinforced by the positive correlation between the two measures for the mainstream sample in the pilot study.

Any behaviour difficulties need to be evaluated within the relevant context, e.g. the classroom, with the aim of specifying intervention strategies. The behaviour checklist can form part of the assessment that informs an intervention, and provide a baseline from which to monitor and evaluate interventions. As a profession there is a need to
establish more research-based practice, re-directing the profession away from a reliance on opinion based approaches to EBD, and subsequent report writing, to designing and implementing interventions. At present, neuropsychological strengths and weaknesses are often not considered in relation to positive interventions for children’s learning and psychological health (Hood, 2003). However, research has suggested that behaviour problems during the pre-school period place the child at increased risk of being convicted of an adult offence (Stevenson and Goodman, 2001). In addition, children recognised as having a behaviour difficulty in reception year continued to have problems in year 2 (Merrell and Tymms, 2001), suggesting an intervention could be appropriate for this mainstream group on the basis of the behaviour measures alone, especially as behaviour difficulties have the potential to impede academic progress.

The questionnaire that contained the Du Paul and the Frick did appear able to discriminate young children with and without behaviour difficulties on the basis of scores, and therefore it could be useful as an approach to focusing teachers regarding the specifics of their behavioural concerns. The questionnaire data could be used to form a baseline from which to measure the effectiveness of interventions or to monitor changes in behaviour over time. EP involvement could provide more qualitative information to clarify a reported difficulty, as performance on tasks, for example, is only one form of assessment information. For example, poor performance on the Visual Attention task in this study could have been due to underlying visual attention problems or impulsivity, depending on the type of error made. A high frequency of off-task behaviours on the simpler items would lend support to an attention and impulsivity hypothesis. Poor performance on the more
difficult items could be related to a cognitive overload hypothesis. Without additional qualitative observation, clarity is more difficult to obtain.

This study explored the relationship between behaviour and performance on Executive Function and emotion recognition tasks. The contribution of this study, and other research in this area, to difficulties in schools is limited due to the inconsistencies between studies. ADHD appears to be reported increasingly by schools but this needs to be treated cautiously due to the variability in the research base, despite the volume of research. EP’s should be cautious regarding the implications of existing research for the profession and subsequently for schools and for children. For example, it could be argued that there is at present a lack of fine-grained EF tasks that are reliable enough to be used in the assessment of ADHD, which included those published and available to purchase by applied psychologists.

The need for caution extends to the research in the area of Antisocial Behaviour, where there is a paucity of studies, predominantly based on a skewed population, and undertaken by a small number of researchers. As a result, the level of independent critique has not been high. It could be argued, for example, that the emotional recognition task employed in this study would add nothing to the assessment process for EBD.

One potential aim of research in this area was its use to the LEA in directing limited resources to greatest effect, with a focus on early intervention with behaviour difficulties due to the potentially greater long-term cost. There is, however, limited evidence in this research that could be used in this way. The local and national
agenda for social inclusion would be better supported from closer monitoring of children recognised as having behaviour difficulties, and the evaluation of any interventions. EP’s could support the LEA in this area, with the design and evaluation of projects, and establishing specific intervention and monitoring cycles of children with behaviour difficulties.

An EP is best placed to apply psychological knowledge within an educational context, with their understanding of neuropsychology, as well as their knowledge of how schools work, combining assessment tools and consultation skills. EP’s are the main group within LEAs who have relevant training and experience in conducting research, and therefore are able to undertake further studies in this area, either as part of a specialist role or in conjunction with EP training institutions - especially in relation to the new doctorate. Significant findings could be used to inform local and national policy and strategies. EP’s could develop evidence with regard to the validation of assessment techniques and evaluation of interventions. Many EP’s have experience in this area and could usefully contribute to the evidence base of effective assessment.

6.3. Suggestions for Further Research

Research should inform clinical judgement but needs to be interpreted carefully. There is a need to inform the understanding of ADHD, with particular reference to assessment and intervention, and then research on the effectiveness of interventions can be developed. An important goal for future research is clarity regarding the relationship between general and specific cognitive impairments, and behaviour difficulties of young children.
Other research possibilities incorporate the development of a specific cognitive intervention to help develop Visual Attention skills, an identified area of weakness associated with measures of behaviour difficulty in this thesis. EP involvement could be with interventions to minimise the impact of environmental factors on recognised difficulties in this area, from starting at the simplest level. For example, are there factors in the classroom contributing to the difficulty?

There is a lack of longitudinal studies, and it could be beneficial to review the research participants at different stages to assess whether their behaviour ratings are consistent over time, or whether the apparent difficulties were more transitory or part of normal development. There is a need for more clarity to provide effective early interventions that could minimise the impact of any behaviour difficulty highlighted by measures of ADHD and Antisocial Behaviour. This could potentially reduce the impact of such behaviours associated with Antisocial Behaviour later in development for some individuals.

Any research in this area needs to be treated sensitively as there could be a concern that future results may have the potential to be used to inappropriately label children. Existing research is highlighting many weaknesses and few firm conclusions at present. The questionnaire did appear able to discriminate young children on the basis of scores, and therefore it could be useful as an approach to focusing teachers regarding the specifics of their behavioural concerns.

Further research is needed to clarify the utility of EF tasks for EP assessments. Future research could consider initial group formation on the basis of the factors within the
scales rather than the total scores. For example, rather than an ADHD group, have Inattention and Hyperactive-Impulsive groups. Instead of an Antisocial Behaviour group, have Impulsive and Callous-Unemotional groups. Due to the anticipated low prevalence rates, a large sample would be recommended to maximise the chances of any group effects.

6.4. Reflections on what has been learned

One important learning point over the doctoral period was how the context in which we operate can change, albeit indirectly, with the production of documents, which impinge on the work of Educational Psychologists. Within Education, at the local and national government level (DfES), there is an emphasis on inclusion. At national government level (Home Office), there is also an emphasis on enforcing rules and standards of behaviour, which was reinforced by the White Paper, 'Respect and Responsibility - taking a stand against antisocial behaviour', published by the Home Office in March 2003. The White Paper emphasised strengthening the tools available to deal with antisocial behaviour, with a vital role for local authorities. In addition to this, a Green Paper on 'Children at Risk', considering universal and targeted provision for children at risk of poor outcomes, such as those with antisocial behaviour. There is a National Behaviour and Attendance Strategy, incorporating support and training for secondary schools, in addition to centrally funded Behaviour Improvement Projects. Behaviour, therefore, is a key issue within both local and national government.

Undertaking this level of research offered the opportunity to assess a large number of
children over a relatively short period of time, and therefore highlights factors of assessment materials that may not have been observed with a more gradual approach. The NEPSY has been designed for younger children but impressions gained from assessment would suggest that the tasks are potentially too difficult for the range of ability. In the early stages of planning, one task was deemed to be inappropriate as when tested on a couple of children, who could be considered well within the average range (from discussion and attainments), the task was clearly too difficult. It was also complicated to administer, with the combination of equipment manipulation and written recording. One aspect of useful research is its practical application and in exploring EF tasks, if they are to have any professional benefit, they need to be appropriate to the age group and relatively easy to administer. Without this, they are unlikely to be utilised as part of EP assessment.

The importance of preparation and good planning cannot be over-estimated. Choosing two distinct aspects of behaviour for this research resulted in parallel aspects that became confusing at times. For example the type of journals in which the articles existed created its own difficulties, with some particularly scientific and inaccessible, despite a science background. It may have been better to focus on Antisocial Behaviour or ADHD, especially given the vast body of research, which appears to exist with ADHD, although a lot is American, and therefore limited in its applicability to the UK. In doing so, a greater number of EF tasks could have been compared across groups.

In addition, the research base changes, and new papers appear, describing tasks that may have been considered had they been written earlier. For example, the emotion
sensitivity task employed by Blair and Coles, on reflection may have been more useful than the DANVA. With any research, however, there comes a time when decisions have to be made on the basis of the available information.

6.5. **Professional and Personal Development Opportunities Generated by the Study**

Undertaking this level of research and necessary critique has been something of a steep learning curve, and has raised my level of awareness uncomfortably high. Written recording and reading regular journals are done in a more critical fashion and therefore I would argue that my understanding and reporting have improved gradually over the four-year doctoral period.

Undertaking research in these areas, and at this level, has improved my skills in searching a vast range of information, in deciding what is good or poor quality, and in summarising vast amounts of information into a few paragraphs or a table.

Volunteering for service ‘jobs’ has taken on new meaning, in the sense that what previously may have been good enough no longer is and opportunities to apply the newly established search skills frequently arise. Rather than a reliance on ‘old course notes’ or colleague opinion, (still valuable, of course), regarding information collection to do with a new case or issue, a brief review of the latest research is the new minimum standard. This of course has implications in a profession that increasingly feels pressured to become involved quickly, and to provide answers now rather than later. In essence, undertaking the doctorate and this research has taught
me to think, but there is a tension with professional practice, when thinking time appears limited.

The sense of achievement nearing the end of what at times has been an arduous yet stimulating process is immense. Completing this research has given me greater confidence, both personally and professionally. This partly reflects the level of challenge and rigour, which has persisted over this research period.

The enthusiasm for schools to participate in the research was encouraging, and I initially underestimated their willingness to invest time in it without any direct reward. The active interest of schools has encouraged me to initiate other projects within schools, and to utilise my research skills in supporting schools with their own projects. The advantage is that Government funded initiatives can be used to create good quality, evaluative studies. The level of my involvement in projects within the LEA will be able to increase further following completion of the doctorate.

6.6. Final thoughts

With a climate of increasing concern regarding EBD, with an increase in the number of referrals, it is important for EPs to adopt a strategy for assessment that is seen to be objective and systematic, and grounded in psychological theory. Research can play a vital role in exploring or devising assessment approaches based on the available evidence. This research was an appropriate study undertaken in an applied context, and relevant to the profession of Educational Psychology as research has highlighted biologically based developmental pathways into emotional and behavioural difficulties, challenging the notion that the cause of some children’s difficulties is
exclusively social in origin. The two areas of particular relevance to this piece of research are attention problems and impulsiveness (ADHD), and problems in responding to the sadness and fear of others (Antisocial Behaviour). This in turn is associated with heightened levels of instrumental aggression and an absence of guilt. The research in the literature review suggested that there are a number of tasks, which are able to tap these individual neurocognitive systems. The goal of this research was to see whether performance on these tasks is associated with measures of behavioural difficulty with younger children, with a view to the potential for early identification and intervention of appropriate programmes to aid social inclusion.

This study found further evidence to suggest that performance on some measures of EF are associated with ratings on behaviour scales, with children rated as having more difficulties performing less well. The creation of a range of simple EF measures, which may be able to offer more consistent results across research studies, is recommended.

This study was only able to offer limited support, however, for the association between the recognition of emotion and ratings on behaviour scales. It is suggested that this in part may be due to methodological issues. Possibilities for further research have been suggested and the implications for the practice of Educational Psychology discussed. It could be argued that there are few definitive conclusions about the relationship between brain physiology, higher cognitive functions, and human psychopathology (Cooper, 2000), which reflects the complexity of this area of research. Whether a disorder develops depends on the complex interaction between the individual and the external environment.
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APPENDICES

1. Information for School letters (anonymous):
   a. Parent version
   b. Teacher version (introduction)

2. Letter sent with rating scale forms (anonymous)

3. Letter sent to HT with information regarding main study dates and participants (anonymous)

4. Copy of behaviour rating scale form

5. Copy of photographs from the DANVA
September 2001

Survey of Behaviour (Attention/Social Awareness) of Young Children

Dear Parent

The Educational Psychology Service is carrying out a survey of the Behaviour (Attention/Social Emotional Awareness) of young children in the area. This survey will form part of a doctoral research project in association with University College London.

A cross sample of schools has been chosen to participate (including your child’s school) and all the reception year children are to be surveyed by questionnaire in October 2001. The information provided by schools will help to provide a clearer picture of young children’s needs and may inform any decisions regarding future service provision or funding.

The initial survey will sample at least 200 children and of these a smaller sample of 80 will be chosen to participate in the second part of the research during the spring/summer term. This will involve an individual session with myself completing a variety of puzzle type activities which children generally enjoy, (I am happy to provide further details if requested).

The information provided will be held in strict confidence by myself, the Educational Psychologist responsible for this research. I will, of course, be happy to provide information regarding outcomes to interested parents or would be happy to answer any questions parents may have. I can be contacted directly on –

Thank you for your assistance with this, as your involvement is key to improving the research base upon which many work practices are based.

Yours sincerely

Marie Ramsay
Educational Psychologist, BSc (Hons). PGCE. Dip.RSA, MA., C.Psychol
Please complete and return the slip below to school if you do not want your child to participate.

I do not want my child to form part of the large sample □

I do not want my child to form part of the small sample □

Signed: .................................. Name of Pupil: ..............................
September 2001

**Information for Schools**

Dear Reception Teacher

The _______________ Educational Psychology Service is carrying out a survey of the Behaviour (Attention/Social Emotional Awareness) of young children in the area. This survey will form part of a doctoral research project in association with University College London.

A cross sample of schools has been chosen to participate (including your school) and all the reception year children are to be surveyed by questionnaire in October 2001. The information provided by schools will help to provide a clearer picture of young children’s needs and may inform any decisions regarding future service provision or funding.

The initial survey will sample at least 200 children and of these a smaller sample of 80 will be chosen to participate in the second part of the research during the spring/summer term. This will involve an individual session with myself completing a variety of puzzle type activities which children generally enjoy, (I am happy to provide further details if requested).

Your participation is key to the success of this project and involves the completion of a two-sided questionnaire (see attached) by yourself and a second questionnaire by an additional member of staff, for all the children in your reception class in the week prior to half-term in October 2001. I will send all the printed questionnaires required and an envelope for their safe return directly to yourself at a later date.

I will be happy to provide information regarding any outcomes to yourselves and to answer any questions you may have, and can be contacted directly on the number above. The information provided will be held in strict confidence by myself.

Thank you for your assistance with this, as your involvement is key to improving the research base upon which many work practices are based.

Yours sincerely

Marie Ramsay
Education Psychologist, BSc (Hons). PGCE. Dip.RSA, MA., C.Psychol
Letter 2

October 2001

Dear

Re: Behaviour Research

Please find enclosed questionnaires to be completed for your reception children, as agreed at the planning meeting.

As discussed, each child has two questionnaires. One to be completed by the class teacher and the second by another adult in school who knows them.

Could these please be completed in the week before half term and returned to me, following completion, in the internal mail using the envelope provided.

This research requires the return of 200 questionnaires from across the city and your contribution is greatly appreciated.

If you have any questions then please feel free to ring me on ____________.

Of those 200 questionnaires I will choose 80 children for the main study, but at this stage I am not able to say who they will be but I can assure you it will not involve work for yourself or the school, just me!

Thank you again for your participation and I will inform you of any results following data analysis later this term.

Yours sincerely

Marie Ramsay
Educational Psychologist, responsible for the behaviour research
BSc (Hons). PGCE. Dip.RSA, MA., C.Psychol.
Head teacher

7 January 2002

Dear

Re: Behaviour Research

I have now calculated which 80 children will form part of the main study during the early summer term 2002, but I can reassure you that this will mean work for me and not you. This will involve children in your school and I have provisionally allocated the following dates:

- 19 April 2002
- 22 April 2002

If you have any further concerns or questions, then please feel free to contact me.

Happy New Year and best wishes

Marie Ramsay
Educational Psychologist
4.

Behaviour Rating Scales

Child's name: ____________________  Sex:  M  F  Age: ______
Class: ____________________________

Completed by: ____________________  Position: ________________
Date: __/__/____

How long has the child been in this class (months) ______

Please complete the background information above. Then read each statement and circle the number that best describes this child's school behaviour. Do not leave any statement unrated.

Part 1: Attention and Activity

<table>
<thead>
<tr>
<th></th>
<th>Never or rarely</th>
<th>Sometimes</th>
<th>Often</th>
<th>Very often</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Fails to give close attention to details or makes careless mistakes in schoolwork.</td>
<td>0 1 2 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Fidgets with hands or feet or squirms in seat.</td>
<td>0 1 2 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Has difficulty sustaining attention in tasks or play activities.</td>
<td>0 1 2 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Leaves seat in classroom or in other situations in which remaining seated is expected.</td>
<td>0 1 2 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Does not seem to listen when spoken to directly.</td>
<td>0 1 2 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Runs about or climbs excessively in situations in which it is inappropriate.</td>
<td>0 1 2 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Does not follow through on instructions and fails to finish work.</td>
<td>0 1 2 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Has difficulty playing or engaging leisure activities quietly.</td>
<td>0 1 2 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Has difficulty organising tasks and activities.</td>
<td>0 1 2 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Is &quot;on the go&quot; or acts as if &quot;driven by a motor&quot;.</td>
<td>0 1 2 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Avoids tasks (e.g., schoolwork homework) that require sustained mental effort.</td>
<td>0 1 2 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Talks excessively.</td>
<td>0 1 2 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Loses things necessary for tasks or activities.</td>
<td>0 1 2 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Blurs out answers before questions have been completed.</td>
<td>0 1 2 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Is easily distracted.</td>
<td>0 1 2 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Has difficulty awaiting turn.</td>
<td>0 1 2 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Is forgetful in daily activities.</td>
<td>0 1 2 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Interrupts or intrudes on others.</td>
<td>0 1 2 3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Part 2: Social and Emotional Awareness

<table>
<thead>
<tr>
<th></th>
<th>Not at All True</th>
<th>Sometimes True</th>
<th>Definitely True</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Blames others for his/her mistakes.</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>Is concerned about how well he/she does at school.</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>Acts without thinking of the consequences.</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>His/her emotions seem shallow and not genuine.</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>5</td>
<td>Lies easily and skilfully.</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>6</td>
<td>Is good at keeping promises.</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>7</td>
<td>Brags excessively about his/her abilities, accomplishments, or possessions.</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>8</td>
<td>Gets bored easily.</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>9</td>
<td>Uses or “cons” other people to get what he/she wants.</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>10</td>
<td>Teases or makes fun of other people.</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>11</td>
<td>Feels bad or guilty when he/she does something wrong.</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>12</td>
<td>Engages in risky or dangerous activities.</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>13</td>
<td>Can be charming at times, but in ways that seem insincere or superficial.</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>14</td>
<td>Becomes angry when corrected or punished.</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>15</td>
<td>Seems to think that he/she is better than other people.</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>16</td>
<td>Does not plan ahead or leaves things until the last minute.</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>17</td>
<td>Is concerned about the feelings of others.</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>18</td>
<td>Does not show feelings or emotions.</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>19</td>
<td>Keeps the same friends.</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

Thank you for completing this questionnaire.
University College London

Assignments submitted for the Continuing Professional Development
Doctorate in Educational Psychology
(D.Ed.Psy.)

Volume 2

Professional Practice Assignments

Name: Marie Ramsay

2004
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Assignment One

One Approach to the Management of Challenging Behaviour in Children with Severe Learning Difficulties

Core Curriculum Area: Psychological Assessment and Intervention

Introduction

Difficult pupil behaviour continues to attract the attention of educational practitioners and researchers, and one of the major professional groups to advise schools in respect of difficult behaviour is that of educational psychologists. Behaviourism has been an influential perspective but since the 1980's there has been a growth of interest in approaches derived from systems theory and organisation development, and identifying the most effective level for intervention, e.g. whole school, teacher or pupil (Miller, 1995).

Two groups of children and young people in schools for pupils with severe learning difficulties are currently causing particular concern for parents, teachers, administrators, and other professionals. These are pupils who have multiple handicaps and pupils whose difficult or problem behaviour (challenging behaviour) presents a threat to their education and safety, to the education and safety of other pupils, or to the safety of staff. Kieman & Kieman (1994) argue that with an increasing emphasis on care in the community and the high cost of out - Local Education Authority residential schooling, the pressure to develop local provision has increased. The presence of such pupils in Severe Learning Difficulty (SLD) day schools or integrated educational settings raises issues concerning appropriate methods of education and behavioural management.
These in turn provoke questions concerning staffing and the skills of teachers and other school staff. Many Local Education Authorities have been considering the feasibility of meeting the needs of children within local, rather than independent, school provision. This would appear to be motivated as much by economic concerns, as by the principle of maintaining children in their local communities. Placement away from the area means that the family cannot maintain regular contact with their child and are likely to be as poorly prepared for supporting their child in the future, as they were before the child left home and as a result many may remain in long term care.

This assignment attempts to review one local authority’s response to the management of challenging behaviour in children with SLD within their local provision.

Objectives

The objectives of this current assignment are to review the existing, available research and practice literature within the area of SLD, challenging behaviour and children. It will then discuss one local approach to meeting the needs of children with SLD and challenging behaviour in the context of the literature reviewed. Finally, implications for Educational Psychology practice will be discussed.

Literature Review

For this literature review a number of sources were researched, incorporating the use of both modern technology and old-fashioned hard work! For example, a number of university libraries were visited (OU, UCL, INSTITUE), and their databases were explored. The primary terms used were a combination of ‘challenging behaviour’, ‘severe learning difficulties’, ‘learning disability’, and ‘behaviour difficulties in
children’. Both the Education and Psychology databases were explored and a more specific computer search was undertaken using the ERIC and PsychLit databases. The focus was with the 1990’s + for journal articles, as books (another useful source of more general information) tended to discuss earlier research. Any relevant articles were then obtained, irrespective of date. I did not explore the more ‘social science’ based database, as I wanted to retain an educational focus and to keep the amount of available information manageable.

Children described as having challenging behaviour can be found in a wide range of provision, although the term was introduced, (and is used here), for people with SLD (Porter & Lacey, 1999). Challenging behaviour can be seen as behaviour which presents a serious risk to the physical safety of the individual or others around them, or which prevents the individual taking part in everyday life in the community. Mansell (1994) emphasises the social construction of challenging behaviour, that it is the product both of individual and environmental characteristics.

Norgate (1994) defines challenging behaviour as pupil behaviours

‘Which are either dangerous to themselves or others, or interfere with their education to an extent that they require a programme designed specifically to bring them within instructional control. Such behaviours may typically be aggressive, destructive or self-injurious but would also include those in which high levels of ritualistic or stereotypical behaviour are experienced.’(Pg.201/2)

Children with severely challenging behaviour are often difficult to engage in the usual classroom teaching activities and frequently disrupt the work of their peers. They place additional demands on staff time and, consequently, may create considerable stress and
anxiety. One in five teachers in one survey reported they felt dissatisfied with the provision available for children with SLD and challenging behaviour, with a wide variation in the amount of support provided (Porter & Lacey, 1999). With children who display violent or aggressive behaviour, directed towards themselves or other people, some form of physical restraint may seem unavoidable (Harris, 1995).

To work effectively with children, who present a challenge, it is necessary to understand the behaviour from the child's point of view and not simply as a problem that interferes with the goals and activities defined by adults. It is also important to recognise the contribution of a SLD, as the behaviours that challenge adults are unlikely to be premeditated or intended to have any particular outcome. They are more likely to be a reflection of the child's difficulties in understanding how they can fit in with school organisation and the many complex social routines, which comprise educational practice (Harris, 1995).

**Prevalence**

There are probably as many estimates of the prevalence of behaviour problems as there are definitions. The degree to which behaviour is perceived to be a problem or not will depend not only on the behaviour per se, but also on features of the social or physical environment which render such behaviour contrary to accepted norms, or perhaps physically dangerous (Qureshi & Alborz, 1992).

A relatively high proportion of children with SLD present challenging behaviour or severe challenging behaviour (Quine, 1986; Qureshi & Alborz, 1992; Keirnan & Keirnan, 1994). Quine (1986) argued that prevalence studies of behaviour problems in
children with SLD were rare owing to difficulties in the definition of SLD and the fact that, until the mid 1980’s, health districts did not compile registers. There have, however, been more recent studies completed in the 1990’s. Prevalence rates of challenging behaviour have been shown to vary across location, age groups and levels of ability (Qureshi & Alborz, 1992). The precise number varies and depends upon the way in which challenging behaviour is defined, whether or not the school concerned encourages or discourages the admission of pupils with a known history of challenging behaviour, and the research methodology employed. The latter can vary from observation from staff either internal or external to the school, staff discussions within the school, more structured data recording methods, survey methods or a combination of all four, each method with its own strengths and weaknesses. Most estimates suggest that in any school for children with SLD, between 10% and 15% will display some form of behaviour, which presents a severe challenge (Harris, 1995).

Quine (1986) presented data on the prevalence of behaviour problems in a population of children with SLD, and the social and environmental correlates of challenging behaviour. Significantly more children with challenging behaviour were found to be incontinent, to have few self-help skills, to have poor communication skills, and to be unable to read, write and count than children who did not show challenging behaviour. Children who do exhibit challenging behaviour present their carers with more management problems; they are more difficult to keep occupied and to keep safe. Their dependence on others to perform simple tasks and their incontinence make extra work for their carers. When the wider family environment correlates of challenging behaviour were sought it was found that remarkably few appear to have been identified. There was
no association between challenging behaviour and family size, birth order, and age of parents, social class or income.

Keiman & Kieman (1994) completed a postal survey concerning the prevalence of challenging behaviour in schools for children with SLD in England and Wales. The survey concentrated on children who showed challenging behaviour and aimed to assess the numbers of such children, their abilities and challenging behaviours and the service responses made to such children by schools. In their survey, their definition of challenging behaviour included behaviours that may interfere with educational interventions, such as stereotyped behaviour, ritualistic behaviour and non-compliance. They identified 22.2% of the school population sampled: 8.2% extremely or very difficult and their data support the common assumption that the number of difficult children increases with increasing age. Within these children the proportion at each age group who were rated as extremely or very difficult remains consistent at approximately 38%. This shows that the common assumption that children only become severe management problems when they become adolescent is incorrect for this group of children. It appears a fairly consistent proportion of difficult children are severe management problems throughout the school year groups.

This survey, (as a measure at one period of time), cannot clarify whether it will be the same children who will be perceived as a severe challenge, although I would hypothesise this is the case. From working within an SLD school, behaviour problems, especially severe behaviour problems, appear to be persistent and resistant to change once developed. Certainly, Keirnan & Keirnan (1994) suggest a core of very difficult children at each age group and one possible explanation could be that children with
severe management problems would always form part of an SLD class. From a perusal of children’s records in a local school for children with SLD, it often appears that the older children with significant behaviour problems had problems as very young children. Consequently, it is likely that children in the younger age groups may, without effective interventions, continue to present problems throughout their school careers and that older children will present problems when transferred to adult facilities.

Service responses to challenging behaviour of pupils with SLD

Employment of extra staff to assist in the management of more difficult children appears to be a common service response, although there appears to be a large variation in the amount of additional support teachers receive. Porter & Lacey (1999) found that 32% of their survey receives additional staffing for 75% of the time or more, and 37% received support for less than 25% of the time. Assistants provided some of this support for 58% of those surveyed, to promote learning and manage behaviour, and a wide range of other professionals were also mentioned, for example psychologists.

The approaches and strategies employed within schools can also vary. Axelrod et al (1990), argue that despite numerous and long standing research to indicate that behavioural procedures can produce large gains in academic skill development, the techniques are seldom used in regular education. This can be a problem if a behavioural intervention is recommended as the most effective strategy for a particular problem. A recent study has shown that between 50-86% of Educational Psychologists still devise, with primary schoolteachers, behavioural interventions for primary children (Miller, 1995). Despite this practice and the supporting empirical evidence, there is also agreement that it has been difficult to encourage teachers to take up and use these
approaches regularly to maintain positive behaviour. This also appears to be the case within the special system as Dessent (1988) suggests the extent to which teachers in special schools or units use behavioural techniques is questionable and that there is a problem concerning the maintenance of behavioural skills acquired via INSET. He argues this is true of many INSET courses. If Educational Psychologists are to make use of behavioural interventions effectively, they need to understand why such interventions are ignored.

Dessent (1988) suggests it may be the over emphasis on detailed recording and measuring techniques associated with behavioural approaches. Rather than the techniques themselves, it may be staff interpretation of them. A factor in this could be a misperception of how to complete appropriate records, for example the inclusion of irrelevant data that becomes so time consuming and impossible to complete within a classroom setting. Axelrod et al (1990), suggest it may, in part, be due to a lack of training in behavioural techniques in teacher training and a lack of supportive evidence presented in regular education journals. In addition, individual problems and the learning needs of children are viewed as controllable by manipulating something within the child. They argue that behaviourism also has an image problem that associates behaviour modification with rats and pigeons, and makes generalising to the classroom difficult. For example, they argue the most commonly used behavioural principal, positive reinforcement, can be difficult to apply as short-term consequences shape many teachers into being screamers rather than praisers. They suggest the failure of behaviourists to, a. make greater use of their own technology, b. give greater attention to the problems of treatment adherence and dissemination, and c. devise functional
alternatives to behavioural consequences, may be factors preventing general adoption of
behavioural principles by educators.

Miller (1995) interviewed a number of mainstream teachers who had participated in
consultations regarding a child with difficult behaviour and argued that the take-up of
and adherence to behavioural interventions by teachers may depend upon factors not
usually addressed in the literature on this subject. He suggests that some aspects of
behavioural approaches, in a consultative context, can be highly effective in helping
teachers, although they may lack the methodological rigour typical of behavioural
approaches. He found teachers avoided a problem solving orientation towards problem
behaviour and that staff culture is not necessarily supportive to a teacher with a difficult
child. This could in part be explained by an apparent tendency amongst teachers to
perceive problems as ‘within child’ and therefore it would not seem relevant to other
children. He argues a written policy does not necessarily support an individual teacher
with an individual child, and may not lead to a staff culture that is positive towards
working with difficult to manage children. As teachers were unlikely to describe
successful interventions to their colleagues, then good practice would not be spread
throughout the school. It may, however, not be fair to criticise written policies per se,
rather than looking at why some teachers may not be following them. As an external
support agency, EPs could refer the class teacher back to their written policies via
consultation or other work. We could also help develop policies, if the existing one is
not perceived to be relevant.

Miller argues that it is important to look at the effect of interventions within a school on
the other members of staff when considering ‘treatment adherence’, rather than focusing
on one particular teacher or class. Proponents of behavioural interventions need to consider the crucial role of staff culture and other teachers and parent perceptions, if approaches are to spread beyond a single child/class. Although much of this work has been based on mainstream teachers and children with behaviour problems in mainstream schools, it appears that in a special setting there are parallels with this. There is evidence in clinical and research literature that people with challenging behaviours do respond to highly structured methods of intervention, however there is very little evidence that such approaches are used routinely in day special schools for children with SLD (Harris, 1995).

Harris (1995) argues that when systematic interventions are used in schools they usually involve experienced professionals who design intensive treatment programmes for individual children. These interventions often draw upon extensive behavioural literature with attempts to analyse antecedents, consequences and functions of behaviour. Harris (1995) argues that

‘When such interventions stop being driven by outside experts, the treatment itself quickly decays and improvements in behaviour frequently recede’.

This does appear to be the case from my experience with some children. His particular research project was more concerned with long-term school-based interventions requiring the development of expertise within the school. He describes work carried out with teachers and classroom assistants in special schools to establish effective ways of responding to challenging behaviour presented by children with SLD. A survey of special schools within the West Midlands highlighted a number of behaviours, which they thought presented a severe challenge to staff. The variation in the number of
responses to each behaviour reflecting the different perceptions of staff as to what is considered challenging. As part of their study project staff directly observed staff and child behaviour in the context of ordinary classroom activities, and subsequently targeted the behaviour for intervention. The behaviour of both staff and children could have been influenced by the presence of another adult, which can add another dimension to any planned intervention. The direct involvement of staff in behaviour recording was considered essential for the development of school-based expertise. Following classroom-based interventions, 72% of the behaviours being monitored showed a reduction in their frequency or duration. Some of the monitored behaviour responded more rapidly, and for some the interventions seemed to have little or no direct effect on their challenging behaviours. The varying results may relate to the length of time behaviour has existed, as the longer it exists, the harder it can be to diminish. Or it could be that functionally equivalent behaviour was not found or a child simply enjoys it.

In addition a semi-structured interview schedule was designed to provide information about the children, their management and their homes, as well as the teacher's evaluation of the severity of the challenge and the availability of additional help. Ten positive approaches to overcoming challenging behaviours in the classroom were highlighted by Harris (1995) to be long term and school based, encouraging the development of expertise within the school:

- Help the child to establish positive relations with one adult;
- Formalise judgements about appropriate and inappropriate behaviour using a system of rewards;
- Introduce planned activities matched to child's strengths and weaknesses;
Focus on teaching language and communication;

Encourage language and communication for meeting individual needs in everyday settings;

Help the child to anticipate the sequence of daily events and activities;

Provide opportunities for the pupil to opt out of activities;

Convey adult expectations clearly and provide consistent feedback;

Ensure that all staff are aware of new methods of working;

Provide a written protocol that describes how to respond to the challenging behaviour.

I would suggest that the majority of these statements would be familiar to many teachers, but in themselves may not be enough to reduce challenging behaviour significantly without some form of structure to the classroom and a high level of consistency amongst staff. Although, Harris concedes it is also possible that there will be a small number of pupils, and possibly some behaviour, which are highly resistant to interventions. A combination of these within school approaches with occasional, external reinforcement of more structured approaches may be more successful with the more challenging child.

Dessent (1988) suggests that it is important that behavioural approaches are not a substitute for an appraisal of a child’s needs, such as the curriculum, resources and attitudinal factors. Also, that it is important that the time and resources needed to implement a behavioural programme are available to teachers and that approaches are described and implemented in a more practical way. He suggests de-emphasising the importance and use of complex recording systems and making increasing use of
behavioural principles in the development of practical teaching resources and materials. This then may seem more accessible and relevant to teachers, but without clear recording systems there is a danger that, for example, a functionally equivalent behaviour may not be taught and challenging behaviour may persist.

A common response to severe behaviour problems in SLD schools is to place children in special classes (Norgate, 1994). Porter & Lacey (1999) surveyed provision made by schools in a number of geographical areas for children with learning difficulties and challenging behaviour. They found that 3% provided segregated provision, 72% a combination of segregated and integrated, although current philosophy, e.g. the Department for Education and Employment’s Green Paper, emphasises integration with peers, in addition to supporting the maintenance of a range of provision.

Segregation may provide a better adult-child ratio, a more appropriate curriculum and environment, access to skilled staff and the avoidance of disruption and possible danger to other children. Although in isolating children there is a risk of isolating staff that may develop practices at variance with the philosophy of the school. They may feel marginalized and given the stress related with this area there is an argument for shared responsibility. Porter & Lacey (1999), found that teachers who expressed high levels of satisfaction with provision appeared to be supported by a variety of personnel including heads and deputies.

In addition, if all the children showing challenging behaviour are grouped together, experience of more normal peer-models, an important source of learning, are rare. It is
therefore very important to consider the potential advantages and disadvantages of any approach being considered.

**The Local Approach**

Porter & Lacey (1999) suggest there is a danger that the solution to challenging behaviour is seen to lie with managing the child rather than the curriculum, the teaching methods or the environment. This is the impression I have gained from observation, consultation and direct work over a three-year period within the local provision for children with SLD. Only 5% of schools in the survey by Porter & Lacey (1999) refer to using additional staff to promote communication. This is a concern as there is a link between communication difficulties and certain forms of challenging behaviour. They argue that given the importance of sensitive staff responses, communicative attempts should be a priority function.

Norgate (1994) argues that schools need to be helped to develop the skills necessary to manage their own problems rather than to remain dependent on outside agencies. Norgate (1998) suggests that the level of predictability and structure within the curriculum often seems critical. He describes an intervention study using TEACCH (Treatment and Education of Autistic and Related Communication Handicapped Children, Mesibov et al, 1989) techniques, which appeared to reduce the level of self-injurious behaviour (a form of challenging behaviour), in a child with SLD. He argues that it is important to consider whether the TEACCH approach or other factors are responsible. For example, he found that where assistants felt better supported by the advice that had been offered this enabled them to manage the child more confidently and effectively. I would suggest that the fact that staff were knowingly observed, and
aware that the intervention and outcomes were monitored and evaluated, would also make them far more aware of their own behaviour and its impact on children. In addition, as Harris (1995) argues, looking at ways to make the curriculum more explicit resulted in staff reviewing the content, and the possibility of a general increase in stimulation and activity. Norgate (1998) concluded that although comments suggested the TEACCH procedures had helped, he found it difficult to find convincing and uncontaminated evidence for this.

The strength of conducting research in the classroom is that it comes closest to reality; the difficulty is there are so many uncontrolled variables. For example, the other children within the classes could change, having an impact on class dynamics. It is always possible that behaviour could change spontaneously, for example as a result of maturation or changes at home. Norgate (1998) found little published research on either the relationship between behaviour and predictability, or the use of TEACCH with children presenting challenging behaviour. He concludes, however, that the lack of evidence for an alternative hypothesis lends weight to the effect having been produced by changes made within the school curriculum. He suggests this raises the issue of critically reviewing the curriculum for all children with challenging behaviour.

The TEACCH approach appears to offer the potential attraction of meeting a wide range of needs within a range of contexts, as implicit in TEACCH is the need for staff to pre-plan the curriculum in detail. A planned intervention, with clear roles, enables staff to become more involved and valued, which can have a positive effect on their efforts and enthusiasm.
The TEACCH approach is typically associated with children with Autism. Autism is commonly thought of as a triad of impairments: impaired social development; impaired language and communication; and rigidity of thought and ritualistic behaviour. Since children differ in the severity of their autism, the term autistic spectrum disorder is frequently used. TEACCH is one approach aimed at reducing many of their difficulties by providing an environment that is perceived to reduce their stress and anxiety. There is an emphasis on positive behaviour management strategies and visually mediated teaching approaches, factors that have been suggested as important for children with SLD and challenging behaviour. A child’s communication skills and understanding are developed with a variety of media to suit individual needs such as objects of reference, photographs and pictures, symbols and words. TEACCH is recognised as being an adaptable tool that can provide a framework for meeting a child’s academic, personal and social objectives (Rees, 1999).

As is true of many areas, challenging behaviour and children with SLD is a significant issue within the Milton Keynes area. The particular focus in this study has been a local attempt to better meet the needs of this group of children. The setting is the only SLD school within the authority and the focus a relatively small number of children, (seven at the time of writing), who have a history of SLD, challenging behaviour and communication difficulties. As has been found elsewhere, previous attempts to reduce the levels of challenging behaviour have had no obvious lasting effects and a steady number of children have ultimately been educated out-authority, which contradicts the authority’s inclusive policy and push to educate children locally. Attempts have included the use of partial segregation, with the use of an additional adult to withdraw a child at difficult times. Traditionally the school has broadly attempted integration for all
the children, with some grouping on the basis of ability rather than behaviour, within their respective age ranges. Educational and Clinical Psychologists have been involved in a variety of casework, using more traditional behavioural/positive programming, with limited success. Visual timetables are incorporated into some of the classrooms and points of reference in all. These aid transition times and provide added cues to increase a child's understanding of their curriculum, however they were not enough in themselves to meet the needs of this particular group of children.

Morale within the school also appeared to be low at the time of this study, with relatively high rates of sick leave, as these children could have a significant impact on the smooth running of their class in a number of areas. They could be aggressive when interacting with children and staff; their noise levels could be disruptive, e.g. screeching, crying; they could be destructive with equipment and resources and much of this behaviour appeared to be causing distress to both them and others. As a result they were prevented from participating in the curriculum; the learning of other children was affected; their behaviour resulted in them being either constantly shadowed or supervised or being isolated from their peers and therefore segregated. As a relatively new unitary authority which was undergoing a special needs review, a school eager for change, an OFSTED report highlighting behaviour management as an issue, and staff feeling both themselves and children were at risk, the time was ripe to try something new.

Preparation involved a number of meetings between selected members of staff within the school, members of the psychological service and LEA officers. A number of approaches were explored and the decision to operate a TEACCH type system was
decided, as on the basis of available evidence this appeared to be a system, which would be feasible within the present environment. This was in part a geographical decision as a neighbouring authority has established it within its autistic provision and from discussion it was reported to be successful and staff would be able to access training easily. Staff were familiar with the approach, which enabled easier adoption, as interest was high. TEACCH appears to be a well-documented and established approach (for children with autism) with clear background literature, which is accessible to teaching staff. Its key concepts of predictability and structure seemed particularly relevant to the children with challenging behaviour and SLD.

PECS (the picture exchange communication system) was another approach which appeared relevant and which there had been some training amongst some of the Educational Psychologists within the authority. It was felt that this may be more appropriate to introduce at a later stage to supplement TEACCH, once it had become established, as in itself it would not provide the structure and predictability perceived to be necessary. In addition, it had to be 'sold' to the school's resident speech and language therapist, who had responsibility for communication within the school and who was not PECS trained.

The LOVAAS programme, which is another familiar programme for children with autism was considered briefly but did not appear to be feasible for a classroom. It requires intensive 1:1 discrete trial training for 40 hours weekly in the initial phases of the programme, involving parents and adult helpers. The focus also appears to be on early intervention with a three year planned programme, which may be useful with a pre-school population but not the particular children in this study. Baird (1997, in
Connor, 1998) suggests that the LOVAAS approach emphasised compliance and not group activities, generalisation and everyday tasks of living, which are perceived to be important for the population in this study. Connor (1998) reviewed the effectiveness of the LOVAAS programme (compared to other approaches, including TEACCH) for early intervention for children with autism and concluded that this was not unique in achieving a positive outcome. He argues there are a number of interventions with common elements, such as: predictability and routine; a functional approach to problem behaviour; family involvement and generalisation strategies.

TEACCH was chosen and as part of this approach the class would maintain the same timetable structure each week and it provided a clear framework to encourage staff consistency. The routine for the day was established by doing similar types of activities at fixed points. This provided far more predictability to their environment than they had previously experienced within the school setting. TEACCH was adopted with an added emphasis on enabling the children to organise themselves and to gain some independence, which the teacher felt was lacking within the structure of TEACCH. Afternoon outings were organised occasionally, but always at the same time, staffing levels allowing. Issues such as environment of the classroom, resources, and staffing, funding and parental involvement were explored, based on the available information, for example the designated training course and the aims of the class. Multi-sensory cues were utilised, for example an object, or a song, as well as visual activity cards. The cards were placed in a designated box, representing the completion of an activity. An action plan was drawn up in preparation for the new class, known as the ‘alternative environment group’ (AEG) to the professionals and parents involved. The reader is referred to Schopler & Mesibov (1989) for further details of the TEACCH approach.
Discussion

Outcomes

Outcomes were monitored using a variety of methods:

- Regular meetings (termly) between the EP and AEG staff;
- Semi-structured interviews of staff with EP;
- Observation of attention to task by EP (termly);
- Frequency recording of challenging behaviour incidents by staff (daily), (see appendices for a copy of the chart used);
- Recording of attention to tasks by staff (daily);
- Monitoring /recording of their communication by the SALT.

The psychological service held semi-structured interviews with a small, representative sample of the staff to aid evaluation of the action plan and to clarify staff perceptions of the AEG (see Appendix 1 for the interview schedule). As there was only a small team of one teacher and three NNEB trained assistants, one assistant and the teacher agreed to be interviewed. All staff reported they were heavily involved and appeared to enjoy their active involvement, from the initial training and regular discussions, and clear philosophy of the staff working as a team. A high level of job satisfaction was reported, with a very low rate of sick leave.

The staff of the AEG monitored child behaviour. General behaviour was recorded at the same time as attention to task, using the format provided as part of the TEACCH approach. More serious incidents of behaviour are recorded separately as is the school policy. In addition, classroom observation and recording are undertaken by the Educational Psychologist on a number of occasions throughout the year to monitor
overall trends in child behaviour within class. The results of staff recordings of within class task behaviour and EP observations were transferred into graph form, for ease of communication at school meetings. The overall trend for six of the children was an improvement in on task behaviour within class (i.e. increased concentration) with the associated effect of an improvement in general class behaviour (i.e. a reduction in the number of challenging incidents). Pupil 1 was absent at the third observation session, and therefore it was difficult to comment on any trend with confidence, although it appeared to be positive overall. Pupil 3 appeared to respond well to TEACCH, however had a particularly difficult two weeks and from the available information it was difficult to explain this. From discussion with staff it appeared that staff absence had been a possible factor, highlighting the powerful influence of individuals. Another factor could be that replacement staff are not familiar with the TEACCH approach, which could have a negative effect on the smooth running of a structured classroom. Behaviour has also been noted to deteriorate following a school holiday, suggesting that the change in routine is unsettling. One factor being explored is the use of similar approaches in the home setting. Although the structure may not fit into family life easily, some of the more simple elements such as the visual timetable/cues used could, introducing more predictability.

Classroom observations of task behaviour were undertaken, as well as a review of the behaviour incident records, to monitor any changes in behaviour and academic achievement following placement within this environment. Initial results suggest there have been improvements in on task behaviour and a reduction in the number of challenging behaviour incidents since TEACCH was implemented. In addition, the child’s communication skills are assessed, monitored and reviewed, following
intervention by the resident speech and language therapist. The following communication strategies have been added to the TEACCH approach for use in the play area and playground: to develop an understanding of the effectiveness of communication the adults respond to and act upon the children’s idiosyncratic communications; to develop the social aspects of communication the adults engage the children by copying their actions and interpreting these in simple language, enhancing turn taking and eye contact; to develop imaginative play the play area is set up for early symbolic play and the adults model appropriate play. There have been reported small changes in all the children’s communication as measured above, for example all the children responded to their names during registration and joined the class group during drink time, where previously they did not in their respective classes. It is, however, too early to say whether this can be sustained. All the children have reportedly developed some ability in imaginative play where previously there was none, which was highlighted by the speech and language therapist in her sessions. This will hopefully help them to both make sense of and use early language meaningfully. Change is in very small steps and any progress will need to be monitored carefully over time to see if it can be maintained and generalised to different settings.

An improvement in both communication skills and on-task behaviour has been recorded for all the children to varying degrees. Behaviour records appear to indicate that there has been a decrease in the number of incidents for all the children, some showing a greater change than others. An attempt was made to record every incident of challenging behaviour. Previous records existed for a number of the children over a significant period (at least a year) prior to the implementation of TEACCH. It was hoped that this would provide a good series of baseline data against which to compare
the effectiveness (or not) of the TEACCH approach. Although it could indicate broad
trends, closer examination of the data highlighted an inconsistency in reporting methods
between staff, a problem that has been found in the literature. In addition, in the absence
of a comparison group and a lack of multiple baselines, the conclusions drawn may be
limited but still relevant. Working closely with this SLD School, on this issue, which
was specific to their environment, required a process of negotiation, and some of the
resulting recording methods, for example, were a compromise.

For its second year of operating there will be a slight increase in the number of children,
and therefore an increase in the number of staff, going from a ratio of 7:4 to 10:6,
pupils: staff (1 teacher and 5 full time NNEB qualified assistants). In addition, there will
be an increase in classroom size, with the provision of two adjoining rooms, which can
be partitioned when required. Modifications to the playground are being considered at
present, to try to increase the amount of space they have.

**Issues for further consideration/research**

There are a number of systemic or broader issues to consider regarding the
implementation of this intervention, which relate to the literature reviewed at the start of
this assignment.

- Whole staff communication through the school is presently done via a combination
  of a notice board and a presentation at a staff meeting. As yet there has not been an
  objective survey of non-AEG staff opinion, although the existence of the AEG has
  a knock on effect for staffing levels in the rest of the school. This in itself has
management and funding implications for the school budget, and is presently an area of potential conflict between the school and LEA.

• The curriculum is a particular issue at present and the head teacher has requested advice and support in developing this. Other teachers have raised issues about meeting the needs of children with emotional and behavioural difficulties within the framework of the National Curriculum (Porter & Lacey, 1999). The introduction of flexibility at Key Stages 1, 2, and 4 may help, however the demands of a subject driven approach, with narrowly defined expectations of appropriate behaviour may not provide suitable conditions for learning (Harris, 1995). It is common for some children to miss some subjects of the curriculum either regularly or occasionally (Porter & Lacey, 1999).

• Another issue is the intention to generalise some of the successful strategies and skills to other classes within the school. Reintegration is part of the long-term plan. One successful approach has been to utilise one of the skilled members of staff to reintegrate a child into another classroom. The provision is gradually being developed to have more inclusion.

• Funding is an issue that is being explored and as part of this the AEG needs to continue to monitor and promote its progress. Axelrod et al (1990) suggests an important activity is to become involved in the superstructure of organisations that are responsible for decision-making. Liaison meetings have been held and there will be a meeting to discuss and plan a presentation to the Local Education Authority.
• Although the parents are all reportedly pleased, home visits are being considered to get a fuller picture of the child and family. The Children’s Services (social services) link is not well established at present but it will/is being developed as there are issues of funding and respite care, which can have an impact on the success of any project like this. There will continue to be termly meetings, to which they will be invited.

• Porter & Lacey (1999) also emphasise a problem solving approach to provide opportunities to talk through and analyse the nature of the child’s difficulties and how to most effectively meet their needs, with support groups providing a valuable forum for staff to share their expertise. The Educational Psychologists are to initiate a problem solving group/model for the child and their family from the autumn term.

• One issue in reviewing the data has been the difficulty in comparing recording sheets for evaluation purposes due to small differences in completion approaches. Harris (1995) found that many teachers were not keeping consistent behaviour records and that some found it difficult to distinguish target behaviours from other less severe challenging behaviours. As a result they provided a short workshop on behavioural observation and recording which produced a marked improvement in record keeping consistency and permitted comparisons between the data collected by the project team and those collected by teachers using behaviour record sheets. This may be a future option within this particular approach worth considering. Axelrod et al, (1990) suggest demonstrating behavioural techniques, encouraging their practice and offering feedback will be more effective than simply telling teachers what to do. In addition identifying functional alternatives to consequences
that are more likely to be applied on a regular basis, e.g. prompting systems, environmental arrangements, and redeployment of staff and appropriate timetabling.

- While a strong element in TEACCH is an increase in predictability and structure, many factors rely on the professional judgement of staff, especially in pre-planning the curriculum in detail. It could be that behaviour improved as staff changed the amount of time that the children were occupied and had developed better reactive strategies to interrupt any challenging behaviour. Overall, for pupils with severe challenging behaviour, extensive assessment, analysis, and intervention may be essential, and a continual process, in order that any gains are maintained.

**Implications for EP practice**

EPs have an important role to play in both understanding and reducing behaviour that is deemed challenging and to consider specific intervention programmes as well as broader aspects of the curriculum, the organisation of the environment and the deployment of staff. It is important to identify children with challenging behaviour to ensure that provision is altered to meet their needs in order that something different or extra is made available (Porter & Lacey, 1999).

As teachers are to be expected to rely on their own knowledge and skills to develop programmes of management, more extensive school based in-service training would be necessary to transmit and develop required skills (Keirnan & Keirnan, 1994). They emphasise the importance of early intervention, both in pre-school populations and in schools. Given the high costs to the individuals concerned, their families and services, urgent attention to the quality and effectiveness of school-based intervention seems to
be an important issue. By challenging the opinion that children only become difficult as
adolescents may pave way for more early intervention work, as these challenging
behaviours do not appear to go away (Keirnan & Keirman, 1994) and it is in a school’s
interest to resolve problems at the earliest opportunity.

As one of the major professional groups to advise schools in respect of difficult
behaviour it will be important that we appear confident and skilled in this area.
Traditionally behaviourism has been an influential perspective amongst EPs but it is not
perfect. We will need to re-think due to the apparent lack of success with this particular
group of children (Dessent, 1988) or teach it differently (Axelrod et al, 1990). It will
also be important to maintain support to schools so that behavioural improvements are
maintained (Harris, 1995).

In addition, with increased involvement of parents, it may empower parents and
demonstrate that they play an important part in their child’s development. This
increased exchange of information about a child’s behaviour at home and school will
help reduce incorrect assumptions by parents and teachers about what is happening in
their respective settings and enable parents and teachers to discuss priorities for work
with the child at home and school.

The Children Act (1989) has highlighted the need to plan support on a collaborative
basis between health, social services and education. Whilst this is a need for most
children with special educational needs it is crucially important for children with
‘challenging behaviour’ (Norgate, 1994). In his epidemiological review in one local
authority, schools indicated that in only 35% of cases were they confident that the
parents were managing to cope acceptably with the problems being presented in the home. The LEA is consequently under pressure to consider residential options on domestic rather than educational grounds. He suggests the educational needs of most of these children can be adequately met within day school provision, given the availability of an appropriate staffing level, resources and expertise (although theses are not quantified!). Supporting parents within the home and the availability of respite care is the key need if the authority as a whole wishes to maintain children within their home community, with a jointly planned strategy between the LEA, Health and Social Services.

With an increase in interest at working at different levels within the education system, for example LEA, school, teacher, child, it is important we are clear about our roles and do not underestimate our potential influence. It will also have implications for working with social services and the local authority in general due to the possible financial implications. Whilst attending out-county reviews we have a role, which can influence the decision regarding a possible return to local provision. As in this study, we are in a key position to develop or improve local provision.

With limited funds available to a Local Education Authority to meet Special Education Needs, decisions have to be made about the cost effectiveness of providing for statemented children within its own provision, special or mainstream. Local Education Authorities need a range of provision to enable a flexibility of response, tailored to the specific needs of the child, requiring joint agency involvement and planning (Norgate, 1994). There is always the danger that parents will not find the provision offered to their
child in a Local Education Authority suitable, which can lead to legal disputes that can be expensive both in time and money.

Concluding Remarks

Challenging behaviour and children with SLD is a significant concern within the Milton Keynes area, as it is nationally. Previous attempts to reduce the levels of challenging behaviour have had no obvious lasting effects. This has resulted in a number of children being educated out authority, at a high financial cost and in contradiction to the authorities inclusive policy and the spirit of the DfEE Green Paper. Research has highlighted the importance of not relying on a purely behavioural approach (Dessent, 1988; Harris, 1995), as these do not appear to have been maintained successfully, especially without outside professional involvement. It appears to be accepted that predictability and structure are important to children who have difficulties with communication, especially those with SLD.

This particular study focused on a small group of children with challenging behaviour and SLD, who were perceived to be on the autistic spectrum. It involved the implementation of the TEACCH approach (Mesibov et al, 1989), as this tackled the curriculum, the teaching methods, the environment (Porter & Lacey, 1999), as well as predictability and structure (Norgate, 1998). Although it isolates children from peers, which has implications in terms of positive role models and staff stress (Porter & Lacey, 1999; Norgate, 1998), early indicators suggest that staff stress has reduced in this group. Attempts at reintegration are being considered for the future, especially for the most successful children. Here, elements of the TEACCH approach are transferred with the children to their new class.
Outcomes, as measured by observation, recording sheets and semi-structured interview, suggest the approach has been successful. Trends suggest that the level of challenging behaviour has reduced and the level of on task behaviour has increased. In addition, the children are more communicative, although the changes are small and whether they are maintained and generalised will be monitored over time.

Reference List


APPENDICES

Appendix 1: Interview Schedule

Warm Up

1. Can I first ask you what position you work in?
2. How long have you worked at the school?
3. How did you become involved with the AEG?
4. What are the aims of the AEG?

Category of Developing Provision of the AEG

5. How is it decided who joins the AEG? (clear criteria).
6. What steps were taken prior to commencement of the AEG? (visits, training, research).
7. Was there any one particularly useful thing completed prior to commencement?
8. Was there any one particularly not useful thing completed prior to commencement?
9. Were other staff in the school involved at this stage? How?
10. The AEG commenced in September, did you feel you were ready? (if not, why?)

Category of the Environment

11. Is the External Environment suitable for the AEG? (if not, why?)
12. Is the Internal Environment suitable for the AEG? (if not, why?)
13. I understand TEACCH to be the chosen approach:

   Why was it chosen?

   How close would you say you are to this approach?

   What are the strengths of TEACCH?

   What are the weaknesses of TEACCH?

   What changes have you made since September 1999 regarding TEACCH?

Category of Communication
14. Do other staff of the school become involved? How?

15. Do parents become involved? How?

16. Do staff of the AEG communicate with each other? How?

Staff were also given the opportunity to add any further information they thought might be relevant.
Assignment 2

The Social-Emotional Needs of Able Children

Core Curriculum Area: The Profession of Educational Psychology and its Context

Abstract

This assignment explores the issue of able children, and in particular the question as to whether they have social-emotional needs that are different to other children. From an exploration of some of the literature, much of which appears anecdotal, a small number of key studies were found. Overall, these appear to suggest that any difference in the social-emotional needs found were related to contextual factors (e.g. family difficulties), which could affect all children, irrespective of ability. The exception appears to be with children of particularly high intelligence (as measured by IQ), that the research suggests can have social-emotional needs associated with their ability due to their potential isolation in their educational contexts.

From the literature reviewed the implications for EP practice appear to suggest that any assumptions regarding social-emotional needs of the majority of able children based on their ability alone (by either parents or professionals) need to be challenged. Children need to be treated as individuals, irrespective of ability, especially at the present time, with increasing prominence given to this field.

Section 1: Aims and Scope of the Assignment

Introduction
The issue of able children is one that has recently attracted a lot of interest both locally and nationally.

Literature and research referring to the pupils who are likely to be regarded as the subject of this assignment might nominate them - 'gifted', 'exceptional', 'very able', 'most able', 'more able', 'able', 'talented'. For the sake of brevity, the term 'able' will be used throughout this assignment unless an alternative phrase is quoted from another publication.

Social-emotional development in children influences motivation to learn, self-esteem, behaviour and so on. Within the field of education opinions appear to vary regarding the issue of able children. Some argue there is no such definable group just children who have different propensities and potentials from their peers because each child is unique (e.g. Young & Tyre, 1992), while others suggest a definable group can be identified who have particular needs (e.g. Gross 1999).

The meaning of 'able' will vary dependent on the culture, period of time and method of identification and therefore any generalisations from one group to another need to be treated with caution. Although being more able than peers can be beneficial it is also important to consider a child's emotional, physical and educational development. Some authorities in the field have focused on the cognitive aspects, however broader definitions have existed since at least 1916 with Stern who introduced motivation and appropriate environment, up to Goleman's 'emotional intelligence' which incorporates self-awareness, impulse control, persistence, empathy and social dexterity.
There appears to be the popular view that more able children have IQs of 140+ and that using intelligence tests can help identify children who might not otherwise present as extraordinarily able, however many psychologists have doubts about their efficacy and ethics. In addition, the terms intelligence and IQ have become such a part of language that they are used as if people know what they mean (Young & Tyre, 1992), but the lack of consensus within the field suggests this over simplifies the situation. Amongst psychologists within education IQ tests appear to have waned in popularity as even if they test abilities of one sort or another they do not test life skills such as personality, motivation and emotion factors which may crucially affect future performance and achievement.

This assignment attempts to contribute to the development of one local authority’s response to the needs of able children.

**Objectives**

As part of my present role as an educational psychologist working in collaboration with an advisor with responsibility for able children I have the task of producing information for schools on the social and emotional needs of able children. Partly in response to increased Government, and hence LEA, interest in the area of able children, and partly because the psychological service has responsibility for social and emotional development within the Education Development Plan.

The objectives of this current assignment are to review the existing, available research literature within the area of able children’s social and emotional needs. It will then discuss the local context and the local approach to communicating with schools the
LEA response generally and more specifically the EP role in communicating the main findings of the literature reviewed. Finally, implications for EP practice will be discussed.

Section 2: Practice and Context

Context

Recently there has been renewed national and local attention given to meeting the needs of more able pupils. The Government has promoted a sense of urgency about this topic through: initiatives to raise educational achievement, such as ‘excellence in cities’; QCA documentation related to subject schemes of work; a House of Commons Education and Employment Committee report - 'Highly able children- in 1999, setting out more than forty recommendations; developments, such as the National Literacy and Numeracy Strategies, have shifted the focus in classrooms towards learning and progression, raising further questions about raising achievement of the more able.

Universities and business have also been concerned about the standards of potential entrants, and are increasingly interested in identifying the most able students and ensuring they achieve the best results. Mainstream schools have a duty to provide a broad and balanced curriculum designed to meet the needs of, and provide the most appropriate opportunities for, all pupils. The 1993 Education Act emphasised that children are unique and that schools should be prepared to support and develop pupil diversity.

The DfEE (1999) suggest there is a mistaken belief that able children can ’get by on their own’ and argue they are entitled to have their needs addressed as much as any
other children. They also argue this benefits other children, as there is evidence of an association between good provision for the most able in a school and for all the children in the school.

The House of Commons Education and Employment Committee Report (1999) recommend that Local Education Authorities should have a policy on the education of highly able children, and every LEA should appoint an adviser, at a senior level, with responsibility for them. Milton Keynes as an authority responded by allocating this responsibility to the literacy adviser. As part of increasing collaboration and the perceived central role of Educational Psychologists, (especially within areas such as self-esteem and social-emotional development), I was enlisted to provide a professional and psychological input. Initial work centred on the production of a guiding policy for all schools, which is presently being reviewed by schools in its draft form.

The document states that a proportion of pupils in mainstream schools should be regarded as 'more able' and the LEA have adopted a 10% figure which they argue is based on research (without specifying what) of whom about 2% will be considered 'most able'. Milton Keynes Council has established an initiative, outlined in its Educational Development Plan, to identify the needs of its more able pupils, and to assist schools in the development of their own policies, practices and procedures to support the education of these pupils. The principal function of the council's policy is the enhancement of the teaching and learning of the most able pupils by: drawing attention to this group of pupils; assisting schools to identify and appropriately provide for more able pupils; helping to clarify thinking about and approaches to more able
pupils; providing guidance to schools on their own policies; improving school practice in respect of these pupils.

Guiding principles incorporate the expectation that:

- All teachers should be aware of, looking out for and meeting the needs of more able pupils and designating a teacher responsible to co-ordinate the work in schools.
- Schools should undertake to identify and provide proper opportunities and support for more able pupils, regardless of their ethnicity, home language, gender, disability or social circumstance.
- Schools should seek to extol the achievements of their more able pupils and challenge all negative attitudes to their success. This attitude will develop in an atmosphere where excelling is not only acceptable, but also desirable and celebrated.
- Schools should be sensitive to the difficulties of identification in those instances when some pupils are reluctant to be regarded as different from their peers; boys particularly, but not exclusively, can be uncomfortable being regarded as 'more able'.
- Schools should be aware that a few more able pupils experience social and other difficulties as a result of their more marked abilities, and be sensitive to providing appropriate support in overcoming these problems.

Further work is planned and will incorporate guidelines to school, and recommendations for good practice. Initial guidelines produced have been in the area of literacy, Numeracy guidelines are being produced and I have the task of producing information for schools in the area of social and emotional needs.
The role of producing information to schools regarding social and emotional needs was agreed in part because our service to a certain extent is pigeonholed in that area within the LEA. Another reason was that there appear to be assumptions made about the social and emotional needs of able children by the LEA, schools, parents and educational psychologists without any obvious evidence to back it up. From experience the assumptions appear to be made in relation to provision. One position is that able children will not be able to socialise successfully with their peers due to their different ability (often the parent or school perspective) and need to be moved to a different class. Another is that in moving able children into older classes (or equivalent) will not meet their social and emotional needs (often the psychologist’s perspective). I recognise these are generalisations and not all parents, for example, think in the same way but as different assumptions exist and with the recent highlighting of able children, it seemed an appropriate time to clarify the area.

One other local development, which reinforced this further and resulted in a debate among the EP team, was the poaching of relatively large numbers of more able year 7 pupils into year 8 classes of secondary schools in the area, a year early. This has become an issue in Milton Keynes as at present they have a system where children transfer from middle school to upper school in year 8. As an authority that borders another operating a grammar school system, significant numbers of the more able children were leaving the MK system at the end of year 6 to join the other system at the typical secondary age of transfer at year 7. Local secondary provision was therefore losing some of their potentially brighter students to another area and their response was to offer an early start in their schools. The students, therefore, would be omitting a whole year of education.
As the numbers involved are class sizes rather than individuals this move could potentially impact on a relatively large number of individuals. To me this reinforced the importance of being clear about the research evidence regarding their social and emotional needs, as the initial response to this policy from the EP team was one of concern. If we want to be in a position to influence schools we need to be clear about our evidence. In an area with a relatively high number of grant maintained secondary schools, the LEA is limited in its influence, although there appear to be some vague long term plans regarding a change in the age of transfer.

As there is an existing file in all schools for information regarding able children, and they are high on agendas at present, producing information to schools to clarify the social and emotional needs of able children may help challenge or confirm some of the assumptions.

Section 3: Psychological Theory and Research

Literature Review

Research Methods

For this literature review a number of sources were researched, incorporating the use of both the Internet and manual search techniques. For example a number of university libraries were visited (UCL, London Institute of Education, Nene University College) and their databases were explored. The primary search terms used were a combination of 'able children'; 'gifted children'; 'emotional aspects of giftedness'; 'emotional development and giftedness'; 'social development and giftedness'; 'social-emotional development and able/gifted'. An Internet search by author name was undertaken and both the education and psychology databases were explored (e.g. PsychLit, PsycINFO,
ERIC), in addition to more general search engines, (e.g. 'google'). Any relevant journal articles, reports or books were obtained. A focus on the more psychological databases attempted to keep the information specific to the area, as there appeared to be a high number of anecdotal sources of information but limited research studies. In addition, from reading or scanning the books there appeared to be a fair amount of repetition and cross-referencing to a few key studies, but very little from the last few years.

**Definitions of Giftedness**

There are a number of definitions of able children and as mentioned earlier a variety of labels, such as 'gifted', 'talented', 'able', 'genius', 'prodigy', 'precocious', 'excellent', 'expert', 'competent', and 'proficient', in existence. The variety between the definitions and overlap between the 'categories' highlights a lack of consensus within the field.

Some reflect intellectual abilities (e.g. Sternberg, Davidson), with some implicit reference to the possibility of other types (e.g. Sternberg).

Sternberg (1986, cited in Gagne, p.71) based his concept of ability on his triarchic theory of intelligence, which combines three sub theories and states

'The componential sub theory specifies the mental mechanisms responsible for the planning, execution and evaluation of intelligent behaviour. The experiential sub theory further constrains this definition by regarding as most relevant to the demonstration of intelligence behaviour involving either adjustment to novelty or atomisation of information processing, or both. The contextual sub theory defines intelligent behaviour as that involving purposive adaptation to, selection of, and shaping of real-world environments relevant to one's life.'
He argues this is broader than usual conceptions of ability, even those incorporating creativity and motivation.

Davidson (1986, cited in Gagne, p71.) defined ability as insight ability, incorporating selective encoding, selective combination and selective comparison. She found that performance on insight problems discriminated between intellectually bright and average children.

Some include a variety of other abilities (e.g. Marland, Tannenbaum, Gardner).

A frequently cited definition, used by the United States Office of Education (Marland, 1972, cited in Gagne, p70) states

'Gifted and talented children are those identified by professionally qualified persons who by virtue of outstanding abilities, are capable of high performance........include those with demonstrated achievement and/or potential ability in any one of the following areas, singly or in combination: 1. General intellectual ability, 2. Specific academic aptitude, 3. Creative or productive thinking, 4. Visual and performing arts....will encompass a minimum of 3-5% of the school population.'

Renzulli (1979, cited in Gagne, 1993,p.70) criticised this definition for its lack of non-intellective (motivational) factors and the non-parallel nature of the categories.

Gardner's theory of multiple intelligences was introduced in the 1980s. He identified seven distinct 'intelligences': the linguistic, the musical, the logical-mathematical, the spatial, the bodily-kinaesthetic, as well as two personal intelligences: the intrapersonal and interpersonal. A particular type of ability corresponds to each of these intelligences.
Some include characteristics outside the domain of abilities (e.g. Renzulli, Feldhusen).

Renzulli (1979) defined giftedness as:

'...an interaction among three basic clusters of human traits- these clusters being above average general abilities, high levels of task commitment and high levels of creativity.'

Feldhusen (1992, cited in Gagne, p.71) defines talent as

'A complex of aptitudes or intelligences, learned skills and knowledge and motivations-attitudes-dispositions, that predispose an individual to successes in an occupation, vocation, profession, art, or business'.

And defines giftedness as

'A complex of intelligences, aptitudes, talents, skills, expertise, motivations, talents and creativity that lead the individual to productive performance in areas or domains or disciplines valued by the culture and time'.

Two definitions, which overlap so much they almost, become the same, (Gagne, 1993).

Some refer to adults, with children only having the potential to be able, and only a very small number (e.g. Tannenbaum).

Tannenbaum (1983, cited in Gagne, 1993,p.70) proposed the following definition

'Keeping in mind that developed talent exists only in adults, a proposed definition of giftedness in children is that it denotes their potential for becoming critically acclaimed performers or exemplary producers of ideas in spheres of activity that enhance the moral, physical, emotional, social, intellectual or aesthetic life of humanity'.

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He identified five factors that combine to produce great performance: superior general intelligence, exceptional special aptitudes, nonintellective facilitators, environmental influences and chance or luck.

Some mention a larger percentage of the population (e.g. Marland, Gagne)

Most definitions do not specify the percentages involved, although an IQ of 130+ and a percentile of 95 are cited, both placing prevalence at 2-5% and both arbitrary (Gagne, 1993). He would prefer the notion of a confidence interval/threshold zone covering the top 15-20% of the population.

Gagne (1993) proposed a differentiated model that perceives 'Giftedness with natural or non-systematically developed human abilities, called aptitudes and talent with systematically developed abilities or skills which constitute expertise in a particular field of human activity.... Mediated by the support of intrapersonal (e.g. motivation, self-confidence) and environmental (e.g. family, school, community) catalysts, as well as through systematic learning and extensive practice.' (p.72)

As the criteria for giftedness broadens, there will be an inevitable increase in the numbers included. Gagne modified his definition to (p.85)

'Giftedness corresponds to a level of competence in the non-systematically developed abilities of at least one domain that places subjects among the upper 15-20% of their age peers. Talent corresponds to a level of performance in the systematically developed skills of at least one field of human activity that places subjects among the upper 15-20% of the same age active members of the field.'
Some include the concept of SEN (e.g. Marland, Renzulli, Borland).

Borland (1989, cited in Gagne) proposed a more practical definition

For the purposes of education, gifted children are those students in a given school or school district who are exceptional by virtue of markedly greater than average potential or ability in some area of human activity generally considered to be the province of the educational system and whose exceptionality engenders special educational needs that are not being met adequately by the regular core curriculum.

Most do not specify how ability differs from talent, with some suggesting it is the same (e.g. Marland), as do most academics in the field (Gagne, 1993).

In contrast Stankowski (1978, cited in Gagne, 1993) devised a classification system for definitions due to their large number using five (not exclusive) categories. The first 'after the fact' definitions based on adult accomplishments. The second 'IQ' definitions specifying a particular threshold score. The third 'talent' definitions emphasising outstanding performance in specific artistic and/or academic fields. The fourth 'percentage' definitions varying from a generous 20% to a strict 3% or less of the population. The fifth 'creativity' definitions stressing original and productive accomplishments in a particular field. This system emphasises two components implicitly or explicitly present in most definitions: a 'what is' statement reflecting the core nature of the construct, and a 'to whom' or 'how many' statement about the size of the population it concerns.

Although there does not appear to be a consensus on any one particular definition, more recent work appears to agree that 'ability' appears to involve a number of qualities, not
just intellectual ones and the influence of environment appears to be an important factor in realising a child's potential. With some definitions requiring positive motivation and other social-emotional aspects as integral to the concept of ability. The following section incorporates studies that have focused on able children to explore the influences than can affect success. Due to the limited number of accessible research studies none have been excluded on the basis of the definition employed. Likewise, the information reviewed has gone beyond the specific information regarding those individuals who may be classified as 'prodigies' (i.e. a very small number of individuals). In line with the LEA policy, this assignment has focused on a broader, and probably more simplistic, definition encompassing the top10% of the population in any field as measured by their achievements. Unfortunately, much of the information I have reviewed limits itself to more IQ based definitions of ability.

**Studies of Able Children**

When considering the question of whether able children have social-emotional needs that are different from other children, it is important to note that the extent to which able children are prone to social-emotional problems has caused controversy over the decades. In the 1980s there was a high level of interest when there appeared to be limited research and much experiential evidence (Webb, 1993). Webb reviewed a number of studies in an attempt to produce a summary of the issues, however he neglected any critical analysis. Historically, he suggested that studies related to talented or creative children (as opposed to academically able) were more frequently anecdotal. During the late eighties the focus switched to reviewing the methods of identifying and concepts of 'ability' and 'intelligence'. As a result much of the research he summarised
on the social-emotional needs of able children concerned children who showed aptitude academically.

Webb (1993) argued there were two categories of research; those arguing the able and talented were in need of special intervention in view of their unique difficulties and those stating they could manage very well on their own, with only a minority needing special intervention. The latter studies often-used participants from academic programmes designed for able students and the former relying on data from clinic settings or a self-selecting population, e.g. parental referral. Both being biased samples that could under and over estimate social-emotional difficulties respectively. Able children functioning well and thereby selected for special programmes are unlikely to be experiencing difficulties, whilst those unrecognised may be more likely to be experiencing social-emotional difficulties (Webb, 1993). Although with an emphasis on achievement as part of being 'able', the latter group has received fewer studies. There is also the concern that you sometimes don't know what it is you do not know and therefore is anyone ever clear regarding the numbers of unidentified able children?

There are at least three key researchers who have focused on the early development of able children: Freeman, 1979, 1991; Gross, 1989, 1994, 1999; Gottfried et al, 1994.

The Freeman studies (1974-8, 1985-8) used 210; 5-14 year olds in the initial study whose parents had joined the National Association Gifted Children, 70% of whom parents had identified as able (thereby a self selecting population). Each was matched with two controls, one for intelligence (initially using the Ravens Progressive Matrices and later the updated Stanford Binet Intelligence Test) and the other at random (both matched for age, sex, socio-economic status) from the same class. Teachers and families
were interviewed and the children tested. Teachers also completed a standardised
behaviour questionnaire. Freeman (1979) argued for a difference between the able and
intellectual controls in social behaviour (as measured by the Stott, 1978, Social
Adjustment Guide) with the able more likely to be described as difficult.

In the follow-up (1991) Freeman found that all the children’s achievements were
directly related to the educational provision received and that all the children did not
achieve their ‘high promise’ for a variety of reasons. These incorporated an abuse of
potential by force-feeding for exam success, a lack of preparation for university life and
work, unwillingness on the part of teachers to be close to pupils, and a focus on taught
skills and knowledge to the detriment of self-confidence and personal relationships.
This appears to suggest that there is a difference in the way able children’s social-
emotional needs are considered and met for some children, rather than having
specifically different needs. These results were based on interviewing 81% of the
original sample and their parents separately and could say more about able children who
are identified by parents rather than able children per se due to the selection of the
group. Parents of able children who were content may not feel the need to contact such
an organisation.

This does of course assume that if things had been different, the outcomes would have
been different, but she cannot know this for sure. It also appears to imply some
assumptions regarding what would be perceived as successful, e.g. academic success,
which is only one measure. In addition, she is making conclusions on the basis of
hindsight interviews with parents and students, not the most objective or balanced
evidence. It would be interesting to have the view of the educational establishment, who
may or may not agree. Freeman statistically analysed her data using a combination of factor analysis, analysis of variance and non-parametric measures. This may have implications for those schools enlisting large numbers of children a year earlier to maintain their numbers on role.

One interesting point was that children with identical Ravens scores scored significantly different on the more detailed IQ test, which appeared to be related to home circumstances, the 'better' (educationally) they were the higher the score. This has implications for identification, not to rely on one test, especially if the environment is not particularly supportive educationally and to be cautious with comparisons with children from more enriching environments. One encouraging local factor is the expectation that all schools should be able to identify 10% of their population more able, irrespective of location. If this process was reliant on more detailed IQ tests, Freeman’s studies suggest that able children would probably not be identified as able children who lacked opportunities in school type learning would be missed.

When the results were looked at in terms of IQ alone the specific behaviour problems of the target group, (e.g. measured higher level of maladjustment at school, far fewer friends), mostly vanished and therefore were not related to IQ alone but due to other causes. The children of exceptionally high IQ were found to be as emotionally stable as any others, they were also as badly affected by life events as any others, e.g. warring parents. Freeman (1991) also found no evidence for special personality traits, such as ambition or curiosities, suggesting these are a reflection of culture and upbringing. In conclusion, IQ score alone does not bring emotional problems but other people’s reaction to it can.
Gross (1989) argues that it is well recognised that a healthy self-concept is necessary for the establishment and maintenance of the drive towards excellence. In addition, she states that the 'gifts' of able children are undervalued by their peers and an able child may seek peer approval by developing skills and attributes which are valued, e.g. by becoming the 'class clown' or underachieve to win social acceptance by peers and teachers. Gross (1989) suggests there is a dilemma for able children between satisfying the drive for excellence and risking the attainment of intimacy with age peers. She recognised a lack of empirical evidence on the effects of peer grouping of social-emotional development of able children and indicated the existing research indicating favourable personal and social adjustment of able children resulted from studies of moderately rather than extremely gifted children.

Gross initiated a longitudinal study in the early 1990's (Gross, 1999) looking at the problems able children and adolescents faced, particularly in school, with a focus on 53 children with an IQ of 160+ (which she argues occurs less than 1 in 10,000 individuals). She evaluated the developmental histories of exceptionally able young people and suggested under-achievement resulted from an inappropriate and undemanding education. The children appeared to differ from their peers in intellectual interests and academic achievement, leading to social problems and rejection by peers, affecting their self-concept. Accelerated students report satisfaction with their acceleration both in the short term and long term, with enhanced achievement motivation, increased friendship choices and a greater enjoyment of school and learning. Although a commonly expressed fear by teachers, Educational Psychologists and some parents that social-emotional problems will result from acceleration, this study suggests there is little evidence for this.
Gross (1999) argues that exceptionally able children differ as much emotionally as intellectually with their age peers, especially those of average ability, for example, with their play, conceptions of friendship and reading interests. In her study a number of students taught within mainstream classes report feelings of isolation and alienation from their peers. Overall 41 of the participants (76%) were reported to experience extreme difficulty in establishing positive social relationships with age-peers and low levels of self-esteem, differing from age peers in moral and social development as well as academic ability. This appears to provide evidence that able children have social-emotional needs that are not being met. It does not, however, provide evidence that these are ‘within child’ factors but rather the context in which they are placed, as accelerated students (i.e. placed with ability matched peers) do not appear to have the same needs.

One important distinction with this study is that it focuses on exceptionally able participants which appear to distinguish it from other research and whose conclusions would only be applicable to a small minority. In addition, it is an ongoing longitudinal study and therefore able to report on ‘issues’ as they happen, rather than relying on hindsight, as a few studies appear to do. One clear advantage being access to the context at the time and the views of those around. It is, however, an Australian study and in that sense the context is different from the UK, although I would query whether this would have a significant impact.

The Gottfried (1994) study focused on a comparison of 107 able children and non-able children during the first eight years of their life, from a range of middle class homes with regard to achievement, environment, behaviour and motivation. IQ tests were
administered at 8 years and a cut off of 130 (typically 1/40, approx. 2%) on the WISC designated a child as able, forming one group (20) and the others (87) forming a non-able group, without the knowledge of teachers or parents. The able were provided with more stimulating and enriched environments during their early years. They came from families of a higher socio-economic status, with more highly educated parents. She argues from this that a stimulating environment is important and that parents with a low socio-economic status or less educated necessarily results in under-achievement, however all the families involved were from the middle class and this would appear to be an inappropriate conclusion. There was very little difference between the two groups on behaviour, with similar levels of social interaction. They were, however, only eight and peer pressure appears to be stronger at an older age (Winiarski-Jones, 1985).

Academically the able children achieved more and were more motivated to learn. This study does not appear to suggest able children have differing social-emotional needs, however children with an IQ of 130+ are regarded as significantly different to those with an IQ of 160+ (Gross, 1999). In addition, recent research appears to suggest that an IQ of 130+ is more common than previously thought, (Silverman, 2001).

Pearson & Beer (1990) suggest that able children show little concern about how others react to them in social situations. Their study involved a relatively small and selective sample of 38 elementary children who had already been selected for 'gifted programmes' in one American state based on a combination of intelligence and academic scores. Using a depression inventory, a self-esteem inventory and self-consciousness scale, as a group, they were not experiencing depression, had adequate self-esteem and spent time examining their own behaviour and thoughts, but not to the extent that it would interfere with everyday functioning. This is, however, a relatively
young group and as children get older later research to be discussed may suggest that peer opinion may make more of a difference. In addition, I wonder if this study tells us more about the impact of being selected for such a group than being able.

Webb (1993) suggests the majority of social and emotional problems are exogenous in origin, although recognises there is a lack of clarifying research. Freeman (1985) appears to be in support arguing there is no reliable evidence that being able is directly related to emotional adjustment, the causes of adverse emotional effects being those which would result in poor adjustment to all children. She argues there are secondary aspects of being able which cause emotional problems for some. Webb (1993) highlighted a number of more common problematic interactions from the research he reviewed on able children, which have been reinforced or not by other research covered for this assignment:

- It appears to be a common perception that emotional maturity can also lag behind intellect, with stress resulting from attempts to deal with emotions beyond their capacity (Webb, 1993). This contradicts the findings of Gross (1999) who found that emotionally and socially an able child with the same mental age as older children would resemble older intellectual peers more than chronological peers. One explanation for these differing findings may be due to the fact that different populations (with reference to IQ) are being compared.

- Able children can have high expectations of themselves and through expecting too much of themselves they can develop a sense of failure and give up trying (Freeman, 1985, Webb, 1993). A factor, it could be argued, that cuts across different ability groups, especially without a suitably differentiated curriculum. Adults can
also make unreasonable demands, underestimating the emotional support they may need and assuming that ability in one area is always generalised across different areas. One possible outcome of high expectations is that the child underperforms to escape the pressure (Freeman, 1985; Colangelo & Dettman, 1983, as cited in Lee-Corbin). A factor, it could be argued, which is not unique to able children.

- Exogenous depression may result from anger at a lack of control about situations and one’s own life. Constantly living up to expectations makes it harder for a child to accept himself or herself as a whole person, especially when positive feedback/care appears dependent on academic success (Freeman, 1985; Webb 1993). Once again, a factor it could be suggested is not unique to able children.

- In a British study, Kellmer Pringle (1970, cited in Lee-Corbin) looked at failing children by studying those (using surveyed teacher opinion) who had been referred to the psychological service due to some apparent learning difficulty. The average age of these 103 children was 10.5, with an average IQ of 134, the lowest being 120 and therefore would have been expected to perform better, although the correlation between IQ and achievement is approximately .6, which could be explanation of the results. Their teachers saw less than 50% as possessing high ability a concern when the present method of operating is via consultation, often working with just the teacher’s perceptions. The survey data appeared to suggest that the underachievement was associated with emotional problems, incorporating: strained relationships within the family; lack of peer contact; too high/low expectations and inconsistent parental discipline. These were primarily associated with family problems, although teachers have a potentially important role of influencing a child
and encouraging their development and self-concept. These emotion-related problems are similar to those found with some of the participants in other studies, e.g. Freeman (1991), however; they are not unique to able children.

- Miller (1994, cited in Lee-Corbin) investigated children (13-14 years) of high academic ability who were considered disruptive by their teachers. Many reported they were frustrated academically and socially, and their being disruptive was seen as a response to this, as much of this behaviour was associated with work. They would work if they perceived the task to be appropriate, and preferred teachers whom treated them as equals or with respect. A factor, it could be suggested, which could occur across a wider range of ability if work is not pitched at the appropriate level.

- It has been suggested that due to a variety of interests able children require a variety of peer groups, and often choose adults or older children for peers (Webb, 1993; Gross, 1999). Freeman (1985), however, argues from her study they have a need to meet others of approximately their own age, as long as they can meet others of the same ability level. Which is argued is important for their self-image, as all children find emotional support in experiencing others like themselves (Gross, 1999). This will have implications for schools in grouping children who are matched chronologically and academically for at least part of their curriculum. Although, given there is a wide spectrum of ability within any age group; there will be a limit to how many matched groups there could be. As has been found, the vast majority of children appear well placed with their chronological peers.
Lee-Corbin (1998) suggests that local cultural differences and adverse peer group pressure can lead to perceived under-achievement. Even in more 'academic' schools there can be an anti-academic atmosphere with pressure both inside and outside the classroom, where they can be distanced socially (Stopper, 2000), which can result in conformity (often girls) and hostility (often boys) (Freeman, 1985). Although the research data appears contradictory (Williams, 1995; Ayles, 1991; cited in Lee-Corbin). A child's degree of distress appears likely to be related to the relative distance between them and their peers and achievement can be affected as a result. Some would argue that peer-group pressure is the most important factor governing a child's success at school (Stopper, 2000). In middle adolescence (14-16 years) it appears to be at its most influential (Winiarski-Jones, 1985), a crucial academic time within education. Bailey (2000) suggests this can be a particular difficulty for African-American students risking rejection, isolation, alienation and misunderstanding to pursue academic success. Although like many of the suggestions offered there appears to be either a lack of empirical evidence or detail in explanation, making further analysis difficult.

A survey of secondary mathematics teachers, (from approximately 10% of comprehensives in England), to evaluate the current status of able children as an issue revealed widespread teacher concern, (over 2/3 of the sample), for mathematically able pupils. These children were thought to be under-stretched and frequently deterred by peer group pressure, and only 22.9% of the teachers felt the children lacked ambition (Chyriwsky & Kennard, 1997). Although interestingly a small minority strongly disagreed peer group pressure was an issue. Data analysis appeared to suggest that pupil ambition is related to peer pressure, which in turn
may be influenced by teacher expectation. Peer pressure was found to be a negative influence in schools with lower than average examination grades and a positive influence in those with higher than average grades (using GCSE data). School ethos, location or parental support are only a few other possible explanations for theses results. Chyriwsky & Kennard (1997), however, appeared to ask leading questions in their survey, the first of the three questions made the assumption that able children are a cause for concern, e.g. 'Why are able children a cause for concern?'

The social-emotional development of able children needs to be considered in light of the cultural context of 'ability' (Webb, 1993), as it is defined in different ways in different cultures, with differing value systems. The needs of 'able' children are, to a large degree, the same as other children and they appear to go through the same developmental stages, although maybe at a younger age in a minority of cases (Gross, 1999). Likewise their environment, for example poverty could limit them, unless challenges are met by positive and supportive responses from the environment (Gottfried, 1994). Social-emotional responses are more likely, for example, if needs are met with harsh, inconsistent punishment; over-conformity to societal expectations; family disintegration and emotional problems by family members, as with any child.

Due to difficulties with the identification of the able and the lack of contextual controls in studies, there is a lack of accurate statistics. Whether endogenous or exogenous, some able children do experience social-emotional problems at some point in their lives (as do other children) although the larger risk appears to be from contextual factors (Webb, 1993). Monks and Boxtel (1985) suggest that research showed little consistency and apparent contradictions, primarily because of the use of different definitions. This is
highlighted by the differing conclusions of the three primary studies, reflecting, in part
the different participants used. Especially in the Gross longitudinal study, which appears
to provide, the most compelling evidence for differing social-emotional needs of able
children when the learning context is not appropriate and the children are exceptionally
able.

Section 4: Integration with Theory, Research and Practice

Conclusions from the research

There is a large body of literature concerning the educational needs of able children and
the possible adaptations to accommodate able children (Webb, 1993) but less on the
social-emotional needs.

The research literature appears to paint something of a mixed picture when considering
the question of whether able children have social-emotional needs that are different
from other children.

Freeman (1991) found that all the able children’s achievements were directly related to
the educational provision received and that all the children did not achieve their ‘high
promise’ for a variety of reasons. This appears to suggest that there is a difference in the
way able children’s social-emotional needs are considered and met for some children,
rather than having specifically different needs. This may have implications for those
schools enlisting large numbers of children a year earlier to maintain their numbers on
role, as these risks focusing on academic success to the detriment of their social-
emotional needs, a problem in the Freeman study. In addition, it could equally be
argued that the majority of children would not fulfil the criteria for exceptionally able,
and therefore the studies reviewed do not provide evidence that it is needed. Although neither do they provide evidence it could cause undue harm, in relation to social-emotional needs. On the contrary, it has been suggested that able children require chronologically and ability matched groups, which this approach could provide, (as could staying within their present setting). This in itself would appear to challenge the assumptions of some teachers and educational psychologists that it is potentially damaging to their social-emotional needs.

Any response by education needs to be more on an individual approach than a blanket approach, as what suits one child may not suit another, as different children have different needs, irrespective of IQ. Research has shown their needs are more likely to be due to contextual factors and assumptions should not be made about the needs of able children.

Research suggests that caution is needed when using IQ scores as scores on the more detailed test appeared to be related to home circumstances, the ‘better’ (educationally) they were the higher the score. This has implications for identification, not to rely on one test, especially if the environment is not particularly supportive educationally and to be cautious with comparisons with children from more enriching environments. As schools locally aim to identify the more able 10% of their population, irrespective of location, use of more detailed IQ tests would not be appropriate as able children who lacked opportunities in school type learning would be missed.

Most evidence for differing social-emotional needs comes from exceptionally able children (Gross, 1999) who differ as much emotionally as intellectually with their age
peers. In her study a number of students taught within mainstream classes report feelings of isolation and alienation from their peers, whereas those accelerated did not. This appears to provide evidence that the context in which exceptionally able children are placed may affect their social-emotional development, however this is only applicable to a small minority (1<10,000), and certainly not whole classes. It does, however, suggest that occasionally something different may need to be provided, educationally, which challenges the push towards inclusion. Although it could be argued there is a need for a special school in the same way that it continues to be argued that a child at the other end of the spectrum still appears to require a special school in the present education system.

It is important to caution against the use of simplistic labels which suggest a type of person as a member of a homogenous group and simplistic approaches in meeting their (or LEA/Government) needs. Like the definition of children with SEN, the size of the cohort will depend upon the criteria chosen to define the group. The use of psychometric information (reflected in the majority of research I reviewed), although it can be easily quantified, reflects a narrow view of the abilities of highly able children (AEP, 1998). As EPs we are trained in the use of psychometrics and within education probably best placed to evaluate their strengths and weaknesses, especially as definitions of intelligence discussed in the last section highlight the broadening of the concept beyond IQ. Likewise IQ does not reflect individuals' attainments more generally.

To ignore the talents and abilities of many by focusing on the achievements of a few could undermine the Government's focus on excellence for all. To maximise the
involvement of all children in extending cognitive skills would be more useful than defining a minority. Especially as the numbers of able children are increasing when defined by IQ, questioning the assumption of the normal curve of distribution for IQ. For example, 127 children in a state population in America were found to have an IQ above 180, which theoretically should have produced 1 (Silverman, 2001).

There is a spectrum of ability in every school and the able are rarely in a position of intellectual isolation among peers (Freeman, 1991). Freeman's work highlights the individuality of the young people who were all different, with different abilities and needs. She highlights the need to change educational policy for all by encouraging motivation in learning, thinking and creativity, alongside parental and adult involvement in the guidance (including educational and vocational) and counselling of pupils. It would seem more appropriate for specialists within domains to assess a child's ability/attainments and to provide an appropriate curriculum, rather than acting upon a psychologist's IQ assessment. It could be suggested that if a child was so different as to require something different, then an IQ test should probably not be required to identify such children.

Able children have assets, not deficits; the deficits may be in their environment, in their parenting, in their social circumstances or in their education.

**Action Plan for information to schools**

A summary of the key points discussed in sections three and four will form the information to schools regarding the social-emotional needs of able children. Although thorough research appears to be lacking in the field, it would seem appropriate to
provide information to schools as part of the LEA response, with an emphasis on treating each child as an individual who can be influenced by a number of contextual factors, irrespective of ability. If any exceptions are to be made on the grounds of social-emotional needs, the above research suggests that these need only be for a very small minority.

**Issues for further consideration/research**

There appears to be a lack of thorough research in the area and much of what has been accessed relies heavily on a narrow definition of ability, primarily associated with IQ. In addition, many of the subjects are in existing programmes or associated with recognised organisations, and as such the research tells us more about these specific groups. It could be that there are a number of unidentified children, especially given the impact of environment on attainment and IQ. It would be interesting to plan some research which takes a broader definition (possibly looking at a percentage of children across a range of areas, as in MK), although it is important that what children can achieve is not underestimated because their IQ does not fall within a specified range.

In addition, more long term studies, which took a more balanced view regarding sources of information when assessing outcomes is crucial. The reliance on self-reporting without any input from the educational establishment, for example, appears to omit key information, which may or may not support similar conclusions.

**Implications for EP practice**

- Possible involvement in research.
• Influence Government and LEA practice (There is a concern their policies could be based on more anecdotal or flawed research methodology).

• Working with schools in supporting or questioning their approaches to meeting the needs of able children, e.g. early transfer.

• Working with parents to challenge some of their assumptions regarding able children.

• Working with colleagues to check opinions are not assumptions.

Section 5: Concluding Comments

The research reviewed appears to suggest that the social-emotional needs of able children in the vast majority of cases is the same as for all children, influenced by the same contextual factors.

The label 'gifted' often implies children can be divided into two separate groups and status because they are fortunate recipients of gifts (Howe, 1990-2). It does not allow for the fact that individual capabilities are largely the outcome of experience, opportunities and various forms of enrichment, tending to favour children of parents who are relatively well educated, affluent and successful.

From a review of the above research there is a need for further study and reflection linking research, policy and practice as the debate increases and decisions are being made about the needs of able children, and whether they differ from those of other children. Stopper (2000) suggests an important aspect to this is to obtain the views of the children themselves, however it will be important not to rely on the views of children and families in isolation of their context.
References


• Stopper, M.J. (ed.)(2000) *Meeting the social and emotional needs of gifted and talented children.* A NACE/Fulton Publication


Assignment 3

Educational Psychology and Multi-Agency Work

Core Curriculum Area: The Profession of Educational Psychology and its Context

Abstract

This assignment explores the issue of multi-agency work and educational psychology, in particular the characteristics of successful multi-agency work.

The future of the profession of Educational Psychology appears to be one encompassing an increased role for multi-agency work, (DfEE, 2000). From an exploration of some of the literature a small number of related studies were found. These appear to suggest that there are a number of key characteristics associated with successful multi-agency work. This will have implications for EP practice, suggesting that the following factors need to be considered with any increase in multi-agency work to maximise its chances of being effective:

- A combination of skills provided by different services (Kerfoot and Imich, 2000) and the sharing of ideas (Lloyd-Bennett and Melvin, 2001)
- Management involvement (Kerfoot and Imich, 2000; Bryan, 2002), and co-ordination (Wigfall and Moss, 2001), and a shared vision (Law et al, 2001)
- A distinct professional stance (Bryan, 2002), yet role clarity (Bryan, 2002; Howley et al, 2001; Law et al, 2001; Lloyd-Bennett and Melvin, 2001)
- Expertise highlighted and differences respected (Bryan, 2002; Howley et al, 2001)
- Agreed ownership of tasks and shared goals (Bryan, 2002; Howley et al, 2001)
1. Aims and scope of assignment

Introduction

In the UK in the 1980s and 1990s there has been an emphasis on partnership and multi-agency working within the public services. For example, in the majority of published guidance designed to stimulate service development in the fields of drug misuse, children’s services, health care and criminal justice (Christian and Gilvarry, 1999). In addition, the future of the profession of Educational Psychology appears to be one encompassing an increased role for multi-agency work, (DfEE, 2000).

One key recommendation was that LEAs and Educational Psychology Services should seek to formalise a structure with health and social services for the co-ordination of joint planning and provision including multi-agency assessment. This document highlighted that schools want, amongst other things, more school based multi-agency planning from an educational psychology service. LEAs also report they want more multi-agency planning, intervention and review, and cross directorate work.

The Government has also recently issued guidance on promoting children’s mental health (DfES, 2001), which encourages involvement with other agencies, especially CAMHS. They argue that with partnership with more specialist agencies, schools may
be better placed to support and maintain progress achieved by children with mental health problems. Schools are being encouraged to draw on support from LEA Behaviour Support Teams, Educational Psychologists and CAMHS to support them in their work. There therefore appears to be an increasing emphasis on multi-agency work. Educational Psychologists may be involved in increasing amounts of multi-agency work and it is therefore important, as a profession, to be clear about the potential strengths and weaknesses. In addition, possible implications should be considered, such as whether there will be a need to train more specialists.

**Objectives**

The primary objective of this assignment is to review available research on multi-agency work, especially that which involves or impacts upon the work of educational psychology. Then, to highlight any particular strengths or weaknesses in existing practice, and suggest ways of moving forward in this area.

2. **Practice and context**

*The National Context*

The government's current agenda for educational change is based on two principles - the development of a socially inclusive society and a competitive society that needs to raise achievement levels for all. The government has stressed the importance of multi-agency work in promoting the co-ordination of services to children with special needs and their families (DfEE, 1999; DfES and DoH, 2002).
Government guidance, (DfES, 2001), argues that schools, often working in partnership with other agencies, can help promote the mental health of all children. This followed a report regarding the practice of educational psychologists (DfEE, 2000), based on what they say they do now, what they could offer in the future and what service users would like them to provide. The group defined the contribution of Educational Psychologists as:

'To promote child development and learning through the application of psychology by working with individual and groups of children, teachers and other adults in schools, families, other LEA officers, health and social service and other agencies.' (Page 5)

The report highlights three core functions of EP services:
- Early years work,
- Work with schools,
- Multi-agency work,

which children, parents, schools, LEAs and other agencies, irrespective of location, will have access to.

The report suggests that other agencies can expect the LEA to have an established framework for joint planning and intervention and for involving the EP service as appropriate, e.g. LAC. That agencies should be clear as to the role of the EP service and to make referrals to/access support from an EP as appropriate, e.g. CDC assessment.

That primary care group/trusts and GPs should be clear about the role and responsibilities of an EP. That social services teams should be able to seek and receive advice from an EP in respect of children known to the service and be provided with input to case conferences, etc, as appropriate. That an EP should attend multi-agency meetings focused on particular children, where appropriate.
In tandem with this report, is the emphasis on early identification and early intervention as key themes in the Framework for the Assessment of Children in Need and their Families (2000) and the Special Educational Needs Code of Practice (2001). Both these documents highlight the importance of different agencies working together to support children, the former focussed on social services and the latter on education. Early intervention and identification are also central to Government initiatives such as Quality Protects and Sure Start. The latter involving a range of professionals working together to support children and families. It appears to be commonly accepted that effective early intervention and support can improve the health and social/cognitive development of children.

One recent document presently out for consultation is concerned with the delivery of services to children with disabilities in the age range birth to two and their families (DfES, 2002). This has been produced by a multi-agency working party and highlights active partnership with parents, prompt and co-ordinated assessment of needs and the importance of key workers. These guidelines have been produced in part because consultation with parents have identified some areas where needs are not being addressed effectively. One key barrier has been the lack of co-ordination between multiple service providers. Factors having a positive impact incorporate: early diagnosis and a joined up approach to assessment; effective co-ordination of service provision that incorporates the sharing of information; the existence of a key worker to act as a gateway to a multi-agency approach and effective communication between professionals. The guidelines argue that improvements in outcomes for children and families can only be achieved by close collaboration between parents, professionals and agencies. What a shame then that a representative from the educational psychology
profession was not on the working party, although a number of agencies an EPS regularly liaises with were, as well as members of the DfES.

LEA context

It is not clear how these national recommendations will impact on EP services generally, as there is little hard data at present on how much multi-agency work is currently done by EP services.

Research into the current models of EP service delivery in England and Wales highlighted (from a 52% questionnaire response rate) that time allocation was the most prevalent, often linked to a Service Level Agreement and consultancy model (Leadbetter, 2000). Complex formulae/weightings were used to allocate total EP time in many services and where time allocation was in operation, there was less flexibility in how an EP could operate. Some PEPs were reviewing this and looking for more negotiation between psychologists and their schools, challenging the notion that all schools need the services of a regular visiting EP. One suggestion, given limited time, is to prioritise work in terms of the differential needs of schools and the goals of the LEA. Transparency in the factors that lead to the allocation of service time, as well as evidence regarding outcomes, will be necessary if some schools will not automatically receive input from an EP (Kerfoot and Imich, 2000).

There is increasing emphasis on accountability, especially in the light of LEA OFSTED inspections and ‘Best Value’. Whatever LEAs do has to be related to pupil achievement and raising of standards (Kerfoot and Imich, 2000). As long as EP services are part of the LEA, therefore, there is a need to add value to the process of raising achievement for
all. EP services need to produce data and evidence about what we can offer and whether we have delivered it. It is, however, recognised that different EP services are at different stages in the development of systems for monitoring the quality and effectiveness of their services (Leadbetter, 2000). The system in existence could have a significant impact on the ability to participate in multi-agency work. A risk is that due to the pressures in relation to raising attainment, any work could have a very narrow focus whilst EPS are tied to the LEA. It has been argued that there is a need to maintain relative autonomy, personal responsibility with the immediate clients as priority (individuals, schools, families), rather than the government or LEA as clients (Webster and Hoyle, 2000).

Within Milton Keynes a SEN repositioning group have recently produced an internal document for consultation identifying a range of issues, which need to be addressed within SEN. The group consisted of representatives from head teachers, LEA officers, health and social services, highlighting a desire for partnership in meeting the needs of children in Milton Keynes. In common with the national picture it is recognised that there is insufficient contact between professionals working in schools, the support services and other agencies. Multi-agency work is less effective than it could be and the pooling of expertise and experience in addressing the needs of specific groups is undeveloped. The report argues for a need to maintain and enhance the knowledge and skills of those dealing with specific groups, e.g. children with autism, children with hearing impairment. One response is the development of professional leadership groups for the discussion of contemporary issues, and the identification of good practice and training needs. What is lacking within the report is any specific detail regarding time scales and composition of these groups making any analysis difficult, although draft
protocols are to be written within three months of their establishment, based on a shared understanding of expectations and procedures.

In addition the document produced by the repositioning group discusses the centrality of health and social services departments to the provision of quality services. It is recognised that there is a need for clarity at the operational level regarding joint working and a consideration of the impact of an inclusion policy on health service ability to meet children’s needs, e.g. Speech and Language Therapy placements. A suggestion is that such issues are shared at a joint forum between senior managers from education and health and an approach agreed. Once again details are lacking although there is recognition that there are a number of issues (not stated), which need to be taken into account if joint working is to become a reality. With impending OFSTED inspection feedback and so many details to be resolved, there could be the potential to influence opinion within MK. This assignment aims to seek guidance from existing literature in formulating a contribution to the development of multi-agency working in MK.

3. Psychological theory and research

Research Methods

The literature reviewed was accessed from a number of sources. The AskERIC and PsychLIT databases were searched using a combination of the key terms: multidisciplinary/agency working; delegation; educational psychology; collaboration and service delivery. Ancestral searches were carried out using the reference lists of recent publications as described above.
Multi-agency work and collaboration

For the purposes of this assignment I have consistently used the term multi-agency work to encompass the terms multi-disciplinary and inter-agency work, terms, which appear to be used inter-changeably in the literature. The term multi-agency work is increasingly used, and is a relatively vague term as it can mean a number of things and encompass a range of activities. These could range from sharing information with other professionals at its simplest to actively working together for mutual benefit, which could be described as collaborative working. This incorporates a range of activities, any of which could be appropriate at different times or with different activities. This is shown quite well by Figure 1 which is taken from the DfES report on working with disabled children (2002,p.23) which outlines a continuum of co-ordination which culminates in collaboration and which appears to suggest a useful distinction beyond the sharing of information:

Figure 1. A continuum of co-ordination of multi-agency work (DfES, 2002).

NETWORKING > CO-ORDINATION > CO-OPERATION > COLLABORATION

Sharing information Sharing information Sharing information Sharing information

Altering activities to Altering activities to Altering activities to
achieve a common achieve a common achieve a common
purpose purpose purpose

Formal links Formal links

Work together for
mutual benefit
This continuum (DfES, 2002) was produced as part of a joint health and education multi-agency working party consultation document on guidance regarding the delivery of services to children with disabilities in the age range birth to two and their families. The guidelines were produced from consulting with parents and professionals, and reference to other government department guidelines. They appear to lean heavily on one piece of research, by the Joseph Rowntree Foundation, on the impact of childhood disability on family life, in addition to the skills and experience of the working party members. The document provides a useful framework that can be used to categorise the research evidence reviewed, as well as existing local practice. The use of the term continuum appears to be a useful one in that within Figure 1 different levels of involvement are indicated at different points along it.

The continuum highlights that collaboration requires more than different agencies being involved. It requires effective joint working, which will have implications at different levels, for example in daily practice as well as more decision-making levels. The question of effectiveness itself is quite complex as if something is effective it should improve outcomes, as distinct from efficient, which is primarily related to cost. In these days of Best Value cost effectiveness is an issue, especially for budget holders, who have to demonstrate that what they are offering or providing could be described as best value. Collaboration also challenges the more traditional professional values of autonomy, knowledge and responsibility, requiring a limitation on autonomy and a sharing of responsibility, which could be construed either as a threat, a relief or an opportunity. These are issues, which may require further discussion within and between agencies if and when they arise with the recommended increase to collaboration amongst different agencies. It could be argued that EPs, by the nature of their work, e.g.
consultation, are probably less threatened than some by an increase in collaboration. The potential positive impact that collaboration and multi-agency work can have is highlighted in the following definition,

'Regardles of which service-delivery model is used in the intervention process, collaborative consultation is a problem-solving strategy. It applies across situations, service-delivery settings, and types of disabilities. It is an interactive process that enables teams of people with diverse expertise to generate creative solutions to mutually defined problems. The outcome is enhanced, altered, and produces solutions that are different from those that the individual team members would produce independently.'

(Nelson, 1994, p.21, as cited in Harn, Bradshaw, and Ogletree, 1999).

Factors arising from existing practice within the literature reviewed will be explored using the DfES (2002) continuum as a guide, from networking, to co-ordination, to co-operation and then collaboration.

**Networking**

*Networking involves the sharing of information.*

There are a few areas where the opportunities for multi-agency work in the form of networking not only exist but also are already happening to a greater or lesser extent. This could be described as multi-agency working in its simplest form in which, it could be argued, that all EPs participate in.

With early intervention work with families of children with disabilities, where health, social services and education all provide some support, although the degree of joint
working within this will vary between areas. Another area is statutory assessment and the issuing of Statements of SEN, which attempts to bring together different disciplines, as does the Annual Review process. These structures within SEN appear to exist to encourage the sharing of information and procedures within EP practice are well established. Although the amount of actual joint work will vary greatly as in practice many professionals do not appear to attend Annual Reviews or Transition planning, for example.

Lloyd-Bennett and Melvin (2001) surveyed DECP members for examples of joint working practice between educational and clinical psychologists. Of the 25 clinical psychologists who responded, 24 had experienced joint working with an EP. Of the 22 EP responses 18 had experience of joint work. As these were low return rates any conclusions extrapolated to the rest of the profession need to be tentative. CP reported a wider range of 'collaboration' than EP, both reporting casework and/or liaison meetings and contacts the most frequent (2/3) categories of collaboration (networking). Positive aspects of 'collaboration' included role clarification and the sharing of ideas. Difficulties were practical obstacles, such as time and workload, which led to the avoidance of joint work, as did limited funding for meetings and training initiatives. Different theoretical approaches were reflected in confusion over terminology and there were different professional perspectives on issues, e.g. ADHD, psychometrics and style of working. Negative experiences involved the misunderstanding of the roles of respective professionals, professional rivalry, some unwillingness to discuss or collaborate, and some reluctance for contact due to confidentiality. There was agreement that collaboration required both personal willingness and support from management structures. This incorporated maintaining direct contact and overcoming role confusion,
structured and informal meetings, agreed guidelines and joint training initiatives. Overall there was a high level of agreement that the benefits outweighed the difficulties. The authors argue that joint working could potentially decrease future workloads due to improved efficiency, which may increase support from management.

**Co-ordination**

In addition to the sharing of information, co-ordination involves altering activities to achieve a common purpose.

One example of co-ordination is the multi-agency work developed in Essex following the identification of secondary schools, using LEA data, with high levels of exclusions. This led to the development of a multi-agency team to work on a range of initiatives aimed at reducing exclusions. The teams of LEA advisory staff (school development adviser, senior EP, senior manager from the special needs support service) were provided to work with schools with the aim of reducing exclusion levels (Kerfoot and Imich, 2000). There was, therefore, experience within the team related to advisory and inspection work with whole school development, incorporating the curriculum and management issues, as well as experience of working with individual pupils. It was argued the combination of skills was important as the evaluation was focusing on improved learning outcomes for pupils as well as school processes. Interestingly while senior staff from the EPS and SEN support service were selected to be involved, the link advisor led the meeting.

It is not clear from Kerfoot and Imich's paper why the link EP was not involved and whether this was because seniority was thought to be important, and the link EP became involved later with some of the planned activities. Joint planning and co-ordinated
support resulted from a school being highlighted by the LEA. Initially this could be described as networking in relation to the continuum illustrated in Figure 1, with the team sharing information with the school. Activities were designed in a meeting led by the link advisor between the head teacher, chair of governors with contributions from the team. It could be argued this then became co-ordination, with reference to the continuum and it could potentially become co-operation with more established formal links.

As a process driven by the LEA, initially this could have the potential to become more genuinely collaborative if it was perceived by the school to be of benefit to them and wanted. In fact, how involved parties perceive a process could determine their positioning on the continuum in question. If, for example, a school did not request multi-agency involvement it would seem inappropriate to call this collaboration, as it lacks the key characteristic of 'working together for mutual benefit', as the school perceives it. The other agencies, however, may perceive the process as being exactly this, whether it was requested or not. It is possible that if involvement was not requested, longer-term outcomes could be different.

Kerfoot and Imich (2000) highlight the successful example of the Early Reading Research approach associated with Solity (2003). Solity has himself, however, highlighted that although this is a very successful approach in Essex, one school where it was less successful was when the school in question had not followed completely the recommended activities. Outside professionals may have perceived this as collaboration however the class teacher may be at the level of networking, in the sense that they have not altered their activities enough the achieve a common purpose. One disadvantage of
the continuum is that it does not allow for the presence of formal links (as in the previous example) with the absence of altering activities.

**Co-operation**

In addition to the sharing of information and altering activities to achieve a common purpose, co-operation also involves the establishment of formal links.

One example of this is the PIPE Project, a multi-agency attempt to reduce exclusions in Lambeth, between a small group of schools, the EPS, a voluntary agency and a health trust (Bryan, 2002). Tasks have involved individual and group work with children, consultation and INSET for school staff, drop in surgeries and workshops for parents, and work with families. The three line managers met regularly, highlighting a divergence of approaches within a profession and different professional perspectives. Benefits are reported to be the maintenance of a distinct professional stance alongside the development of new approaches, and an increasing awareness of the overlap between agencies. Areas of expertise were highlighted, with an emphasis on different but equal.

Bryan (2002) found respect for the other disciplines, their perspective, skills, ability and training, was key to good working relations. Agreeing ownership of tasks and shared goals worked well. Sharing tasks appeared to encourage teamwork and relationship building, with trust emerging as a crucial issue. Evaluation (via questionnaires with both children and teachers) highlighted some favourable responses from children and interest from teachers continuing the programme when PIPE has withdrawn. Further evaluation to the long-term benefits is planned by PIPE and the Kings College School of Education.
has secured funding to research the effectiveness of PIPE, which is essential prior to the model being replicated elsewhere.

An 'innovative' model of a multi-agency childcare network created from a public-private partnership, co-ordinated and headed by a voluntary organisation, was studied between July 1998 and September 2000 (Wigfall and Moss, 2001). A predominantly qualitative methodology was employed, incorporating documentary analysis, observation and interviews (both staff and users). In addition quantitative census data was briefly sampled over a two-week period. There was a lack of any common data collection on service users, which made any evaluation more difficult. The research was not an attempt at assessing the effectiveness of multi-agency working but an exploration of how it can happen and the difficulties it must address, although it could be argued that whether something is effective or not is equally, if not more important.

Wigfall and Moss found connections between service providers, e.g. formal links or overlapping client groups, aided collaboration and co-operation between services with referrals and joint working. Enabling factors include the Community Services Manager being perceived as the key link person. In addition, they had a Campus Co-ordinating Group made up of senior managers representing the services being key for general planning and administration, although less effective for strategic planning. Staff have been slower to come together below management level, although activities, resources and training are beginning to be shared, which they argue enhances the prospect of collaboration. A trust between all those involved has taken time to build, as would be expected when something new is introduced. Constraining factors have included workloads, lack of time for informal interaction or for reflection and planning.
Wigfall and Moss argue that critical to moving the multi-agency network forward was: senior level support from health, education and social services; the status of the voluntary organisation and their lack of competition with any one agency placing it in a powerful position to initiate and co-ordinate their partnership; a local authority committed to integrated childcare and education; and the general move for joined up working. They do not, however, say how senior management need to be and it is a concern that the even with the involvement of senior service managers, strategic planning was not particularly effective. In addition, at field level joint working has been more difficult to achieve, as they argue it calls for flexibility and a different approach. Service users tended to only use one service provider but this was gradually changing as staff made more referrals and users became more aware with what was on offer. They conclude that the concept of services working in collaboration, with a common value base and overall co-ordination, has the potential to fit different situations.

**Collaboration**

*In addition to the sharing of information, altering activities to achieve a common purpose and the establishment of formal links, collaboration involves working together for mutual benefit.*

One example of multi-agency working for children with autism exists within Northamptonshire (Howley, Preece and Arnold, 2001). Here a collaborative and multi-agency approach to using structured teaching has been established involving education, social services, health and voluntary agencies. Howley et al (2001) used a narrative case study approach with two families to illustrate how appropriate and consistent provision across settings was developed. Although there are limitations to the generalisability of
findings from such a small sample to a wider population, they highlight areas for further development or research. The multi-agency group was formed back in 1988 in response to concerns regarding provision and long term planning for children with autism, with an aim of recommending a strategy for meeting health, educational and social needs of the autistic population. Recommendations focused on increasing specialisation in all services and joint training to aid consistent practice. Statutory agencies jointly funded a three-year project including an EP, SALT and unit manager (social services). Professional and parental collaboration appears to have resulted in an integrated network of services and specialist provision, all these services make consistent use of the structured teaching approach (TEACCH – for more information readers are referred to Schopler and Mesibov, 1989).

Regular meetings are held to ensure consistency across disciplines, offering opportunities for multi-agency problem solving and group supervision. Each intervention is monitored and evaluated by the autism project team, class teachers and families. Evaluations involve dialogue between families, support workers and supervisors. The families determine criteria for success and success is reflected in the outcomes for individual families. As such it appears that the whole monitoring and evaluation process is something of a subjective one, which has its place but not in isolation of more objective criteria between families. In arguing for the development of a new service, with the implications for funding, requires some of the consistency and structure recommended within the body of their work e.g. consistent criteria for success to aid more objective evaluations.

The Northants approach highlights a commitment to multi-agency collaboration and to working effectively with parents by: having a family focused service, supporting and
building on the existing resources within a family; being professionally competent in their areas of expertise; having a shared understanding of autism; and a shared value base, enabling the focus to remain on the potential outcomes. With an acknowledgement of the limits of professional and personal competence, there is a reported willingness to engage in multi-professional problem solving. This agreed framework appears to provide the context for more collaborative and less competitive approaches. Open and trusting relationships were seen as essential for collaborative working.

The approach within Northants reflects a commitment to multi-agency teamwork alongside a countywide adoption of the TEACCH model. The latter provides a framework to develop understanding and focus on outcomes with a shared philosophy and consistency of approach. As the service is jointly funded, and with joint training and regular contact between those involved, and shared goals, it avoids a number of difficulties which can be present when working collaboratively (Lacey and Lomas, 1993), such a irregular contact between professionals and a lack of shared goals and priorities.

Government funded research into the provision of SALT services made a number of recommendations, many of which focused on the need for enhanced collaboration at a range of levels (Law, Lindsay, Peacey, Gascoigne, Soloff, Radford and Band, 2001). The project was designed in three interlocking phases. The first phase involved the development of a questionnaire to obtain information about current provision circulated to all SALT managers in Health Trusts with a children’s service and 50% of all LEA managers in England and Wales. The response rate was 65% from LEAs and 74% for
Health Trusts. In the second phase, fifteen pairs of LEA/Health Trusts perceived to be collaborative were targeted for a qualitative analysis, (interviews at managerial, practitioner and parental level), of the factors determining the process of collaboration between health and education services. The third phase involved a series of five meetings across the areas combining managers, practitioners and parents. The report identified widespread recognition for the need for collaboration between different agencies, as well as the difficulties in achieving this. It was considered to be effective at the practitioner level when the professionals have a clear understanding of each other’s roles, when therapists are prepared to take account of the educational context, when teachers understand the importance of language to the curriculum. In addition, when school systems support therapist’s involvement, e.g. liaison time, well planned SEN meetings. The interviews indicated that less was known about collaboration at a managerial level, although a shared vision and a joint strategic plan were central issues. They argue that collaboration should not be reliant on individual practitioners but strategic planning across health and education is required.

**Multi-agency work and complexity**

It has been suggested that there is a growing consensus that multi-agency approaches are needed to understand autistic spectrum disorders (Jordan, 2001), from the diagnosis to provision and the co-ordination of services. The complexity, diversity and individuality of the disorder call for multi-agency approaches to provide a variety of perspectives, e.g. health, education and social services, to aid understanding of the affects on an individual and their families. A survey completed in 1999 by the NAS showed that from a cohort of 294, 65% saw three or more professionals before getting a diagnosis, and 23% five or more (Beardon, Parsons and Neale, 2001). This figure may be higher today if the survey was repeated due to the apparent change in emphasis on
more multi-agency work. Likewise, this work needs to become more collaborative and
to move beyond diagnosis towards intervention and provision, as there is no point in
having an efficient diagnostic team without good follow up services (Moxon and Gates,
2001). Different disciplines need to be able to work together and co-ordinate their input,
continuing to offer support to families, as has been highlighted by the Northants
approach. Some LEAs and health boards have set up outreach teams to develop services
in schools, e.g. Leicester City Council (Jordan, 2001). The importance of parent-
professional partnerships and multi-agency working is often referred to in policy, in
practice it has been suggested that multi-agency working is cumbersome at best, and
frequently absent (Tissot, Bovell, Thomas, 2001). In relation to the continuum in Figure
1, the research appears to suggest there needs to be a shift in focus towards more
working together, as reflected in 'collaboration'.

Key Characteristics of successful multi-agency working

The literature reviewed can be summarised into the following key characteristics of
successful multi-agency working.

• A combination of skills provided by different services (Kerfoot and Imich, 2000)
and the sharing of ideas (Lloyd-Bennett and Melvin, 2001).

• Management involvement (Kerfoot and Imich, 2000; Bryan, 2002), and co-
ordination (Wigfall and Moss, 2001), and a shared vision (Law et al, 2001).

• A distinct professional stance (Bryan, 2002), yet role clarity (Bryan, 2002; Howley

• Expertise highlighted and differences respected (Bryan, 2002; Howley et al, 2001).

• Agreed ownership of tasks and shared goals (Bryan, 2002; Howley et al, 2001).

• Key link person (Wigfall and Moss, 2001).

• Commitment to integrated childcare and education (Wigfall and Moss, 2001; Howley et al, 2001), and a joint strategic plan (Law et al, 2001).

• Regular meetings/contact (Howley et al, 2001; Lacey and Lomas, 1993; Law et al, 2001; Lloyd-Bennett and Melvin, 2001), which are well planned (Law et al, 2001).

Summary

Multi-agency working can mean different things to different people in different situations. The continuum in Figure 1 is one approach that attempts to highlight the range of work possible, from 'Networking' through to 'Collaboration'. It requires planning and resourcing, especially time. Time for discussion and reflection, time for each member to make a contribution and to develop trust and respect. Time to develop joint programmes, especially with staff in schools (Jordan, 2001). Many demands are placed on all professionals by their own systems leaving, it has been argued, little to build bridges across agency boundaries (McConkey, 2002).

The literature on multi-agency collaboration suggests that it is beneficial and desirable, but difficult to achieve. For example it has been argued that maintaining continuity of personnel and the commitment of agencies within the area of autism has been problematic (Jordan, 2001). Professionals from different disciplines need to be able to work together and co-ordinate their input. It has been suggested that much of this communication is informal (Moxon and Gates, 2001) and it has been highlighted that some shared knowledge and understanding are just two of the factors required for effective communication to be possible (Lindsay and Dockrell, 2002, et al).
4. Integration of theory, research and practice

The literature appears to suggest a number of key characteristics associated with successful multi-agency working, which will have implications for any planned multi-agency work if its chances of success are to be maximised. This is especially true of that which could be described as collaboration with reference to the continuum in Figure 1.

Autism is an area, which has a clear medical definition yet increasingly, involves a range of professionals and subsequent diagnosis becomes more multi-agency (Jordan, 2001), which is certainly reflected within the local context in Milton Keynes. A local core team of paediatrician, EP, health visitor and SALT work together to share experience, assessment findings and to draw conclusions together to help plan for the future, reflects a number of characteristics of successful multi-agency working. This can be broadened to incorporate a clinical psychologist if they are involved or perceived to be required but a weakness of the present system is that it does not involve parents as part of the professional meeting. From the perspective of an EP this appears inappropriate when trying to work in partnership with parents and is an area the EPS are presently trying to change. In relation to Figure 1 this would be seen as 'Collaboration' and is one of the more successful local projects, which has a number of the key characteristics for success as highlighted by the research, such as role clarity and shared goals.

The way that professionals work together during the assessment process is crucial. A co-ordinated approach to gathering information about a child is important if parents are to avoid the frustrating experience of having to tell their story repeatedly. It will also benefit the professionals allowing them to set the information they have in the context
of the whole child. Working together can minimise disruption for families with joint or co-ordinated appointments, which can simplify what can seem a complex assessment process. One response has been via a ‘one stop shop’ where different agencies can operate out of one child development centre for example, although practice varies across the country as to whether EPS are an integral part to this. Locally they only involve SALT, OT and Physiotherapy. There is, however, a system for the more formal sharing of information when any involved professional initiates an official multi-agency meeting, which could be an EP. In the absence of formal structures informal arrangements for joint appointments and assessments can also be effective, minimising fragmentation. This level of 'Networking', in relation to Figure 1, appears to reflect the locally established approach at present. As such, it lacks some of the recommendations highlighted by the recent Government guidelines, such as the use of a key worker.

A key worker, as a source of support to families and link between the services, has been recommended by the recent guidelines for early years working for children with disabilities (DfES, 2002), and Wigfall and Moss (2001). Although the role of a key worker can mean different things to different people and it would benefit from being clearly defined in terms of role in relation to the specific context. Key workers could provide a single point of reference for information, co-ordination of other agency support and help/support for the child and family, review of support arrangements over time and anticipation of service needs, continuity of support, and a role in implementing the plan. They may, however, not be acceptable to the family. They may give one agency a particularly large role and therefore be in a more influential position. They will need enough knowledge of other agencies to co-ordinate and be experienced in working with families under stress. Within the local communication service context the key
worker is the person who makes the original referral, although this does not appear to make them more influential.

If systems have a common focus and outcome, joint working makes more sense, and when there is an integrated system with a common management and finance structure, which appears to be supported by the research reviewed. In addition, joint training with a focus on client needs, e.g. 'early intervention specialists' and a 'one stop facility' to access support (McConkey, 2002). Although it has to be recognised that sharing a building with common management does not automatically result in more joined up working, as can be seen within the local context of a combined children services, encompassing social services and education, although this is reported to be a key characteristic of successful multi-agency work (Wigfall and Moss, 2001 et al). This may, in part, be because the everyday working demands and practices have not changed and therefore the arguments regarding lack of time etc still ring true.

The future of multi-agency working

The government-funded report on the role of educational psychologists (DfEE, 2000) is quite clear in its support of more multi-agency working. One issue to consider is that although more multi-agency work is one recommendation from the DfEE Report (DfEE, 2000), this was not specifically listed as a request by EPs, but LEAs, Social Services and Health. Educational psychologists actually wanted more opportunities to be key agents for change and to apply psychology, which could be counter to more multi-agency work. When PEPs were asked for their views on future patterns of practice (Leadbetter, 2000) multi-agency working did not appear to be mentioned although more collaborative work with schools was, as was a move to more preventative work and
early intervention, which does not preclude multi-agency working. Likewise, longer
term involvement with some pupils and more psychological approaches were also
mentioned which could incorporate more collaborative working. As PEPs were asked
their views in 1998, hence prior to the publication of the DfEE (2000) report, their
views may have subsequently changed.

Multi-agency co-operation must meet client needs. An efficient diagnostic team
requires equally effective follow up services. Tissot et al (2001) argue for cross border
collaboration in order to provide the range of provision which is required, through a
regional pooling of resources, to aid co-ordination, reduce duplication and provide
economies of scale. The DfEE has established five regional pilots on SEN, with the
West Midlands focusing on Autism, and the results are awaited. These may offer a way
forward as it does not appear to be financially viable for all authorities to be able to
offer a full range of provision for all needs, especially with the increase in smaller
unitary authorities over recent years, such as Milton Keynes. A pooling of expertise,
knowledge and funding that minimises the differences between agencies, all factors the
literature reviewed suggests are associated with successful multi-agency work, could
create a more collaborative context to meet the needs of children and families. They
suggest an adaptation of the ‘care management’ approach introduced in the 1990 NHS
and Community Care Act. This could involve a specialist area team, which holds
devolved budgets from health, social services and education. They could organise
packages of care, which reflect a broad range of services for the child, and family,
which may be more flexible. Although this approach would not be easy it is not
impossible. It will, however, require a level of commitment and joined up thinking
which appear to be absent at present within local government. Although there has been
some joining of education with social services for children within Milton Keynes (in terms of structure and organisation), this appears to have made little difference to planning or joint working so far. The provision of a specialist team could potentially provide a clear basis on which to work more collaboratively.

Educational psychologists need to be clear regarding their role so that service users know when involvement is appropriate; especially as role clarity is key with successful multi-agency work. This will have implications for how the EP profession develops, for example an increased focus on expertise in certain areas with the development of specialists, especially as expertise is a factor associated with successful multi-agency work. It must be remembered, however, that an EP is already a specialist in the application of psychology to educational issues but there appears to be an increasing amount of specialisation developing and being encouraged beyond this, e.g. AEP and Soulbury. What is meant by specialisation can differ between contexts, from a specific activity to an area of development/interest. It has been suggested that specialists can be good sources of income, lead to team building, help in recruitment and a means of expanding services (Arora, 2002). As they are often related to Government initiatives they can be time limited and dependent on additional (sometimes joint) funding, preventing the development of the necessary skills. There needs to be a balance between working collaboratively with colleagues so they retain and develop skills in the area, as well as developing their own expertise further. Time is essential to develop Specialists, to make the necessary relationships, which aid collaborative working, and to learn new skills and knowledge. The possible move to the increased length in training may help in the development of Specialists, especially if it is at a higher level rather than more of the same.
Recommendations from the DfEE (2000) report encompass the development of specialists, and associated training, aspects that are in line with the literature on what promotes successful multi-agency working.

With the move towards consultation the emphasis appears to be placed on skill rather than knowledge and although skills are important there is a danger that the evidence-base of educational psychology, which incorporates both research and practice related issues, becomes increasingly marginalized. This would not be advantageous to the profession of educational psychology (Webster and Hoyle, 2000). The profession has expertise in the application of psychology within education. This is the primary difference between EPs and other applied psychologists.

One recent development is the increased involvement of CAMHS within education and which appears to be encouraged in the government circular on promoting children’s mental health (DfES 0619/2001). In this 1:1 therapeutic work with the child by a mental health worker, even within a school, appears to be encouraged. Specific examples of work include cognitive behaviour therapy, behaviour modification and counselling-areas, which would be classed as appropriate to educational psychology. This is not presented in terms of multi-agency work but of broadening the range of work of one service. This in effect could potentially damage a move to working more together, with some resentment amongst EPS and extra confusion within schools when what was needed was more clarity. Especially as research suggests role clarity is an important factor for success. This in part could be the fault of EPs in not being clear about their role and inconsistencies not only between EP services but also within them about what they do, and when they do it.
With reference to the continuum of joint working highlighted in Figure 1 earlier within this assignment, all aspects will be appropriate at different times, from networking through to collaboration. It will be important to demonstrate that EPs are able to work at different levels. This in turn could aid the planning and evaluation of the work of an EPS and clarify the contribution that could be made to multi-agency working. The government report on the role of an EP (DfEE, 2000) recommends the LEA has an established framework, which allows joint planning and intervention. The nature of other support services and agencies in each area and their enthusiasm for collaborative working could operate as either a barrier to or opportunity for a shift in the focus of educational psychology services (DfEE, 2000). It could be suggested that now is a good time to be clearer regarding the role of EPs to safeguard the future, as role clarity is a key characteristic of successful multi-agency work.

**Issues for further consideration and research**

It is not enough for an EP just to work as part of a multi-agency team. DfES (2002) argue, that for children with disabilities, a multi-agency working group is required at senior management level to review current arrangements, agree a strategy for development and implement change. Early assessment will be important to highlight the services required to meet needs and an action plan agreed between the family and professional agencies providing services. In addition opportunities to pool budgets, to support the development of integrated provision and to develop joint commissioning approaches. Also that a named key worker is identified, especially for families receiving services from more than one agency, factors supported by the research reviewed.

There appears to be a need for further research on inter-professional collaboration, especially with the push to inclusion with increasing attempts to meet needs within
mainstream provision requiring the support of a range of professionals. Multi-agency working needs to be researched and evaluated, to identify whether goals are being met and the most effective means of meeting them e.g. developing model projects, evaluating new styles of service, longitudinal studies (McConkey, 2002). With a more focused approach, in combination with joint management and planning, and a culture that values partnership working, then there may be more scope for change. There will also need to be a commitment from the EPS, e.g. through its time allocation system, to maximise the chances of success that any new initiatives can be maintained.

In the current climate, with a focus on inclusion and multi-agency working, a clear understanding of the issues involved in providing a co-ordinated approach to meeting SEN is essential. The response of individual LEAs to the enhanced freedom under Fair Funding regulations to delegate resources for EP services to schools could act as a barrier to or an opportunity for a shift in their focus. One recommendation from the ‘Current Role, Good Practice and Future Directions’ report (2000) was for the retention of the EP service within the LEA, as they have an important role in supporting the Governments education and social inclusion agenda. Increasing the length of training to three years relies on close working relationships with host LEAs for both funding and training in the anticipated lack of national funding to train EPS (Webster and Hoyle, 2000).

5.Concluding comments

Non-collaboration can have a significant detrimental effect on the lives of children and families. It is important that parents and professionals find ways of creating a context of collaboration in which differences are accepted and valued as part of an on-going
parent-professional relationship. We are in a context where there are more initiatives from Government about multi-agency working as well as a review of the practices and re-evaluation of training of EPs. The need for co-ordinated planning across health, education and social services has already been highlighted for areas such as ADHD and Autism. At present there are few examples of systematic inter-agency working, where funding and accountability is jointly agreed and supported by health and education (Lloyd-Bennett et al, 2001).

Effective provision for children with special needs requires teamwork extending beyond schools and requires a collaborative, consistent and effective multi-agency approach. By working together the LEA, schools and parents will develop the facilities, resources and expertise within schools and across MK so that schools are better able to meet the needs of all children effectively.

References


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Assignment 4

**Personal and Professional Development over a Four Year Doctorate Course, with reference to 360-Degree Feedback and Working Mothers**

Core Curriculum Area: Interpersonal Effectiveness

**Section 1: Aims and Scope of the Assignment**

There is a consensus that a full repertoire of professional skills, following qualification, can only be achieved through sustained periods of ‘internship/apprenticeship’ (Webster, Hingley and Franey, 2000). This is supported by professional practice guidelines that state it is a duty of all Educational Psychologists to update their professional knowledge and skills continually post qualification to maintain competence in a changing world (DECP, 2002).

To maintain standards of professional practice for all practising psychologists, including Educational Psychologists, there is an expectation that CPD is essential (BPS, 2002), with a focus on applying the new learning to practice, in essence becoming reflective practitioners. Draft guidelines by the BPS on CPD have been produced pending statutory regulation of chartered psychologists, with an expectation that a summary CPD record will form part of the renewal process for the Practising Certificate. The emphasis is on professional responsibility and the development of competences rather than time spent on formal courses, ensuring effectiveness as a practitioner in the changing professional context.

CPD is defined as
‘Any process or activity that provides added value to the capability of the professional through the increase in knowledge, skills and personal qualities necessary for the appropriate execution of professional and technical duties, often termed competence.’

(Professional Associations Research Network in BPS, 2002, p.4)

The BPS recommend a wide range of activities, both formal and informal, that may comprise CPD and suggests a minimum of 40 hours per year, incorporating e.g. training courses, reading, systematic reflection of practice. Reflection is important in identifying how the learning will be used, especially in relation to changes in practice. CPD has a range of benefits to: the individual psychologist, e.g. evidence of continued competence and enhanced career prospects; the employer, e.g. recruitment and retention of skilled staff, and the society; e.g. maintaining the professional standards of the membership.

Recent changes for the profession have included the government-funded report on the current role, good practice and future directions of Educational Psychology (DfEE, 2000). This highlighted three key areas for EP involvement: Early Years, Multi-Agency and Schools. Educational Psychologists apply psychology, to promote the development of individuals within their environment. CPD is designed to support this process and it could be argued a professional doctorate course is one key way of achieving this today, especially as the move to doctoral level training for all new Educational Psychologists appears to be imminent.

This assignment will reflect on my personal and professional development as I near the completion of a four-year doctoral course. It will use 360-degree feedback as an approach to obtaining feedback from colleagues, and discuss some of the strengths and
weaknesses of this approach as an aid to reflection. This will be in relation to personal practice and the local service context, especially with reference to CPD. In addition, due to more personal changes, sourced research on working mothers will be used to reflect on my personal and professional development. The implications of the research conclusions and feedback, for the service, or myself will be discussed. I will consider to what extent my professional development has prepared me for future changes and challenges in educational psychology.

Section 2: Practice and Context

This section reviews the context with reference to Continuing Professional Development and the National, LEA and EP agenda for change. More specific local processes contributing to change, especially in relation to personal and interpersonal effectiveness, are discussed and potential strengths and weaknesses highlighted.

The Doctorate as CPD

CPD is used as a means of assuring quality control, accountability and competence (Fowler and Harrison, 2001). Suggested benefits also include improved service provision, enhanced knowledge, skills and techniques, greater confidence and increased awareness and ability in dealing with others. A number of articles have argued for the extension of initial training to three years (Farrell, Gersch, and Morris, 1998), as it is perceived to be impossible to provide the breadth and depth of training for the range of tasks required within the yearly course. The doctorate could offer the opportunity to acquire and apply the depth of research and theory in psychology within educational and family contexts. The argument being that this could move an EP from a superficial understanding of theory and practice to allow for the fluency, maintenance,
generalisation and adaptation of learning. This could result in more evidence-based practice, from a better understanding of the relationship between research, theory and practice. The CPD doctorate offers opportunities for Educational Psychologists to extend the depth of their knowledge and skills and to gain a higher degree. There are at least 13 doctorate courses, of which 10 are four-year part time. The prevalent age is 35-45, with more females than males. The majority are main grade Educational Psychologists and half are funded completely by their employer, (Wolfendale, 2001) I am, therefore, a ‘typical’ student.

The Context

At the same time as meeting organisational needs, there is a need to respond to the demands of clients, whilst maintaining high professional standards. Positioned within LEAs, the practice of the profession is influenced by Education Development Plans, for example, in addition to being accountable to professional standards as outlined by the BPS. Educational Psychologists are faced with a number of changes that will be highlighted, in relation to the National, Local and EP agendas.

National agenda

The National agenda influences local practice and two key areas are highlighted here. The first is the Government’s current agenda for educational change that is based on two principles – the development of a socially inclusive society and a competitive society that needs to raise achievement levels for all. The second is the production of a report regarding the practice of educational psychologists (DfEE, 2000) was produced, based on what they say they do now, what they could offer in the future and what
service users would like them to provide. The group defined the contribution of Educational Psychologists as:

‘To promote child development and learning through the application of psychology by working with individual and groups of children, teachers and other adults in schools, families, other LEA officers, health and social service and other agencies.’ (p.5)

Core functions of EP services were listed as working in the areas of early years, schools, and multi-agency. It highlighted the request of schools and LEAs for an increase in EP involvement in multi-agency work, e.g. planning in schools. In addition, an increased emphasis on links with health and social services, e.g. clarity regarding what an EP can do and frameworks for access. An emphasis on early years work was reinforced with the focus on early identification and intervention as highlighted in the revised SEN Code of Practice (DfES, 2001).

LEA agenda

There is increasing emphasis on accountability, especially in the light of LEA OFSTED inspections and ‘Best Value’. Whatever LEAs do has to be related to pupil achievement and raising of standards (Kerfoot and Imich, 2000). As long as EP services are part of LEAs, therefore, there is a need to add value to the process of raising achievement for all. EP services need to produce data and evidence about what we can offer and whether we have delivered it.

EP agenda

Educational Psychologists want more opportunities to be key agents for change and to apply psychology (DfEE, 2000), as well as more collaborative work with schools, more
preventative work and early intervention (Leadbetter, 2000), in addition to more long-
term involvement with some pupils. Psychology is often perceived within education in a
narrow assessment role ((Maliphant, 2000), leaving limited time for more preventative
and early intervention work. It is important to practice quality psychology within the
education system and the doctorate offers the opportunity to develop more specialised
knowledge and to practice new skills under supervision.

Recommendations from the DfEE (2000) report encompass the development of
specialists, and associated training, although an EP is already a specialist in the
application of psychology to educational issues. Research on multi-agency work does
suggest that role clarity is one key aspect to successful work (e.g. Bryan, 2002). The
development of specialist roles is one possible response to this. There could, however,
be time implications, for example, to make the necessary relationships which aid
collaborative working, and to learn new skills and knowledge. The doctorate may help
in the development of Specialists, especially if the work completed as part of the course
is related to a specific area.

Consultation has been highlighted as a useful method and principal mode of service
delivery in some services (DfEE, 2000) and appears to be growing in popularity in the
profession as witnessed by a special edition of the professional journal Educational
Psychology in Practice (2000). In Consultation the emphasis appears to be placed on
skill rather than knowledge and although skills are important there is a danger that the
evidence-base of educational psychology, which incorporates both research and practice
related issues, becomes increasingly marginalized. This would not be advantageous to
the profession of educational psychology (Webster and Hoyle, 2000). The doctorate could be one approach to updating an EP with advances in their own discipline.

**Local Processes Contributing to Personal and Interpersonal Effectiveness.**

Interpersonal effectiveness involves the ability to adapt personal and professional approaches to different contexts and purposes (UCL, 2002), and could in part reflect someone’s ability to adapt to change.

**Personal and professional development**

Professional (doing) and personal (being) development are inextricably entwined and required for competency. Professional development typically involves attendance at courses or conferences, or some structured learning, with opportunities to update knowledge and to learn new things. It can also involve practical experience and supervision. Personal development is associated with psychological health, such as 'the ability to engage with warmth, authenticity, and skill in interpersonal relationships’ (Wilson, 1994). Personal development encompasses emotional health and stability, peer support, and a variety of social and professional pursuits. Professional development encompasses theoretical and research interests, through literature, conferences and training events. Together the broader experience is applied within the professional context, where as a practitioner psychologist the person-to-person encounter between psychologist and client, i.e. interpersonal effectiveness, is key.

Within the local EPS there exists a performance review framework, which consists of both formal and informal measures. Formal measures include an annual appraisal meeting between an EP and SEP where individual objectives are set and reviewed on a
six-week cycle, informed by service objectives and LEA objectives. As part of this process individual training and development is planned and evaluated. This in turn informs the CPD plan for the service and any common needs can be identified and addressed through the cycle of team days (6 per year) and individual CPD needs through the individual days allowed (6 per year). The doctorate is supported both financially and with time and assignments are linked to EP or service aims. The local CPD policy is generally viewed favourably amongst Educational Psychologists. Educational Psychologists are encouraged to record CPD opportunities within a CPD Log although it is anticipated that the status of this will change (from optional to requirement) with statutory registration. Supervision from experienced supervisors is an essential component of continuing development and an entitlement of Educational Psychologists working with clients (DECP, 2002). Locally this is an established process for the first year of practice or colleagues new to the team. In addition, access to more informal CPD opportunities is possible, e.g. a professional interest group is organised every two weeks and coordinated by a senior EP, covering a range of issues, or attending national conferences, and joint working opportunities.

The combination of formal and informal opportunities is designed to maintain a balance between the needs of the individual and the service, to ensure the EPS remains a learning organisation, which is able to reflect on its practice in a changing world.

**Strengths and Weaknesses of Local Processes**

The AEP (2000) completed a survey on the amount of time and finances made available for CPD at the LEA level, with a return rate of 59% (102/173 LEA reps). 49% had a written policy for CPD and of these, 72% had an entitlement to a minimum number of
days CPD, but only 26% were encouraged to acquire doctoral status. 92% received day
courses provided by outside training agencies and 85% had in-house day courses. Less
formal arrangements meant staff meetings and ‘other information sharing activities’ for
91% but only 31% received study leave. 26% were allowed between 12-15 days CPD
each year, there was a wide variety with 40% with no fixed amount. The average
amount made available per EP was £275, although responses varied, with 22% having
no limit. Additional responses were focused on the cost implications, often negative,
with differing view between management and individual. In relation to the purpose of
CPD, there was some conflict between LEA, service and individual objectives. Most
respondents saw doctoral training as an essential element within CPD. In some services
there was a sense of unfairness and unequal access to CPD. In comparison to this
national picture the local service fares quite well, with the exception of supervision
beyond the first year, which is an area for further development.

If high quality induction and supervision is to become a reality service managers will
have to view these as entitlements (Webster et al., 2000), as they are important in
maintaining professional competence. Some of the above results suggest they may not.
Webster et al. (2000) suggest the creation of senior posts to incorporate induction,
supervision and CPD, which they suggest will lead to a more self-confident, outward
looking profession. Locally we have done just that and created a focus on CPD for one
of the existing establishment. The disadvantage is that this could be less representative
of the wishes of the team, dependent on how the role is coordinated.

As the doctorate lasts for four years there have been inevitable changes in my personal
and professional development. My personal experience has included the birth of twins,
a house move and becoming a more experienced practitioner - each impacting on the
other. Sourced research on 360-degree feedback, including the strengths and weaknesses of this approach, and working mothers (to reflect changes in my personal life), will be discussed. Does the feedback and research mirror my own experiences whilst completing the doctorate?

Section 3: Psychological Theory and Research

Feedback has the potential to inform us whether our practice is consistent with intentions or expectations, as part of professional development. 360-degree feedback is one way of achieving this and is based on the premise that feedback from multiple perspectives will be more comprehensive and objective than from a single perspective. The central premise being that staff will be more willing to accept performance feedback from multiple observers. As the approach employed for this assignment, the research basis of this was explored, followed by sourced research on working mothers to reflect personal changes over the past four years.

360-Degree Feedback

'360-degree feedback is a systematic process for assisting professional development by enabling an individual to obtain collective opinions of a range of people with whom they work and to set these alongside their own opinions’

(Sharp et al., 2000, p.104)

Sharp et al. highlight its research base as incorporating a number of areas from the behavioural sciences, such as person perception, impression formation, self, and behaviour change. Factors important to the effectiveness of the procedure are: feedback is developmental, not evaluative; a mentoring session accompanies feedback; a goal or
action plan follows feedback; feedback data belong to the receiver and the process is confidential (Dyer, 2001). Dyer suggests that it must be divorced from evaluative processes such as performance appraisal, as evidence suggests raters provide more honest feedback when it is not evaluative. She does not, however, clarify whether this specific evidence is from her own, or other research. In addition, mentoring is important, especially if in receipt of negative feedback regarding interpersonal skills, as this can be painful because it is often contrary to how we think of ourselves (Dyer, 2001). Successful implementation depends on: an understanding of the purpose, roles and importance of developmental feedback; a user-friendly feedback instrument; management support; a link between feedback and organisational goals; retention of ownership of the feedback and confidentiality.

The particular 360-degree instrument chosen to focus on personal and professional change over 4 years was that developed within the Buckinghamshire EPS, further details of which can be found in the Sharp et al., (2000), reference. It is a useful and flexible tool as the content can be changed to meet the changing needs of a service. It is designed to evaluate previous change and to inform future change in a cycle of continuous improvement.

**360-Degree Feedback and Personal and Professional Development**

360-degree feedback is one approach to obtain feedback regarding personal and professional development as a practising EP and has a growing body of research to support its use as part of reflective practice. In a survey of the use of appraisal in EPS in England and Wales, from a sample of 57 LEAs, 6 services are appraised using a 360-
degree model (Webster, 2001). The use of multiple sources for performance ratings has been growing significantly since the 1970s (Harris and Schaubroeck, 1988).

**Strengths:**

Reported benefits include an increased awareness of others expectations and reduction of inflated self-ratings as a result of receiving feedback, rather than relying on personal perceptions, for example. 360-degree feedback has been used increasingly within management development programmes and appraisal systems (Sharp et al., 2000). This, in part, is because of the limitations of self-appraisal in isolation due to ‘self-serving’ bias. Although it has been argued that those whose self-ratings start higher than others ratings reduce their own ratings over time, (Atwater and Yammarino, 1992). Higher agreement is found between different observers than between self and other observers (Harris and Schaubroeck, 1988; Furnham and Stringfield, 1998).

Furnham and Stringfield (1998) explored the ratings between individuals who were quite familiar with each other having worked as part of task orientated teams investigating the possibility of major organisational change, at least weekly, for more than twelve months. 56 male managers and 7 management consultants, divided into teams of one manager, six peers and an outside consultant, used 360-degree feedback as part of an organisational development strategy. A questionnaire of twenty items rated on both performance and perceived importance using a seven-point scale was administered. Of the performance measures, there was evidence of a leniency effect, with subjects rating themselves higher than all others. Correlations between observers/others were higher than correlations between self (actor) and observers (peers, superiors and subordinates). Furnham and Stringfield argue the research base gives mixed results but
possible reasons offered for the leniency effect are the rating scale used i.e. a leniency effect increases with less specific behavioural ratings. Another reason could be the relationship between the subject and observer, when observers do not know each other well and feel they cannot be critical. This could also work the other way, of course, with a reluctance to criticise friends and close colleagues. The implications of the results could also be important, for example in this case, the possibility of major organisational change could have significant implications for staff. One advantage could be related to the type of questions involved, as some provide a measure of something quite specific and observable. This type of information, e.g. ‘communication’, appears to reflect more agreement in ratings between managers, peers and self, as opposed to less observable information, which can also be obtained, such as ‘analysis’.

Harris and Schaubroeck (1988) conducted a meta-analysis of self-supervisor (36), self-peer (11), and peer-supervisor (23) ratings and found a relatively high correlation between peer and supervisor ratings ($p = .62$) but only a moderate correlation between self-supervisor ($p = .35$) and self-peer ratings ($p = .36$). Job type (managerial/professional versus blue collar/service) appeared to moderate self-peer and self-supervisor ratings, with lower correlations for managerial/professional employees, although this was not the case for peer-supervisor correlations. This suggests that managers and professionals have different views from others of their performance, although observers exhibit far more agreement. They suggest this fits with the egocentric-bias theory, the underlying assumption of which is that self-ratings are biased in some way, while others share a set of common perceptions.
A second explanation for variance between studies may reflect difference in opportunities to observe job performance, and therefore some may be unaware of some of the tasks involved in a job, which could result in a lower correlation. Would it not be, therefore, that the more independent the style of working the less chance of agreement there is between self and observers, especially when observers have the same experience? As peer-supervisor ratings show more agreement than self-supervisor/peer ratings, it could be questioned how helpful this is if it is only based on a partial performance. It could be that it highlights 360-degree feedback is only useful if observers (either all of them or a relatively high number) have a good understanding of the breadth of a role?

As much of the work of an EP is undertaken away from the office, knowledge of managers will be indirect and the use of self-appraisal important for an accurate evaluation of what an EP does and how successful they are in doing it (Webster, 2001). It has been argued that 360-degree feedback is perceived as better than line manager feedback alone (Sharp et al., 2000) as the averaging of a number of observers could result in less bias. It could be argued, however, that knowledge of how a person works is an important mediating variable here. One rating from someone more familiar with your work could be more useful than an averaging of observers who are not that familiar, despite the risk of bias. Sharp et al. (2000) suggest managers can lack accurate information about staff performance but this could also be true of colleagues, especially within an EPS, who may have the same or even less knowledge, dependent on how a service works. They found that between the three elements of performance review within their service, 360-degree feedback was rated more positively than performance
review meetings and performance measures. One positive benefit, however, is that it offers the opportunity to give honest feedback anonymously to managers.

Improvements in work behaviour have been shown from 360-degree feedback, e.g. the development of management skills (Hazucha, Hezlett, and Schneider, 1993), especially if development recommendations are followed up, therefore what you do with information is important.

**Weaknesses:**

It can be time consuming. For example, support in interpreting feedback and setting improvement targets is seen as essential (Sharp et al., 2000) if it is to result in improved work behaviours.

The usefulness of collected data may be limited if a representative sample has not been chosen. Sharp et al. recommended selection should be on the basis of objective criteria such as ‘the five schools closest to the average number of visits made’. A minimum of four observers in each category is recommended to reduce the impact of unique views. Anonymity is important as without it you can get inflated ratings, which have lower validity (Antonioni, 1994), however if it is impossible to attribute some important views to an individual it could be argued it is harder to change something which may benefit both the person being rated and the observer.

Observers will not necessarily be consistent or right in their evaluations (Sharp et al., 2000). It has been suggested that a lack of convergence between different observers is neither surprising or problematic as they may be observing different dimensions of performance or have different definitions of effective performance and therefore arrive
at different assessments of the same individual’s performance (e.g. Landy and Farr, 1980, in Harris and Schaubroeck, 1988). A review of the literature suggests low correlations are either due to egocentric bias (e.g. defensiveness of the observed), differences in organisational level or observational opportunities. It has been suggested that self-esteem could be a mediating variable with egocentric bias, in that high self-esteem may inflate ratings and low reduce them. As a result correlations between observers will be higher than between self and others (Harris and Schaubroeck, 1988).

360-degree feedback is, like all measures, not without its weaknesses but research, on balance, shows that it has the potential to be a useful measure of professional development.

**CPD and Educational Psychologists**

A survey investigating the career continuation plans of Educational Psychologists highlighted that they are generally satisfied with their work, although many found the job stressful, with dissatisfaction associated with workload and time constraints, (Male and Jensen, 1998). They sampled seven Educational Psychology Services in England with a questionnaire designed to yield both quantitative (Likert-type scale) and qualitative data. A 56% response rate resulted in a modest sample of 61. Although this survey did not specifically target working mothers, 74% of the sample was female, which they argue is representative of the profession in terms of biographical data. 53 responded to an open ended invitation to comment on the pace and nature of change, with 91% considering it too fast. Regarding stress, on a scale of 1 for no stress, 2 for somewhat stressful, 3 for stressful and 4 for very stressful, the mean score of the sample was 2.79 (sd .78). As this is a relatively small sample given the size of the profession,
generalising findings need to be done cautiously, but it does suggest that the female dominated profession of Educational Psychology can be stressful.

Fowler and Harrison, (2001), found no main effects for any demographic variable, such as gender, on the need for CPD, although family responsibilities such as childcare, family separations and spousal objections may act as constraints to CPD efforts. Fowler and Harrison completed a study with a random sample of school psychologists in America; a relatively small sample, which they argue, was demographically similar to national figures. The mean age of the sample was 46, with the majority (64%) in the age range 41-55, 72% were married and 52% had two or more children. Fowler and Harrison developed a rating scale for assessing school psychologists CPD needs. Respondents were directed to rate 40 items on a 5-point Likert scale according to need for CPD in their present position. The response rate was relatively low (235, 47%), despite a reminder to return questionnaires. About 75% reported that re-credentialing requirements affected their CPD engagement, as it could be anticipated it will here with the changes to statutory registration. Paid leave (17%), combined with monetary reimbursement (39%) were the most frequently reported employer provided CPD incentives. Most respondents rated personal needs and interests as likely/extremely likely to enhance participation. The opportunity to practice new skills and receive feedback was rated as an incentive, a stated benefit of the UCL doctorate in its course brochure. Harrison argues that empirical research on the CPD needs of school psychologists has been lacking. CPD appears to be regarded as important and a recognised need, with psychologists adopting a professional commitment to it, as expected in national and state standards for the profession.
Working Mothers and Personal and Professional Development

Due to the personal changes over the past four years the research base in relation to working mothers was explored. A number of investigators have argued that work is important to a woman's self-concept and that outside employment has a positive rather than negative influence on mothers (Smith, 1981).

The review of research conducted by Smith indicated that professionally employed mothers demonstrated higher self-esteem, a higher sense of competence, voiced fewer concerns over identity problems, described themselves as more attractive, and reported fewer feelings of loneliness than housewives who had chosen not to pursue professional careers. When asked what was missing from their lives, (assuming to an extent in the question that something was), the professional women said time and the housewives creative involvement and challenge. In response to the question, 'how does having children change your life?' the professionals tended to respond they enriched your life, whereas the housewives emphasised the sacrifice. Working mothers were found to suffer from role overload, and more strain and stress. When strain was defined as a reaction to an accumulation of role demands, employed mothers, especially of pre-school children, demonstrated a higher level of strain. One possible explanation is the role conflict, with competing demands on time and energy. Overall there were conflicting findings regarding identity development, life satisfaction and stress experiences. Some studies found that working outside the home can contribute to positive identity development, whereas others found it leads to stress and depression, especially with pre-school children. It could be argued that these are not mutually exclusive. The impact on partner and family was also complex; some found marital conflict but other issues also appeared to be playing a part other than working, such as
the partner’s attitude towards his wife working, the attitude of the women themselves, and the sharing of housework and childcare. One difficulty with study comparisons was the different groups and methodologies used and Smith recommended a multilevel framework incorporating individual, family, community and societal analysis for conducting future research, as the conflicting findings result from a blurring of these four subsystems that affect maternal employment. There appears to be a complex interaction related to support within a family, a partner’s attitude, the mother’s role and age of children. Smith’s work is over 20 years old although I would suggest some of the pressures remain today. A changing factor today is the increasing number of fathers choosing to be the primary carer and research in this area would be interesting given it challenges an equal number of societal expectations.

The impact of the arrival of a child on the marriage of a dual career couple, particularly on the mother, was viewed as an emerging clinical phenomenon in the late eighties (Okun, 1989). The expansion of career opportunities for women has created changing social and economic conditions, which it was suggested changed the rules and roles for men and women, resulting in confusion and conflict. Okun, (from her applied psychologist work in the clinical field), distinguishes career couples from working couples by the investment of part of their identity in their professional and work achievement. Whether this is a helpful or even factual distinction is debatable.

Okun argues that a generation of females grew up with the expectation they ‘could have it all’ - a successful career, marriage and motherhood. This in turn affected the men as their work, marital and parental roles are required to change. Occupational and social structural change designed to help, e.g. parental leave, flexitime, job share, it is argued, remain ‘remote’ to women who are trying ‘to have it all’, and who are confronted with
occupational and parenting realities, especially their limited time and energy resources. Okun uses the phrase ‘working mother syndrome’ to summarise these role conflicts, the competing demands of career, husband and children (not forgetting friends, community, extended family and herself). Although not a research paper as such it is based on clinical practice and does highlight that there are implications to a changing society which may require the exploration of other possibilities. Okun argues that clinical and research data co-evolve and intertwine, and in the context of change clinical learning can precede conclusive research data. The difficulty, though, is that it may only be describing a ‘clinical population’ and the implications need to be treated cautiously.

In an exploratory study of educators’ attitudes to working mothers, an ‘Attitude Toward Working Mother Scale’ was administered to 411 educators, which included 94 psychologists and guidance counsellors, 269 female and 142 male. This 32-item Likert-type rating scale, (with good internal consistency, as reflected in a Cronbach’s alpha of 0.94 for females and 0.95 for males), was designed to assess attitudes to the dual role of mother and worker and the effects on the woman and/or her family (Tetenbaum, Lighter and Travis, 1981). Tetenbaum et al. found teachers and administrators had slightly negative attitudes towards working mothers, whereas psychologists and counsellors had slightly more positive attitudes, with a significant difference between them. Males were more negative across the groups, which Tetenbaum et al. argue is because they are more traditional in their sex role perception than women. It could be that the females found it easier to identify and empathise with working mothers and there may be some support for this argument in that the 20-30 year old teachers had significantly more positive attitudes than the over 40 group. The attitudes of the 31-40 year olds did not differ significantly, however this study was completed in 1981 and attitudes could have
changed since then with increasing numbers of mothers working. Age was not a significant factor for the administrators and pupil personnel workers, although the trend was for the younger members to be more positive. Demographic variables such as marital status, children, and mother’s employment history did not appear to be related to attitude.

A replication study was undertaken to ensure the findings were not specific to the sample, with 330 educators, of whom 108 were school psychologists and guidance counsellors. There were equal numbers of males and females, and fewer young people in this sample, with differences in marital status figures and ethnicity. Differences were accounted for in terms of practice areas, urban for the original sample and suburban for the replication. The attitudes were significantly less positive for all three groups, although the rank order remained the same. Psychologists and counsellors remained more positive, males remained more negative and younger teachers were more positive than older teachers. One explanation of the more negative attitude overall from the suburban workers could be a reflection of the mothers they have contact with and their perceived choice in the situation, as opposed to a need, as with some urban mothers. They suggest the reason for psychologists and counsellors more positive response reflects the balance in the male: female ratio, however they do not give a breakdown of the sex ratio for each group and therefore it is difficult to discuss this further. An alternative hypothesis is that the more positive attitude is a reflection of the knowledge and research base of these groups who may be more objective in their attitudes or in a better position to challenge stereotypes. For example, their awareness from experience of working with ‘troubled’ young people from homes with and without working mothers. One suggestion from the researchers is that teachers may benefit from similar
training to psychologists so that they become more aware of their attitudes and biases.

The attitudes of teachers could have implications for an EPS and EP in terms of how sympathetic they may be with difficulties associated with personal issues, e.g. a change of visit date due to a sick child.

Ten years on, one study used two different attitude measures, a free response approach and an ‘Attitude to Women Scale’, to explore attitudes towards women, roles and issues, amongst psychology college students (Powell and Yanico, 1991). The free response approach (thought listing) involved individuals listing any thoughts they have in response to a specific stimulus, which are subsequently judged to be positive or negative (with an acceptable test-retest reliability of .64). Seventeen stimulus phrases related to women’s roles and issues were piloted and two independent judges categorised each thought as traditional, liberal, neutral or irrelevant. Interrater agreement was 89% and the six phrases that produced the most varied and numerous responses were used in the main study. The ‘Attitude to Women Scale’ is a 55-item Likert scale which Powell and Yanico state is widely used in research on attitudes to women’s rights and roles. Seventy-nine males and eighty-one females aged 17-35 participated in this study for extra course credit (a questionable approach which may have implications re a desire to please, for example?) The free response approach resulted in a moderate-to-nonexistent relationship amongst the attitudes, which reflected a wide variety of difference in attitudes. Liberal thoughts were significantly correlated with scale scores, although the women’s was significantly less than the men’s (r = .31 and .66 respectively), suggesting men were more consistent in their expression of attitudes regardless of how attitudes were measured. This may suggest men are more fixed in their less liberal views, as consistent with previous research, women were more
liberal than men. Limitations are that this involved a relatively small non-random sample of college students, based in a southern state of America and the results could be different in the UK, especially in relation to attitude measurement. The technique of using free response, however, could be applicable and a useful, alternative procedure for exploring attitudes.

Multiple role juggling, (i.e. simultaneously attending to the demands of different roles), has a negative effect on task enjoyment and mood, although the relationship is complex (Williams, Suls, Alliger, Learner and Wan, 1991). Williams et al. examined the daily consequences of managing work and family roles simultaneously, and distinguished between intrarole and interrole conflict. Intrarole referring to incompatible role pressures occurring within a single role (e.g. job stress affecting the quality of family interactions) and the interrole referring to the demands or pressures of one role incompatible with another role (e.g. the extent to which the family role intrudes into the work role and vice versa).

Williams et al. suggest that previous studies have not looked at day to day variability in role demands and moods and employed a within subjects design to monitor individuals over time, using experience sampling methodology. This involves subjects receiving signals at random intervals, e.g. via a watch, and being asked to complete one page of a diary each time. The argument for this approach is that it is likely to provide information regarding a mother's immediate reaction to simultaneous role activity rather than asking for retrospective judgements. A small group of 20 working mothers from 19-45 were solicited from day care centres (12) or self-referral (8), with the average number of children 2.2. Subjects were contacted at 8 randomly selected times between 8
a.m. and 10 p.m. each day for a period of eight days. Task enjoyment was measured with one item, ('Are you enjoying your present task or activity?'), on a seven-point Likert scale. Items from the ‘Negative and Positive Affect Scale’, were used to measure current mood on a six point scale, indicating how they felt at the time the beeper rang. An end of day satisfaction measure was also taken, with subjects indicating how satisfied they were with home, work life and social life on a five point Likert scale.

Interrole juggling resulted in greater negative affect and less task enjoyment than when no juggling occurred. In addition, enjoyment was lower during interrole than intrarole juggling. One explanation is that role juggling is a stressor and may impede efforts to obtain desired goals, resulting in frustration and negative affect. Negative consequences of role juggling may result from reduced control over events and outcomes. Although Williams et al. highlight that the effects of multiple juggling were not strong suggesting that role juggling may not be a major stressor. Role juggling is only one aspect of work-family conflict and moderator variables such as other support need to be explored in conjunction with role juggling. One criticism is the small sample size which reduces the representativeness of the results as well as reducing any possible effect size, especially when all the mothers varied in terms of age, number of children and occupation. The sampling period was relatively short and the results may be a reflection only of this short period, although the participants commented they were typical. The results are, however, important given the increasing numbers of mothers entering the work force.

One recent prospective study looked at 134 mother’s parenting stress, (i.e. a mother’s perception, and feelings in response to that perception, that the changes and demands that are associated with the mothering role exceed the resources available for dealing
with those demands), during the first three years of life at ages 1, 6, 15, 24 and 36 months (Mulsow, Caldera, Pursley, Reifman and Huston, 2002). Mulsow et al. found that the mother’s personality was the most predictive of parenting stress and that mothers who were more satisfied with work choices were more likely to be chronically stressed. For example, feel overwhelmed, incompetent in the parent role, or consistently unhappy with one’s life. Not that higher satisfaction predicted higher stress, but that when highly stressed, she was less likely to experience a decline in stress over time when she was more satisfied with her work decisions. One suggestion is that mothers who have demanding children find respite in work but continue to find parenting stressful.

Stress was measured at 15, 24 and 36 months using ‘The Parenting Experiences Scale’ (Cronbach’s alpha for the scale was .78). A different measure was used to measure parenting stress at 1 and 6 months (‘Abidin Parenting Stress Index’ – in four sections with a Cronbach Alpha range from .80 to .55). The change in measure appears to be related to the nature of the questions, which were more appropriate for their respective stage, e.g. ‘I expected to have closer and warmer feelings for my baby than I do and this bothers me’, was not appropriate for 24m. Mothers rated their level of satisfaction with their decision about working or not on a five-part Likert scale at each age. Perception of social support each month prior to each age visit was also measured using an 11-item ‘Relationships With Other People Scale’ (Cronbach alpha >.90). Maternal satisfaction with work and school increased significantly over time (p<.05), with the most satisfaction reported at 36months. Social support decreased significantly over time (p< .001), however social support was a significant predictor of parental stress at 15, 24 and 36months, with mothers with greater amounts of social support reporting less parenting.
stress. Parental characteristics are the most powerful predictors of parenting stress, which is mediated by social support, e.g. from family and friends.

Females are generally more positive than men in their attitudes to working mothers, although the relationship is complex and needs to be viewed from a number of levels: individual, family, community and society. The research reviewed suggests that trying to combine work with motherhood can be stressful especially in relation to time and role juggling although many of the studies are looking at different aspects or groups in the broad area of mothers who work. There appears to be some strong evidence that the level of social support available can be a positive mediating variable. The implications from the research for practice will be explored in the next section.

Section 4: Integration of Theory, Research and Practice

The use of 360-degree feedback will be described and the implications of the results considered, especially in relation to the local service. The impact of personal and interpersonal skills on my professional work will be considered and improvement suggestions offered.

360-degree feedback was chosen as one approach to reflect on my personal and professional development after four years studying for a doctorate. This was in addition to the existing systems in place locally such as school evaluations and appraisal. There have been personal and professional changes such as the birth of twins, house move and various CPD opportunities, which have all had an effect to varying degrees on me as an individual. Personal perceptions have included developing confidence and skills, at the
same time as high stress, tiredness and irritability. The concern was that the latter rather than the former was the impression I gave to colleagues.

**Using 360-Degree Feedback**

Appraisal targets are set on an annual basis, many of which are team targets and not individual ones and therefore individual feedback is relatively limited. As identified elsewhere, (e.g. Sharp, Frederickson and Laws, 2000), achieving targets does not identify the factors which make a contribution effective or not. Sharp et al. identified a need to collect process information regarding the execution of EP duties to inform professional skills and service procedures. They responded by introducing 360-degree feedback into their service.

The Bucks EPS 360-degree feedback form was utilised and handed out to all 10 colleagues in the local service, all Educational Psychologists bar one who is the office manager, and one completed by myself. The completed questionnaires were sent in stamped addressed envelopes by the raters to a secretary at UCL who forwarded them on to the scoring company. The results were received after a few weeks. The results are presented in a report and distinguish 'overall areas for celebration' (i.e. the five highest scoring) and 'priority areas to be fixed' (i.e. the five lowest scoring) are listed using feedback from colleagues and myself. These highlighted that the overall areas for celebration were different for self and colleague ratings, although there were none I would disagree with. With reference areas to be fixed the only contradiction was that colleagues had highlighted an area, which I highlighted as an area for celebration: is aware of the impact of her behaviour on others, although there was only one mark
difference from 4 to colleagues and 5 for me, on a scale of 1-6 (1 being low). The scores are summarised below for each section:

**Interpersonal and communication skills** - Mean performance score was 4.7 for colleagues and 4.0 for self.

**Work organisation and management** - Mean performance score was 5.2 for colleagues and 5.0 for self.

**Professional knowledge and practice** - Mean performance score was 4.9 for colleagues and 5.0 for self.

**Ethics and equal opportunities** - Mean performance was 5.1 for colleagues and 5.0 for self.

Overall all the scores were in areas for celebration and none highlighted as significant areas of concern, although they were not 100% and therefore there is room for improvement. Two potential areas to fix, as rated by colleagues (‘challenges others views appropriately and helpfully’, and ‘is aware of the impact of her behaviour on others’) could be reflecting concerns I have had myself in terms of irritability and stress. I saw ‘aware of the impact of my behaviour’ as a relative strength; colleagues saw it as a possible area to be fixed. They could assume therefore that I am not aware of my behaviour, as I am not changing it, whereas I could argue I am but am too tired to be otherwise. Or it could be that I have a relative weakness in seeing things from another’s point of view. This discussion highlights a weakness of 360-degree feedback in that responses are anonymous and therefore there is not the opportunity to discuss findings and therefore assumptions are made about the intent / understanding behind comments.
360-Degree Feedback and the Local Approach

Higher agreement is found between different observers than between self and others (Harris and Schaubroeck, 1988; Furnham and Stringfield, 1998) and therefore this is a useful source of feedback information, especially as those whose self-ratings start higher than others ratings reduce their own ratings over time, (Atwater and Yammarino, 1992). The question is can this work in the other direction as well? Could it be used to counter the effects of a low self-esteem and to raise someone’s confidence in their ability? It has been suggested that self-esteem could be a mediating variable with egocentric bias, in that high self-esteem may inflate ratings and low self-esteem reduce them.

Managers and professionals have different views from other observers of their own performance, although other observers exhibit far more agreement on the performance of professionals and managers (Harris and Schaubroeck, 1988), which fits with my results in some areas. Where I had a different view with reference to being aware of the impact of my behaviour, seeing it as a relative strength, whereas colleagues appear to agree with each other in seeing it as a relative weakness. Where self-ratings are lower this is possibly because of the mediating variable of self-esteem. When self-ratings are higher they suggest this fits with the egocentric-bias theory.

An alternative explanation for variance could be difference in opportunities to observe job performance, and therefore observers may be unaware of some of the performance measures, hence a lower correlation. Would it not be, therefore, that the more independent the style of working the less chance of agreement there is between self and observers, especially when observers have the same experience of the observed? For
example, in the local service colleague observation of performance will be in relation to team meetings and occasional INSET and team days, as opposed to working alongside as part of a team on a day to day basis, which could be true of shop workers or nurses, for example. Colleague observations, therefore, could be skewed in relation to the activities observed. As peer-supervisor ratings show more agreement, it could be questioned how helpful this is if it is only based on a partial performance. It could suggest 360-degree feedback is only useful if those rating (either all of them or between a relatively high number) have a good understanding of the breadth of a role or are consumers of it? Although it has been argued that 360-degree feedback is perceived as better than line manager feedback alone (Sharp et al., 2000) as the averaging of a number of observers could result in less bias. It could be argued, however, that knowledge of how a person works is an important mediating variable here. One rating from someone more familiar with your work could be more useful than an averaging of others who are not that familiar, despite the risk of bias. As much of the work of an EP is undertaken away from the office, knowledge of managers and colleagues will be indirect and the use of self-appraisal remains an important aspect for an accurate evaluation of what an EP does and how successful they are in doing it (Webster, 2001).

Feedback received from a colleague following use of the 360-degree feedback form suggested that it was not that easy to complete. He found it confusing in its layout and some of the wording was hard to understand. This in part could have been exacerbated by my limited introduction to form completion, especially as successful implementation depends on an understanding of the purpose, roles and importance of developmental feedback and a user-friendly feedback instrument (Dyer, 2001). One colleague felt
unable to complete it, as they did not know me well enough having only worked in the service for six months.

Honest answers were encouraged but as this was a first attempt for most and not part of the established procedure, ratings were possibly higher because colleagues were uncomfortable with the potential criticism of another colleague. The more experience colleagues have with the process the more critical they may become. I would suggest this might never be easy as an EP as part of their daily role typically frames things in a positive light in order to work collaboratively with other professionals.

There is a need to ensure that colleagues have opportunities for shadowing and formal supervision to improve awareness of the work of colleagues and to aid the process of becoming a reflective practitioner. It can be useful to see how others see us, especially in relation to career development, e.g. if have to take on a supervisory / management role. 360-degree feedback is, like all measures, not without its weaknesses but on balance it has the potential to be a useful measure of professional development, although as an EP the knowledge of managers and colleagues will be indirect and therefore use of self-appraisal remains important.

The Impact of Personal and Interpersonal Skills on my Professional Work
Interpersonal effectiveness is intimately intertwined with professional knowledge and experience, and CPD, including the doctorate is key to its development. Females are as interested in CPD as males, although can be constrained by their circumstances (Fowler and Harrison, 2001). The research reviewed suggests that trying to combine work with motherhood can be stressful for some women, especially in relation to time. This
reflects my personal experience. Completing the doctorate at the same time has simply exacerbated the level of stress, despite the potential benefits to career development and professional skills. The issues of lack of time and juggling roles will have implications for services keen to encourage employees to complete this level of training, which requires a high level of commitment over a considerable amount of time. Research suggests that one important mediator is the level of social support and therefore this may have more implications for an individual’s personal situation than professional. A more flexible approach within work may enable social support networks to function more effectively, e.g. with flexi-time, for example.

The role of personal needs and interests as an incentive for CPD supports the importance of the adult learning model, where adults learn best when they are allowed to control their own learning by choosing learning experiences that are applicable to their individual personal and professional contexts, self-diagnose their own strengths and weaknesses and make choices about their needs. In other words, self-directed learning, for which there are a number of meanings (Straka, 1999). All factors, it could be argued, which are reflected within the doctorate programme within UCL. The disadvantage of this approach, however, could be that it results in a variety of experience between doctoral graduates who may not be updating in ‘key areas’ but those they are more interested in. The quality of the content of the doctorate relies to an extent on the professionalism and responsibility of the participating EP, e.g. with their choice of subject for assignments within the broad curriculum. This may be further constrained by funding LEAs. The doctorate could be too individualistic for a professional course in an era where role clarity is an important issue (e.g. Bryan, 2002),
as it reinforces the variety in the profession. This could be good for the individual but
not necessarily the future of the profession.

**Improvement Suggestions for Practice, Service, Research**

**Practice**

Using 360-degree feedback highlights the lack of peer supervision and shadowing in my
professional practice, thereby reducing opportunities to reflect on my practice through
discussion with colleagues. The Annual Appraisal process with regular reviews is
limited by the LEA wide system, which focuses on EDP plans and service targets
towards these. They do not offer the opportunity to explore the implications of how I
implement the psychology evidence base. More direct feedback re interpersonal
effectiveness and professional knowledge and practice, from colleagues with an
understanding of psychology, is not presently formally available within the local EPS,
beyond the first year. Although there has been a recent agreement to trial a staff
consultation group focused on collaborative problem solving (Hanko (1999), which has
been found to be successful in schools locally and elsewhere (Bozic and Carter, 2002).

**Service**

The local approach of annual evaluation from schools and LEA appraisal does not
provide the level or range of feedback when compared to the potential of 360-degree
feedback. The form used here could be improved and adapted for the local area, for
example by simplifying it, and having dedicated sections for schools and colleagues, as
well as sections for all. This would make the existing evaluation from schools surplus
information and could be used to highlight constraints in service delivery and issues for
change.
I would agree with the need to move beyond role of ‘assessors of relative need for additional resource’ (Kerfoot and Imich, 2000), to being able to demonstrate a significant contribution to more effective intervention at a variety of levels in the education system – to move towards more evidence based practice, e.g. promoting inclusion, the application of a specific reading or behaviour approach. If we are not clear about our role, especially in relation to Education, then we will continue to be marginalized, both locally and nationally, irrespective of DfEE recommendations. 360-degree feedback is a credible approach, which could provide more detailed feedback from a range of users.

Research

The idea that CPD, and by implication the doctorate, will lead to more effective services and better outcomes for clients appears to be an assumption which could benefit from further exploration. Future research could look at the recent doctoral students to see whether there is any evidence for this, also, to monitor the impact of new entrants to the profession with doctoral status. Will this lead to a change in role or will there be a significant difference with new entrants with doctorates and those with post qualification doctorates?

Conclusions

It is a duty of all Educational Psychologists to update their professional knowledge and skills to maintain competence in a changing world (DECP, 2002) and CPD is an essential part of this (BPS, 2002), with an emphasis on professional responsibility. In relation to the national picture regarding CPD (AEP, 2000) the local service fares quite well, with the exception of limited supervision after the first year of practice.
The professional doctorate is one way of maintaining competence and preparing EP’s for future changes and challenges in the profession. One key part of this is interpersonal effectiveness, the ability to adapt personal and professional approaches to different contexts and purposes (UCL, 2002). Personal and professional development are inextricably entwined and applied within the professional context, both are required for competency.

Core functions of an EPS were listed as working within the areas of early years, schools and multi-agency (DfEE, 2000), and therefore tasks chosen to be completed on the doctorate were related to these areas (e.g. the assessment of EBD with young children, challenging behaviour and severe learning difficulties, educational psychology and multi-agency work), as it offered the opportunity to explore areas in more detail and to practice new skills under supervision. Within a consultative framework, the doctorate enabled the focus to remain on the evidence base of Educational Psychology and was a key way of updating on advances in some areas of the discipline.

The use of multiple sources for performance ratings has been growing significantly since the 1970’s (Harris and Schaubroeck, 1988), and 360-degree feedback was chosen as an approach to reflect on my personal and professional development over the past four years. Although not perfect, it is perceived as better than line manager feedback alone (Sharp et al, 2000), especially if the feedback is received from someone with a good knowledge of how a person works. Opportunities for supervision and shadowing could aid the effectiveness of an approach such as 360-degree feedback, because much
of the work is undertaken in isolation of colleagues, which means that self-appraisal remains useful for an EP (Webster, 2001).

References


BPS (2002). **Society CPD Guidelines.** Revised draft. BPS. Leicester.


DECP (2002). **Professional practice guidelines.** Leicester: BPS.


Appendices

Research Methods

The literature reviewed was accessed from a number of sources. The Ask ERIC database was searched using a combination of key terms, such as: educational psychology; CPD, Professional Development, Interpersonal Effectiveness, Working Mothers/Women, Change and 360-degree feedback. Related articles in the journals Educational Psychology in Practice and Educational and Child Psychology for at least the last ten years were explored. Ancestral searches were carried out using the reference lists of recent publications as described above. Articles were also sourced from the British Library.