The Perspectives of Educational Psychologists' Teachers' Parents' and Healthcare Professionals' on the assessment, diagnosis and treatment of children with a diagnosis of ADHD in one English Local Authority.

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I hereby declare that, except where explicit attribution is made, the work presented in this thesis is my own.

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Abstract

The aim of this research is to gain the perspectives of key stakeholders involved the assessment, diagnosis and treatment of ADHD in one Local Authority where concerns have arisen about high rates of diagnosis and treatment. Knowledge and views about Attention Deficit Hyperactivity Disorder (ADHD, APA 2001) may vary between parents of children with ADHD and professionals assessing, diagnosing and treating ADHD. It is hoped that this research will help provide a more effective framework for the assessment, diagnosis and treatment for children with ADHD and thus enable the Local Authority to have regard to the National Institute for Health and Clinical Excellence (NICE) (2008) guidelines on ADHD.

This study took the form of a mixed methods design, incorporating qualitative data with summative quantitative figures. Semi-structured interviews and questionnaires explored the following areas of interest, firstly referral procedure; secondly, the assessment / diagnosis of ADHD; thirdly, individual perspectives of pharmacological treatment, and review process and, finally, the response to NICE guidelines on ADHD. Each interview was transcribed and analysed using thematic analysis.

In total twenty participants, which included five Teachers, five Educational Psychologists, five Parents and five Healthcare professionals were interviewed using semi-structured interviews and completed a short questionnaire. The thematic analysis of the interviews identified a number of factors which may be impacting on the assessment, diagnosis and treatment of children with ADHD, they were: subjectivity of diagnosis, limited resources, medical interventions, the ADHD label impact and lack of adherence to NICE guidelines. The findings of this study are important as they highlight the reality of current practice within the Local Authority and demonstrates that the assessment, diagnosis and treatment of children with ADHD is disjointed, potentially subjective and lacks alternative treatment options. Findings point to a number of practical implications that need to be considered in the Local Authority context.

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Chapter 1: Introduction

Attention Deficit Hyperactivity Disorder (ADHD) is a heterogeneous behavioural syndrome characterised by the core symptoms of hyperactivity, impulsivity and inattention (NICE, 2008). Given the increasingly high prevalence (Nylund, 2000) of ADHD and its significant impact on children and families, it is important to gain the views of those involved in the process of assessment and diagnosis, in particular, parents, Educational Psychologists (EPs), Teaching Professionals and Healthcare Professionals. This study will take a closer look at ADHD assessment, diagnosis and treatment in one Local Authority (LA) in England.

The LA that commissioned this research has seen the diagnosis of ADHD and subsequent treatment with stimulant medication rise in recent years. It is now 5th in the league table of LA's to prescribe Ritalin to children with ADHD (Gainsbury, 2008). The LA wanted to shed further light on the current assessment, diagnosis and treatment frameworks and practices that are being utilised for children with ADHD in the LA. The research will focus on four areas: assessment and diagnosis; utilisation of stimulant medication or alternative treatment options and the impact of the recent NICE guidelines on ADHD (2008).

A lack of prior research and the increasing diagnostic rates of ADHD makes this research valuable as it will help to shed light on the current situation and may uncover areas of current weaknesses or strengths that will help to provide a clearer picture of such systems in context. It is hoped that this research will also fill a void in our understanding of the complexity of the assessment process. It is hoped that gaining an understanding of the current reality and opinions of key stakeholders will inform policy and help to support change where necessary.

Potential outcomes of the research include:

- The Local Authority who commissioned this research to refine future policy and practice;
- Practitioners wanting to apply evidence based practice within the LA;

- Parents of children with ADHD shall understand the process of assessment, diagnosis and treatment.

1.1 Research Aim:

There has been a limited amount of research into the views of parents and professionals about ADHD in the UK. This research aims to carry out a predominantly qualitative, mixed method, in depth, exploratory investigation of Parents' Teachers' Educational Psychologists' and Healthcare professionals' perspectives on the assessment, diagnosis and treatment of children with ADHD. This exploration will be strengthened by summative figures from a quantitative investigation.

This research aims to provide the LA with evidence based information upon which future policy can be developed. It may also highlight potential developments in the role of the EP in this process and may help embed community based applied Educational Psychology practice. It was also hoped to help inform LA officers of new ways to promote the five outcomes contained within the Every Child Matters agenda for children with ADHD (DfES, 2003).

1.2 Professional / Local context

This research was conducted as part of a three-year doctoral training course in Educational, Child and Adolescent Psychology. During the second and third year of this course, doctoral students are expected to work as Trainee Educational Psychologists for a Local Authority. The LA and specifically the Educational Psychology Service were particularly interested in the current ADHD assessment, diagnosis and treatment practices and wanted to get a more evidence based understanding of the system from key stakeholder's perspectives.

This research was conducted in a Local Authority (LA) in the south east of England which has a combination of urban and small rural locations. There is a mixture of affluent areas and more socially deprived areas throughout the LA, reflecting the wide-ranging socio-economic status of the residents. According to the

most recent census (2001), the population is 251,700. The largest ethnic group in the LA 'White British' (90.2%) and the next largest ethnic group considered themselves 'Asian or Asian British' (3.4%, of the population). There are 69,000 children in the Local Authority – 27 per cent of the total population. The Local Authority is ranked 150th most deprived borough overall in 2007, a decline from 160th in 2004, indicating that the borough is now relatively more deprived (Office of National Statistics, 2009).

1.3 Organisation of Thesis

Chapter 1 has provided a very brief outline of the research context whilst highlighting the research objectives. The remainder of the report is organised into four further chapters. Chapter 2 describes the most relevant literature and discusses the current research on ADHD assessment, diagnosis and treatment. Chapter 3 outlines the methodology chosen for this study. Chapter 4 presents and discusses the findings. Finally, Chapter 5 presents the summary and conclusions of the findings and sums up the overall contribution of this study.

Chapter 2: Literature Review

2.1 Introduction to Literature Review

Chapter 2 will present a critical review of previous research on Attention Deficit Hyperactivity Disorder (ADHD). It will start by considering the concept of ADHD. I then discuss the prevalence, the assessment and diagnostic process as well as intervention options. A review of the research illuminates important questions about the validity of the ADHD diagnosis. The reliability and validity of behaviour rating scales in ADHD diagnosis are also looked at in more depth. Finally, the rationale for the current project will be considered within both the local and national contexts.

2.2 What is Attention Deficit Hyperactivity Disorder?

ADHD (APA, 2001) or Hyperkinetic syndrome (WHO, 1996) are the current diagnostic terms used to describe children who present with pronounced and incapacitating difficulties in sustaining attention, modulating activity level and regulating impulses across a number of social contexts such as the family, school and peer group (Meltzer et al, 2000). Earlier labels for such deficits have included hyperkinetic reaction to childhood, hyperactive child syndrome, minimal brain dysfunction, and attention deficit disorder (with or without hyperactivity). However, for the purposes of this research, the author will use the umbrella term ADHD.

According to the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR, APA, 2001), the essential feature of ADHD is:

> *"a persistent pattern of inattention and/or hyperactivity-impulsivity that is more frequent and severe than is typically observed in individuals at a comparable level of development"* (Pg. 85).

The DSM-IV-TR (APA, 2001) also states that:

> *"some hyperactive impulsive or inattentive symptoms that cause impairment must have been present before age seven years; some impairment from the symptoms must be present in at least two settings (for example, at home and at school); there must be clear evidence of interference with developmentally appropriate social, academic, or occupational functioning; and the disturbance is not better accounted for by another mental disorder"* (p. 85).

The DSM-IV-TR (2000) identifies three subtypes of ADHD that are to be used by professionals when diagnosing: the predominantly hyperactive-impulsive type (ADHD-HI) the predominantly inattentive type (ADHD-I), and the combined type (ADHD-C).

Views about the validity of ADHD as a psychological disorder in children vary, from those who regard it as a myth (Weinberg and Brumback,1992, as cited in Jadad et al, 1999) to those who believe that the underlying genetic and physiological evidence supports its existence (Kewley, 1998, as cited in Jadad et al, 1999). Several features of ADHD contribute to the controversy:

> "1) it is a clinical diagnosis for which there are no laboratory or radiological confirmatory tests or specific physical features; 2) diagnostic criteria have changed frequently; 3) there is no curative treatment, so patients require long-term therapies and; 4) therapy often includes stimulant drugs that are thought to have abuse potential" (Jadad et al, 1999, P.2).

Timimi (2002) a well know critic of ADHD, argues that there is obvious uncertainty about how to define this disorder, with definitions changing over the past 30 years depending on what the current favourite theory about underlying aetiology is, and with each revision producing a higher number of potential children deemed to have the disorder. Furman (2005) considered other hypotheses regarding the core symptoms of inattention, distractibility, and hyperactivity, including the possibilities that this behaviour represents (1) one end of a normal distribution of school-aged behaviour (especially for boys who outnumber girls in every study), (2) an expression

of endogenous temperament, (3) differences in rates of developmental maturation, or (4) rigid or unreasonable parental, societal, or educational expectations for school-aged children.

2.3 Classification of ADHD

Carr (2006) highlights three strengths which arise from the use of a classification system. First, it permits particular developmental problems to be clinically described in terms that are clear-cut. Second, classification allows for the development of epidemiological information about the prevalence and incidence of childhood disorders. This type of information is particularly important in the planning of services and in the making of decisions about how to allocate the sparse resources with regard to mental health and special educational services. Third, classification systems provide a common language through which clinicians, practitioners and researchers can communicate with each other.

2.3.1 Diagnostic Manuals: DSM IV or ICD 10?

The conceptualisation of childhood psychopathological disorders has traditionally been dominated by clinically based classificatory perspectives. The main differences between DSM-IV (American Psychiatric Association, 2001) and ICD-10 (World Health Organisation, 2003) pertain to the occurrence or existence together of the three domains (inattention, hyperactivity and impulsivity), the exclusion of co-morbidity and the degree of pervasiveness. The ICD-10 criteria require a full set of symptoms in all three domains, whereas the DSM-IV recognises three distinct subtypes of the disorder. An ICD-10 diagnosis of Hyperkinetic Disorder (HKD) is, thus, most congruent with a DSM-IV diagnosis of ADHD combined type. ICD-10 diagnosis also requires a clinical observation of the child in context, whilst DSM-IV diagnostic criteria does not demand a clinical observation in context. Possibly this is a contributing factor in the more prevalent use of DSM IV diagnostic criteria.

The majority of the studies based on the DSM-IV reviewed by Skounti *et al* (2007) have suggested that the predominantly inattentive type (ADHD-I) is the most

common form of ADHD, followed by combined (ADHD-C) and hyperactive-impulsive type (ADHD-HI). Studies using only one informant (i.e. parent or teacher) usually report higher rates compared to studies using two informants. For example, Gomez et al (1999) reported rates of 8.8 or 9.9% when parents or teachers were asked, respectively. However, the prevalence rate dropped to 2.4% when diagnosis was based on consistent reports from both informants.

2.4 Prevalence of ADHD

According to the 4th edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV TR, APA, 2000), ADHD is one of the most common childhood disorders. In the UK it is difficult to ascertain accurate national figures. The breakdown of Special Educational Needs (SEN) figures provided in government statistics does not include a discrete category for ADHD. NICE (2008) note that based on the narrower criteria of ICD-10, hyperkinetic disorder is estimated to occur in about 1–2% of children and young people in the UK. Using the broader criteria of DSM-IV, ADHD is thought to affect about 3–9% of school-age children and young people in the UK, and about 2% of adults worldwide. Rowland et al (2002) argued that this widely cited estimate of 3–5% is:

> *'poorly documented' because 'it is unclear where this estimate comes from'* (p. 165).

Cameron and Hill (1996) highlight differences in the prevalence rates according to different diagnostic criteria utilised to investigate their difficulties. Hyperkinetic disorder has more stringent diagnostic criteria, which could partly account for such differences. They highlight that hyperkinetic disorder (HKD) could be considered a more severe subtype of ADHD. Such differences in diagnostic practice may be affecting the diverse rates of ADHD diagnosis throughout the UK.

In a letter to 'The Psychologist' (Hill, 1995, as cited in Prior, 1997) asserted that:

> "*The (ICD 10) diagnostic criteria ....are tighter than the American concepts employed and it would be helpful if clinical professionals adopted the ICD*

approach, particularly since this is the framework adopted within the Health Service" (P. 249).

Professor Hill's letter highlights a major issue in terms of the increased identification of ADHD as some clinical professionals now routinely use DSM IV criteria in preference to those outlines in ICD 10 (Prior, 1997). The average local prevalence rate in several LAs in England where school surveys have been carried out was found to be approximately 0.5% of each school population (Holowenko and Pashute, 2000; Evans 2004). ADHD is considered to be more prevalent in the age range 6–11 years (Buitelaar, 2002). Although figures vary according to where and when studies are carried out and the diagnostic criteria used, it appears that ADHD is present throughout the world. It occurs across social and cultural boundaries (Cooper, 2006) and in all ethnic groups (Selikowitz, 2004).

Rowland, Lesesne, & Abramowitz (2002) argue that an accurate estimation of the incidence and prevalence of ADHD has been hindered by several critical factors, including the lack of: (1) an objective diagnostic test for ADHD; (2) a "gold standard" measure of ADHD that is easily applicable in epidemiological research; (3) a systematic means to monitor the diagnosis of ADHD; (4) consistency in case definition and how it is operationalised; and (5) consistency in reporting symptomology across age, gender, and informant source. In addition, changes in criteria and the increase in the number of ADHD types in DSM-IV resulted in increased prevalence estimates (Wolraich et al, 1996).

ADHD is more common among boys than among girls; preadolescents than adolescents; and urban than rural children (Hinshaw, 1994, as cited in Lange et al, 2005). The ratio of males to females displaying ADHD symptoms varies considerably across studies. Biederman and Faraone (2005) note that boys tend to outnumber girls with a male to female ratios ranging from 4:1 to 9:1, depending on the setting (i.e. general population or clinics). Barkley (1990) argues that discrepancies between the ratios found in the general child population are primarily due to referral bias. According to Brown et al (1991), in order for girls to be referred, more severe behaviours must be displayed. Arnold et al, (1997) notes that this discrepancy also exists in research participants, he refers to this as 'sampling bias'

and argues that this may play a fundamental role in determining the magnitude of observed male-female gender ratios. Arnold notes that in clinical samples, boys are six to ten times more likely than girls to be referred.

Gershon (2002) as cited Stefanatos and Baron (2007) argues that young males are more likely to demonstrate behaviours consistent with ADHD combined type symptom criteria than are young girls, perhaps a reflection of the fact that a majority of children in the DSM field trial were male (Lahey et al, 1994, as cited Stefanatos and Baron (2007). In part, this may reflect inherent biases in the DSM IV symptom list that emphasise externalising behaviours, the kind of behaviours more closely associated with boys. As a consequence, some recommend that symptom cut off scores be sex referenced (Waschbusch & King, 2006, as cited Stefanatos and Baron, 2007).

2.5 Diagnosis

Diagnosis of ADHD is made by a qualified medical clinician. An accurate assessment requires evidence of pervasiveness and should be based on detailed information from Parents, Teachers, Educational Psychologists and other professionals (BPS, 2000; Cooper and Bilton, 2002).

> *'Relevant professionals need to work together in effective treatment, as no one professional group "owns" the management of these children'* (P. 91) (Kewley, 1999).

Most studies suggest that approximately 60–70% of children with ADHD are likely to experience co-existing or co-morbid disorders, the symptoms of which may overlap (Pliszka, Carlson, and Swanson 1999). They may include disruptive behaviour disorders such as: Oppositional Defiant Disorder (ODD) and Conduct Disorder (CD); learning difficulties, dyslexia, speech and language disorders; depression and anxiety; Obsessive Compulsive Disorder (OCD), tics and Tourette's syndrome (Cooper and Bilton, 2002). Having so many co-morbid conditions complicates the diagnostic process. In this section we look at the current criteria for diagnosing ADHD.

2.5.1 Diagnosis according to DSM-IV criteria

The diagnosis of ADHD is based on observations and individual reports of developmentally inappropriate behaviour in the domains of inattention, hyperactivity, and/or impulsivity obtained from a variety of sources, including, but not necessarily limited to: the child, parents, and teachers. In order to meet DSM-IV diagnostic criteria for ADHD, a child must demonstrate six or more symptoms from either of the two, nine item lists set forth in the DSM-IV-Text Revision (APA, 2001) manual.

When we look more closely at the kinds of behaviours that constitute violations of normative expectations, for example, the inability to sit still for extended periods of time, difficulty retaining and following instructions, difficulty working quietly and independently, difficulty maintaining focus; it is clear that the extent to which these behaviours will be deemed problematic is context-dependent. While attention and focus are important in some organised play activities, ADHD behaviours are in general less obvious on the playground than they are in the classroom (Barkley, 1990).

2.5.2 Diagnostic dilemmas related to DSM-IV criteria

While ADHD has been said to have good clinical validity (Faraone, 2005), there is widespread recognition of the need for continued refinement of the operational criteria used to diagnose the disorder (Achenþach, 2000). The empirically derived diagnostic criteria for ADHD as set forth in DSM-IV represented a significant advance over previous categorisation, but a number of persistent problems have emerged with clinical application of this diagnostic scheme. These relate in part to limitations in symptom specification, insufficient consideration of developmental course, age, gender, and maturational stage, heterogeneity of subtypes, unspecified influence regarding non-empirically based age differentiation for both diagnosis and duration, and indifference to environmental contextual considerations (Stefanatos and Baron, 2007). Prior (1997) argues that DSM IV criteria use terms that:

> *"could be conceived of as woolly and open to subjective interpretation, for example, to determine frequency of occurrence, the diagnostician using the*

DSM IV criteria is invited to determine for themselves the meaning of the word 'often' in no less than 16 out of the 18 diagnostic descriptors" (P. 20).

A number of the concerns surrounding the DSM-IV approach to the diagnosis of ADHD stem from the framework's under emphasis on developmental differences and situational factors. The same criteria are used irrespective of chronological age, and adjustment is not made for age appropriate behavioural change. Due to lack of developmental gradation of ADHD symptoms, children may cross subtype boundaries as they mature. For example, DSM-IV field trial data indicated that while ADHD-C was primarily evident in school-aged children, ADHD-HI was primarily diagnosed in preschool children. Recent longitudinal studies (Lahey et al, 2005, as cited Stefanatos and Baron, 2007) have suggested that children who met criteria for ADHD-HI at baseline were less likely to meet criteria for ADHD in subsequent years than children diagnosed with ADHD-C. Of those diagnosed in childhood, 20% to 30% will continue to meet criteria for ADHD during late adolescence (Muglia, et al, 2000, as cited Stefanatos and Baron, 2007) and fewer in adulthood (Mannuzza et al, 1998, as cited Stefanatos and Baron, 2007).

Relatedly, both the cutoff and specific items chosen for inclusion in the DSM-IV symptom list may have limited generalisability to age groups outside the 4–16 years age range. For children younger than 4 years, the cutoff has the potential for an increased false positive rate since symptom list items are developmentally inappropriate at these younger ages. Conversely, application of these thresholds to adolescents and adults may result in under diagnosis of ADHD and a greater false negative rate because hyperactivity decreases significantly with increasing age (P.17) (Fischer et al, 2002, as cited Stefanatos and Baron, 2007).

2.6 Assessing ADHD

Multidisciplinary or multimodal approaches to identification and treatment of ADHD are considered essential (Kewley 1999; British Psychological Society (BPS) 2000; Cooper 2006; NICE 2008). An accurate assessment requires evidence of pervasiveness and should be based on detailed information from Parents, Teachers, EPs' and other professionals (Cooper and Bilton 2002; NICE 2008). This view is

supported in the report of a British Psychological Society (BPS) Working Party (1996) ADHD: A Psychological Response to an Evolving Concept where in it is concluded that:

> *"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"* (P. 63).

2.6.1 Purposes of Assessment

Assessment requires comprehensive information on the many factors that influence the child in a particular setting or situation; therefore it is important that 'practitioners' must not lose sight of the uniqueness of the individual (BPS, 1996, p.40). The purpose of ADHD assessment as NICE (2008) recommends appears to be twofold: (1) assessment of DSM-IV symptoms, and (2) assessment of the degree of impairment. Angold et al (1999) argues that while it is clearly important to establish whether a child meets DSM-IV criteria, this step alone is typically not the most appropriate referral basis, nor does it allow for prediction of long-term outcome (Mannuzza & Klein, 2000).

Peltham et al, (2005) argues that the underlying, fundamental reason for clinical assessment goes well beyond establishment of a diagnosis, instead, involves case conceptualisation, to determine the need for treatment, specify treatment goals, develop treatment targets, and monitor progress and outcomes.

2.6.2 Observation and ADHD Assessment

Peltham et al, (2005) notes that observational measures may yield objective information that is often viewed as the 'gold standard' in research, particularly as measures of treatment effects. However, traditional observational measures have limitations, particularly for clinical application, including high cost, the need to train observers, and the need to conduct multiple ratings across days and settings to obtain stable and representative estimates of behaviour. However, snapshot observations in an analogous situation (for example, parent–child interactions in a

clinic) as a proxy for behaviour in natural settings may not be a true reflection of the child's day to day behaviour. Mash & Foster (2001) argue that observations in clinical settings are costly and difficult to employ in clinical practice, and they do not provide a representative example of the child's behaviour in the natural environment. Stefanatos and Baron (2007) argue that:

> *'clinical practitioners are acutely aware of the moment-to-moment variability possible in the behaviour of a child suspected of having ADHD, and how clinical observations may not necessarily agree with standardised test data obtained in an artificial structured test environment, thereby limiting confirmation of behavioural impressions obtained through objective means and generalisation to the natural, real-world environment'* (P. 22).

Nylund (2000) argues that teachers and parents may have some investment in the outcome of the ADHD assessment and as a result are biased in their observations of such behaviours. An interesting quote from therapist Ian Law (1997) as cited in Nylund, (2000) notes:

> *"Two people can observe exactly the same behaviour, use exactly the same behaviour rating scales, and reach entirely different conclusions"* (p. 286).

What happens when you give that same scale to someone who feels insecure about his or her management of a disruptive child or highly stressed parent? Cooper and O' Regan (2001) report that distribution is not even, with some schools having a disproportionate number of pupils displaying ADHD type characteristics. Why could this be, could it be the subjective nature of observation or the ability to manage ADHD type behaviour in the classroom?

2.6.3 Impairment and ADHD Assessment

Assessing the degree of impairment is important because core symptomatic behaviours (e.g. inattention, hyperactivity and impulsiveness) are both widely

distributed and common to some degree in most children (Singh, 2008). All children are sometimes restless, sometimes act without thinking, and/or sometimes daydream the time away. However, it is when the child's hyperactivity, distractibility, poor concentration, or impulsivity begin to affect school performance, social relationships with other children, or behaviour at home, that ADHD may be suspected. Thus the assessment of impairment needs to entail an analysis of the impact of ADHD as it relates to (1) difficulties in family functioning; (2) peer relations; and (3) academic functioning. Problems in these three domains are predictors of negative long-term outcome and comprise the targets of therapeutic intervention (Angold et al, 1999).

NICE (2008) recommend that the level of impairment resulting from symptoms of hyperactivity / impulsivity and inattention should be at least of moderate clinical and / or psychosocial significance based on interview and / or direct observation in multiple settings including social, familial, educational and / or occupational settings. However, Fabiano et al (2005) argues that the correlation between ADHD symptoms and impairment is modest because there is variability in expression of ADHD related impairment across domains (Lahey et al, 1998). It is clear that measures of impairment add incremental validity beyond an ADHD diagnosis.

There are many misperceptions relating to attention difficulties and ideas of ADHD. One of the key issues relates to the question 'what do we mean by normal attention'? Lloyd et al (2006) questions what is within the bounds of 'normal' behaviour, he notes that 'normal attention' can be seen within a continuum from, on the one hand, 'very attentive' to, on the other, 'easily distracted'. Lloyd argues that as diagnosis is based on the observation of behaviours alone, this has led to a kind of 'open season' where anyone can 'have a go' at identifying a child with ADHD: teachers, parents, school doctors and so on. As the construct becomes more widely known within any community, confidence in making provisional diagnosis grows too (Newnes & Radcliff, 2005). This again highlights potential difficulties in the assessment of ADHD, is the language used clearly understood in the same way by all concerned, particularly those concerned in the diagnostic process? Professional and personal perspectives are key to this, for example, is normal attention and

concentration seen by each person in the same way or do we all have different views on what is acceptable based on our own social and cultural experiences and values?

Researchers, clinicians, and school personnel often emphasise the importance of obtaining an accurate assessment of DSM–IV symptoms with relatively less emphasis on the assessment of impairment. Impairment can affect children in different ways, for example, studies of children with ADHD in classroom settings have routinely documented that they are more off-task, complete less assigned work with less accuracy, are more disruptive and break more classroom rules, and are less likely to comply with adults compared to other children. These behaviours contribute to lower levels of academic achievement and higher rates of disciplinary referrals, retention, and later dropout (DuPaul & Stoner, 2003). Comprehensive assessment of ADHD must therefore follow NICE (2008) guidelines on the effect of impairment on a child's functioning.

2.6.4 Rating Scales and ADHD Assessment

The purpose in this section is to selectively review the literature and determine the evidence-base for some of the more common assessment instruments utilised when assessing children with possible ADHD in clinical practice. One such tool utilised in the assessment of ADHD is the rating scale. This review is therefore not exhaustive and is limited by the measures chosen for inclusion.

ADHD symptom rating scales have been used since the late 1960s to describe participant's behaviours in research studies and to measure treatment outcomes (for example, Conners, 1969; Quay & Peterson, 1983). The first DSM symptom based rating scale of ADHD, the Swanson and Pelham rating scale (Atkins et al, 1985), was constructed because no parent or teacher rating scale of the Diagnostic and Statistical Manual of Mental Disorders (3rd ed.) Attention Deficit Disorder (ADD) symptoms existed.

The American Academy of Pediatrics (AAP) list of "ADHD-specific Checklists" includes only the familiar Conners' parent (Conners, 1998a) and teacher (Conners,

1998b) rating scales for children ages 6 to 17 years. Furman (2005) notes limitations to rating scales such as:

> *"they may function less well in primary care clinicians offices"* and that *"the questions on which these rating scales are based are subjective and subject to bias"* (p .996).

These questionnaires are based on a person's observable behaviour, the criteria used for rating behaviours are based on likert-type frequency descriptors (for example, often, seldom, never and so on), thus reliable diagnosis depends on how consistently raters' share a common understanding of the behaviours to be rated.

Nylund (2000) argues that one of the biggest problems with these scales is that they depend on the subjective biases of teachers and parents to rate the child's behaviour. For example, on the Connors scales parents and teachers are asked to rate the child on a scale of zero (not true at all) to three (very much true) with respect to statements such as:

- Inattentive, easily distracted
- Loses temper
- Short attention span

The Nylund (2000) quote simplifies this argument:

> *"how many four year olds does that describe? How many eight year olds?"* (P. 25).

A pertinent question arises from this, that is, how does one distinguish an individual's understanding of ADHD type behaviour? It also questions the individual's perception of the language used, for example, would a parent or teacher understand 'often' or indeed 'seldom' in the same way, how measurable is often or even seldom? Has this weakness in the diagnostic process been overlooked? Nylund (2000) argues that:

"rating scales depend on opinion rather than fact, there is no objective anchor to decide how much a child is exhibiting ADHD symptoms" (p.25).

According to Diller (1998) as cited in Nylund, (2000) ADHD questionnaires and rating scales are based on norms from a white, middle class background. Criteria such as "restless" and "fidgety" mean different things to different ethnic, racial and socioeconomic communities

Parent and teacher rating scales are utilised for the purpose of establishing the DSM-IV requirement, that for a diagnosis of ADHD, the symptoms need to be present across different settings (Barkley, 1998). Studies that have examined parent-teacher agreement for DSM-IV ADHD rating scales have consistently reported low agreement for the ADHD symptoms for children from the general community, and also those with, or at risk of the ADHD diagnosis (Amador-Campos et al, 2006). To date, a number of explanations have been proposed for the poor agreement between parent and teacher ratings for the ADHD symptoms. In general these explanations relate to either situational specificity of the ADHD symptoms at home and at school (situation specificity hypothesis), or differences in parent and teacher perceptions for the ADHD symptoms (bias hypothesis) (Antrop et al, 2002). A recent review by Collett (2003) as cited in Furman (2005) concluded that rating scales can:

"reliably, validly and efficiently measure DSM-IV based ADHD symptoms in youth", (P. 996)

However, Furman (2005) highlights that a careful review of the statistical methods used to reach this conclusion makes it extremely doubtful as only two of the nine measures examined were tested for validity, which is the crucial question, that is, does the rating scale actually measure what we are trying to measure? Yet the Connor's still appears to be a consistent measurement tool used in ADHD assessment. The only other ADHD rating scale evaluated for validity (the ADHD-IV) faired poorly with the specificity ranging as low as random chance (Snyder, 2004 as cited in Furman, 2005). Considering the insubstantial results of the two rating scales (Conner's and ADHD-IV) that were tested for criterion validity and the lack of such testing of the other nine reviewed scales, there appears to be a lack of sufficient

evidence to conclude that rating scales can validly measure DSM-IV based ADHD symptoms (Collett et al, 2003, as cited in Furman, 2005). However, Pelham (2005) argues that the Conner's rating scale and its short forms are also well validated when the Conner's is compared with other measures of symptoms (e.g., the Diagnostic Interview Schedule for Children; Shaffer et al, 2000).

Finally, some researchers suggest the possibility of bias in parent ratings of ADHD. Chi & Hinshaw (2002) argue that parental depression may influence ratings, making children appear to have ADHD even though they do not. On the other hand, if mothers have a history of depression but are not actively depressed, bias may not be an issue (Baumann et al, 2004). Pelham (2005) highlights that the clear implication for both researchers and clinicians is that information from teachers or other sources (or methods, such as observations) are needed in addition to parent's ratings, thus looking at the child in a more holistic and systematic way.

2.7 The Guidelines

Various guidelines exist in the field of ADHD in the UK, prominent among them are the National Institute for Health and Clinical Excellence (NICE) guidelines (NICE, 2008). NICE (2000) and the NICE (2008) revised ADHD guidelines recommend that diagnosis should follow a comprehensive assessment by a child and adolescent psychiatrist or a paediatrician and should involve the child, parents, school and take into account cultural factors (See Appendix 12 for NICE guidelines). The meeting with the child should include the history, mental state examination and physical examination. If significant co-morbidity is found, a referral to an educational or clinical psychologist and/or social worker should be considered. Use of Conner's questionnaires in diagnosing ADHD is commonplace in the UK. ADHD is often co-morbid with other disorders and one of the roles of the clinician is to diagnose co-morbidities.

The NICE (2008) guidelines acknowledge that there is no objective test or identified etiology for ADHD and that diagnosis relies on subjective criteria. They also highlight that Pediatricians are directed to assess for "co-morbidities," such as major affective disorders and learning problems. However, a recent American study

found that only 25.8% of pediatricians "reported routine use of all 4 diagnostic components" and only 53.1% performed follow up visits three to four times per year, as recommended (AAP, 2001) for their patients on stimulant medications (Rushton, 2004).

2.8 Interventions and Treatments

Interventions for ADHD are a relatively controversial topic, and dominated by the results of one large American study, the Multi-Modal Treatment Study of ADHD (MTA) (Jensen et al, 1999). The controversy surrounds whether or not it is appropriate to medicate children with ADHD. On one hand, medication appears to yield significant improvements in symptoms (Konrad et al, 2005). However, a number of concerns have been raised regarding the use of psycho-stimulant medication for children with ADHD, especially younger children. These range from ethical objections to utilising stimulant medication to modify children's behaviour to concerns about the lack of evidence for the long-term effectiveness of stimulant medication (Pelham et al, 1998).

Results of the MTA study suggested that medical management alone was significantly more effective for improving the core symptoms of ADHD compared with psychosocial treatment alone and routine community care (Jensen et al, 1999). In addition, psychosocial intervention did not significantly improve outcome when combined with medical treatment. The results of this study influenced recommendations made in the British NICE report (NICE, 2000, 2008) on interventions for ADHD, which recommended medication as the front line intervention for children with severe ADHD impairment to be followed by psychosocial intervention, if possible.

Holowenko (1999) states:

> *'the goal is not simply to arrive at a diagnosis of ADHD, but to determine an intervention plan that is likely to succeed, based on the information gathered'* (p.30).

After diagnosis of ADHD, the main questions left to address involve what intervention or treatment is most appropriate. Peltham (2005) notes that key questions to consider may be whether the child is sufficiently impaired to need medication (primary care question), therapy (mental health), or special services (education) and then to evaluate treatment outcomes.

Interestingly, Purdie et al (2002) as cited in Graham (2007), found in their review of the interventions that the effects on educational outcomes were greater for educational interventions than for any other types of intervention, including medical, psychosocial and parental training interventions. Prosser et al (2002) as cited in Graham (2007) argues about:

> *'a danger in medicalising an educational problem of disruptive behaviour in schools, as this may cause educators to see such behaviour as 'strictly biological and outside their expertise'* (P. 587)

or indeed as a within child characteristic, as opposed to external (situational) influences that stem from the environment or culture in which that individual is found (Thomas & Glenny, 2000, as cited in Graham, 2007).

2.8.1 Medical Treatment

The use of medication continues to be one of the most debated and controversial issues surrounding the concept of ADHD. Wheeler et al (2008) argue that the aim of medication is to control symptoms so that the children become more receptive to other forms of non-medical interventions. Those in favour of medication advocate its use as part of a multimodal, multi-professional treatment approach which includes a combination of medical, psychological, social and educational interventions (BPS 1996, 2000; Cooper and Bilton 2002; NICE 2000, 2006, 2008). In the UK it is estimated that approximately 20% of children with ADHD receive medication (Cooper and Bilton, 2002). However, this figure is now eight years old and thus may not be a true reflection of today's medication rates.

In the UK, literature (NICE, 2008) suggests medication should only be used when symptoms of severe combined-type ADHD are evident. Such recommendations imply that medication should be reserved for cases where the pattern of symptomatology fits with a hypothesis that the behaviours result from a '*medical condition of brain dysfunction*' (Kewley, 1999, p. 23). Those that take medication may be subjected to side effects (such as growth retardation). Specialists sometimes advocate 'drug holidays' to limit the possible negative side effects stimulant medication may have on a child (Green & Chee, 1997; BPS, 2000).

Once the diagnosis is made, NICE (2008) guidance makes it clear that management should be multimodal, multidisciplinary and should stimulants be required, they should always be a part of a comprehensive treatment programme (Nice, 2008). However, the process of diagnosing children and young people with ADHD and treating them with medication such as methylphenidate hydrochloride (Ritalin) continues to be controversial (Coghill and Markovitch, 2004), and the recommended management approach is rarely evident in practice. At the same time, reports (for example Schachar et al, 2002) indicate that in both the USA and UK it is an increasingly preferred option for medical practitioners, parents and teachers who struggle with behaviours they find challenging.

Many studies (e.g. as reviewed in Lord & Paisley, 2000) indicate benefits for parents, teachers and young people following the diagnosis of ADHD and treatment with medication. These benefits are reported as more acceptable behaviour at school and at home, improved family life and greater engagement with academic work. However, such research has been criticised for its poor design and also because it has studied only short-term effects (Schachter et al, 2001). Reviews that have looked at the few studies which report longer-term effects of medication suggest academic outcomes are not necessarily improved, and behavioural improvements might only be sustained as long as medication is taken (e.g. Purdie et al, 2002).

The use of stimulant medications in children with symptoms of hyperactivity and inattention has been promoted by some as a diagnostic trial. The working plan is

that if the child looks, acts, or functions better on a stimulant medication, then he or she should be on the medication, and a diagnosis of ADHD has been confirmed. However, studies have shown that behavioural response to stimulants does not distinguish children with diagnosed ADHD from normal children; thus, a behavioural response does not constitute either a diagnosis or a treatment but rather an expected response to medication (Furman, 2005).

Some proponents maintain that children diagnosed with ADHD benefit from medication in that they become better disposed to learning (Green & Chee, 1997). Hechtman et al (2004) have argued that stimulant medication does not result in learning benefits for the medicated child. Others have argued that Ritalin improves cognitive performance, for example Mehta et al (2000) argued that stimulant medication enhances working memory. Reason and Sharp (1997) argue that:

> *'medication is not a cure but, according to a convincing body of research, it can facilitate parenting and teaching in conjunction with psychological, educational and social support'* (P.8).

Sole reliance on medication gives the child and others the message that the entire problem is child centred. The Multimodal Treatment Study of Children with ADHD (MTA study) (Arnold, 1997) is one of the biggest studies performed to date on the treatment of children with ADHD. This study has provided support for medication based intervention in a substantial group of children diagnosed as having ADHD. Behavioural intervention was found to be particularly effective in treating non-ADHD symptom domains, such as problems in parent child relationships, poor academic achievement and social skills difficulties. However, Barkley (2000) questions the methodological assumptions made in the MTA study, for example:

> *"the assumption that behavioural problems observed in ADHD children are the result of faulty learning"*(P. 596).

Biological, psychological, and social factors all influence the behaviour of children, young people and adults, and it is appropriate to take all of these into account when determining what action, if any, should be taken to change it. It should, however, be

the case that the least intrusive interventions which are known to have the least harmful consequences are used before more intrusive, potentially physically and psychologically harmful interventions are employed. Rose (2005) argues that Ritalin no more 'cures' ADHD than aspirin cures toothache. Masking the disruptive behaviour can provide a breathing space for parents, teachers and the child to negotiate a new and better relationship, but if the opportunity to do this is not seized, we will once again find ourselves trying to adjust the child rather than adjust society (p. 263).

2.8.2 Multi-Modal Intervention

Barkley (1991) highlights that treatment of ADHD must be multi-disciplinary, multimodal; consider cultural trends and societal expectations. Psychologists have been successful in arguing for a multi-modal approach to the treatment and management of ADHD through behaviour modification techniques and management programmes (Atkinson & Shute, 1999). As such, the ensuing reciprocal relationship that has developed between medical and psychological practitioners has been the condition of possibility for the expansion of the concept of child behaviour 'disorderedness'.

Guidelines have been drawn up for successful multi-disciplinary working in the management of ADHD (BPS, 1996, 2000, NICE 2008), although any collaboration may present difficulties in practice. When professionals from different disciplines work together in delivering services for a multi-factorial condition like ADHD, they have competing professional, political and economic agendas (Hughes and Cooper, 2007).

2.9 Perspectives on ADHD

2.9.1 Medical perspectives on ADHD

Fellick et al (2001) note that paediatricians in the UK are increasingly being asked to assess children in mainstream school who are not performing as well as their peers. Medical perspectives on ADHD can be characterised by the argument that 'ADHD'

represents a constellation of behaviours, the excessive display of which is said to reflect neurological dysfunction in the frontal region of the brain, an area thought to be responsible for inhibition and attentional control (Holmes, 2004).

ADHD is a formal diagnosis that has acquired a standing in our society. The status of an ADHD diagnosis is further bolstered by its scientific basis in modern medicine. Medicine is science-based and traditionally science is said to provide us with objective facts about the world. After all, science gives us in its theories a literally true story of what the world is like (Nylund, 2000). But is this what science actually does? In the author's opinion, science does to some extent give factual evidence for a diagnosis of ADHD, but as discussed earlier it appears as though the majority of ADHD diagnoses are simply clusters of observable behaviours. Observable behaviours are very prone to one's own constructions of the world and are therefore prone to human bias.

The medical model of ADHD continues to posit neurobiological dysfunction (a hypothesis that appears to have gained the status of truth) as the cause for disorderly behaviour, which leads to *'medical practitioners having the primary role in interventions'* (Atkinson & Shute, 1999, p. 124). Why is this the case? Such practitioners may not fully account for systemic factors impacting upon the child, such as socio-economic status or parenting skills. There appears to be very little collaborative work in the diagnostic process.

Norris and Lloyd (2000) believe that the diagnostic label of ADHD:

> *'creates a professional discourse, which is excluding. This makes it difficult to challenge by the layperson or by other professionals who do not have access to this specialised discourse and it subsequently elevates the status of some experts'* (p. 508).

Lloyd *et al* (2006) believes the power of the medical model can disempower parents and pupils from responding to a diagnosis of ADHD. To millions of modern families, the label provides a legitimate justification to 'outsource' some

responsibilities related to raising children. Such research highlights the negative impact of the medical model construct.

2.9.2 Parent's perspective

It appears that, other than to confirm stories about their wildly out-of-control child, parents are rarely consulted about their child's ADHD, perhaps because parents are often considered a large part of the problem (Neophytou, 2004). An attendant argument, is that parents are complicit in the increasing rate of diagnosis because a medical label is said to relieve them of responsibility or blame for their child's behaviour (Smelter et al, 1996). Slee (1995) argues that a diagnosis of 'ADHD' comes to be seen as a 'label of forgiveness' (Reid & Maag, 1997 as cited in Lloyd & Norris, 1999, p. 507). Similarly, parents and children are viewed suspiciously and positioned as deceitful, undeserving or *'fighting for more than their share of scarce resources'* (Lloyd & Norris, 1999, p. 506).

In a recent study, Travell and Visser (2006) reported that parents complained of not being listened to by education and health professionals over a number of years prior to diagnosis, and others felt they should have been given more support and information regarding possible causes of the difficulties they experienced with their children, effective interventions, and the nature and effects of treatment with medication.

2.9.3 Educational Psychology and ADHD

Prior (1997) argues that:

> *"the impact of a more inclusive definition of ADHD has created particular dilemmas for Educational Psychologists and other non-medical practitioners, with the potential for inter-disciplinary disagreement. This is particularly so in education where special educational needs are generally not defined using medical categories or descriptors"* (P. 15).

The psychological literature features compelling arguments that ADHD behaviours can be influenced by extrinsic factors outside the child's control, such as environment (Panksepp, 1998) as well as the other factors, for example, familial and socio-economic status, maternal levels of education, abuse and depression. Psychological treatment of children who come to be described as 'attention deficit hyperactivity disordered' aims to teach inhibitory responses through what could be simply described as cause and effect training. However, several major studies have failed to demonstrate that psychological interventions (intensive or otherwise) provide any benefit over medication alone (Hechtman et al, 2004). Thus multi-modal treatment models, whilst generally considered the best option in the management of ADHD (Atkinson & Shute, 1999), do not live up to either expectation (Whalen & Henker, 1998).

Slee (1995) argues that psychologists are keen to remain key players in the satellite industry surrounding the behavioural 'disorderedness' of ADHD. This has prompted some to suggest that practitioners of psychology avoid the use of words 'such as "symptoms" and "diagnosis" which automatically give precedence to a medical model of ADHD' (P. 123) (Atkinson & Shute, 1999).

Taylor (1995) as cited in Prior (1997) noted that ongoing research into attachment disturbances of all sorts suggests that hyperactive behaviours are more prevalent in families where there is a high degree of disharmony and that much remains to be learned about the way in which various mechanisms interact to determine behaviour (Rutter, 1995). Taking this and other research into consideration, it seems increasingly likely that groups of children identified as being hyperactive may in fact represent an aetiologically diverse and heterogeneous group. This has highly significant implications for the devising and implementation of interventions as it acknowledges the continuing role of other (e.g. contextual and environmental) factors in many instances.

In response to this growth in public attention and increasing controversy, the British Psychological Society (BPS) established a working party who prepared a report in order to clarify the concept of ADHD. This report highlighted a need for psychologists to:

'address the overlapping issues of conceptualisation, identification, prevalence, intervention and prevention of these kinds of difficulties' (BPS, 1996, P.11).

The interactionist model used by psychologists amongst others is not primarily a diagnostic one. A significant distinction between diagnostic and interactionist models is that whereas the former tend to seek confirming evidence of the presence of symptoms in order to prove the hypothesis i.e. that the condition or syndrome is present, psychological enquiries adopt standard scientific methodology to establish also whether evidence exists that might disprove the hypothesis, when is the condition not present and if so, why is it not present (i.e. the application of systematic doubt). In addition, the interactional model also utilises a formulation that incorporates the way in which all the tenable hypotheses may be interacting in order to explain the observed behaviours. Within an interactionist model, behaviours are viewed holistically as a manifestation of a complex and unique interaction between numerous hypothetical influences both within and without the individual (of which ADHD/Hyperkinetic Disorder may constitute just one hypothesis). It remains a powerful way of conceptualising, hypothesising and intervening in order to alleviate, behavioural difficulties - regardless of whether or not a diagnosis of ADHD is present (Prior, 1997).

3.0 Causes of ADHD

The 'evolving concept' of ADHD in children presents conceptually controversial and practical challenges (BPS 1996, p. 8). The theoretical basis of its nature, aetiologies, prevalence, prognoses and the effects of interventions are controversial areas of research and practice. The field has attracted considerable attention from professionals in the areas of education, psychology and health:

'During the last decade ... ADHD has been one of the most widely observed, described, studied, debated and treated childhood disorders' (p. 65) (Kendall, 2000, as cited in Wheeler et al 2008).

3.0.1 Biological ADHD

Contemporary popular literature based on the aetiology of and intervention for ADHD tends to regard ADHD as an uncomplicated, bio medically based phenomenon which is identified and framed within a biological discourse. This is where the aetiology of ADHD is perceived to be a disease caused by biomedical factors, for which psycho stimulant medication is an effective and safe intervention (Visser and Jehan, 2009).

Those who doubt its validity frequently cite statements such as that made by the National Institute for Mental Health (Kupfer et al, 2000) that:

> *'after years of clinical research and experience with ADHD, our knowledge about the cause or causes of ADHD remains largely speculative'* (p. 3).

In countering this position, clinical specialists and researchers in ADHD point out that these comments are being used out of context and cite the many genetic, neuroimaging, neurophysiological and neuropsychological studies that not only support the validity of the disorder, but also provide evidence for it having a biological basis (Barkley et al, 2002).

Joseph (2000) argues that although the claim that ADHD is a genetic condition and as such is strongly heritable, the evidence is open to interpretation. ADHD shares common genetics with conduct disorder and other externalising behaviours, and so if there is a heritable component, it is not specific to ADHD (Timimi, 2002). A wealth of recent literature has examined the anatomical structure of the brain in children with ADHD. Using brain scanning technology such as MRI these studies suggest that the brain circuits linking the prefrontal cortex, striatum and cerebellum are not functioning normally in children with ADHD (Castellanos & Acosta, 2002). Research has also found that ADHD often clusters in families, thus, suggesting a genetic component to ADHD. For example, in a clinic-referred sample, 34–40% of subjects with ADHD reported a family history of it, compared to only 8% of the study's control subjects (Rowland et al, 2002).

Studies examining the neuropsychology of ADHD provide an opportunity to understand the relationship between underlying biological processes and symptoms of ADHD. For many years it was accepted that ADHD symptoms were the result of cognitive dysregulation (Nigg, 2001). The ADHD child's behaviour resulted from insufficient forethought, planning and control (Schachar et al, 2000). A summary of ADHD as a disorder of cognitive dysregulation suggested that the relationship between biology and behaviour in ADHD was mediated by inhibitory dysfunction (Sonuga-Barke, 2002).

Nylund (2000) argues that ADHD advocates ignore critical data that query the biological explanation. (Breggin, 1998, as cited in Nylund, 2000) states:

> *"a closer examination of the research reveals methodological flaws, errors, and gaps in the data that have been offered to explain ADHD. Ultimately, there is no solid evidence that ADHD is a verifiable biological disease"* (p. 21).

Nylund (2000) goes on to argue that *"attempts to define a biological basis for ADHD have been continuously unsuccessful"* (p.36).

3.0.2 Environmental influence on ADHD

In the past, diversity variables have generally been overlooked in assessment, diagnosis, and treatment of children with ADHD. Although the person is treated within an environmental context, the culture, ethnicity, age, gender, and Socio Economic Status (SES) of the individual affect the context. Therefore, in order for the child with ADHD to receive appropriate evaluation and treatment, an understanding of the effect culture, ethnicity, age, gender, and SES plays in the child's life must be considered (Gingerich et al, 1998). Ford et al (2000) argue that research on possible environmental causes of ADHD type behaviours has largely been ignored, despite mounting evidence that psychosocial factors such as exposure to trauma and abuse can cause them. Singh (2004) has argued that ADHD is a relational issue in so far

as a 'problem' child must be seen as existing within a network of relationships that define and shape perceptions of his / her behaviour.

The work of Kreppner and colleagues on the impact of the early severe deprivation experienced by children adopted out of the Romanian orphanages shows a raised incidence of ADHD (among other problems), increasing as a function of length of deprivation experienced (Kreppner, O'Connor & Rutter, 2001). This is highly suggestive of an environmental route into ADHD. Larsson et al (2004) argues that ADHD is best viewed as a gene x environment interaction, whereby the developmentally antecedent impulsive response of the child shapes their social and family environment by eliciting a punitive or negative response from parents and siblings to a failure to engage effectively with the delay-rich environment. Johnston & Mash (2001) as cited in Daley (2005) argue that ADHD behaviours can be a result of chaotic parenting.

Evidence of environmental influences on ADHD comes from intervention studies which have demonstrated improvements in ADHD symptoms, when parents have been taught alternative parenting skills (Sonuga-Barke et al, 2001 and Bor et al, 2002). The Bor et al (2002) study consisted of 87 families. To be included, children of preschool age had to be in the elevated range of behaviour problems according to the Eyeberg Child Behaviour Inventory and mothers had to report six or more symptoms of inattention or hyperactivity / impulsivity for their child. At post-intervention, results of the study indicated that the program was effective in reducing child behaviour problems. However, it was not clear from this study whether children had an actual diagnosis of ADHD or simply symptoms suggestive of ADHD. Pre and post intervention results cannot account for other environmental factors that may be impacting upon the child's behaviour. Results of these studies do not necessarily imply that parents of children with ADHD are bad parents. The relationship between ADHD and parenting may result from both negative aspects of the child influencing the parent's behaviour, and negative aspects of the parent influencing the child's behaviour (Daley, 2005) referring to the circularity of behaviour. However, if ADHD is indeed a continuum, it is important to note that some children with more severe ADHD symptoms will be more difficult for parents to interact with than others with less severe ADHD.

3.0.3 ADHD and School

One of the major areas where ADHD behaviours' can present problems is in the school setting. Wolraich and colleagues suggest that inattention is a key ingredient of poor academic achievement (Wolraich et al., 2003). DuPaul and Stoner (2003) argue that the educational sphere is devastatingly affected by this relatively common disorder. In the current context of inclusive education in the UK, teachers in mainstream schools can experience extensive involvement with pupils deemed to manifest symptoms of ADHD. Recent government proposals, for example Every Child Matters (ECM) (Department for Education and Skills (DfES) 2003) and strategies (DfES 2004) have broadened anticipated outcomes.

UK schools are under pressure to raise academic standards whilst at the same time taking forward the inclusion agenda (Macbeath et al, 2006). Innovations over recent years, including examination league tables, parental choice and OfSTED inspections, can be problematic in the provision of inclusive education for pupils with ADHD. Cooper and Bilton (2002) argue that the demands of the National Curriculum and Standard Assessment Tasks (SATs) present particular challenges for children with ADHD and their teachers. Recent developments such as literacy and numeracy hours *"reduce the pedagogical flexibility available to teachers"* (p. 93). In order for schools to be more able to meet the needs of pupils with ADHD there have been calls for teacher education, which targets it at both the initial training stage and as part of in-service training, and continuing professional development (DfES 2004; Kirby, Davies, and Bryant 2005; Macbeath et al, 2006). However, there is as yet little evidence nationally of increases in relevant training for teachers and teaching assistants. According to a recent report in the Times Educational Supplement, of the 10 out of 85 teacher training institutions in England and Wales who replied to a question on training in ADHD:

> *"six hours training during a three-year course was the most offered. Three colleges offered nothing, one said two hours and the others an hour or less. Two admitted they offered ten minutes*" (Stewart, 2006, p. 23).

The BPS (2000) report on ADHD states that formal education imposes a whole range or requirements, including compliance, focused concentration and the willingness to listen and reflect. Such difficulties in meeting these kinds of demands inevitably have a range of social, educational and psychological consequences for the child. These demands are thought to be particularly onerous for young boys. A common critique of ADHD diagnoses and methylphenidate use claims that schools now require too much of children at a young age (Pollack, 1998). Children are expected to be able to contain their physical energies and to focus their mental energies in order to perform these daily school tasks. Graham (2008) argues that the modern and increasingly unnatural demands of schooling have resulted in the re-articulation of normal childhood exuberance, curiosity and energy as 'unnatural'. Problematically the contribution of changes in schooling demands, such as lowering of school entry ages, increased emphasis on academic learning and seat work, creates pressure for children to learn to read earlier and better, crowding of the curriculum, the shortening of children's recess and lunch times - barely rate a mention in the myriad of contributing and causal factors being considered in the literature around ADHD (p. 24).

Within this broader culture of schooling, the individual school functions as a mechanism that generates cultural knowledge about children's behaviour. In this way, the school, its personnel and its educational practices can generate expectations of and knowledge about children's behaviour. Routine classroom practices come to be viewed as normative; for example, in most UK primary schools, very young children are asked to sit in their chairs, to focus on work, and to refrain from speaking to each other or to themselves (Singh, 2008). In this way, classroom and schooling practices help to create cultural knowledge about what connotes 'normal' behaviour and achievement for children at various stages of development. Should such experiences differ from school to school? The behaviour a child exhibits in one school may not be considered appropriate in another. Singh, (2008) states that:

> *"while there may be some variation in these classroom practices among individual schools, the remit to meet the standards of a broader national*

curriculum requires schools to uphold and provide concrete evidence for this set of normative expectations" (p. 354).

3.1 The ADHD Label

Children who exhibit ADHD symptoms in one context are often referred to as ADHD, as if they have become the disorder. Thus, the ADHD label is a powerful descriptor. Nylund (2000) argues that the ADHD label has become part of the deficit discourse of our society. Nylund (2000) describes the label of ADHD as a fully constructed 'within child' problem that cannot be overcome. Furthermore, Nylund argues that people begin to filter all of their experiences with the child through the lens of ADHD. All behaviours, regular and irregular, are attributed to the disorder, often at the expense of the child's creativity and ability to cope. ADHD is a diagnostic label; it has acquired scientific status and legitimacy in our society. However, unlike traditional medical diagnoses, it does not refer to a set of biological symptoms.

Lloyd and Norris (1999) argue that parents want a diagnostic label for their child. They argue that labels can be helpful in enabling parents to externalise a problem while also freeing parents from a feeling of the guilt and blame of a 'bad parent' label. They go on to argue that a diagnosis of ADHD may bring financial support for parents in that the identification of such a syndrome may bring entitlement to state disability benefits. Lloyd and Norris (1999) argue that it is important to be aware of this possibility, as it will aid in our understanding of why some parents may argue for the `label', suggesting that this cannot simply be a middle class phenomenon, but may also be related to poverty (p. 508).

3.2 Conclusion

The literature on the assessment, diagnosis and treatment of children with ADHD highlights the numerous factors that impact on children and their families. Having reviewed the literature, the main factors appear to be environmental, biological and social. Listening to the perspective of parents' and professionals' involved in ADHD assessment, diagnosis and treatment is the key aim of this research. Listening to

them is particularly important, given the amount of recent changes in legislation, policy and monitoring of services (DfES, 2003; NICE, 2008). This exploratory investigation aims to provide the LA with evidence based information upon which future policy can be developed. It may also highlight additional avenues for EP practice in this process and may help EPs' explore a wider role in community psychology.

3.3 The Research Questions

What are the perspectives of parent's, education and health professionals with regards to the following research questions?

1. What are the perceived processes of assessment, diagnosis and pharmacological treatment / interventions for children with ADHD in Local Children's services?
2. What factors influence the process of assessment, diagnosis and treatment of children with ADHD?
3. Are professionals and parents aware of 2008 National Institute for Health and Clinical Excellence (NICE) guidelines on ADHD and how are the current educational and healthcare services responding to them within the holistic Local Children's services?

The next chapter (Chapter 3) will outline and justify the methodology chosen for the study.

Chapter 3 Methodology

3.4 Introduction

The previous chapter provided a review of the literature. This chapter aims to outline the methodology chosen to investigate the current research and includes a description of the research procedure and methods of data collection. Finally, it will outline the methods of analysis, including information on the construction of measures used in the study.

3.5 Research Design

Mixed Methods Approach

This study took the form of a mixed methods design, incorporating both quantitative and qualitative data. This research is qualitative-dominant in nature. Mixed method design has been described as the third research paradigm sitting between qualitative and quantitative, and is defined by Johnson and Onwuegbuzie (2004) as:

> *"The class of research where the researcher mixes or combines quantitative and qualitative research techniques, methods, approaches, concepts or language into a single study"* (P. 120).

Johnson and Christensen (2004) outline the advantage of using mixed methods research in terms of combining the strengths of both quantitative and qualitative research processes.

Greene et al (2005) as cited in Somekh & Lewis (2005) argues that mixed-method inquiry, firstly, provides stronger validity and less known bias, as with the classic approach of triangulation and is thus more defensible. Secondly, it develops more complete and full portraits of our social world through the use of multiple perspectives and is thus more comprehensive. Finally, it provides an understanding of different stances or positions through the inclusion of different methods that themselves advance different values.

Greene et al (2005) as cited in Somekh & Lewin (2005) notes:

> *'the early roots of mixed-method social inquiry are found partly in the construct of triangulation, which involves the use of multiple methods – each representing a different perspective or lens - to assess a given phenomenon in order to enhance confidence in the validity of the findings'* (p. 274).

When comparing different aspects of quantitative and qualitative methods of research, it can be seen that by using both approaches, the weaknesses of one approach can be compensated for by the strengths of the other through convergence and corroboration of findings (i.e. "triangulation"). Greene et al (2005) argues that:

> *"the overall results are more likely to be valid, credible and warranted"* (p. 274).

Looking in more detail at the advantages and disadvantages of the qualitative aspect of mixed methods; Willig (2001) notes that 'qualitative research allows the researcher to tap into the perspectives and interpretations of participants' (p.150). Willig goes on to argue that "qualitative research tends to be open-ended in the sense that the research process is not pre-determined or fixed in advance. As a result, unjustified assumptions, inappropriate research questions, false starts, and so on can be identified, and the direction of the research can be modified accordingly" (p.150). However, alternative interpretations of the research data are always possible and all researchers work from within the realist paradigm and need to address the role of reflexivity in the research process (Willig, 2001). Taking this into consideration, the researcher utilised qualitative data to investigate the perspectives and experiences of the ADHD diagnostic process.

Marshall and Rossman (1995) highlight that semi-structured interviews allow the exploration of individual views. Smith et al (2005) highlights that this method gives the researcher and respondent much more flexibility than the more conventional structured interview as the researcher is able to follow up particularly interesting avenues that emerge during the interview and the respondent is able to give a detailed account of their experiences. Smith (2005) also notes that semi-

structured interviews and qualitative analysis are especially suitable where one is particularly interested in complexity or process or where an issue is controversial or personal. Semi-structured interviews enable the researcher to prompt participants yet retain the ability to explore their perspectives and opinions.

In this study, rating scale questionnaires were thought to be appropriate as they provide the researcher with uniform descriptive information that could shed further light on participant's perspectives. Hayes (2007) notes that questionnaires are very vulnerable to response bias, that is, people adjusting their responses so as to give the 'right' sort of answer to the researcher. However, they can provide useful information, for example, opinions and attitudes, facts and knowledge, past behaviour, likely future behaviour and motives.

This study had two phases that occurred sequentially, first a semi-structured interview followed by the questionnaire. As noted earlier, this study had a dominant emphasis on the qualitative interview. The researcher was dealing with busy professionals and wanted to gather as much information as possible. Using a semi-structured interview allowed the researcher to gain in depth data in one sitting. The sequential use of a quantitative questionnaire helped to gather additional information to triangulate the evidence gained from the qualitative semi-structured interview. Using the questionnaire also allowed the researcher to explore more controversial subject areas, for example, using the ADHD label to access financial support (Lloyd and Norris, 1999).

3.5.1 Research paradigm

Guba and Lincoln (1994) define a paradigm as the 'basic belief system or worldview that guides the investigation, not only in choices of method but in ontologically and epistemologically fundamental ways (p. 105). Morgan (2007) introduces research paradigms as 'the set of beliefs and practices that guide a field', which are used in order to summarise the beliefs of the researcher. When establishing a research methodology, Doyle, Brady and Byrne (2009) propose that the first principle is to

decide upon the research paradigm.

The primary reason for using mixed methodology in this study was to enhance the richness of the data by obtaining a variety of information on the same or similar issues. The researcher combined data types that were compatible and complimentary to the overall purpose of the study (Kumar, 1999). The value of this approach lies in the integration of data from many sources, which leads to enriched information, clarification and illustration of one data source by the other (Creswell et al 2004; Tashakkori and Teddlie 2003).

It was decided that a pragmatic position would be most appropriate as this is compatible with the mixed methodology used within the research (Creswell, 2003). A 'pragmatic' approach has been heralded as a solution to the 'paradigm war' between positivists (quantitative researchers) and social constructivists (qualitative researchers) (Guba, 1994, as cited Denzin and Lincoln, 1994). Pragmatists advocate using whatever methodological approach works best for a particular research problem (Robson, 2002). This has led to mixed method approaches (Johnson and Onwuegbuzie, 2004) where both quantitative and qualitative approaches are used within a piece of research. Owing to the philosophical position of pragmatists, a key feature of mixed methods research is its methodological eclecticism, which it is suggested frequently results in better quality research (Creswell, 2003; Johnson and Onwuegbuzie, 2004). For this reason, the current investigation has taken a pragmatic approach.

3.5.2 Reliability and Validity

Issues surrounding the reliability and validity of semi-structured interviews and questionnaires were recognised and attempts were made to minimise their limitations. The concept of reliability refers to the consistency or stability of any measurement (Breakwell et al, 2006). The most common technique for establishing reliability is by replication of results, however, this cannot be realistically applied to such a flexible qualitative method as the semi-structured interview. It can be applied

to the questionnaires utilised in a study as they are constant and structured. Interestingly, Willig (2001) argues that:

> *"it has to be acknowledged that there is disagreement among qualitative researchers about the extent to which reliability ought to be a concern for qualitative research"* (P. 17).

To ensure reliability of analysis, four data sets were analysed by a second rater. The second rater also utilised thematic analysis in their research and was familiar with the subject area. Following this second rater analysis, the researchers discussed their similarities and differences to ensure themes and sub-themes were appropriately identified. This helped to achieve an element of inter-rater reliability. Seale (1999) argues that high reliability in qualitative research involves:

> *"recording observations in terms that are as concrete as possible, including verbatim accounts of what people say, for example, rather than researchers reconstructions of the general sense of what a person said, which would allow researchers' personal perspective to influence the reporting"* (p.148).

Validity can be defined as the extent to which our research describes measures or explains what it aims to describe, measure or explain (Willig, 2001). The validity of questioning was improved by ensuring that the questions asked were appropriate to the person being interviewed. Questions were therefore specific to each group to ensure that they understood the question being posed to them.

Interviewer or researcher effects may have existed in this study, as participant's willingness to participate and nature of their answers may have been affected by the professional position of the researcher in X Local Authority. The researcher conducted all semi-structured interviews, thus ensuring consistency of approach. Breakwell et al (2006) states that such interview effects cannot be eliminated, but steps can be taken to control for them. The researcher attempted to

minimise possible interviewer effects by limiting characteristic interpersonal responses, for example, a high emphasis on listening, avoiding verbal and non-verbal cues that may influence the interviewee's responses and giving the interviewee time to answer each question fully before continuing. Audio taping also helped to reduce interviewer bias and ensure full responses were captured.

The use of a pilot study enabled the semi-structured interviews and questionnaires to be carefully constructed in a way that was accessible and neutral. The reliability of the interview was enhanced by the interviewer adhering to the wording and order of questions where possible. The flexibility of the semi-structured interview allowed the researcher to clarify any questions that were not clearly understood by participants. This proved important as changes in wording was needed for some participants; however the general order of questions was the same for each participant. An in depth description of the pilot study shall be discussed later in this chapter.

3.6 Ethical Considerations

The planning and implementation of the research was conducted under the ethical guidelines of the British Psychological Society (BPS, 2008). Ethical approval was also gained from the Departmental Ethics Committee at the Department of Psychology and Human Development at the Institute of Education, University of London. Precautions to limit access to the data and thus maintain confidentiality was made by the researcher. This was achieved by storing data in accordance with the Data Protection Act (1998) in a secure cabinet in the Educational Psychology department of X council and through passwords on the researchers computer.

Participant's informed consent was obtained at the start of the interview. The nature of the study, "parents' and professionals' perspectives of the assessment and diagnostic process of children thought to be experiencing ADHD" resulted in all participants providing the necessary approval. Participants were informed that the researcher intended to analyse the data for the purpose of research. Participants

were informed of their right to withdraw consent at any point of the interview and of their right to withdraw their data at any point, until the research is submitted.

The aims and objectives of the research involved no element of deception towards the participants. Participants were made aware of the necessary procedures should they wish to complain about any aspect of the research. In the present study, the privacy of participants was maintained by not revealing any personal or identifiable information, thus ensuring confidentiality and anonymity.

3.7 Identification of participants

Potential participants were identified through a number of methods. Paediatricians and Educational Psychologists were asked to participate by the researcher. Due to the extremely limited number of participants in these groups, the identification of participants should be considered 'opportunity sampling'. Health professionals were more difficult to access and appeared to have limited time to offer. Having worked alongside all professional groups in my role as a Trainee Educational Psychologist was beneficial as most professionals were willing to participate in this research. The small sample size reflected the time-cost factor of the study and the subsequent in depth analysis of the rich data collected. Willig (2001) notes that:

> *'qualitative research tends to work with relatively small numbers of participants. This is due to the time consuming and labour-intensive nature of qualitative data collection and analysis'* (p. 17).

Teaching professionals were also identified through 'opportunity sampling'. When attending 'In School Review' multi-disciplinary meetings the researcher requested help in identifying potential participants for both the parental and teaching professional groups. Participant selection did not reflect or account for age, gender, experience or level of training on ADHD.

3.7.1 Participants

In total twenty participants took part in the research. Due to the limited sample of potential participants in the EP and Health professional groups, the size of each group (5) was felt to be a balanced sample size. However, it was recognised that not all perspectives and differences could be sought in twenty interviews.

Participants included:

- Five Teachers – four Inclusion managers and one Head Teacher,
- Five Educational Psychologists,
- Five Community Paediatricians,
- Five parents of children with ADHD.

3.8 Materials

Semi structured interviews and questionnaires were designed by the author for each group in order to elicit the information required to meet the aims of this study. Qualitative semi-structured interviews and short questionnaires were given to a range of health care professionals; for interview (See Appendix 1A) for questionnaire (See Appendix 1B); teaching professionals interview (See Appendix 2A) questionnaire (See Appendix 2B); educational psychologists interview (See Appendix 3A) questionnaire (See appendix 3B); and parents interview (See Appendix 4A) questionnaire (See Appendix 4B).

Interview questions were devised around the most common and consistent issues identified in previous research. Each interview and questionnaire covered four themes that are linked to the research questions identified.

- Referral procedure for children thought to have ADHD;
- Assessment / Diagnosis of the children;
- Treatment and review;
- Response to NICE guidelines about services for children with ADHD.

3.8.1 Semi-structured interview

The aim of these interviews was to allow professionals and parents to express their individual perspective and share their stories and experiences of ADHD. For the purposes of this research, a semi-structured interview was considered to be the most appropriate way to elicit rich data pertaining to personal attitudes, views, beliefs and perceptions of ADHD.

The semi-structured interview is open to modification according to the interviewer's perception of what is more appropriate. According to this method, the interviewer is free to modify their delivery of questions, such as changing their order. The interviewer can also give additional explanations, leave out questions that seem inappropriate for use or include additional follow up questions. It was thought that this process would allow additional, possibly unexpected themes to be covered, as participants shared their perspectives on the process of assessment, diagnosis, treatment and review of ADHD.

Smith et al (2005) believes that semi-structured interviews help to facilitate greater rapport/empathy and allow a greater flexibility of coverage within the proposed area of interest. Disadvantages include the reduced control of the investigator during the interview, which can take longer to carry out and is harder to analyse. Gillham (2000) highlights the time consuming nature of semi-structured face to face interviews as there are many additional factors that may be unforeseen by the novice researcher, for example, developing and piloting the interview, setting up and traveling to and from interviews, transcribing and finally analysing the interviews. He calls this the 'time-cost factor'. This 'time cost factor' was a consideration for the researcher in this study due to the competing demands of professional Trainee Educational Psychology (TEP) practice.

3.8.2 Semi-structured interview formulation

Questions relating the research questions and each of the four themes that

were identified through the literature review were used to elicit the views of parents and professionals, however, due to the semi-structured nature of the interviews these were not stringently adhered to. Questions were designed to get participants to express their perspectives and personal experience of ADHD. The reliability of the semi-structured interviews was increased by planning open and neutral questions (Smith, 1995) and using language that was clear and concise to reduce differences in interpretation of the questions by the participants (Greig & Taylor, 1999). Supervision was used to support this process. Preparing semi-structured interviews was time consuming and labour intensive as it required careful preparation of appropriate questions for each group.

Smith, Harre and Langenhove (2005) suggest a sequence of four stages for producing an interview schedule. The researcher attempted to adhere to these stages in the current study. The four stages are:

1. Determine the overall issue to be tackled in the interview and think about the broad range of themes or question areas you want the interview to cover.
2. Arrange areas of interest into an appropriate sequence, ensure a logical order, leave sensitive topics until the latter point of the interview, thus allowing the respondent to become relaxed and comfortable.
3. Think of appropriate questions related to each area/theme/research question in order to address the issues identified.
4. Formulate prompts and probes which may follow from answers given to some of the questions.

3.8.3 Formulating interview questions

Smith et al (2005) recommended the following when constructing the actual questions. The researcher again attempted to adhere to these recommendations when constructing interview questions. They are as follows:

1. Questions should be neutral rather than value laden or leading.
2. Avoid jargon. Think of the language of your respondent and frame your questions in a way they will feel familiar and comfortable with.

3. Try to use open ended questions as closed questions encourage yes/no answers. It is the intention to get the respondent to open up about his or her thoughts and feelings.

3.9 Questionnaire formulation

It was hoped the quantitative data collection would enhance the information gained from the qualitative interview. Rating scale questionnaires asked respondents to circle one of five alternative responses. Questions related to each area / theme / research question in order to address the issues identified. Because the questions and rating formats were largely the same across the different respondents, they enable their responses to be compared directly, while the open-ended questions allow each individual's perspective to also be taken into account. All instruments used were designed under the supervision of an experienced academic professor and Educational Psychologist.

4.0 Procedure

Participants were contacted either by Letter (see Appendix 5) e-mail or telephone (see Appendix 6 for prompt sheet). For those who agreed to take part, the time and location of the interviews were negotiated with the participant. Interviews were arranged with parents, teaching professionals, EPs and health care professionals during the summer and autumn terms of 2009. Informed consent from participants was sought at the time of the interview. As such, all participants were fully informed about the purpose of the research, the method of data collection and of their individual rights with regard to confidentiality, anonymity and consent (See Appendix 7 for an example).

Willig (2001) suggests that the researcher should explain why a recording of the interview is being made and how it is going to be used. Before interviewing the participants, the researcher discussed the use of a recording device to ensure they were comfortable and relaxed in the presence of a tape. All participants were interviewed face to face on one occasion using the specific semi-structured interview

for that group. Participants were given the opportunity to add any further comments at the end of the interview. Participants were given a short de-brief and were thanked for their time and effort.

Immediately after the semi-structured interview, specific questionnaires for each of the four groups were also administered. In order to avoid response bias, the researcher left the room and reassured participants their answers were anonymous. A possible limitation of this may be a reduction in perceived anonymity, as respondents may feel their answers are less anonymous and may therefore be less candid in their responses. However, utilising this method ensured a high response rate and allowed the interviewee to clarify questions if needed.

The aim was to have a set allocated time of up to one hour for all interviews in this study. However, interview length was diverse with healthcare professionals taking about 1 hour to complete the semi-structured interview, other groups interviews lasted a maximum of 40 minutes and were recorded using an electronic dictaphone. Difficulties were encountered in scheduling times to meet with teachers and health care professionals due to their limited availability, however, this was overcome through flexibility on behalf of both groups. All Interviews were transcribed verbatim by the researcher.

4.1 Pilot Study

A pilot study was carried out to test the effectiveness and suitability of the semi-structured interviews and questionnaires that were developed by the researcher. The pilot study is useful in determining whether the intended method of analysis may be used (Gay and Airasian, 2000). The pilot study identified issues with interview questions, for example, accessibility of language used in parents interviews. It also helped to identify issues with questionnaires, for example, the order and wording of questions. For an in-depth description / discussion of the pilot study, please refer to Appendix 8.

4.2 Analysis

4.2.1 Interview Analysis

Willig (2001) highlights that 'interview data can be analysed in a variety of ways, which means that semi-structured interviewing is a method of data collection that is compatible with several methods of data analysis' (P.21). Smith et al (2005) notes that by employing qualitative analysis, an attempt is made to capture the richness of the themes emerging from the respondents talk rather than reduce the respondents to qualitative categories. A mixed method design utilising Thematic Analysis (TA) informed by Aronson (1994) and Braun and Clarke (2006) was used in this study. This shall now be discussed.

Thematic Analysis

Banister et al (1994) describes thematic analysis as a means by which to present interview data in relation to specific research questions. Boyatzis (1998) describes thematic analysis as a process for encoding qualitative information in a systemic manner, which provides a method of identifying and analysing patterns or themes within a data set. Thematic analysis was chosen because it facilitates the interpretation of identifiable themes and patterns of behaviour. This form of analysis is widely used within the domain of psychology and is recognised as particularly accessible for those who are relatively new to qualitative research (Braun and Clarke, 2006). This method was chosen because it provided a flexible and useful research tool that produced rich detailed data from a small sample.

In this study, the questions asked were based on previous research in order to gain an understanding of whether similar issues were important for the participants and if so, to gain further understanding of these issues. However, the process of analysis was conducted in an inductive way allowing for the emergence of new themes. Thus, a 'contextualised' type of thematic analysis was undertaken that recognises that the social context contributes to how individuals create their own meaning (Braun & Clarke, 2006).

4.2.2 Process of analysis

The data was analysed based on the step guide for thematic analysis outlined by Braun and Clarke (2006, p.87), in order to find repeated patterns of meaning across participants.Several close detailed readings of the data were made in order to familiarise the researcher with the data. This involved a number of stages, as follows.

Stage 1: Detailed reading of the data

A detailed reading was carried out on each transcript. This data was read a number of times and a number of codes were identified. These 'codes' were organised using NVIVO qualitative data software (NVivo, 2008). A code can be considered as a quotation from a transcript that is given a corresponding name. These codes related to concepts and phrases that the researcher considered interesting or significant.

Stage 2: Identification of codes

The data set was re-read several times and the initial notes were transformed into specific sub-themes. A theme can be defined as something important that relates to the research interest, and represents some level of patterned response or meaning within the data set (Braun & Clarke, 2006). Codes that were considered irrelevant or vague were excluded. At this stage, to further determine the accuracy of the extracted themes from the information gathered, the material was also shared with one colleague on my Doctoral course. Four transcripts were given to another rater who also generated a list of codes from the data. Codes were later discussed and negotiated until agreement was reached as to the validity and appropriateness of each code and sub-theme.

Stage 3: Identification of initial sub-themes

Codes were reviewed and grouped into potential themes and sub-themes, gathering all data relevant for each potential theme. Main recurrent themes were selected that reflected a group of codes.

Stage 4: Refinement / reviewing of themes

The clusters were categorised based on their relationships to the main themes identified. The themes were reviewed to check the appropriateness to the coded extracts and to the particular theme or sub-theme the code belonged to. A 'thematic map' of the analysis was generated (Braun and Clark, 2006). Supervision was sought on two occasions to discuss identified codes, sub-themes and themes. Informal peer support was utilised to offer alternative explanations for identified codes, thus ensuring that thorough, rigorous thought was given to each code whilst adhering to Braun and Clarks' stages of thematic analysis. Codes and themes were continually reviewed.

Stage 5: Clustering sub-themes into themes

Statements from the raw data were extracted to provide evidence of the existence of each theme within the various categories. Following the guidelines of Braun and Clarke (2006), a final analysis of the selected extracts was related back to the research questions and the appropriate literature, thus permitting the production of a scholarly report. Ongoing analysis of the themes was conducted to define the specifics of each theme and the overall story the analysis told. Again, supervision was accessed on two occasions to explore alternative interpretations of the data and support the selection of themes that encompassed the codes. A thorough read of the initial themes and sub-themes led to more clear definitions and titles of themes to be generated. The discussion around the qualitative data ensured that identified themes were a fair reflection of the research data. The number of participants reflected in sub-themes were also re-checked and stated.

Stage 6: Final themes identified

Following the above phases of thematic analysis, the identified themes were organised under a thematic grid. A running list of phrases, coded into categories was kept in order to maintain a consistent and fair approach in coding as far as possible. The identification and inclusion of a theme was not based on prevalence but on whether it was considered a useful insight into the research questions and also

according to whether it offers insight into the qualitative data (Braun and Clarke, 2006). As discussed above, codes and themes were reviewed with a second rater and supervision was accessed on two occasions to specifically discuss the choice of final themes identified. The final analysis of the data was reported and related back to the research questions and literature (Chapter 4).

The researcher endeavoured to be active and reflective whilst explicitly analysing the researcher's role in the process (Mason, 1996). The researcher tried to be watchful against potential bias and attempted to be critical of the interpretation of the data (Bell, 2005). The researcher attempted to ensure transparency of the thoughts and assumptions used when analysing the data, whilst also discussing these within supervision and the through peer support process. However, others argue that attitudes, beliefs and values of the researchers influence their findings, so that fully objective and value-free research is a myth (for a similar argument see Smeyers, 2006, p. 479). The theme choices were supported by the literature and regular supervision sessions, as well as the process of analysis to consider alternative interpretations of results (Robson, 2002).

a) Questionnaire Analysis

Given the limited number of participants, the sample size was too small to allow parametric statistical tests to be carried out; therefore quantitative data were descriptively analysed using SPSS statistical software. Means and standard deviations were used to illuminate these findings. This provided the researcher with descriptive statistics that helped to confirm and enhance the qualitative findings.

4.3 Conclusions

The design and methodological approach outlined in this chapter was chosen to be practical in the research environment whilst fulfilling the aims and objectives of the study. This chapter has described in detail the rational for the chosen method of research design whilst highlighting the process of thematic data analysis.

The next chapter (Chapter 4) will present the findings and discuss these in the context of relevant literature.

Chapter 4 Findings and Discussion

Chapter 3 outlined the methodology chosen for this study. This chapter aims to answer the research questions posed by presenting in depth analysis of qualitative data together with summary figures of the quantitative data. Given the limited number of participants, the sample size was too small to allow parametric statistical tests to be carried out. Appendix 9, 10 and 11 respectively contain summary figures of between group questions; specific professionals' only group questions; and finally Healthcare professionals' specific questions.

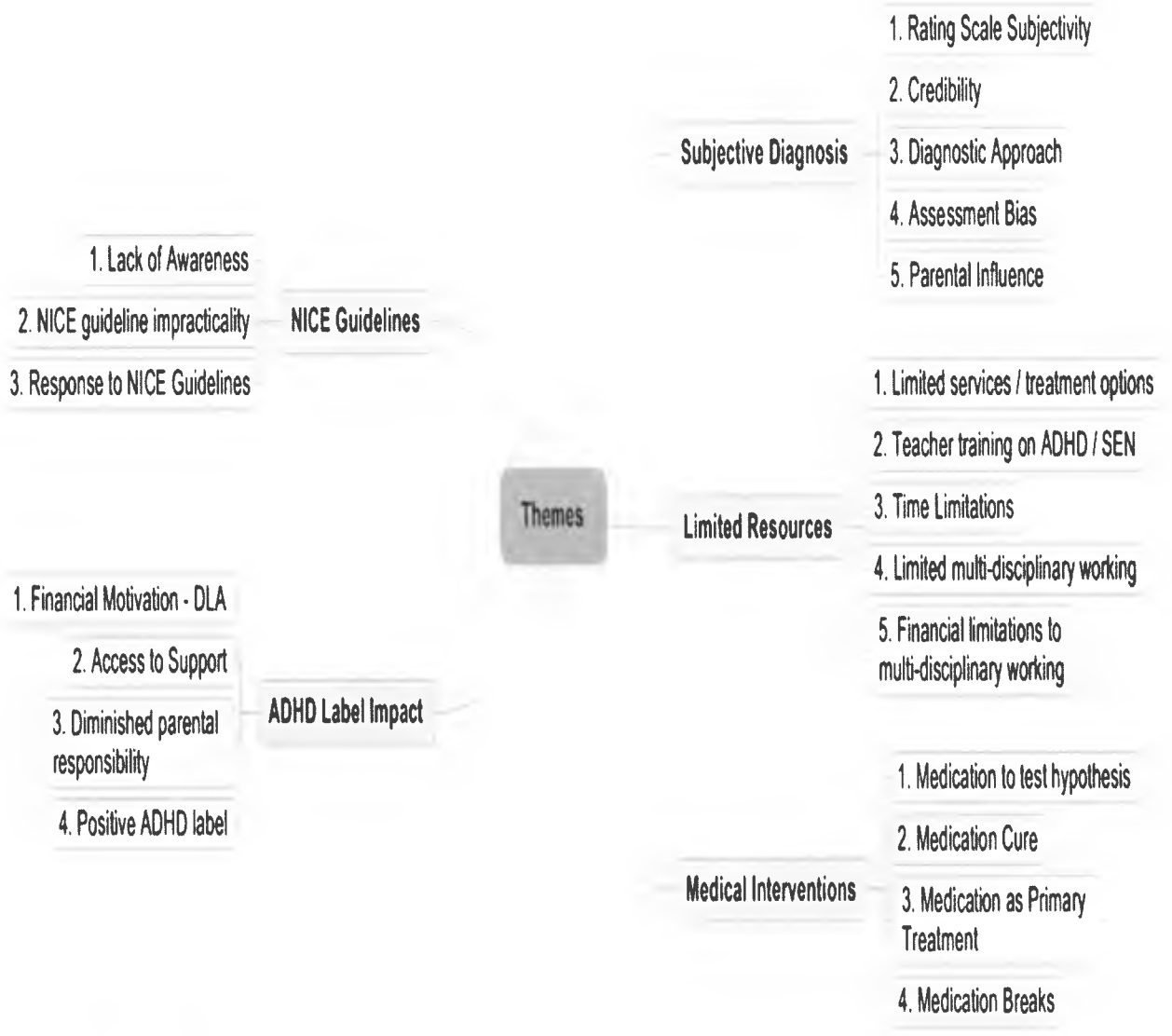
The first section outlines participant's qualitative results with additional summary figures for quantitative data where marked differences between or within groups are noted. Each theme will be discussed in turn, focusing on the data used to create that theme and its sub-themes. By the end of this chapter, the researcher aims to show that each theme makes a distinct contribution to addressing the research questions surrounding the assessment, diagnosis and treatment of children with ADHD.

4.4 Analysis of interview data

Following Braun and Clarke's (2006) six phases of thematic analysis, a number of themes emerged from the interviews, as illustrated in Figure 1. Some themes and sub-themes were interrelated, this is highlighted below. Within each theme, further sub-themes or dimensions were identified. These sub-themes are presented with example quotations throughout the text. Each quote is numbered with the corresponding interview participant number. In this section, each theme will be discussed in turn, focusing on the data used to create that theme and its sub-themes whilst relating the data to the research questions. It is important to highlight that some themes are 'stronger' than others as the number of participants within each theme / sub theme differed with most themes across groups and others within groups.

Figure 1 shows the overall range of themes and sub-themes that emerge from the date.

Figure 1: Thematic map of Interview analysis



Analytic Keys:

EP: Educational Psychologists
TP: Teaching Professionals
} Educational Professionals

HP: Health Care Professionals – Community Paediatricians

PA: Parents of children with ADHD

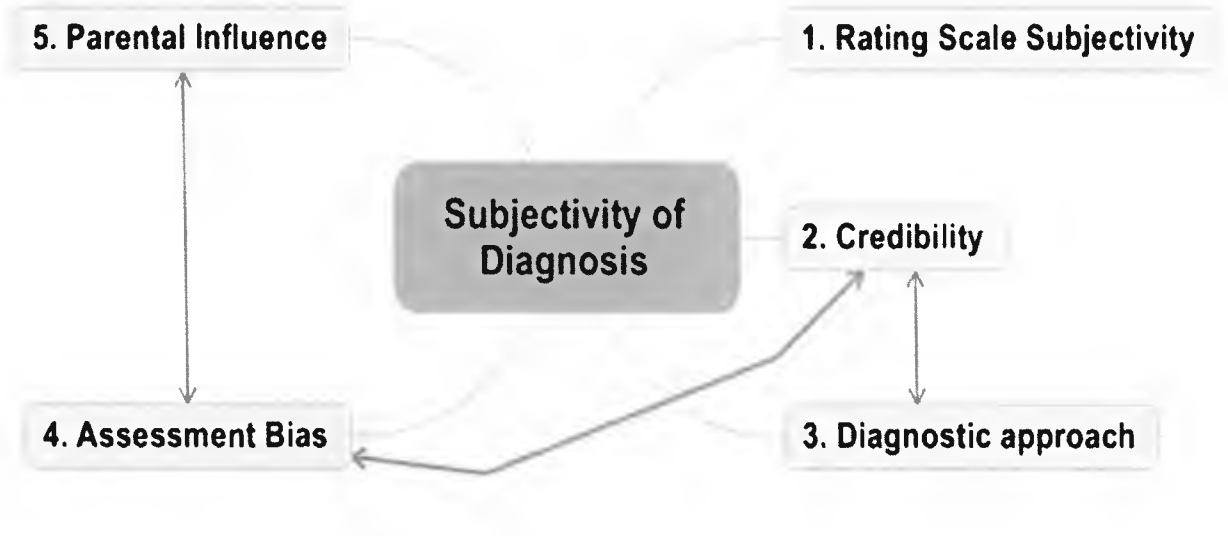
4.4.1 Theme 1: Subjective Diagnosis

The theme of 'subjective diagnosis' within the assessment and diagnostic process was one that emerged amongst parents and all professional groups. In particular this related to the subjective nature of service, individual practice and the assessment tools utilised. In the current analysis, subjective diagnosis had five dimensions / sub themes: Rating scale subjectivity, credibility of information, diagnostic approach, assessment bias and parental influence. These dimensions are illustrated in Figure 2.

Research question one was partially answered in this theme. Parents, EPs and Teachers did not have an in depth knowledge of the process of assessment and diagnostic process. Parents in particular found it difficult to recall the assessment process and were unsure how the Paediatrician came to their diagnostic conclusion. EPs were not involved in the assessment, diagnosis or intervention process at all and therefore were unable to share their views on it.

These sub themes are somewhat interrelated as they come together and overlap throughout the assessment and diagnostic process.

Figure 2 **Theme 1: Subjective Diagnosis**



1). Rating Scale Subjectivity

Interviews	EP 1, EP 2, EP 3, EP 4, HP 1, HP 3, HP 5, TP 1, TP 3, TP5, P2, P4, P5.

Parents and professionals from both education and health commented on the subjective nature of rating scales, which are commonly used in the ADHD assessment and diagnostic process. Thirteen out of twenty participants highlighted this as a sub-theme. This reflects previous research that has also questioned the validity of the Conner's Rating Scale-Revised as parent and teacher "ratings" of school children are frequently discrepant, suggesting that use of subjective informant data via scales does not form an objective basis for diagnosis of ADHD (Furman, 2005). One health professional highlighted the subjective nature of a rating scale through the following example:

"you can say it's a subjective form, I can fill in a form on your behaviour at the moment and make you ADHD if I wanted to, or not ADHD if I didn't want to" HP 1.

One teacher that regularly contributes to the information required to assess a child for ADHD also highlighted the subjective nature of rating scales.

"mm, I think they're like anything, open to interpretation of that teacher and, mm what's happened recently on that day, so they're probably, if you're a teacher to do it on one day and then another day it would be different, I think that's probably true of any scale" TP4.

Nylund (2000) argues that rating scales depend on opinion rather than fact; he argues that there is no objective anchor to decide how much a child is exhibiting ADHD symptoms. Educational Psychologists (EPs) highlighted the subjective dimension that exists through the language used in rating scales, in particular the potential ambiguity of the rating scale options, they state:

"mm, well rating scales always have their problems because ultimately its somebody's, you know, views on where this child is at, so you're always going to

have an issue with rating scales regardless, one person's very bad might not be another person's very bad, you always have subjectivity around rating scales, mm, so that would need to be taken into account" EP 1.

Another Health Professional noted that rating scales were limited as an assessment tool and highlighted the need for a more advanced ADHD rating scale. They stated:

"the problem is, because it's diagnosis, it's so subjective, we need an objective measurement, the rating scales answer a little bit of the problem, not an awful lot, it would be nice if we actually developed better ones" HP3.

Lloyd et al (2006) argues that the only difference between behaviours exhibited by normal children and by 'ADHD' children, as the DSM IV (APA, 2000) recognises, is found in the word 'often'. Expanding on this finding, Carey (2002) argues that, the widely used ADHD diagnostic questionnaires are highly subjective and impressionistic. Their items are phrases such as "talks too much, often fidgets and messy work". The rater is not advised how much is too much, how much motion and how often under what circumstances constitutes fidgetiness, and so on.

One parent highlighted the unspecific nature of the rating scale:

"for a parent I really wasn't sure how I was supposed to be filling it out and there were questions in there that weren't really relevant to parents at all, you know, I just think that ticking those boxes 1 to 5 is sort of, you know, oh I'm not really sure ill tick a 2, you know, so it's very difficult" P 2.

Another stated:

"as I say, if you fell between the lines, you're not always either a or b, you can actually be in between and I just think, you know if you're ticking one thing because it's the nearest to how your child is it's not always how your child is, if you know what I mean" P 4.

Nylund (2000) states:

> *"one of the biggest problems with these scales is that they depend on the subjective biases of teachers and parents to rate a child's behaviour. Teachers and parents may have investment in the outcome of the test"* (p.25).

As therapist Ian Law (1997) as cited in Nylund (2000) writes:

> *"Two people can observe exactly the same behaviour, use exactly the same behaviour rating scales and reach entirely different conclusions"* (p.286).

Another parent highlighted how observations of their child can be subjective as it is based on the environment in which one considers behaviour to be normal. They stated that this makes it difficult to answer the questions on these scales, for example:

"as a parent who's been trying to deal with the child that has got ADHD or is aggressive and all the rest of it, what you think isn't too bad you know to somebody else you know what I mean, might seem very aggressive, very violent so I found it, for me, maybe it's not for everyone, but for me, mm I judging this right, I kept questioning myself, never mind about the questions, that mm I seeing this right from an outsiders point of view" P 5.

As there is no specific medical test for ADHD, health professionals have to rely on their professional judgement when assessing and diagnosing children with possible ADHD. According to DSM-IV, the cross setting criterion for ADHD requires that some impairment from symptoms be present in two or more settings. However, DSM-IV does not specify how to establish the two-setting criterion. Part of this process includes the use of the rating scale from both home and school. Parents highlight that they are unsure how to accurately rate their child on these scales, yet their answers to the questions are utilised in the assessment process. As ADHD assessment and diagnosis is heavily dependent on the judgment and experience of the contributing professionals and parents, the differences between what they see as 'usual' or 'normal' or 'often' for a 7-year-old or a 11-year-old boy or girl may be

different. Interestingly, this finding suggests that although healthcare professionals are aware of the subjective nature of the ADHD rating scale, they continue to utilise these scales as a method of gathering data that informs their diagnostic decision. It may be that healthcare professionals only continue to use these scales in order to meet the two setting criterion as demanded by the DSM IV criteria. It could therefore be argued that current measures do not account for potential subjectivity of the rater and therefore the impact of subjectivity on symptom assessment is potentially considerable. This finding poses problems and challenges on how these ratings need to be combined for a diagnosis of ADHD.

2). Credibility

Interviews	HP 1, HP 2, HP 3, HP 4, HP 5,

A second dimension to 'subjective diagnosis' was looking at the credibility of the information gained or given during the assessment process. Interestingly it was only the healthcare professionals that raised 'credibility' as an issue, for example:

"the parental information is very important because it's not just what the parent is saying, but also I am making an assessment of the credibility of what the parent is saying during the whole process, I'm looking at parental views, actual parenting and what's actually happening within the family environment" HP 5.

In this example, the healthcare professional appeared to be looking at parental judgment, whilst also considering other potential reasons for the information presented by the parent. This finding is similar to previous research (Sayal et al, 2003) which argued that parental concerns and perceptions of problems might influence how clinicians interpret parental accounts of symptoms, including indirect reports about possible difficulties at school. Therefore, the credibility of the information taken by those concerned is an important factor as it may be at the expense of accurate clinical identification. Misdiagnosis carries risks such as commencing potentially long-term treatment unnecessarily and the potential to inappropriately label children.

Another health professional appeared to suggest that schools complete rating scales in a biased manner depending on their perspective of ADHD and thus questioned the credibility of their information, for example:

"I've got schools who don't want me to medicate so they tick everything as no and I have got one example where the school ticked everything as no and the teacher did a covering letter and said there's nothing wrong with him except he won't sit still, keeps shouting out the answers and everything she said he never does, in the covering letter she said he did" HP 1.

Another example of 'credibility' is as follows:

"if you meet an individual teacher and talk to them, you get a sense that perhaps their observations haven't been quite as close as perhaps the parental ones, do you know what I mean" HP 4.

These findings suggest that healthcare professionals are consistently aware of the interpersonal differences that exist among parents' and teachers' information. It was surprising that healthcare professionals viewed conflicting evidence from schools as either reflecting the school or teacher's opinion of ADHD as a deliberate attempt to impact on the diagnosis or possible medical treatment rather than genuine assessment data providing useful information about a child's functioning in another context. This also highlights the differences between diagnostic professionals as some question the credibility of parent's information and some question the credibility of school information. There is very little previous research on the credibility of information given during the assessment process.

3). Diagnostic Approach

Interviews	EP 2, EP 4, EP 5, HP 2, HP 3, HP 4, TP 1, TP 3.

Thirdly, many education and health professionals (eight out of fifteen) talked about subjectivity with respect to diagnostic perspective / position of the individual clinician.

Certainly, this provides support for the findings of previous research (Cohen et al, 1994, as cited in Evans et al (1997) "*which suggests that prevalence of ADHD varies, depending on the clinician's diagnostic perspective*" (p.80).

"each paediatrician seems to have mm, an interest in certain areas and they tend to group and it seems to be more sort of diagnosis, whereas for some children it may not be the most appropriate, so if they're interested in ADHD, they're looking more for that in children than possibly other people may be, although you can see the difference between the new locums that come in because some of them can do a more sort of thorough process to go through" TP 1.

EPs' also felt that some paediatricians are subjective in their approach when diagnosing children with ADHD, for example:

"I think there are paediatricians out there that are more likely to diagnose than others and that might come from the core belief of championing the child and the child's needs and wanting to do the right thing, so it comes from a very positive belief but it's not necessarily helpful but mm, equally they could be doing it to help a family" EP 5.

Tschan et al (2009) argues that following the initial information gathering phase, the evidence yields a first representation of the problem and the generation of a hypothesis, which is matched with an illness script (a schematic, often narrative representation of diagnostic elements and treatment options). This hypothesis and illness script then sets the stage for their diagnostic decision. One health professional commented on the confidence and diverse approach of a paediatrician's decision making process, for example:

"It's to do with confidence and it isn't a personality thing, it's how much do you actually need to know before you say right I'm happy now to make a diagnosis with this much information rather than needing a bit more because nothing is ever 100% in medicine, not all the boxes are ever ticked. At some point you have got to say there is enough information to make a diagnosis" HP 4.

Tschan et al (2009) argues that based on health professionals' knowledge, they rapidly formulate a first hypothesis, and additional information is used to confirm, refine, or reject this hypothesis (Patel et al., 2002). The quality of decision making depends on the expert's pertinent knowledge. Cox and Popken (2008) argue that people are keen to confirm their theories. They attend to seek confirmatory information, select information, reinterpret it, and retrieve it so as to preserve their theories or hypotheses. Thus, perceivers may often be tempted to devote a great deal of attention to information that is likely to confirm their stereotypic expectations. Given that paediatricians are likely to have hypothesis about the children they see, they may also be susceptible to look for confirmatory information. Interpretation of such information and the subsequent decision / diagnosis may be a reflection of the diverse diagnostic approach of each paediatrician; with some paediatricians being more confident and comfortable to diagnose with less or indeed more information about a given child.

4). Assessment Bias

Interviews	EP 1, EP 2, EP 4, EP 5, HP 2, HP 3, HP 4, TP 1, TP 3.

"I think they are looking for set behaviours to give a diagnosis, I'm not sure they are looking for behaviours that disprove a diagnosis" EP 2.

Fourthly, most professionals (nine out of fifteen) talked about 'assessment bias', in the assessment and diagnosis process. A perception that one's perspective is correct may lead to a bias in the assessment process. Interestingly, decision-making researchers (for example, Friedrich, 1993, as cited in Fugelsang et al 2004) have demonstrated that, in many circumstances, a confirmatory, or positive, testing strategy can lead to correct results. Thus, although some researchers no longer criticise people for preferentially asking questions confirming their hypothesis, they do continue to try to show that questioners using such a strategy anticipate "yes" more often than "no" responses, and that they actually induce such "yes" responses (see Trope & Liberman, 1996). Thus, professionals may be restricting themselves to confirmation of hypotheses they deem to be correct as soon as a reasonable number

of confirming features have been identified. Such a testing strategy does not necessarily disconfirm hypothesis, therefore when disconfirming features are encountered, the perceiver keeps on searching for additional confirming features. This strategy appears to be the case in ADHD assessment and is summed up well in the following quote, for example:

"if I see a child that in my opinion, in my observations that if I have a suspicion that the child's behaviour is very much like ADHD but when you receive the information from the school, the school doesn't tick any of the boxes, you have to ask yourself whether you think the teacher is experienced enough or looking at the symptoms you are asking" HP 2.

Interestingly this appears to show a possible 'assessment bias' on behalf of the paediatrician. A person's level of competence and capacity to contribute is questioned if it is not in line with the assessor's own personal perspective. Singh (2004) argues that ADHD is a relational issue in that the child must be seen as existing within a network of relationships that define and shape perceptions of his / her behaviour. Yet, this healthcare professional does not appear to consider the context in which they observed the child, the potential relationships that define and shape behaviour, instead they appear to apply a form of 'assessment bias' if the information is not in line with their observation of a child. The National Institute of Mental Health (2004) argues that different symptoms may appear in different settings, depending upon the demands the situation may pose for the child's self-control. Gomez et al (2005) argues the possibility of a situation specificity hypothesis (real differences in ADHD behaviours at home and at school) however this does not appear to be considered in this health professional's view.

Another EP highlighted the potential assessment bias that may lead to a subjective diagnosis, they state:

"*my experience has been that sometimes schools' information might be dismissed over parents' information, especially when there is a discrepancy and that's the thing that really concerns me, that where there's a discrepancy instead of exploring other*

possibilities for working out the diagnosis, I think they are too quick to make that diagnosis because they're too quick to listen to what parents are saying" EP 1.

This finding suggests that parents' views are listened to more readily than schools'. It also reflects previous research that looks at possible bias in the assessment process. Antrop et al (2002) noted the possibility of the bias hypothesis (differences in parent and teacher perceptions for the ADHD symptoms). Healthcare professionals have to unpick potential bias and thus recognise the potential subjectivity that may exist in the diagnostic process (Wolraich et al, 2004). Fugelsang and Dunbar (2005) argue that most people are prone to flawed and biased intuitive reasoning about causality and relevance of evidence. A common pattern, sometimes called "premature closure," is that individuals and groups tend to adopt prematurely causal hypotheses and conclusions to explain observations, based on inadequate information (Borrell-Carrio and Epstein, 2004). Healthcare professionals may therefore 'prematurely close' their hypothesis about ADHD children when they feel confident they have enough information to defend a diagnostic decision. These potential biases need further investigation as research on this area is relatively limited.

5). Parental Influence

Quantitative Figures

Specific professional group questions		Teaching professionals (n=5)	Educational psychologists (n=5)	Health professionals (n=5)	Total (n=15)
How often do you think a positive diagnosis of ADHD is due to: **The influence of the parents (Percentages)**	Mean	0.68	0.79	0.12	0.53
	STDV	0.28	0.23	0.10	0.36

Fifteen professionals were asked what percentage, out of 100, do parents influence a positive diagnosis of ADHD. As can be seen from the above percentage figures,

teachers felt that a positive diagnosis was 68% influenced by parents. EPs felt a larger percentage average (79%) of parents had a considerable influence on a positive ADHD diagnosis. Such high mean percentage averages indicate that educational professionals attribute a significant role to the parents, in the case of a positive diagnosis of ADHD. These were in contrast to the Healthcare professionals who viewed parental influence as relatively low (12 percent). This sharp contrast suggests that healthcare professionals do not see parents as having a considerable influence over their diagnostic decision. This outcome is consistent with qualitative findings outlined below.

Qualitative analysis

Interviews	EP 1, EP 2, EP 4, EP 5, HP 1, TP 1, TP 2, TP 4, TP 5.

Eight out of ten educational professionals talked about the theme of parental influence on the assessment and diagnostic process. It appears that educational professionals feel that parents have an unequal influence during the assessment and diagnostic process.

"I think the people with the biggest impact are actually the parents because I think, I should just say that I think on the whole the paediatrician will in a way listen more to the parents, after all the parent is there physically, generally there isn't anybody from the school there to represent the school or our views and so I think that they have the biggest impact on the decisions and the diagnosis to be honest" TP 5.

This raises an interesting point, parents contribute their perspective through a consultation with the paediatrician, yet the school's input in the form of a rating scale or cover letter is simply that, a paper report about the child's functioning in the school context. Is this an equal form of information sharing?

Another teacher stated:

"I think that parents, anything that the parents say will get heard, so if the parents think they've got ADHD, then they could get a diagnosis of ADHD, is that controversial?" TP 4.

Such views of perceived parental influence on the assessment and diagnosis of ADHD were also held by EPs', one EP stated:

"I think if you're seeing somebody face to face, their argument is going to be much more persuasive potentially then a written report from school where they don't meet the school teacher at all, so on the one hand you have written information and the parent there and on the other hand you have just written information, it's not equal, the information they get is not equal, I think it's much more powerful when you have got a parent in the room, you know, how can those differences be explained, and I don't think they take time to explore other possible options" EP 1.

This highlights an important underlying factor that may influence the assessment process; the clear fact that parents are more heavily involved in the actual assessment and potential diagnosis of their child. Another EP seemed to reiterate the parental influence that may be exerted on paediatricians, they stated:

"I think that the main bulk of assessment is done between parent and paediatrician and I think the parents' can play a very influential role in convincing a paediatrician that ADHD, that the child's got ADHD without the paediatrician questioning that" EP 2.

This sub theme may be interrelated to the 'assessment bias' sub-theme as parents and teachers provide confirming or disconfirming evidence for ADHD that may be ignored in favour of the paediatrician's hypothesis. Fugelsang et al (2004) argues about the phenomenon of "confirmation bias". This suggests that professionals then tend to seek confirming evidence and ignore or underweight disconfirming evidence for the favoured causal hypothesis. Indeed, when they look for confirmation of their

hypothesis, people often ask for information that is most accessible, given the hypothesis.

If parents are more influential on the assessment process, as this finding suggests, it may be possible that due to the current process of assessment, paediatricians are indeed confirming their hypothesis with parents who are in the room. Given that previous research suggests that people actively seek out confirmatory evidence and that parents are the ones being interviewed by the paediatricians, it may be possible that parental information is sought to confirm the hypothesis of the paediatrician. This may then be perceived by others as parental influence. For some theorists, this confirmatory approach to information gathering and evaluation has been seen as setting the stage for self-fulfilling prophecies to occur (for example, Snyder, 1992 as cited in Fugelsang et al 2004). Klasen (2000) argues that in the UK, it is often parents' who view their child's behaviour as being symptomatic of ADHD, having consulted websites and/or friends in their efforts to deal with their child's behaviour.

One health care professional also appeared to acknowledge the potential influence parents can have on the assessment process, for example:

"I suppose that I respect the parents more, this is in general and not in individual cases because they are my client or the child's the client, the parent is there usually because they've got a problem" HP 1.

The same paediatrician also appeared to highlight the importance of the parent's perspective, stating:

"I would then respect the school but at the end of the day, I'm treating the parents' perspective so I suppose they just slightly up the edge of the school" HP 1.

Another EP noted the particular influence parents have on an actual diagnosis, regardless of professional perspectives:

"I think if the parents' are really keen for a diagnosis, I think that has a massive influence, because if parents' don't want that label they are unlikely to give it if it's

borderline, paediatricians' might work with them over a period of time, but I think parental mm influence when they are borderline and showing a few symptoms has a massive influence" EP 1.

Another stated:

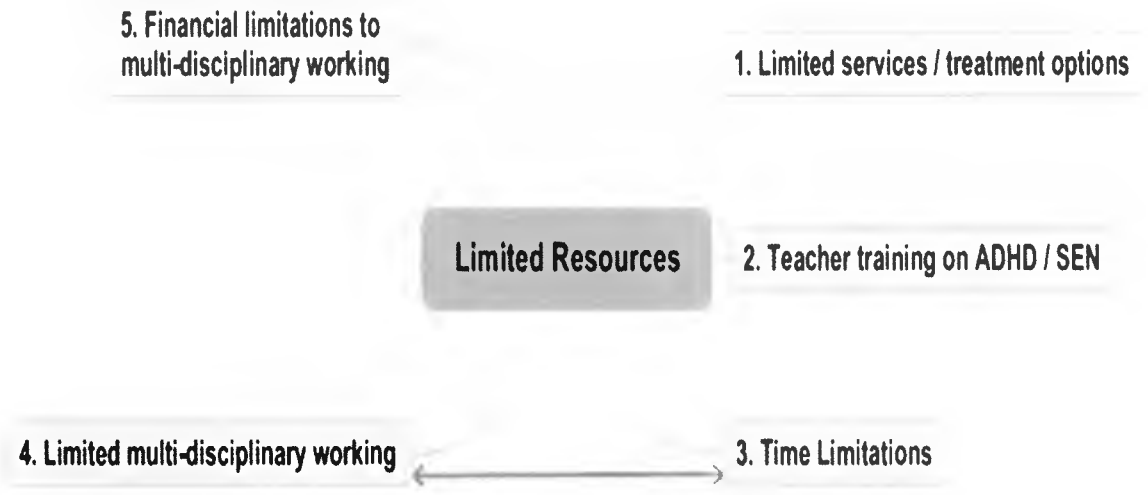
"well family can have a huge impact because the paediatricians' don't always wait for or ask for or take notice of any other information that comes in and they'll listen to families, which is not identifiable for me, so the family information I think has a huge impact on whether or not there's a diagnosis cause if the family say actually this child is fine at home I don't know what all the fuss is about, mm, it's unlikely to be an ADHD diagnosis, equally if they say this child is completely unmanageable, mm then there is likely to be a diagnosis, so big impact from family" EP 5.

The education professionals generally appeared to highlight the sub-theme of 'parental influence' on the assessment process and felt that health professionals supported the parents' views. It could be argued that having parents in the room at the time of assessment is imbalanced in favour of parental views. This sub-theme helps to answer research question two, as parents may have an unbalanced influence on the assessment process.

4.4.2 Theme 2: Limited Resources

The theme of 'Limited Resources' within the assessment and diagnostic process was one that emerged amongst parents and all professional groups. Lack of resources presents challenges to the assessment, diagnosis and treatment options of children with ADHD. This was particularly evident within the healthcare professionals' services. In the current analysis, the theme of 'limited resources' had five dimensions / sub-themes: limited services / treatment options, teacher training on ADHD / SEN, time limitations, limited multi-disciplinary working and financial limitations to multi-disciplinary working. These five dimensions / sub themes are illustrated in Figure 3.

Figure 3 Theme 2: Limited Resources



1). **Limited Services / treatment options**

Interviews	EP 1, EP 2, EP 3, EP 4, EP 5, HP 2, HP 3, HP 4, HP 5, TP 1, TP 2, TP 3,TP 4, TP5, P 1, P 2, P 3, P 4, P 5.

Parents and professionals from both education and health commented on the lack of services and treatment options available for ADHD children and their families. This sub-theme is linked to the general theme 'limited resources' as finances are reported to be limiting the implementation of alternative treatment approaches. Nineteen out of twenty accounts of this were given by participants. Healthcare professionals highlighted the limitations they face in their practice as a result of limited services for ADHD, for example:

"you even hear parents who are willing to take the diagnosis of attachment, and so what, there is no services for certain things and this is what exactly happened here, certain services are probably more expensive than others, so that is why I think it is" HP 3.

Another stated:

"what's the point, there's no services if you give a label, I mean, you know a diagnosis without medication, so what's the point, mm, I know, I can write in my notes but I would not be very happy, if the parent insists I can give them the label, especially if it's for getting the benefits, I don't mind giving the label, but it should be for a clear reason, not just giving the label to a child if there is nothing I can do about it" HP 3.

It appears that some paediatricians' are influenced by the lack of services for ADHD. However, the above example implies that children who have ADHD are not given the label as the paediatrician doesn't see any benefit to it, possibly because of the limited alternative treatments. This could be potentially underestimating the need for alternatives as children with ADHD are not given a diagnostic label. Perhaps this is one reason why children in this LA are 5th (Gainsbury, 2008) in the country for taking medication (per 1000 children) as diagnostic labels are only given to children who actually take medication. The limited alternative treatment options available appear to have an influence on diagnostic decisions. It also appears that post diagnostic support for parents of children with ADHD is also rather limited, for example:

"we used to have an ADHD support group but it doesn't exist now, before parents' used to get a lot of information after a diagnosis, now we are just giving national ADDISS website" HP 2.

Another healthcare professional highlights the lack of services for ADHD outside the school environment, for example:

"well, alternative treatments, the only alternative treatment I would personally look at would be is there anybody else offering advice on ADHD behaviours, which should be through school to be honest, I'm not looking outside the school because I don't think anybody is doing much else outside school" HP 5.

Health professionals appear to see school as providing appropriate strategies to support children with their ADHD. However, as will be seen in the next sub-theme

not all classroom teachers have the training and knowledge to implement appropriate strategies to support these children. Needs are identified through diagnosis, however what happens if the teacher disagrees with the diagnosis, are they going to put strategies in place? EPs may indeed have a role in this process by helping school to implement strategies to support these children post diagnosis.

Another stated:

"the next thing you might be thinking of is what we certainly feel is a problem with us is that we actually do not have any resource in which to put in any behavioural drives, any behavioural management at all. We, I suppose rely on the schools' to be doing some of that" HP 4.

This healthcare professional acknowledges the limited amount of behavioural interventions that are put in place to support children and their families. Do healthcare professionals think the assessment and diagnosis is the intervention? Schools are given a diagnosis, however, where is the liaison between health and education as outlined in Every Child Matters (2003) and BPS (2000) recommendations and NICE (2008) recommendations. More multi-disciplinary working may help to meet this need and help to support children in a holistic way.

Educational professionals appeared to be equally unaware of alternative services for ADHD.

"I don't know any, I can't think of any, I suppose behavioural support and the educational psychology service, mm but I don't think they are billed as alternatives to medication but they are other service there to support, mm, yeah, onside, the inclusions service but its less about specifically ADHD and more about the behaviour management around ADHD and strategies that can support" EP 3.

Teachers also appear unaware of any alternative treatment options:

"I don't know of any support groups for ADHD or anything like that" TP 2.

Parents' also highlighted the lack of alternative treatment options and services available for their children, for example:

"I don't have a clue, no have no idea what alternative treatments are, I myself have looked up and have tried to get him to try things like rekey which is slow moving martial arts, but he won't have anything to do with it" P 2.

This lead to frustration, for example:

"when he was assessed, not being given the information about the support groups and things like that, I mean you know, I think that that should be just literally, you should just get a bumper pack, your child has ADHD, here's a bumper pack on everything on ADHD, all the groups that are available to you" P 2.

Given that alternative treatment options are recommended in the NICE (2008) ADHD guidelines, it appears that professionals and parents in this local authority feel there is a limited treatment options for children and also a general lack of support for parents. This results in limited post diagnostic support for parents and may contribute to more medication being prescribed as healthcare professionals have limited alternative options. There is little research on the impact of limited treatment options for children with ADHD.

2). **Teacher training on ADHD / SEN**

Interviews	EP 1, EP 3, EP 4, TP 1, TP 2, TP 3, TP 4, TP 5, P 1, P 2, P 3, P 5.

"I think cause it's such a huge thing that every time I have asked an NQT about the training they have had, they said o it's a few days, and that a few days out of three years, I did a week's worth out of four years when I did my degree years ago, cause it's such a huge thing you can't possibly know it all in that time and you have got to learn everything else as well" TP 2.

This was a sub-theme that emerged from parents and educational professionals. It

appears that teachers feel undertrained on SEN generally and this also encompasses ADHD. Lack of initial training of these professionals and subsequent ongoing professional training may be influenced by the general lack of resources for training on SEN. Previous research has also highlighted the lack of teacher training and has responded with calls for teacher education at both the initial training stage and as part of in-service training and continuing professional development (Cooper and Bilton 2002; Kirby, Davies, and Bryant 2005; Macbeath et al, 2006). However, as this finding suggests, there is still little evidence nationally of increases in relevant training for teachers and teaching assistants.

One Teacher stated:

"with new NQT's that come, in they always spend some time, I always spend some time with them finding out what they know mm, which usually isn't very much cause they don't get much at university mm, about different conditions and you know I sort of share what I know and I've got information here that I share with them to learn a bit more about it and then generally speaking it's just learn as they go along asking questions really and find out anything about ADHD as they go along" TP 2.

Generally, it would appear that teachers, in particular newly qualified teachers (NQTs) are not too well informed about ADHD due to their limited initial and ongoing training.

Another stated:

"as teachers we're expected to know so much and actually when you get trained as a teacher you don't get trained in SEN, I didn't do any SEN training for my PGCE, I don't think any of our staff did here at all, yet we're the ones here at the chalk face with ADHD and ASD children and our training is based on what you know, think is useful, I think it's harder than what people think it is, it's really dependent on an awful lot of things" TP 4.

Parents also appear to be aware that teachers are not fully prepared / trained to work with children with additional needs. They suggest that teachers are not understanding of the needs of children with SEN, for example:

"how can I put it, a lot of these people go to university and want to be a teacher don't they, they're going in to be a teacher, then they're going into a class of thirty and then you're having these kids that are displaying odd things and they can't handle it cause they're not being explained about it and there are so many of these children now in mainstream schools and they just can't cope with it" P 1.

This sub-theme highlighted the systemic limitations that exist in the current education system. Teachers appear to feel that they leave their teacher training ill equipped to deal with SEN / ADHD children. Goldstein and Goldstein (1998) argued that teachers' knowledge can influence classroom practices, which in turn can influence the performance of students with ADHD. Such research only serves to highlight the importance of teachers having a factual knowledge of ADHD and indeed other special educational needs. However, this research has found that teachers still feel their training was not thorough enough. Previous research has similarly argued that such knowledge should be delivered during initial teacher training as well as part of continuing professional development (Lovey 1999; Cooper and Bilton 2002; Kirby, Davies and Bryant 2005).

This anecdotal experience, however, is consistent with a growing body of literature investigating teachers' knowledge about ADHD. International studies have reported teacher knowledge of ADHD, assessed by performance on questionnaires, to be limited (Barbaresi & Olsen, 1998). It is imperative that teachers have a sound understanding of ADHD. The high prevalence of the disorder means that teachers are likely to have at least one child in their classroom who has this diagnosis. This also has implications for teachers in identifying and referring children who may have ADHD for further assessment (Tannock & Martinuseen, 2001); in effectively managing the behaviour of these children within the classroom, in communicating with health professionals involved in treating these students, and in monitoring a child's response to medication (Bekle, 2001). Given the significant risk of poor academic outcomes for children with ADHD (Loe & Feldman, 2007), it is important

that these children are identified as early as possible so their educational needs can be met (Fell & Pierce, 1995).

3). **Time Limitations**

Quantitative Figures

Healthcare professional's specific questions (N: 5)		
There is time pressure when assessing a child for ADHD.	Mean	3.60
	STDV	0.89
There is an excessive caseload / number of children for ADHD assessment	Mean	4.60
	STDV	0.55

Health professionals were asked about time pressure and caseload. On a scale of 1 to 5, with 1 being strongly disagree and 5 being strongly agree. As can be seen from the above means, healthcare professionals 'agreed' (mean 3.60) that there are time pressures with assessing children for ADHD. Interestingly, they also 'strongly agreed' (mean 4.60) that there was an excessive caseload of children whom they have to assess for ADHD. This is consistent with qualitative findings outlined below.

Qualitative analysis

Interviews	EP 1, EP 2, EP 4, HP 1, HP 2, HP 3, HP 4, TP 5

Eight out of fifteen education and health care professionals highlighted the sub-theme 'time limitations'. This sub-theme is also related the sub-theme 'impracticality of NICE guidelines' as it would take a large amount of time to fully implement some of its recommendations. The time pressures that arise from limited resourcing issues are highlighted below, for example:

"*so you know the parent plays a huge role over say, in obtaining a diagnosis*

INT: why do you think that is?

I think sometimes there's, well that's because how the paediatricians' deal with, well they're not in schools are they and perhaps they don't have the time to be in schools checking out whether the symptoms of ADHD are present across a range of contexts" EP 2.

This EP appears to be highlighting the perceived 'time limitations' of the healthcare professional. Four out of five healthcare professionals' also noted the 'time limitations' impact on their ability to provide a thorough assessment of children with possible ADHD, particularly when the child may have other co-morbid difficulties, for example:

"In the sense of how long it takes to diagnose, if I don't have long enough time in clinic I find it more difficult to make a diagnosis so if some of the patients come with possible ADHD or possible autism, possibly attachment disorder or possibly dyspraxia and an hour is just not enough time to asses them, so that would slow up the diagnosis" HP 1.

This finding highlights a clear difficulty in the current system. Time pressure on Paediatricians may have an impact on the assessment process. Another example of this relates to the systemic influences that result from NHS targets, for example:

"Well, in their wisdom someone decided that in terms of our clinics we have got half an hour for review patients or an hour to see a new patient. An hour to take a good and detailed history is just, not of any use it is just not enough you know. All of us have been saying that it is not enough but it has been falling on deaf ears" HP 4.

Another stated:

"in the modern NHS, it's all about ticking boxes, seeing the right number of people in the right number of clinics; I'm only allowed so many sessions in the office per week, and I've got to do this and got to do that, and the managers worry that we're overachieving or underachieving on our guidelines and targets

INT: so you have guidelines and targets to meet, a certain amount of people and

RES: yeah, and that's how the payment to the department is achieved, so

INT: so the more, can you expand on that

RES: o right, it's a head count, if we don't see enough patients then we don't get enough income, then we don't have any more doctors or we lose staff" HP1.

'Limited resources' appeared to present a number of barriers, particularly for health care professionals as they have limited time available for the assessment, diagnostic and intervention process.This finding is worrying as health care professionals clearly identify the impact of limited time on their work. It also highlights the clear link that 'limited resources' has on the everyday practice of healthcare professionals.

Due to time limitations for assessment and diagnostic practice, it could be argued that the use of rating scales is perceived as advantageous for the following reasons (a) they are quick and efficient to complete; (b) they provide an easy means of gathering information about the child's behaviour in multiple settings and situations; and (c) they facilitate the integration of information from multiple sources (Wright et al, 2007). However as highlighted earlier, these rating scales are subjective. Yet the use of rating scales as a time efficient screening tool continues to be widely used in the assessment of children ADHD despite the subjectivity that may exist.

Given that Paediatricians' find and use both confirmatory and disconfirmatory evidence to make a diagnostic decision, they may not have enough time to engage in both confirmatory and disconfirmatory processing. Limited time may impact on their ability to test all of their hypotheses. Also, the information available to healthcare professionals is not always sufficient to permit optimal hypothesis testing. Yet Paediatricians must make decisions and they must act, even if they might prefer to wait until they have more and better evidence to work with (Cox and Popken, 2008).

It could be argued that the current NHS system limits healthcare professional's ability to meet the NICE (2008) guidelines on ADHD assessment, diagnosis and treatment as they are under significant pressure to meet their targets. Such pressures may be

due to a number of factors, for example waiting lists. Pressure to reduce waiting lists means that those concerned have to meet diagnostic criteria in the most time efficient way. This may mean that professionals who are trained to assess and diagnose ADHD are limited in their ability to see children in a range of contexts, liaise with outside professionals and attend multi-disciplinary meetings as they are pressured to reduce the amount of time spent on assessment and diagnosis due to budget limitations. The direct implication of this is that working in a more multi-disciplinary manner, as recommended by NICE (2008) is difficult to achieve. Breggin (1998) as cited in Nylund (2000) supports the view that clinicians are under pressure to streamline the diagnostic process.

4). **Limited Multi-disciplinary working**

Interviews	EP 1, EP 2,EP 3, EP 4, EP 5, HP 1, HP 2, HP 3, HP 4, HP 5, TP 1, TP 2, TP 4, TP 5, P 1, P 2.

Two parents and most professionals from both education and health commented on the lack of multi-disciplinary assessment and diagnosis. Multidisciplinary or multimodal approaches to identification and treatment of ADHD are considered essential (Kewley, 1999; BPS, 2000 Cooper, 2006; NICE, 2008). An accurate assessment requires evidence of pervasiveness and should be based on detailed information from parents, teachers, educational psychologists and other professionals (BPS 2000; NICE 2008). However, most participants in this study highlight the lack of such working practices.

"I think from the point of referral we then lose sight or lose touch of the assessment process, I think it's passed over to the medical staff and it is a medical diagnosis and we all understand that but I don't feel at all that there is, it's hit and miss whether you get a multiagency diagnosis or whether you get purely a paediatric diagnosis, it needs to be more consistent, some Paediatricians will involve more people, some Paediatricians don't" EP 2.

One Health professional highlighted the systemic influence that 'time limitations' has on 'multi-disciplinary working'. These sub-themes are interconnected, for example:

"I would like to do it, as a group we are very keen to work in a multidisciplinary way but the big question always is, where is the time? We have, you know we have very strict job times in the NHS these days, everything is accounted for" HP 4.

Another stated:

"I personally think it should be more multi-disciplinary and I believe that we would need more involvement from Educational Psychology because of their skills and the child's learning and emotional well being and everything but obviously with the number of children that are getting referred to us, probably that might not be possible" HP 3.

Despite the BPS (2000) recommendations that assessment should always reflect the multi-faceted nature of ADHD, taking into account the biological, social, emotional and psychological features of the phenomenon, it appears that the social and emotional aspects of the child may not be fully investigated due to the limited amount of multi-disciplinary working in this local authority. This healthcare professional recognised the value of Educational Psychology involvement, yet believes that due to the high levels of children that are referred for assessment, it may not be possible to work together. EPs in this study also highlight the limited amount of multi-disciplinary work on ADHD they engage in, for example:

"minimal, less than minimal, I suppose perhaps discussion with parents around the behaviours, perhaps discussion around what strategies might be useful, in terms of the actual diagnosis I wouldn't say I have any role" EP 3.

Another stated:

"I don't really get involved with diagnosis at all, X does it by paediatricians, we don't have any joint panels, we don't have anything to do with that, if I have seen a child that might need further exploration around ADHD, because I can't diagnose it" EP 1.

This finding suggests that NICE (2008) guidelines are not being followed in relation to multi-disciplinary assessment and diagnosis. Yet, the BPS (2000) report on ADHD states that "the concept of ADHD is multi-faceted, therefore no individual discipline is likely to be competent to identify, assess and intervene alone. As such diagnosis becomes a mechanical feature in a holistic process involving a range of professionals" (p. 13). However, it appears that only health professionals are responsible for the majority of the assessment, diagnosis and intervention decisions.

Another health professional did highlight some 'multi-disciplinary' input from other professionals, for example:

"it's very limited I suppose, we haven't got teams, but all we have is the information from parents, we would have information from parents, preschool, we were having information from health visitors, nursery school staff, reception school staff, once they are at school they are relying on the teachers, supposing the child goes to any after school activities, sometimes the, like you know the heads of those teams also send us information" HP 5.

Parents also commented on the limited amount of multi-disciplinary working around their child, for example:

"you've got to all work together and that's where it's all going wrong, and a lot of things as well like schools do not work with parents, and parents they don't work with health, they've got to all work together and without that I don't think there is going to be any help" P 1.

Analysis of the data suggests that there was a distinct lack of professionals working together with most agencies reported to be working in isolation. Government guidance, for example Every Child Matters (ECM) (DfES, 2003) recognises 'the need to bring specialist services together, working in multi-disciplinary teams, to focus on the needs of the child' (DfES 2004, p.25). Unfortunately, such advice advocating a collaborative approach is often vague about the reality of how this might happen (Hughes and Cooper, 2007). NICE (2008) guidelines also recommend multi-disciplinary working; however, once again the guidelines do not appear to identify

how this is going to happen on the ground. Fourteen years ago the British Psychological Society report (1996) stated that 'there is active support for current policy developments which seeks partnerships between health, education and social services' (p.10). However, this does not appear to have translated into the reality of everyday practice today. This sub-theme addresses research question three as multi-disciplinary assessment and diagnosis is not currently in place and there are no clear plans for this to be implemented in the near future, at least in the Local Authority involved in this research.

5). **Financial limitations to multi-disciplinary working**

Quantitative Figures

Healthcare professional's specific questions (N: 5)		
Budget constraints impact on our ability to provide multi-modal assessment options?	Mean	4.80
	STDV	0.45

Health professionals were asked financial constraints upon multi-disciplinary working. On a scale of 1 to 5, with 1 being strongly disagree and 5 being strongly agree. As can be seen from the above means, Healthcare professionals 'strongly agreed' (mean 4.80) that budget constraints impact on their ability to assess children in a multi-disciplinary way. This is consistent with the qualitative results outlined below.

Qualitative analysis

Interviews	EP 2, EP 4, HP 1, HP 2, HP 3, HP 4, HP 5, TP 2, TP 5.

"money, too many people, too many bodies, they are trying to cut down, it would be great if they would and I would like to think it would, mm but in my experience is, you know can't afford it, the local authority or nhs" TP 2.

Nine of fifteen education and health care professionals highlighted the sub-theme 'financial limitations to multi-disciplinary working'. One health professional highlighted

the wish to work more with other professionals; however they highlighted limited resources as the stumbling block, for example:

"then we all meet together and say yes we think probably ADHD is a possibility here and we try to start the medication, or at the same time we try this and that and the other, this is not happening and there is no plan to happen yet, cause I think resources are very limited and it's probably the reason" HP 3.

NICE (2008) recommends multi-disciplinary assessment, however they are unclear about who will fund or indeed implement the recommendations. The BPS (2000) recognised that the involvement of a full multi-disciplinary team in each case of ADHD, though ideal, is likely to be constrained by resource, practical and logistical factors. Links between services and professionals are recommended to ensure appropriate assessment and intervention, however, this research has found that real world limitations impact on professional's ability to adhere to the 'gold standard' NICE (2008) recommendations.

It appears that organisational systems may cause difficulties for joint working, for example, resources, budget allocation time issues and legislation. NICE (2008) guidelines suggest that:

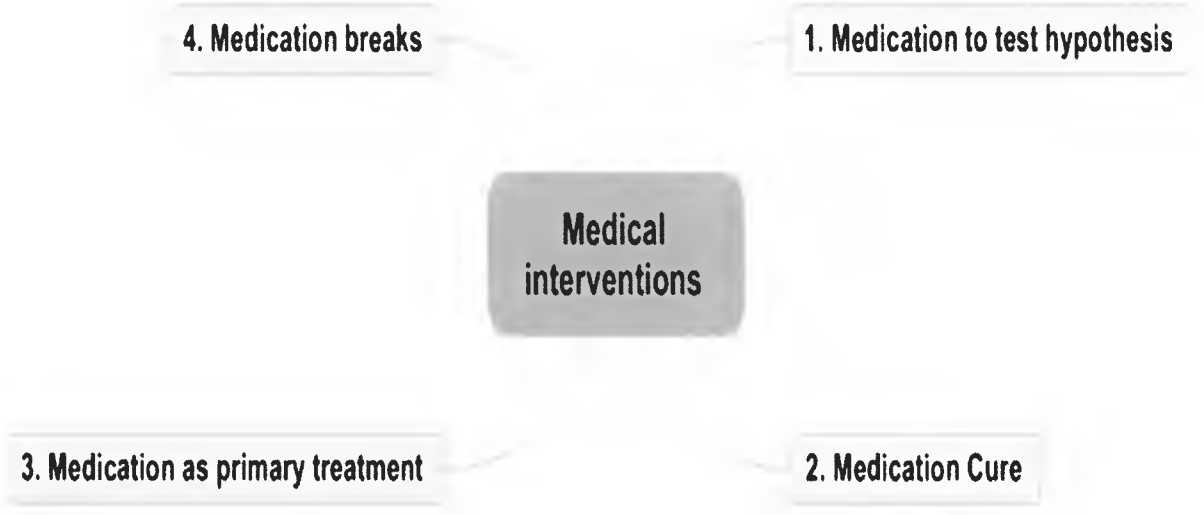
> *"every locality should develop a multi-agency group, with representatives from multidisciplinary specialist ADHD teams, paediatrics, mental health and learning disability trusts, forensic services, child and adolescent mental health services (CAMHS), the Children and Young People's Directorate (CYPD) (including services for education and social services), parent support groups and others with a significant local involvement in ADHD services"* (p. 13).

Yet there is no clear guidance on whom is responsible for leading this multi-agency group. There is also little thought given to the 'limited resources' available in the current economic climate for the realistic implementation of such recommendations on the ground in front line services. Tight budgetary constraints are likely to remain a reality for years to come.

4.4.3 Theme 3: Medical Interventions

The theme of 'medical interventions' was one that emerged amongst parents and all professional groups. This sub-theme helped to partly answer Research Question one as most professionals noted that medication treatment was the only form of treatment available. In the current analysis, medical interventions had four dimensions/sub themes: Medication to test hypothesis, medication cure; medication as primary treatment and medication breaks. These dimensions are illustrated in Figure 4.

Figure 4 Theme 3: Medical Interventions



1). **Medication to test hypothesis**

Interviews	HP 1, HP 3, HP 4,

It was solely health professionals who highlighted the use of stimulant medication in children with symptoms of hyperactivity and inattention as a diagnostic trial. The working plan is that if the child looks, acts, or functions better on a stimulant medication, then he or she should be on the medication and a diagnosis of ADHD has been confirmed. However, studies have shown that behavioural response to stimulants does not distinguish children with diagnosed ADHD from normal children;

thus, a behavioural response does not constitute either a diagnosis or a treatment but rather an expected response to medication (Bernstein et al, 1994). This finding was in line with previous research that highlighted the improper use of medication to test hypotheses about an ADHD diagnosis.

"I would be looking at purely educational, they're under functioning and the teacher thinks they are, then I would go with the diagnosis, occasionally, I'm left thinking, gosh this sounds like ADHD, I haven't got the evidence for it, I'll go on a trial of medication, so we would use the trial of medication to prove the diagnosis" HP 1.

This statement appears to touch upon the subjective nature of ADHD, as there wasn't enough evidence to meet diagnostic criteria, yet the concept of a positive reaction to a medication may reinforce the possibility of a diagnosis. Research suggests that this may lead to a higher degree of false / positive diagnosis, for example, Singh (2007) argues that effective methylphenidate treatment of problem behaviours in children does not indicate accuracy of diagnosis. Rapport et al (1978) as cited in Prior (1997) found that Methylphenidate (Ritalin) has also been shown to improve attention and focus in 'healthy' volunteers.

Another health professional stated:

"you sort of have to get whatever information there is around and sometimes it does take you know quite a while before we say it's time we get off the fence about this one and we actually went through a trial of treatment with this one and see if actually this really isn't ADHD, it is just social circumstances or parenting skills or whatever" HP 4.

Another paediatrician stated:

"there have been times when, I've looked at ADHD as a diagnosis, we've got everything back, and its borderline, I suppose actually in those cases the impairment is quite great, but the diagnosis is weak or not clear, and I would discuss with the parents that the symptoms your child is showing can be helped by this medication, I can only give it when the child's got a diagnosis of ADHD, so let's give the diagnosis

and see if the medication works, if it doesn't work then we'll remove the diagnosis and try something else" HP 1.

This finding is concerning, as it is not in line with ADHD guidelines, for example BPS (2000) guidelines argue that:

> *"a positive response to medication is not an effective or appropriate assessment tool and does not justify abandonment of ongoing assessment, intervention, support and monitoring"* (p. 14).

This finding is also reflected in previous research, for example, Prior (1997) argues that:

> *"retrospective 'confirmation' that a child has ADHD because of their response to a pharmacological intervention such as Ritalin also has a doubtful hypothetical basis as non diagnosed children may also experience similar effects"* (p. 17).

Such variation in practice might suggest that the diagnosis of ADHD, which is premised on the notion that it is a clearly defined 'disorder' which has been accurately diagnosed, could be invalidated, and should therefore be treated cautiously as professionals work in a variety of different ways. It also suggests that an intervention, in this case medication, is being used as an assessment and treatment tool. Could this be a reflection on possible time constraints of healthcare professionals?

2). **Medication Cure**

Interviews	EP 1, EP 4, EP 5, EP 4, TP 1, TP 3, TP4, P 1, P 2

Interestingly, it was two parents and seven professionals from education that commented on the sub-theme of 'medication cure'. The educational professionals highlighted the perception that medication intervention gives the parents the

message that the problem is entirely within the child. One teaching professional highlighted the perception of 'cure' through the following example:

"for some parents, mm, they are looking for medication maybe, mm if required, but not for all, it's not, I think you know a lot of parents are keen to have ADHD looked at because they think there will be some magical pill at the end" TP 1.

Another teacher stated:

"cause some people think they can magically cure children with ADHD and they can't they just need to work out ways to enable them and I don't think everybody does that or can do that" TP 4.

Some parents did highlight the belief that medication may indeed cure their child, for example:

"I suppose I was expecting some medication that would cure him, not cure him but make him better" P 2.

Another stated:

"well, at first I was a bit, but my children needed it, and I swear by it, Ritalin, and without it he wouldn't be where he is today, he didn't take Ritalin in his mocks and failed every test, he took it for his gcse's and passed every one" P 1.

This finding is in line with previous research that has found that parents, after making the decision to treat their child with stimulant medications may unintentionally be more likely to emphasise the positive impact of the medication and minimise side effects and potential risks. Parents may be attributing more efficacy to stimulant treatment than research would suggest (Moline and Frankenberger, 2001). Given that medication is the most often used intervention for children with ADHD, it may be possible that participants perceive a reduction in ADHD symptoms to in some way 'cure' the child for a short period of time. Prior (1997) argues that:

'the use of medication as a primary intervention is potentially a powerful reinforcer of the belief that it has a purely medical basis requiring entirely medical 'solutions'. There are also issues regarding popular perceptions as to the whole purpose of medication i.e. to what extent is it correctly perceived as a symptom suppressant as opposed to it being viewed (and used) as a pharmacological means of controlling challenging behaviour' (p. 22).

Timimi (2004) argues that the children and their carers may be unnecessarily cultured into the attitude of a "*pill for life's problems*" (p. 453).

3). **Medication as primary treatment**

Quantitative figures

Between group questions		Teaching professional (n=5)	Educational psychologist (n=5)	Health professional (n=5)	Parent (n=5)	Total (n=20)
I want children to take medication for their ADHD.	Mean	3.20	2.40	3.80	4.20	3.40
	STDV	0.45	0.55	1.30	1.01	1.01

All participants were asked if they wanted children to take medication for ADHD. On a scale of 1 to 5, with 1 being strongly disagree and 5 being strongly agree. As can be seen from the above means, healthcare professionals 'agreed' (mean 3.80), EPs disagreed (mean 2.40); teacher neither agreed nor disagreed (mean 3.20) and parents agreed (mean 4.20). This was interesting as it suggests that healthcare professionals and parents were more agreeable with the notion of giving medication to children; teaching professionals were neutral in their perspectives and EPs generally disagreed with it.

Five health care professionals were asked what percentage, out of 100, of children that they see receive medication only, behavioural intervention and combined interventions / treatments. As can be seen from the below percentage figures, health care professionals highlighted a mean average of 81 percent of children

receive medication only, this is in line with qualitative findings; a mean average of 30 percent of children receive behavioural intervention as treatment; however it is unclear what these may be. Finally a mean of 32 percent of children receive combined treatment. Such high mean percentage averages indicate that medication is the predominant treatment on offer.

Healthcare professional's specific questions (N: 5)		
What is the percentage of the children with ADHD receive Medication as a treatment?	Mean	80.60
	STDV	14.89
What is the percentage of the children you see who receive professional behavioural intervention as a treatment?	Mean	30.00
	STDV	28.28
What is the percentage of the children that you see that receive both Medication and professional behavioural intervention as a treatment?	Mean	32.00
	STDV	22.80

Qualitative analysis

Interviews	EP 1, EP 3, EP 4, TP 3, P 1, P 3, P 5, HP 1, HP 2, HP 3, HP 4, HP 5.

Most parents, educational professionals and health care professionals highlighted the 'medication as a primary treatment' sub-theme. All five health professionals in this study highlighted medication as the preferred treatment choice. This theme may also be related to the sub-theme of 'limited services and treatment options' as healthcare professionals felt they had limited alternative to medical management of ADHD. The concept of alternative treatments as recommended in NICE (2008) guidelines were not acknowledged, for example:

"INT: and how do you decide on a preferred treatment choice for a child with ADHD?

RES: what do you mean preferred treatment choice, there only two types of treatment drugs to choose, stimulant and non-stimulant" HP 2.

Another noted that the ADHD label would be useless without medication as the primary treatment, for example:

"I would not personally give a diagnosis to a child unless we are going to start on medication, cause I don't think they need the label, and this has been the agreement in the department, but this varies between doctors" HP 3.

The same professional expands on this point:

"what's the point, there's no services if you give a label, I mean, you know a diagnosis without medication, so what's the point, mm, I know, I can write in my notes but I would not be very happy" HP 3.

This healthcare professional appeared to suggest that without medication a diagnostic label is not beneficial. Looking at this further, this healthcare professional goes well beyond establishment of a diagnosis and, instead, determination of need for treatment, focusing on treatment goals. However, the treatment options or goals appear to be solely medication.

Interestingly, the teaching professionals highlighted the subjective nature of individual practice in relation to treatment choice, for example:

"mm we do feel there are times when it depends which doctor you might go to depends on whether you get a medicine or not, so therefore I don't know then, I think maybe it does skew their view, but that's just a feeling though" TP 3.

It was not only health professionals that automatically highlight medication as the primary treatment option, one EP reflects on the expectation of teachers for children to be given stimulant medication, for example:

"I think to a certain extent teachers think oh he's got ADHD, he needs medication and I think even now medication is seen as the holy grail of ADHD treatment and management and it doesn't need to be all the time, I can see its benefits some of the time, I don't think it's always necessary" EP 3.

Another health professional noted the need for impairment in the diagnostic process, yet they continually reinforce the sub-theme of medication as the primary treatment choice, they state:

"*the factors making the diagnosis is actually the child has significant impairment and would benefit from the only intervention we have, i.e. medication, so if my professional opinion is that if this child will actually do well or better being on the medication than not on medication then we will give him a trial of medication"* HP 3.

One parent highlighted that the only treatment discussed was medication, for example:

"was there any discussed, any alternative service or treatment options discussed with you?

RES: no, I was just told he's got ADHD and the way we do this is with Ritalin at the time" P 5.

Although more than half of the parents interviewed described other interventions (e.g. changed diets) having been used at some point either prior or subsequent to the diagnosis of ADHD, once ADHD was diagnosed, medication typically followed as the sole treatment. In only a very few cases did parents report that following the diagnosis of ADHD such interventions were suggested before medication itself was used. The extensive literature on the management and treatment of ADHD suggests that stimulant therapy has been, and continues to be, the primary treatment of choice. In the past few years, the use of stimulant medication has greatly increased as the main treatment for ADHD (MTA Cooperative Group, 2004).

Researchers in the field of education argue that clinicians are medicalising the educational problem of disruptive behaviour in schools and such behaviour may be seen by those in education as 'strictly biological and outside their expertise' (Prosser et al, 2002) or indeed as a dispositional problem (Thomas & Glenny, 2000) not related to their choice of teaching style or ability to engage children in learning. Drug

treatment may also distance all concerned from finding more effective, long-lasting strategies (Cohen et al, 2002).

4). **Medication Breaks**

Quantitative Figures

Between group questions		Teaching professional (n=5)	Educational psychologist (n=5)	Health professional (n=5)	Parent (n=5)	Total (n=20)
Children receiving medication for ADHD should have medication 'time outs' during their treatment.	Mean	4.00	3.80	4.00	4.60	4.10
	STDV	1.00	1.01	0.71	0.55	0.85

All participants were asked if they wanted children to have medication time-outs. On a scale of 1 to 5, with 1 being strongly disagree and 5 being strongly agree. As can be seen from the above means, healthcare professionals 'agreed' (mean 4.00), EPs agreed (mean 3.80); teacher agreed (mean 4.00) and parents strongly agreed (mean 4.60). This was interesting as it suggests that there was strong support for medication breaks among all groups. This finding is largely similar to the qualitative findings below.

Qualitative analysis

Interviews	EP 1, EP 2, EP 4, HP 1, HP 3, HP 4, HP 5, TP 1, TP 2, TP 3, TP 4, TP 5, P 1, P 3, P 5.

This sub-theme was highlighted by most participants, fifteen out of twenty. NICE (2008) guidelines do not recommend the use of medication breaks when treating

children with ADHD. However, as highlighted below, most parent's and professionals appear to disagree with this guidance, for example:

"you have to have breaks in the medication, atomaxotine you don't, because that has to be taken every day forever and when you stop the medication it wears out of the system, it's not just gone over night, methanpheladate, does go overnight, so you do need a break from it, I find a lot of parents do that accidentally, because they simply forget" HP 1.

Another health professional highlighted the uniqueness of each person when it comes to medication breaks, for example:

"I wouldn't go for drug holidays if the feedback I was getting every time is that he is still only just about supported on the medication, that would be too soon to say, but supposing I'm seeing an older child or an adolescent, who's been on the medication for two or three years and they are coming and they're completely fine and I talk to them about their expectations about what the drug is doing" HP 5.

Other professionals highlighted the possible benefits of medication breaks, for example one EP recognised the potential to investigate side effects further through medication breaks.

"it could be useful to, from exploring whether medication is making a difference, mm any symptoms, negative symptoms like loss of appetite and things like that, a break could mean a child goes back to more regular sleeping patterns and or put on weight could be beneficial, so in terms of exploring side effects it could be useful" EP 1.

This finding is in line with BPS (2000) guidelines on ADHD interventions. It states that "once a programme of medication is embarked upon, opportunities for assessing the child's performance when not on medication should be investigated (i.e. during regular medication 'holidays'). Such assessment should include means of monitoring a child's perceptions of what it is like for that child to be taking and not taking medication" (p. 15). The difference in guidelines appears to highlight the differences

between the psychological (BPS, 2000) perspective on ADHD management and the medical perspective (NICE, 2008) on ADHD management.

Most parents were in favour of medication breaks as they were concerned about their child's low weight on medication, for example:

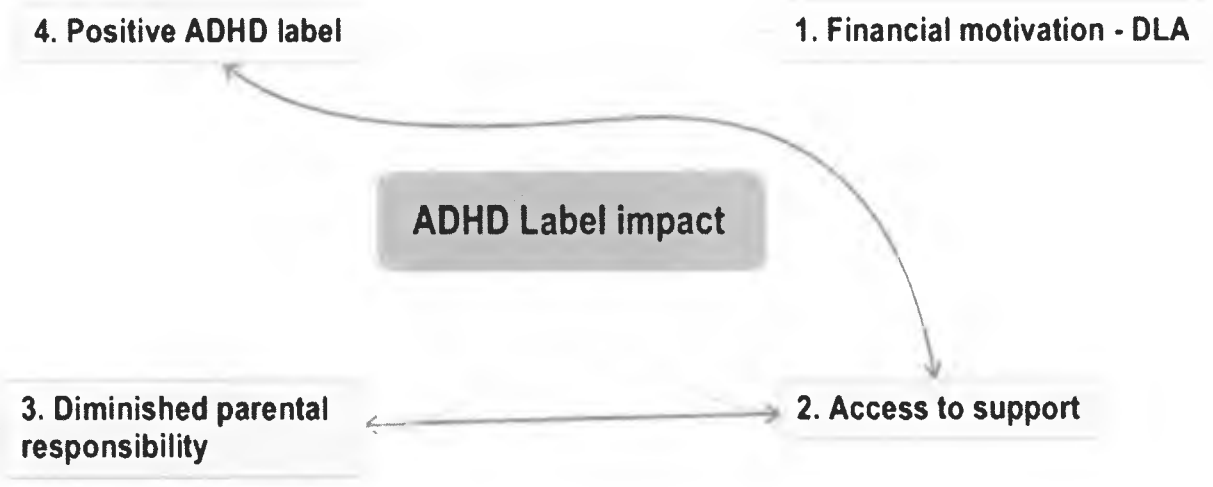
"*I do give him medication breaks when I can, ah, if the weekend seems ok then he can have a break from it or in the summer holiday I try to keep him off the medication, that helps bring his weight up*" P 5.

This finding suggests that there are many reasons why participants felt it necessary to have medication breaks. Healthcare professionals were split in their opinions on medication breaks as they highlighted the limitations of this option due to the type of medication the child is taking. Parents were in favour of medication breaks as they were concerned about their child's low weight due to the side effect of apatite suppression. Once again these findings question how strongly the NICE (2008) guidelines on ADHD are strictly adhered to by those who assess, diagnose and treat ADHD.

4.4.4 Theme 4: ADHD Label Impact

The theme of 'ADHD label impact' within the assessment and diagnostic process was one that emerged amongst parents and all professional groups. This theme addresses Research Question two as it identified one factor that influenced the intervention options for ADHD, in particular the belief that children with a diagnosis of ADHD will get more support in school. DeGrandpre (1999) as cited in Singh (2007) argues that ADHD problematises the assumption of an objective measure of 'normal' functioning and points to the distinctly social tasks of judging normative behaviours by assigning diagnostic labels. The problematic boundaries between 'normal' and 'pathological' in relation to the ADHD diagnosis have been the subject of longstanding critique. 'ADHD label impact' had four dimensions/sub themes: Financial motivation – Disability Living Allowance (DLA), access to support, diminished parental responsibility and positive ADHD label. These dimensions are illustrated in Figure 5.

Figure 5 Theme 4: ADHD Label Impact



1). **Financial Motivation – DLA**

Quantitative Figures

Between group questions.		Teaching professional (n=5)	Educational psychologist (n=5)	Health Professional (n=5)	Parent (n=5)	Total (n=20)
Parents put children forward for ADHD assessment with a view to State Allowance (DLA) for their child?	Mean	3.80	4.00	3.80	2.80	3.60
	STDV	1.01	0.71	1.30	1.50	1.19

All participants were asked if they felt parents put children forward to get Disability Living Allowance (DLA) for their child. On a scale of 1 to 5, with 1 being strongly disagree and 5 being strongly agree. As can be seen from the above means, healthcare professionals 'agreed' (mean 3.80), EPs agreed (mean 4.00); teacher agreed (mean 3.80) and parents neither agreed nor disagreed (mean 2.80). This was interesting as it suggests that professionals felt that parents had a financial

incentive to put children forward for ADHD assessment. Parents were neutral in their response to this statement (mean 2.80). These figures are consistent with qualitative results below.

Qualitative analysis

Interviews	EP 1, EP 5, HP 1, HP 3, TP 1, TP 2, TP 3, P 2

"I'm just very aware, maybe I'm sceptical now, but I'm very aware that for certain diagnosis, such as ADHD, it is linked to finance and mm, people can then apply for DLA having an ADHD diagnosis and I think a lot of research is done, mm and I think when they discover what they are entitled to and how much it is, mm, I think a lot of them are wanting that diagnosis for the, to be able to say my child has got this and hence I can get this money" TP 1.

The financial incentives that parent's are able to access if they obtain a diagnosis of ADHD was mentioned by all professional groups. Two EPs, three teachers, two health professionals and one parent highlighted potential financial motivation for an ADHD diagnosis. They appeared to suggest that parents actively seek an ADHD label to access financial resources. In a study from the United Kingdom regarding use of mental health services for hyperactivity, the strongest predictor of a parent's belief that the child's hyperactivity was a problem meriting referral, was the financial impact of the child's behaviour on either parent's work (Sayal et al, 2003 as cited in Furman (2005). Similarly, parents and children are viewed suspiciously and positioned as deceitful, undeserving or *'fighting for more than their share of scarce resources'* (Lloyd & Norris, 1999, p. 506).

"Financially, parents will get money and take the benefits that fall from that; I'm not too up on all the benefits for that" EP 1.

However, some healthcare professionals appeared to be aware of this possibility:

"mm, one of my colleagues is forever thinking that the parents are only in it for the DLA money, and they don't actually want anything for the child, it's just DLA money, and occasionally I would agree with that" HP 1.

Most parents did not agree with this and reported that they were unaware of the possibility of DLA prior to diagnosis, for example:

"I just think there needs to be more help to the parent, I'm a benefit officer now and I still see people that have children that have been diagnosed with certain things who haven't got a clue what DLA is" P 2.

This finding is in support of Lloyd and Norris (1999) research that suggests ADHD may bring financial support for parents in the form of disability allowance. However, it could also be argued that this is a systemic issue, in that DLA is available to support all children with ADHD. Parents did not see this in the same way as professionals. Generally parents were grateful for the financial support gained via DLA; however they all reported that DLA was not a motivating factor in getting their child assessed for ADHD. Olfson et al (2003) notes that rates of treatment for ADHD have increased significantly across all socio-demographic groups, and in particular among children from poor and low-income families. This suggests that it is not only low income families that have children with ADHD, however it does suggest that it is more prevalent among low socio-economic families.

2). **Access to Support**

Interviews	EP 1, EP 3, EP 5, HP 3, TP 1, TP 4, P 1, P 2, P 3, P 4, P 5.

"parents feel that they can access a route forward for statutory assessment to get further support, as I said disability living allowance, so for some parents its really useful, whether it's appropriate useful or not is another question but they would perceive that as useful" EP 1.

A second dimension to 'ADHD label impact' was the sub-theme that a diagnosis of ADHD will act as a route to access more support for the child. All five parents, three EPs', two teachers and one health professional highlighted this sub-theme. This was also an area that was highlighted heavily during the parental interview. One EP appeared to suggest that both parents and health professionals believe that the ADHD label will give access to more support, for example:

"where the paediatrician will know if they give a diagnosis that will give the child more access to support, so again they are doing it to benefit the child" EP 5.

One teacher also noted that parents believe that a diagnosis of ADHD will give more support for their child, for example:

"on occasion the parents think a diagnosis will open a whole new world in school" TP 1.

Another teacher agreed that a diagnosis does give a child more support, for example:

"if you have special needs in this school no matter what your diagnosis is, if you don't have the diagnosis, you don't get the support, so if a child has ADHD, from my experience of our staff, up until the diagnosis point, they're regarded as disruptive and things are done to manage their behaviour and to improve their behaviour but there's always, if you like more negative feeling towards it, whereas I think when they have a diagnosis of ADHD, the teachers and TA's have more understanding and maybe sympathy for, and therefore have a different approach and then that in itself is then going to impact on the child's behaviour" TP 4.

In this example, the teacher describes the potential for some staff to treat children with possible ADHD as disruptive; however they also note that the label provides staff with a greater level of understanding of children with ADHD symptoms and therefore are more supportive of the child's additional needs.

Parents agreed with professionals and believed that a diagnosis of ADHD would lead to more support. It seems that despite inclusion policies and SEN policies in schools, most parents believe that a statement is required to support their child or their child's additional needs would not be met. All parents highlighted the need for support for their child following diagnosis, for example:

"I just think that there should be more, before they are labelled, even before they are labelled they're should be more support within the school and I know the school hasn't got the resources, mm but there should be somebody there" P 4.

Another example of parent's perspectives that a diagnosis will give their child additional support in school:

"as I said I was expecting the doctors to then contact the school and say this child has this you need to now employ someone at school, because you don't know as a parent, you don't have a clue what the process is, you don't, you know you assume that the doctors and the teachers and everyone are going to talk together on your behalf now and its only afterwards that you realise you have to do the work actually, mm, I was expecting to get I suppose, x statemented, I suppose that was my expectation, okay, he has these problems, mm, and I expected him now to get help at school for those issues" P 2.

Accessing support for some parents is perceived as a 'battle'. This 'battle' included convincing schools that a statutory assessment needed to be put into place. One parent described it as a challenging process. However, parents appeared to be motivated to go through the process because of the perceived benefits of additional support for their child, for example:

"it was quite a surprise to say, oh just because your son has these issues of ADHD doesn't really mean you will get any extra help at school and I find that quite hard to believe, I just assumed when he was first diagnosed okay, now he will get some support, he'll either be kept in mainstream school if he can cope or instantly there would be a place for him in special needs school, but it's only as you go on and you realise actually that doesn't come and you have to fight for it if you want it and you

do have to push for everything and that is my main issue with the statementing process and the diagnosis as well, I'd feel like a lot of parents, especially with children with special needs have special needs themselves and don't always know how to fight the battle for their children and I think that's a major issue in X" P 2.

As with any label, ADHD can be helpful in highlighting the general area of concern. However, it is important that parents are aware of the support that exists for their children in school regardless of the diagnostic label they receive. There was a limited amount of previous research on the belief that a diagnostic label of ADHD will give access to support, particularly in schools.

3). **Diminished parental responsibility**

Interviews	EP 1, EP 2, EP 4, TP 2, TP 3, TP 4, P 3, P 5.

The third dimension on 'ADHD label impact' was of that of 'diminished parental responsibility'. Two Parents and most educational professionals highlighted this sub-theme.

"parents, in some cases it absolves them of any responsibility of dealing with the child's difficulties because they can slap that label of ADHD and maybe absolve them of the responsibility of looking at their parenting skills, or maybe, you know it gives them some where to place, to put in a box to say my child is like this" EP 2.

Another EP stated:

"Perhaps a diagnosis at the, as an end result would be enough and parents then feel that it's not their fault, that it's something beyond themselves" EP 4

One EP highlights the possibility that parents may feel relief that their child is given medication to treat the child with ADHD, for example:

"parents feel they have failed and in my experience when they need to go to the Paediatrician about the behaviour of their child they, a lot of them tend to be really happy that they get given medication cause they don't have to make the effort, you know" EP 2.

One teacher said:

"well I think that can sometimes be, when a parent who will sometimes use it to excuse the behaviour of a child, what do you expect he has got ADHD" TP 3.

Parents did not address diagnosis as an excuse for their child's behaviour. Two parents commented on the relief they felt when their child received a diagnosis of ADHD, for example:

"I was like a relief, just to know why he was like that

INT: why do you say a relief?

RES: mm, well not a relief because obviously I didn't want him to have it, it's just the fact that I knew what was causing his behaviour and things like that" P 3.

For two of the parents interviewed, the diagnosis confirmation was a relief because it answered a lot of unanswered questions. Regardless of whether parents were expecting a diagnosis of ADHD or not, these parents appeared relieved as they felt there was an explanation for their child's behaviour and potential support for their child as a result of the label.

Attribution theory (Kelley, 1972) is often used to predict behavioural and emotional responses to stressful events. The way in which individuals explain the causes of events, or attributions, is measured across three dimensions: (1) internal/external (the degree to which an individual perceives that an event is caused by personal factors as opposed to environmental or other external factors), (2) stable/unstable(the degree to which causes are attributed to enduring or transient factors), and (3) global/specific (the degree to which causes are attributed to a

variety of contexts versus specific situations) (Kelley, 1972 as cited in Antshel, Brewster and Waisbren (2004). In the paediatric literature, a number of authors have shown that the types of attributions parents make about the cause(s) of their child's behaviour can, in part, explain the emotional and behavioural responses of parents toward the child (see review by Joiner & Wagner, 1996). Parent attributions are also predictive of the quality of the parent–child relationship (Bugental & Johnston, 2000 s cited in Antshel et al (2004); when parents see children as responsible for their misbehavior (e.g., internal attributions), they are more likely to respond negatively to such behaviour (Slep & O'Leary, (1998) as cited in Antshel et al (2004). Furthermore, there is some evidence that age is a mediator of parental attributions; older children with misbehaviour/academic difficulties are viewed more negatively (Gretarsson & Gelfand, 1988 as cited in Antshel et al (2004).

The theme of 'diminished parental responsibility' is in line with previous research, Atkinson & Shute (1999) as cited in Graham (2008) argues that parents are complicit in the increasing rate of diagnosis because a medical label is said to relieve them of responsibility or blame for their child's behaviour. Mah and Johnston (2007) argue that parents of children with ADHD take less personal responsibility for their children's behaviour than do parents of non-problem children. They go on to argue that:

> *"the experience of parenting a child with ADHD is related to a diminished degree in which parents see either themselves or their children as responsible for the child's difficult behaviour"* (p. 137).

4). **Positive ADHD label**

Interviews	EP 2, EP 3, EP 4, EP 5, TP 1, TP 2, TP 3, TP 4, P 2, P 3, P 5.

Three parents and most educational professionals highlighted the positives of an ADHD label in the education setting.

"you can plan intervention according to the diagnosis, you can plan what you need to do to support that child in school" EP 2.

Cooper & Ideus (1996) reinforce this finding and state that understanding of the nature of ADHD can be used by a teacher to make adaptations to a child's learning environment, thus preventing difficulties interfering with educational progress. However, Koonce et al (2004) found that teachers made more negative judgments about children's social and attentional skills when the children were labelled with ADHD in comparison to a non labelled condition. EPs can also assist teachers in understanding the additional needs of these children.

Another EP said:

"I think sometimes it can be an explanation for behaviours, so sometimes they may have just been labelled naughty and then with that diagnosis of ADHD, but perhaps they have a greater understanding of the reasons for that child's behaviour" EP 3.

Parents also highlighted how a diagnosis of ADHD led to more understanding of their child's needs, for example:

"I realise that you know some of the things I was asking him to do before hand are just physically impossible for him to do, he cannot sit still, you know his concentration levels aren't great and you know I was expecting him to do stuff and you know, I was getting really angry thinking why isn't he listening to me; when actually now I know, well actually it's not that he isn't listening to me it's just that the concentration is gone" P 2.

Research suggests that parents of children with chronic disease (e.g., asthma) may hold their children to different standards and are often less strict in disciplining their children for behavioural and/or academic difficulties (Walker, Garber, & Greene, 1993), even though the chronic behaviour may have no impact upon the child's behaviour or academic achievement. It can be hypothesised, therefore, that when the child has a chronic health condition that does effect academic achievement or behaviour, such as ADHD, parents could hold their child

less responsible. Interestingly, Hareli and Weiner (2002) argue that when children receive feedback from others about the reasons for their success, the child may feel pleasure or pride because his/her achievement did not go unnoticed and because the feedback may suggest that the child has outstanding qualities. Considering this research, a label of ADHD may lead to key stakeholders re-framing the child's behaviour in a more positive light.

A diagnosis of ADHD is simply a label for a particular cluster of behaviours. Newnes & Radcliffe (2005) argue that humans are all considered to have a cluster of behaviours that make us who we are, except there are lots of different behavioural clusters that do not attract labels. Positive behavioural clusters are more typically called hobbies or even jobs, yet problematic behaviours appear to be talked about in diagnostic terms. Yet this finding suggests that in some cases, a diagnostic label can bring a level of understanding for a child's additional needs for both parents and teachers. This finding suggests that a diagnostic label, can actually lead to more understanding of a child's difficulties, both at home and at school.

4.4.5 Theme 5 NICE Guidelines

This theme was one that emerged amongst parents and all professional groups. 'NICE guidelines' had three dimensions/sub themes: Lack of awareness, NICE guideline impracticality and response to NICE guidelines. These sub-themes are illustrated in Figure 6.

Figure 6 Theme 5 NICE Guidelines

1). Lack of awareness

Interviews	EP 1, EP 2, EP 3,EP 5, TP 1,TP 2, TP 3, TP 4, TP 5, P1, P 2, P 3, P 4, P 5.

Education professionals and parents were generally unaware of the NICE (2008) guidelines on ADHD. Teaching professionals and parents had never heard of the NICE guidelines. EPs noted hearing of them but had limited understanding of what the recommendations are, for example:

"I heard about them on the news, I haven't read them and I wasn't sent them" EP 3.

Another stated

"yep I have heard of them, I don't know very much about them, I am just aware of them, I'm, I don't know if I'm guessing this or dredging up from some corner of my memory but mm, alongside medication there should be some support going in for managing them, mm, but I don't know enough about them to comment on" EP 1.

Parents also stated their limited awareness, for example:

"Have you heard about the new NICE guidelines for ADHD?

RES: no, but we're always the last to find out, we're parents" P 1.

It was clear that educational professionals and parents had limited knowledge of the NICE (2008) guidelines. It does highlight the reality that those in the education field are not up to date on the current 'gold standard' ADHD guidelines. This also suggests that integrated working, as outlined in Every Child Matters (ECM) (2003) is not working well. Professionals from health were highly aware of the guidelines, yet this was obviously not communicated to those in education, despite the fact that more multi-disciplinary working between the two is a key recommendation of the guidelines and ECM. This serves to highlight the ongoing fragmentation that exists within children's services. Research Question three was partially answered in this sub-theme as parents and teachers were completely unaware of the NICE (2008) guidelines on ADHD. EPs were also generally unaware of the guidelines and did not know how they were being implemented. Again, healthcare professionals were aware of the guidelines but felt limited in their ability to put some of the recommendations into practice. This is interrelated to the 'NICE guideline impracticality' subtheme below.

2). **NICE guideline impracticality**

Interviews	EP 1, EP 2, EP 3, EP 4, HP 2, HP 4, TP 2, TP 3, TP5.

"of course we can't follow all the NICE guidelines recommendations, mm, because there are no resources available, it's not practical, but the majority of things we do follow the NICE guidelines" HP 2.

Professionals from both education and health commented on the impracticality of NICE guidelines. As can be seen below, most education professionals highlight the importance of resources required to implement alternative intervention and treatment options as highlighted in recent NICE (2008) guidelines on ADHD. Two health care professional also noted impracticality of some of the NICE guidelines for example:

"it is impractical, for example, like if you look at the recent NICE guidelines, it says that once you make the diagnosis or even if you don't make the diagnosis yet, the G.P can refer those children and parents or family onto the parent training group, there isn't available, but Parentis which is available in the area, they are not geared up to the children who are suspected of ADHD, it is a general kind of parent support group, so for those reasons and if you read through the NICE guidelines, a lot of them are impractical, you can't really" HP 2

Education professionals also commented on the resource limitations surrounding ADHD and NICE guidelines, for example:

"as with all I think, initiatives you need the money to do it, is it practical, put the money in and possibly it could be, and you could have all these specialist teams, whether X will come up with the money to provide such a team, mm, depends how high on their agenda it is, you know X surprise me, you know sometimes they run with things" EP 2.

As parents were not aware of the NICE guidelines they were unable to comment upon them. Due to the recent nature of the guidelines, there is limited previous research to draw upon. However, it appears from the above finding that these recommendations require a high level of resourcing in order to be fully implemented. This finding also helps to answer Research Question 3 as there is little response to the guidelines due to limited resources and there is also no clear message that there will be integration of these guidelines into day to day practice.

3). Response to NICE Guidelines

Interviews	HP 1, HP 2, HP 3, HP 4, HP 5

Once again educational professionals and parents were unaware of any response to the NICE guidelines. However, all five health care professionals did have views on their implementation, for example:

"What is your understanding of the steps that have been or will be taken to implement the new NICE guidelines for children with ADHD in X,

RES: I don't think any steps have been taken at the moment, I don't know any planning where steps are going to be started to be taken, I'm not aware about anything, aiming high doesn't address anything for ADHD" HP 3.

Another stated:

"I'm not aware of any, because the new NICE guidelines are talking about ADHD parent training and children's behaviour management and mental health assessment, nothing is happening" HP 2.

Such comments appear to highlight the limited services and alternative treatment available to implement the NICE guidelines. It was apparent from some healthcare professionals' comments that NICE (2008) guidelines were simply that, guidelines.

For example:

"but they are useful because they are guidelines, but they are that, they're guidelines, they're not, it's not European legislation or NICE legislation, they are the guide as to what we should do" HP 1.

This response appeared to indicate that as such they may therefore not always be fully adhered to. Another interesting comment claimed that the guidelines were used to reinforce a diagnostic or treatment decision, for example:

"are the NICE guidelines for ADHD helpful for you?

RES: They are because we can hide behind them

INT: what do you mean by that?

RES: mm, so something like the younger children, parents will be pushing, oh he's two and impossible, well we don't prescribe at that very young age, you know NICE guidelines say he has to be six, so we get to the four year old who's killing his mother and I say, well I shouldn't do it until he's six, but because it's you, you know, so as I say, I hide behind them quite often and I quote them to the parents" HP 1.

What emerges from this set of findings is that NICE (2008) ADHD guidelines are not being fully adhered to in this local authority. Healthcare professionals' acknowledge that there was a limited reaction to the guidelines and thus limited implementation of them. One healthcare professional noted that they were used as a 'shield' that could be referred to depending on his / her preferred treatment choice. As noted in previous themes discussed above, there are other factors that impact on the implementation of these guidelines, in particular, limited resources, limited services / alternative treatment options and limited time to work in a multi-disciplinary way. Due to the recent nature of NICE guidelines on ADHD, a limited amount of previous research exists.

4.6 Conclusions

This chapter has presented the findings of the study in the context of relevant literature. The literature review (Chapter 2) reviewed the main factors that have previously been identified as impacting upon the assessment, diagnosis and treatment of ADHD. The findings from this study reinforce and help to further our understanding the numerous interacting factors that are necessary to assess,

diagnose and treat ADHD. The findings identified areas that are important to consider when assessing, diagnosing and treating ADHD, such as the subjectivity of rating scales, lack of training for teachers on ADHD and limited service or alternative treatments. The findings identified new areas such as medication to test diagnosis and the impact of parental influence on the assessment process.

Despite ECM (2003) being in place for seven years, Local Authority Children's Services and health providers in this case, continue to be acting as discrete units with different departments generating different legislation and guidance, using different discourse and different conceptualisations in an area where there is a very clear need for health and education and social care to be working closely together to support children and their families.

Parents and Educational professionals were generally unaware of NICE guidelines on ADHD. Healthcare professionals acknowledged that there was a limited reaction to the guidelines and thus limited implementation of them; however there were a number of reasons why these were not fully implemented in the LA. The final chapter will discuss the general implications of the findings, implications for Educational Psychologists and implications for the LA. Finally, limitations of the study, potential future research and the overall contribution of the study to research are discussed.

Chapter 5: Summary and conclusions

Chapter 4 described the findings of the study in light of previous research. This final chapter will begin by summarising the findings in relation to the research questions followed by a consideration of methodological issues. The implications of the findings to the professional and local authority context and the overall contribution of the study will be discussed. Lastly, recommendations for future research will be suggested and final conclusions will be drawn.

5.1 Summary of Findings

The findings of this study highlight the reality of current assessment, diagnosis and intervention practice in one local authority in England. It demonstrates that despite 'gold standard' (NICE, 2008) guidelines on ADHD assessment, diagnosis and treatment; the process is constrained by factors such as limited resources, subjective assessment tools, limited services and alternative treatment options, and a limited amount of multi-disciplinary working. It also demonstrates that despite ECM legislation, there is limited communication and liaison between education and health.

'Limited resources' appeared to present a number of barriers, particularly for healthcare professionals as their ability to work in a multi-disciplinary manner was impacted upon by the limited time available to them due to NHS target setting. This finding addresses Research Question two as limited resources appear to be a factor impacting on the process of assessment, diagnosis and treatment of ADHD.

Research Questions 3 (**Are professionals and parents aware of 2008 National Institute for Health and Clinical Excellence (NICE) guidelines on ADHD and how are the current educational and healthcare services responding to them within the holistic Local Children's services?**) was answered as parents and educational professionals were not aware of the NICE guidelines or the potential implementation of the recommendations. Healthcare professionals identified a number of potential reasons why the guidelines are not being implemented in the local authority, in particular the limited resources needed to implement them.

Research Question 2 (**What factors influence the process of assessment, diagnosis and treatment of children with ADHD?**) was answered as there were numerous factors influencing the assessment, diagnosis and treatment of children with ADHD. For example, the overarching theme of 'subjective diagnosis' highlighted that the use of rating scales can be a subjective tool; therefore it may be an unreliable factor that influences the assessment process. This potential subjectivity of information is a major weakness in the current assessment and diagnostic process. It reinforced the view that the phenomenon of ADHD assessment and diagnosis is complex; as it relies on a number of different perspectives on a considerable range of behaviours in completely different contexts.

Resourcing issues were identified and these were noted to impact upon the amount and variety of services and alternative treatments for ADHD in the local authority. Medical treatment appears to be the preferred choice of intervention by healthcare professionals. However, as there are limited support services and alternative treatment options available in the local authority, medication treatment was identified as the most accessible option and therefore was discussed as the primary treatment option. Medication was seen as a cure by some participants.

Medication appears to be used as an assessment tool by some healthcare professionals. Despite previous research which suggests that utilising medication to test a hypothesis about a diagnosis may result in a number of false positive results. The concept of medication breaks was generally felt to be a positive step, particularly by parents, as side effects of medication appear to suppress the appetite of their children which impact upon the children's weight.

A lack of training on ADHD / SEN may influence teachers who are not properly informed about the wide range of factors; biological, psychological, social and cultural, which results in a poor understanding of children with ADHD. This lack of understanding can have a negative impact on the teachers approach and interactions with ADHD children.

The findings suggest that although there are well documented national guidelines on ADHD, they might not always be adhered to in practice. Rather, there

was an absence of evidence to show that effective non-intrusive early intervention had taken place to address the difficult and distressing experiences of children, young people and their families. There was a distinct lack of multi-disciplinary working around ADHD with healthcare professionals primarily responsible for assessment, diagnosis and treatment. This finding was also impacted upon by systemic factors within the NHS, such as patient number target setting, maximum of 1 hour to assess children and restrictions on paediatricians ability to attend multidisciplinary meetings or work in a more multi-disciplinary way, for example attending In School Reviews (ISRs).

Findings also suggest the label of ADHD has potential benefits for children with ADHD as it can lead to more understanding of the children's needs. There was a strong feeling among educational professionals that parents were financially motivated to get an ADHD label for their child or indeed at least to get more support for their child in school. Additionally it was felt that parents of children with ADHD felt a diminished responsibility for their child's behaviour once an ADHD label had been attached.

Research Question 1 (**What are the perceived processes of assessment, diagnosis and pharmacological treatment / interventions for children with ADHD in Local Children's services?**) was fully answered as EPs were not involved in the process of assessment or diagnosis, teachers could only account for their participation when filling in the rating scale and parents had difficulty recalling the exact process of assessment and diagnosis. Parents recognised that they were interviewed, filled in a rating scale and had their child observed by the paediatrician, however they did not expand on how they found the process. Healthcare professionals highlighted the assessment steps in accordance with meeting the DSM IV diagnostic criteria.

The findings provide evidence to suggest that despite the recommendations of multiple researchers, in reality little has changed on the ground as children are still being assessed, diagnosed and treated by one professional group, using potentially subjective assessment tools within a system that limits their ability to change and adapt to the recommended guidelines provided for them. Despite this finding the

necessary conditions needed to change the reality on the ground is not likely to change in the near future, due to the limited amount of resources available to implement change, particularly in the current economic climate.

5.2 Limitations of the research and potential improvements

The sample size was relatively small, thus limiting the generalisability of the findings; however, the findings are similar to that of previous research which suggests that the findings contribute to a wider understanding of ADHD in the UK. Gaining access to healthcare professionals was difficult due to their limited availability; however it yielded very valuable information.

Despite piloting the interview schedule, some parents who answered questions did not elaborate on their answers. Some parents that participated in the study had a limited understanding of the assessment, diagnosis and treatment of their child's ADHD and were therefore unable to expand on their views. This occurred despite the researcher's efforts to clarify or expand upon questions. It is unknown as to whether this is due to a lack of collaboration during the assessment process or simply parents who were not very expressive.

Children's views were not sought in this study. This is a considerable limitation of this research and as a consequence it may have possible limitations to the findings as the child's voice is not represented in the study. Choices had to be made as there were time limits imposed on the researcher due to his role as TEP in the LA. The process of analysis (Thematic Analysis) and the time consuming nature of such an analysis was also a factor in this choice. Also the ethical aspect of interviewing children, accessing permission and ensuring children would have been able to understand and respond appropriately to questions were other factors that resulted in the voice of the child not being represented in this research. The Children's Act (2004) states that when reaching decisions about children, the ascernable wishes and feelings of the child must be taken into account, with consideration being given to the child's age and understanding.

The study relied on a one-off interview and questionnaire with four groups. It therefore relied on their views at a particular time, thus offering a 'snapshot' of their views and experiences. However, it is hoped that these findings contribute to a wider understanding of the ADHD assessment, diagnosis and intervention process from key stakeholders perspectives.

Interviewer style and characteristics may have led to some interviewer bias. Although attempts were made to reduce the effect of the 'self' with regards to interpreting the qualitative data, it is acknowledged that the 'self' may have influenced the delivery of participants' narratives as well as the researcher's interpretation.

The use of the questionnaire was of little value in this research as it added little additional information to the qualitative data. The researcher should have been more confident to pursue a purely qualitative research approach.

If the study were to be repeated, a greater proportion of the research would have used questionnaires with a wider population, as it would allow for a greater amount of data from a larger population. Should there have been more time and resources for this research, more participants' views may have been sought. This would have allowed access to a greater amount of participants. This would make the findings more generalisable to the entire UK population as opposed to the current local emphasis.

5.3 Implications of research findings

This study has many implications for professionals and the local authority in which the research took place. This study makes a valuable contribution to overall research on ADHD as it has a number of interesting findings about the assessment, diagnosis and treatment of ADHD. This section begins by considering the general implications of the study. It then looks at the implications for EPs and the local authority. Finally implications to research are considered followed by concluding comments.

Implication of findings:

From the themes identified, the following factors appear to impact on the assessment, diagnosis and treatment of children with ADHD. These factors are discussed below and the implications of these factors are identified.

a) Findings suggest that the widely used ADHD diagnostic questionnaires are highly subjective and impressionistic. This is an area of weakness in the assessment and diagnostic process. Therefore, it may be helpful if the rater is advised how much is too much, how much motion and how often under what circumstances constitutes fidgetiness etc. Improvements in diagnostic methods which improve accuracy while meeting requirements for cost-effectiveness would also be worthwhile.

b) Findings suggest that parents have a considerable influence on the outcome of an assessment of ADHD. Opportunities for school representatives to attend the initial assessment meeting to contribute their findings of the child in a different context may lead to a more balanced picture of the child and thus lead to more evidence based diagnoses. This more direct form of communication may provide the opportunity for schools to clearly communicate their views about a child's behaviour. Telephone consultations / conversations with the class teacher may also be an option for time pressured diagnostic professionals.

c) Findings suggest that medication is used to test diagnosis. Research suggests that this may lead to a higher degree of false/positive diagnosis. Therefore, ADHD guidelines should be adhered to and this practice should be reconsidered.

d) Findings suggest that there are limited services and alternative treatment options for children with ADHD. Therefore, alternative treatment options, like those identified in NICE (2008), for example, parent training, should be made available. Educational Psychologists and or parenting practitioners within the Local Authority are well placed to set up such an intervention in partnership with NHS colleagues. Such support / advice groups may help with the

exchange of information and also help parents to see their child more objectively.

e) Findings suggest that teachers feel undertrained on ADHD and SEN in general. Therefore, an increase in the amount of continuing professional development for teachers in the areas of SEN should be considered. This will provide teachers with the skills and knowledge to identify children with ADHD symptoms and provide support for children with ADHD in school. It is important that teachers and parents have a good understanding of ADHD so they can support children appropriately. Appropriate training will also help to ensure that children with ADHD receive suitable interventions in the school environment to support their additional needs. Educational Psychologists are well positioned within the local authority to organise In Service Training (INSET). This would also contribute to current government policy on inclusion as it would ensure that all professionals are able to turn theory into practice; thus enabling all children who display ADHD characteristics to achieve their potential under the five ECM (DfES, 2003) outcomes.

f) Findings suggest that there are different perspectives on the concept of medication breaks, despite clear NICE (2008) guidelines on this area. Therefore, healthcare professionals should re-assess their approach to recommending 'medication breaks' so that there is a consistent approach between professionals. Parents should also be consulted about their views on medication breaks to ensure they are adhering to the paediatrician's professional perspective.

g) Findings suggest that medication breaks, if used despite the recommendations of NICE (2008), should be discussed with parents and schools to investigate how children on medication have reacted during these breaks, particularly in relation to their attention, impulsivity and behaviour in different contexts. This may help to identify how children are managing their ADHD symptoms whilst taking and not taking medication.

h) Findings suggest that parents believe their ADHD child will get additional support in school and believe a statement of SEN is needed in order for this to be achieved. Therefore, parents should be fully informed of the support

systems that exist within schools to support their child prior to, and following their child's assessment of ADHD.

i) Findings also suggest that parents would like more support following a diagnosis of ADHD. Parents should therefore be given an information pack about their child's diagnosis so they are fully informed and feel supported after the diagnosis is given. A representative from Health and Education should be identified to produce such a pack for parents.

j) Findings suggest that there is limited time available for Paediatricians to work in a multi-disciplinary way. This also impacts on their ability to carry out a thorough initial assessment of ADHD, particularly when there are additional co-morbid difficulties that need to be assessed. Healthcare professionals highlighted modern NHS targets as the main reason for this limited time. Therefore, a review should be considered by the NHS as to the practicality of such a rigid target setting system, as it is impacting on the ability of healthcare professionals to fully assess children with complex needs and work in a more multi-disciplinary way as required by ECM (2003) and NICE (2008).

k) Findings suggest there is a general lack of awareness and understanding of recent NICE (2008) guidelines on ADHD among Educational professionals and parents. Therefore, all educational professionals should ensure they have a full understanding of these guidelines and their implications.

l) Parents had several suggestions regarding ways in which experiences of school for ADHD children could be improved, including:

1. Greater awareness, acknowledgement of individual young people's needs;
2. Provision of more appropriate intervention, planning and support;
3. Greater staff knowledge of, training in, and understanding of ADHD;
4. Improved work and communication with parents.

5.3.1 Implications of findings for Educational Psychologists

Educational Psychologists work at different levels of the education system, including the local authority level, whole school level, with individual teachers and with parents in schools to ensure that individual children with ADHD are accurately identified, assessed, treated and supported in school and in life. The findings of this study suggest that there is an integral role for Educational Psychologists within the LA. EPs well placed to use psychology at a range of levels to support parents of children with ADHD. EPs are also well placed to support schools to facilitate the successful inclusion of children with ADHD through appropriate interventions. EPs can model this practice within school using models of consultation.

As EPs are not constrained by either the school or home systems, they are well-placed to support the development of, and engagement with, community-based services. EPs are well versed at 'giving psychology away' and can therefore support the holders of knowledge about the system (schools, LA and health service) to feel able to share information in a manner that feels safe and effective. EPs are trained in a consultation approach to support the system around a child rather than focus on the individual child. This facilitates a more social model of disability approach to SEN. In terms of a consultation approach, EPs are well placed to meet the needs of the parents so that they in turn are able to meet the needs of their child. In providing access to this type of service in a community based manner, parents and teachers can be supported to actively meet the needs of children with ADHD. However, as this study identified, EPs are involved to a rather limited extent in the actual assessment, diagnosis and treatment of children with ADHD in this Local Authority.

m) EPs can play an important role is assessing the educational needs of children with ADHD and advising schools about how they can support these children to succeed.

n) EPs can also assess the emotional and behavioural needs of children with ADHD, which may act as barriers to learning and behaviour. They can apply psychological theory, for example Bronfenbrenner's (1979) eco-systemic model, to help others understand ADHD and develop appropriate strategies to

support teachers address these children's additional needs in school, thus reducing the level of impairment on the child's learning.

o) EPs are also able to provide additional training to schools on SEN and ADHD; this would help to support teachers to accurately meet the needs of children with ADHD. This is another step on the road to community psychology as the EP can support schools post ADHD diagnosis.

p) EPs can use their psychological training, theory and knowledge to broaden the understanding of key stakeholders about the assessment, diagnosis and treatment of children with ADHD. EPs can utilise psychology to take a 'helicopter view' of the complex interacting environments that impact upon a child's behaviour.

5.3.2 Implications of findings for the Local Authority

In order for schools and professionals to accurately identify, assess, diagnose and treat children with possible ADHD, the local authority needs to ensure that action is taken to implement the findings of this study. Further consideration also needs to be given to implementing NICE (2008) guidelines in the area.

q) Despite the recommendations of ECM (DfES, 2003) and NICE (2008), findings suggest that there is a limited amount of multi-disciplinary working in this LA. Therefore, as in accordance with NICE (2008) guidelines, a specialist ADHD team should be assembled. Resources and time factors should be key considerations in this endeavour. The Local Authority and NHS need to discuss this possibility in the near future. A lead professional should be assigned to this role.

r) The findings of this study further underscore the complexity of assessing ADHD. It is therefore necessary that all professionals work in a more multi-disciplinary way with other professional groups. Therefore, the opportunity for an Educational Psychologist to be made available to healthcare professionals should be given greater consideration. This would contribute the one of the NICE (2008) guidelines which suggests that "every locality should develop a

multi-agency group, with representatives from multidisciplinary specialist ADHD teams". A lead professional should be assigned to this role.

s) The amount of resources available had a far reaching impact on the assessment, diagnosis and treatment of children with ADHD. The findings suggest that as a result of limited resources the availability of alternative treatment options and general support services were rather limited. Further consideration should be given to the amount of resources available to support the implementation of NICE (2008) guidelines on ADHD in the local authority.

t) Findings suggest that an information pack containing additional information about a diagnosis, be issued to parents to inform them fully about the assessment, diagnosis, treatment options, parental and child support services and additional entitlements that may exist in the local authority. The Local Authority should liaise with the consultant paediatric team to support and implement this recommendation.

u) The above findings will help the Local authority to understand the current system's strengths and weaknesses and should highlight the benefits of evidence based practice to decision makers so that they can implement the study's findings based on local need.

v) The research findings will be summarised in a research report that will be presented to the Local Authority, the Educational Psychology Service (EPS) and Consultant Paediatric team. It is hoped that practical 'on the ground' steps are taken to implement them. A member of the EPS will be identified to liaise with the LA and Health services to chair these discussions and implement changes accordingly.

5.4 Contribution of findings to research

This research has provided an insight into the complexity of the assessment, diagnosis and treatment of children with ADHD from the perspectives of parents and relevant professionals in one local authority in England. In general, this research has

helped to highlight the numerous underlying factors that can impact on the assessment, diagnosis and treatment of children in everyday practice.

Initial teacher training courses should increase the amount of training on children with SEN, including ADHD. Given the number of previous researchers that have previously recommended this; this finding only serves to reinforce current and ongoing systemic weakness. Such a systemic weakness also limits teachers' opportunities to include children with additional needs as they feel unsure of how to effectively meet their complex needs.

5.5 Recommendations for future research

The study revealed some new and unique areas of interest for future research. National Institute for Health and Clinical Excellence (2008) guidelines recommend that treatment and care should take into account people's needs and preferences, and, in the case of children, those of their parents or carers. All people with ADHD, including children, should have the opportunity to be involved in decisions about their care and treatment in partnership with their healthcare professionals (NICE, 2008). Although it was not possible for this study, it would be interesting to listen to the voice of the child as this may illuminate other areas of strength and weakness in this assessment and diagnostic process in the area. Would they have the same perceptions? Would they like the system to work in a different way? What would be their view on medication and medication breaks? Gaining an understanding of how the child feels about themselves and their personal attributes may prove interesting, empowering and enlightening. Arora & Mackay (2004) argue strongly for the involvement of children and young people in assessment and intervention processes, drawing attention to the lack of control the children they interviewed felt over decisions made by adults to treat them with medication, and their apparent lack of awareness of 'the complexity of social behaviour' (p. 123).

Findings suggest that healthcare professionals have to unpick potential bias in the information gained from parents and teachers and have to think about the credibility of information gained from all parties during the assessment and diagnostic process. These potential biases / credibility factors need further

investigation as research on this area is relatively small / limited. There are few studies on credibility assessment, and more are needed across multiple assessment settings. How do paediatricians' judge this phenomenon and is this a factor that exists countrywide?

It would be interesting to further investigate some new areas of research that have emerged. For example, within individual diagnostic approach, is the concept of 'confirmatory bias' a factor in the assessment of ADHD? Also, the concept of 'premature closure' of a paediatricians hypothesis testing may be an area of interest?

5.6 Conclusion

This study has provided an insight into the complexity of the assessment, diagnosis and treatment of ADHD from a variety of perspectives. Rich qualitative data enabled this study to explore the perspectives of key stakeholders. It has highlighted that although there are 'gold standard' guidelines for ADHD assessment, diagnosis and treatment, in reality these are difficult to implement in day to day practice. These difficulties are summed up by the key themes identified. These findings need to be considered by both education and healthcare professionals as they may have a bearing on the outcomes of children whom are diagnosed with ADHD in school and in life.

This study should pave the way for the local authority to rethink how they are going to implement the findings of this study and the NICE (2008) guidelines. Educational Psychologists may have a role to play in the assessment process and could form part of a 'specialist ADHD team' should it be set up in this local authority. Educational Psychologists are well placed to support schools and bridge the gap between education and health perspectives and thus ensure that a comprehensive assessment and treatment plan is implemented, in accordance with NICE (2008) guidelines. EPs can work with both parents and teachers in the community to support children with ADHD.

It is hoped that this study has added to the limited amount of research from stakeholder's perspectives and has provided some insight into the numerous interacting factors that are involved in the process of assessment, diagnosis and treatment of children with ADHD on a local level. This research has highlighted the current factors that hinder multi-professional working, however, it is necessary to acknowledge weaknesses and strengths in the system so that children's additional needs are appropriately supported.

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Appendices

Appendix 1A

Semi structured interview for Health Professionals

Q 1. In X, what are the steps that parents, educational and health professionals take which leads to a child being assessed for the possibility of ADHD?

1. In X what are the steps taken which lead to a child being assessed for the possibility of ADHD?

A. **Prompt:** Who starts the ball rolling? Who is involved?

B. **Prompt:** Does this happen in every case?

C. **Prompt:** How long does the process take

2. How much do these steps vary from one case to another?

3. Are there many outside influences on the process of assessment for children with ADHD in X, if Yes, what impact / influence do they have?

Prompt:

A) What people are involved?

B) What happens when a referral is received?

4. Do you accept a referral even if a child has not been discussed at an In School Review (ISR)?

Q. 2 What are the perceived levels of assessment, diagnosis and pharmacological treatment of children with ADHD in X and what influences impacted upon the assessment, diagnosis and pharmacological treatment of those children?

5. What is the general process you go through when assessing / diagnosing children for ADHD?

6. Do you utilise rating scales as a method of diagnostic assessment? If Yes, which ones?

7. What do you think about the rating scales?

Prompt:

A) How much do you rely on rating scales for information about symptoms?

8. What would you consider the advantages and disadvantages of using DSM IV diagnostic criteria when assessing a child for ADHD?

9. What factors influence your assessment of children for ADHD?

Prompt:

A) Time, context, X policies and procedures, diagnostic criteria, experience, etc.

10. Do you think individual differences of practitioners (for example, personality, enthusiasm for a subject) may influence their assessment and diagnosis of children with ADHD?

11. How often do you and other professional's see a child before a diagnosis is made?

12. Do you observe children in different contexts? If not, why not? If yes, in what contexts?

13. Do you consider contextual factors when assessing a child (for example, new teacher, new school, change of house, looked after child etc)? If yes, in what way?

14. **For Paediatrician:** How stringently do you stick to X's 'ADHD care pathway' for ADHD assessment, diagnosis and treatment of possible ADHD?

15. Do you assess for Co-morbidities? If yes, Why so? If not, why not?

16. Scenario: If you have 2 Connors rating scales, one from parents and one from school, the rating from school has very low symptomatology and the rating from parents has very high symptomatology, how would you interpret these findings?

Prompt:

A) Do you consider one perspective in a higher regard than another?

17. What level of symptomology on the Connor's scale is the child at before you start medication?

18. How do you decide upon the preferred treatment choice for a child with a diagnosis of ADHD?

19. What are the general criteria for prescription of stimulant medication to children diagnosed with ADHD?

Prompt:

A) At what point do you start a child on medication?

B) What factors influence you decision?

C) How do you measure the impact of medication on children's behaviour? (If not answered in previous question).

20. What services and alternative treatments to medication are you aware of in X?

21. What is the review process for children diagnosed with ADHD?

Prompt:

A) Who will review the child?

B) How easy is it to follow?

C) How often does the child get reviewed?

22. What significant factors do you consider when reviewing a child with an ADHD diagnosis?

23. How do you assess if a child still needs medication?

Prompts:

A) Do you assess for side effects?

B) What's your opinion on medication breaks / timeouts?

Q3. Are professionals and parents aware of 2008 National Institute of Clinical Excellence (NICE) guidelines on ADHD and how are the current educational and healthcare services responding to them in X?

24. NICE recommendations stress the child's 'degree of impairment' as a consideration affecting treatment. But, they are not very clear what that phrase means. What does 'degree of impairment' mean to you?

25. How do you establish the 'degree of impairment' in a child presenting with ADHD symptoms?

26. Does a high level of ADHD symptoms indicate a high degree of impairment?

27. When looking at a child with a low 'degree of impairment', how do you make you decision about a positive diagnosis?

28. What relevant local and national policies and procedures influence your assessment and diagnosis of children with ADHD?

29. Have you been sent the NICE guidelines? If so, by whom?

Prompt:

A) X or a professional body?

30. How do you think the new NICE guidelines on ADHD will influence your practice?

31. What is your understanding of the steps that have been or will be taken in implementing the new NICE guidelines for children with ADHD in X?

32. Are the NICE guidelines for ADHD helpful / useful for you?

33. What is the current multidisciplinary approach to diagnosis and assessment of children with ADHD?

Prompt:

A) Whom is involved and how do they contribute.

B) If unanswered: Are there future plans for multidisciplinary work?

34. Do you think there is a need for more training about ADHD?

Prompt: For parents and professionals

Appendix 1B

Questionnaire for Healthcare Professionals

1. On Average, how many new referrals do you receive per week (1) for ADHD and (2) General?

A) 1:

B) 2:

2. On Average, how many children do you see in one week (1) for ADHD and (2) General?

A) 1:

B) 2:

3. The information currently available to parents about ADHD has increased the number of children coming forward for assessment.

Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

4. How often do you think a positive diagnosis of ADHD is due to:

(Record as Percentage for each).

A) A child's actual disabilities and characteristics:

B) To the influence of the parents:

C) To the influence of schools:

D) The individual judgements of the doctors involved:

E) Other:

If so, what:

5. How useful do you find the use of scales in the assessment process?

Very Useful, Useful, Neither, Not Useful, Useless.

6. What percentage of referrals for possible ADHD comes from each of the following sources:

A) School:.....

B) Parents:.....

C) GP: .....

D) School Nurse:.....

E) Health Visitor:.....

F) Other (please describe):.....

7. How often is each of the following involved in the process leading to assessment?

A) SENCO: Very Often, Often, Sometimes, Rarely, Never.

B) LSS: Very Often, Often, Sometimes, Rarely, Never.

C) BSS: Very Often, Often, Sometimes, Rarely, Never.

D) EP: Very Often, Often, Sometimes, Rarely, Never.

E) Parents: Very Often, Often, Sometimes, Rarely, Never.

F) GP: Very Often, Often, Sometimes, Rarely, Never.

G) School Nurse: Very Often, Often, Sometimes, Rarely, Never.

H) Health Visitor: Very Often, Often, Sometimes, Rarely, Never.

8. There is time pressure when assessing a child for ADHD.

Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

9. There is an excessive caseload / number of children for ADHD assessment.

Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

10. Parent's personal beliefs will affect their decisions when filling in an ADHD rating scale?

Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

11. Parental discussion forms a major part of my assessment decision.

Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

12. There are advantages to having a label of ADHD in school.

Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

13. Parent's greater awareness of ADHD symptoms is an important factor leading to higher rates of diagnosis of children with ADHD.

Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

14. There are disadvantages to having a label of ADHD in school.

Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

15. Teacher's personal beliefs will affect their decisions when filling in an ADHD rating scale?

Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

16. Health care professional's greater awareness of ADHD symptoms is an important factor leading to higher rates of diagnosis of children with ADHD.

Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

17. What is the percentage of the children with ADHD receive Medication as a treatment?

%: .....

18. What is the percentage of the children you see who receive professional behavioural intervention as a treatment?

%:.....

19. What is the percentage of the children that you see that receive both Medication and professional behavioural intervention as a treatment?

%:.....

20. Health care professional's personal beliefs affect their diagnostic decisions?

Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

21. There are advantages to having a label of ADHD in life.

Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

22. Teacher's greater awareness of ADHD symptoms is an important factor leading to higher rates of diagnosis of children with ADHD.

Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

23. Teacher's reports play an important part of the assessment / diagnostic process of children with possible ADHD.

Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

24. Medication is my preferred choice of treatment for children diagnosed with ADHD.

Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

25. There are disadvantages to having a label of ADHD in life.

Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

26. Budget constraints impact on our ability to provide multi-modal assessment options?

Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

27. Medication combined with behavioural interventions is my preferred choice of treatment for children diagnosed with ADHD.

Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

28. Lack of skilled professional's impact on our ability to provide multi-modal assessment options?

Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

29. Budget constraints impact on our ability to provide multi-modal treatment options?

Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

30. How often are children reviewed for their ADHD symptomology?

Very Often, Often, Average, Sometimes, Never

31. Children diagnosed with ADHD are usually reviewed by the same diagnosing professional e.g. psychiatrist/paediatrician.

Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

32. Teachers are an important part of the diagnostic review process for children with ADHD.

Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

33. Parent's views impact on my decision to prescribe stimulant medication as a treatment for their children's ADHD.

Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

34. Children receiving medication for ADHD should have medication 'time outs' during their treatment.

Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

35. Teacher's views impact on my decision to continue to prescribe stimulant medication as a treatment for children with ADHD.

Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

36. Parents are an important part of the diagnostic review process of their children.

Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

37. Multidisciplinary working is needed to provide a sound diagnosis of ADHD?

Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

38. Parents put children forward for ADHD assessment with a view to State Allowance (DLA) for their child?

Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

Appendix 2A

Semi structured interview for Education Professionals

Q 1. In X, what are the steps that parents, educational and health professionals take which leads to a child being assessed for the possibility of ADHD?

1. In X what are the steps taken which lead to a child being assessed for the possibility of ADHD?

2. What are the main routes to receiving an assessment for the possibility of ADHD?'

A) **Prompt:** Who starts the ball rolling? Who is involved? Does this happen in every case?

B) How long did the process take

C) What part did you play

3. What do you think makes an assessment for ADHD necessary?

4. Who are the main people involved in the process of assessment and diagnosis of children with possible ADHD in X?

A) **Prompt:** What Impact do they have on the assessment process?

5. Do you have much communication with the child's family about the possibility of ADHD?

Q. 2 What are the perceived levels of assessment, diagnosis and pharmacological treatment of children with ADHD in X and what influences impacted upon the assessment, diagnosis and pharmacological treatment of those children?

6. How would you describe your involvement/ role in the process of assessment / diagnosis of children with possible ADHD?

7. Does your knowledge of ADHD influence your decision to put a child forward for an ADHD assessment? If so, how?

8. What information are you asked to provide by health professionals when assessing children for ADHD?

9. Did you feel that the information you provide is taken into account when a diagnosis is given? Please give examples?

10. Have you been sent rating scales as a method of diagnostic assessment for ADHD? If Yes, which one and how did you find it?

11. What do you think of the rating scales?
12. Do you think paediatricians / psychiatrists personal beliefs may influence their assessment and diagnosis of children with possible ADHD? If yes, how?

13. Have you noticed any 'impairment' in children as a result of ADHD type behaviours, for example, on academic work, socially etc.

14. When looking at a child with a low 'degree of impairment' i.e. those who are very mildly affected by ADHD, how do you think those concerned make a decision about diagnosis?

15. How do you think the 'degree of impairment' in a child presenting with ADHD symptoms is established?

16. Looking back, what have you found helpful and not-helpful in obtaining a diagnosis of ADHD for children with ADHD in your class?

17. How do you measure the impact of medication on children's behaviour?
A) Prompt: If you don't formally measure these effects, how are you supporting children with ADHD in your class?

18. Have you come across any side effects of such medication during the school hours?

19. Are there any difficulties in ensuring that the children take their medication at the correct time in school?

20. What are your thoughts on medication breaks?

21. What is the review process for children diagnosed with ADHD?

A) Prompt: were you involved in this process and if so what was your contribution?

B) Who review's the child?

C) How often do you think children get reviewed?

22. What services and alternative treatments to medication are you aware of for children with ADHD in X?

23. What did you think of the review process of children's ADHD diagnosis?

Q3. Are professionals and parents aware of 2008 National Institute of Clinical Excellence (NICE) guidelines on ADHD and how are the current educational and healthcare services responding to them in X?

24. Have you heard about the new NICE guidelines for ADHD?

25. Have you been sent the NICE guidelines? If so, by whom?

A) Prompt: X or a professional body or personal reading?

B) If yes, do you know what the main recommendations are?

26. Are the NICE guidelines for ADHD helpful for you?

27. Do you think there is a need for more training about ADHD?

A) **Prompt:** For parents and professionals?

28. How would you benefit from more training in ADHD management?

29. What is your understanding of the steps that have been or will be taken in implementing the new NICE guidelines for children with ADHD in X?

Appendix 2B

Questionnaire for Education Professionals

1. The information currently available to parents about ADHD impacts upon the number of children coming forward for assessment.

   Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

2. The information that was available to me about ADHD impacted upon my decision to put a child forward for an assessment of ADHD.

   Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

3. How often do you think a positive diagnosis of ADHD is due to:

(Record as percentage for each).

F) A child's actual disabilities and characteristics:.....

G) To the influence of the parents:.....

H) To the influence of schools:.....

I) The individual judgements of the doctors involved:.....

J) Other:.....

If so, what:

4. How useful do you find the use of scales in the assessment process.

   Very Useful, Useful, Neither, Not Useful, Useless

5. I think ADHD rating scales provide a good picture of a child's difficulties.

   Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

6. Parent's personal beliefs will affect their decisions when filling in a rating scale?

   Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

7. I am requested for feedback regarding the impact of medication treatment for children with a diagnosis of ADHD.

Very Often, Often, Average, Sometimes, Never

8. There are advantages to having a label of ADHD in school.
   Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

9. Parent's greater awareness of ADHD symptoms is an important factor leading to higher rates of diagnosis of children with ADHD.
   Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

10. Teacher's personal beliefs will affect their decisions when filling in a rating scale?
    Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

11. There are disadvantages to having a label of ADHD in school.
    Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

12. Parent's opinions are an important part of the assessment / diagnostic process of children with possible ADHD.
    Strongly Agree, Agree, Neither, Disagree, Strongly Disagree
13. Teacher's greater awareness of ADHD symptoms is an important factor leading to higher rates of diagnosis of children with ADHD.
    Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

14. How often is each of the following involved in the process leading to assessment?

I) SENCO:	Very Often, Often, Sometimes, Rarely, Never.
J) LSS:	Very Often, Often, Sometimes, Rarely, Never.
K) BSS:	Very Often, Often, Sometimes, Rarely, Never.
L) EP:	Very Often, Often, Sometimes, Rarely, Never.
M) Parents:	Very Often, Often, Sometimes, Rarely, Never.
N) GP:	Very Often, Often, Sometimes, Rarely, Never.
O) School Nurse:	Very Often, Often, Sometimes, Rarely, Never.
P) Health Visitor:	Very Often, Often, Sometimes, Rarely, Never.

15. I want children to take medication for their ADHD.

Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

16. Health care professional's greater awareness of ADHD symptoms is an important factor leading to higher rates of diagnosis of children with ADHD.

Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

17. There are advantages to having a label of ADHD in life.

Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

18. Health care professional's personal beliefs will affect their diagnostic decisions.

Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

19. Parents put children forward for ADHD assessment with a view to State Allowance (DLA) for their child?

Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

20. Children receiving medication for ADHD should have medication 'time outs' during their treatment.

Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

21. There are disadvantages to having a label of ADHD in life.

Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

22. Teacher's reports play an important part of the assessment / diagnostic process of children with possible ADHD.

Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

23. Behavioural treatment (for example, Cognitive Behavioural Therapy or Parent training) is my preferred choice of treatment for a child with ADHD.

Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

24. Multidisciplinary working is needed to provide a sound diagnosis of ADHD?

Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

25. Medication combined with behavioural interventions is my preferred choice of treatment for a child with ADHD.

Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

Appendix 3A

Semi structured interview for Educational Psychologists

Q 1. In X, what are the steps that parents, educational and health professionals take which leads to a child being assessed for the possibility of ADHD?

1. In X what are the steps taken which lead to a child being assessed for the possibility of ADHD?

2. What are the main routes to receiving an assessment for the possibility of ADHD?'

D) **Prompt:** Who starts the ball rolling? Who is involved? Does this happen in every case?

E) How long did the process take

F) What part did you play

3. What do you think makes an assessment for ADHD necessary?

4. Who are the main people involved in the process of assessment and diagnosis of children with possible ADHD in X?

B) **Prompt:** What Impact do they have on the assessment process?

5. Do you have much communication with the child's family about the possibility of ADHD?

Q. 2 What are the perceived levels of assessment, diagnosis and pharmacological treatment of children with ADHD in X and what influences impacted upon the assessment, diagnosis and pharmacological treatment of those children?

6. How would you describe your involvement/ role in the process of assessment / diagnosis of children with possible ADHD?

7. Does your knowledge of ADHD influence your decision to put a child forward for an ADHD assessment? If so, how?

8. Did you feel that the information you provide is taken into account when a diagnosis is given? Please give examples?

9. What do you think of rating scales used for diagnosing ADHD, for example, the Connors rating scale?

10. Do you think paediatricians / psychiatrists personal beliefs may influence their assessment and diagnosis of children with possible ADHD? If yes, how?

11. Have you noticed any 'impairment' in children as a result of ADHD type behaviours, for example, on academic work, socially etc.

12. When looking at a child with a low 'degree of impairment' i.e. those who are very mildly affected by ADHD, how do you think those concerned make a decision about diagnosis?

13. How do you think the 'degree of impairment' in a child presenting with ADHD symptoms is established?

14. What do you think is helpful and not-helpful in obtaining a diagnosis for children with possible ADHD?

15. Have you come across any side effects of ADHD medication on children in your work.

16. What are your thoughts on medication breaks?

17. What is the review process for children diagnosed with ADHD?

D) Prompt: were you involved in this process and if so what was your contribution?

E) Who review's the child?

F) How often do you think children get reviewed?

18. What services and alternative treatments to medication are you aware of for children with ADHD in X?

19. What did you think of the review process of children's ADHD diagnosis?

Q3. Are professionals and parents aware of 2008 National Institute of Clinical Excellence (NICE) guidelines on ADHD and how are the current educational and healthcare services responding to them in X?

20. Have you heard about the new NICE guidelines for ADHD?

21. Have you been sent the NICE guidelines? If so, by whom?

C) Prompt: X or a professional body or personal reading?

D) If yes, do you know what the main recommendations are?

22. Are the NICE guidelines for ADHD helpful for you?

23. Do you think there is a need for more training about ADHD?

B) **Prompt:** For parents and professionals?

24. How would you benefit from more training in ADHD management?

25. What is your understanding of the steps that have been or will be taken in implementing the new NICE guidelines for children with ADHD in X?

Appendix 3B

Questionnaire for Educational Psychologists

1. The information currently available to parents about ADHD impacts upon the number of children coming forward for assessment.

   Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

2. The information that was available to me about ADHD impacted upon my decision to put a child forward for an assessment of ADHD.

   Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

3. How often do you think a positive diagnosis of ADHD is due to:

(Record as percentage for each).

K) A child's actual disabilities and characteristics:.....

L) To the influence of the parents:.....

M) To the influence of schools:.....

N) The individual judgements of the doctors involved:.....

O) Other:.....

If so, what:

4. How useful do you find the use of scales in the assessment process.

   Very Useful, Useful, Neither, Not Useful, Useless

5. I think ADHD rating scales provide a good picture of a child's difficulties.

   Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

6. Parent's personal beliefs will affect their decisions when filling in a rating scale?

   Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

7. There are advantages to having a label of ADHD in school.

   Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

8. Parent's greater awareness of ADHD symptoms is an important factor leading to higher rates of diagnosis of children with ADHD.

   Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

9. Teacher's personal beliefs will affect their decisions when filling in a rating scale?

   Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

10. There are disadvantages to having a label of ADHD in school.

    Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

11. Parent's opinions are an important part of the assessment / diagnostic process of children with possible ADHD.

    Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

12. Teacher's greater awareness of ADHD symptoms is an important factor leading to higher rates of diagnosis of children with ADHD.

    Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

13. How often is each of the following involved in the process leading to assessment?

Q) SENCO: Very Often, Often, Sometimes, Rarely, Never.
R) LSS: Very Often, Often, Sometimes, Rarely, Never.
S) BSS: Very Often, Often, Sometimes, Rarely, Never.
T) EP: Very Often, Often, Sometimes, Rarely, Never.
U) Parents: Very Often, Often, Sometimes, Rarely, Never.
V) GP: Very Often, Often, Sometimes, Rarely, Never.
W) School Nurse: Very Often, Often, Sometimes, Rarely, Never.
X) Health Visitor: Very Often, Often, Sometimes, Rarely, Never.

14. I want children to take medication for their ADHD.

Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

15. Health care professional's greater awareness of ADHD symptoms is an important factor leading to higher rates of diagnosis of children with ADHD.

Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

16. There are advantages to having a label of ADHD in life.

Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

17. Health care professional's personal beliefs will affect their diagnostic decisions.

Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

18. Parents put children forward for ADHD assessment with a view to State Allowance (DLA) for their child?

Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

19. Children receiving medication for ADHD should have medication 'time outs' during their treatment.

Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

20. There are disadvantages to having a label of ADHD in life.

Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

21. Teacher's reports play an important part of the assessment / diagnostic process of children with possible ADHD.

Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

22. Behavioural treatment (for example, Cognitive Behavioural Therapy or Parent training) is my preferred choice of treatment for a child with ADHD.

Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

23. Multidisciplinary working is needed to provide a sound diagnosis of ADHD?

Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

24. Medication combined with behavioural interventions is my preferred choice of treatment for a child with ADHD.

Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

Appendix 4A

Semi-Structured interview for Parents

Q 1. In X, what are the steps that parents, educational and health professionals take which leads to a child being assessed for the possibility of ADHD?

1. I'm interested in your experiences when (Child's name) was assessed for ADHD? Who took the first step in this process?

Prompts:

A) Was that you or somebody else?
B) Who else was involved?
C) Who assessed your child for ADHD?
D) What part did the parent, teacher, doctor or other professionals play?

2. How long did the process take?

3. What were your experiences of the referral process? (If unanswered above)

4. Did you discuss your child's ADHD symptoms with other parents, friends or school before your child was assessed by a paediatrician, psychiatrist?

5. If yes, did this influence your decision to go for an assessment?
6. What did you think about the assessment process?

7. Did information about ADHD influence your decision to put (Child's name) forward for an ADHD assessment?

Q. 2 What are the perceived levels of assessment, diagnosis and pharmacological treatment of children with ADHD in X and what influences impacted upon the assessment, diagnosis and pharmacological treatment of those children?

8. What did you know about ADHD before your child's referral and assessment for ADHD?

Prompt:

A) How did this knowledge impact on the assessment process?
B) Did you know about the possibility of treatment with Medication?

9. What were your expectations when your child was referred and assessed for having ADHD?

10. How would you describe your involvement in the process of assessment of ADHD for your child?

Prompt:

A) What did you contribute to the process?
B) Did you feel your point of view was listened to?

11. Were their other professionals involved in the assessment / diagnosis of your child?

Prompt:

A) How were the school involved in the assessment process? (If not answered above).

12. Were you given a rating scale to fill in as part of your child's diagnostic assessment?

Prompt:

A) Can you describe it?

13. What did you think of the rating scale?

14. Did you notice any impairment in your Childs life as a result of ADHD, for example, on academic work, socially etc.

15. Looking back, what have you found helpful and not-helpful in obtaining a diagnosis of ADHD for your child?

16. If your child receives medication for ADHD what initial effects did you find it had for your child?

Prompt:

A) What long lasting affects did it have on your child?

17. What medication was your child prescribed?

Prompt:

A) What were you told about the expected impact of this medication?

18. What are your thoughts on medication breaks?

19. Are there any difficulties in ensuring that the children take their medication at the correct time in school or at home?

20. Have you come across any side effects of ADHD medication?

21. What services and alternative treatments to medication are you aware of for children with ADHD in X?

22. How long has your child had a diagnosis of ADHD?

23. Has your child been seen again (reviewed) for his ADHD?

Prompt:

A) Reviewed for the impact of Medication on your child's behaviour?

B) Who reviewed your child?

24. What did you think of the review process of your child's ADHD diagnosis?

Prompt:

A) What information was taken into consideration? (*Only to be asked in their child has been reviewed).*

Q3. Are professionals and parents aware of 2008 National Institute of Clinical Excellence (NICE) guidelines on ADHD and how are the current educational and healthcare services responding to them in X?

25. Have you heard about the new NICE guidelines for ADHD?

26. Have you been given or sent copies of the 2008 NICE guidelines or come across them in your personal life?

27. If yes, do you know what the main recommendations are?

28. Are the NICE guidelines for ADHD helpful for you?

Prompt:

A) Have the NICE guidelines influenced your preferred treatment options?

29. Do you think there is a need for more training about ADHD?

Prompt:

A) For parents and professionals?

Appendix 4B

Questionnaire for Parents

1. Discussion of my child's symptoms of ADHD with other parents / school influenced my decision to refer my child for assessment?
   Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

2. The information that was available to me about ADHD impacted upon my decision to put my child forward for an assessment of ADHD.
   Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

3. I want my child to take medication for their ADHD.
   Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

4. Teachers reports played and important part in the assessment / diagnoses of ADHD in my child.
   Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

5. My views impacted on the doctor's decision to prescribe medication for my child's ADHD.
   Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

6. There are advantages to having a label of ADHD in school.
   Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

7. Parent's personal beliefs will affect their decisions when filling in a rating scale?
   Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

8. Have you received State Allowance (DLA) for your child's ADHD? **YES / NO**

9. I have found the Government Allowance helpful.
   Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

10. Teacher's reports played an important role in the review of my child's ADHD diagnosis.

Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

11. Teacher's greater awareness of ADHD symptoms is an important factor leading to higher rates of diagnosis of children with ADHD.

Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

12. There are advantages to having a label of ADHD in life.

Strongly Agree, Agree, Neither, Disagree, Strongly

13. Medication is my preferred choice of treatment my child.

Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

14. Behavioural treatment (for example, Cognitive Behavioural Therapy or Parent training) is my preferred choice of treatment for my child.

Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

15. Teacher's personal beliefs will affect their decisions when filling in a rating scale?

Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

16. There are disadvantages to having a label of ADHD in school.

Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

17. Health care professional's greater awareness of ADHD symptoms is an important factor leading to higher rates of diagnosis of children with ADHD.

Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

18. Medication combined with behavioural interventions is my preferred choice of treatment for my child.

Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

19. Which interventions have helped your child most (**Please rate first, second and third**).

A) Medication

B) Behavioural treatments

C) Behaviour and medication treatments combined

20. Parent's greater awareness of ADHD symptoms is an important factor leading to higher rates of diagnosis of children with ADHD.

Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

21. I would like my child reviewed by the same health care professional.

Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

22. I felt the review of my child's ADHD was thorough.

Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

23. Health care professional's personal beliefs will affect their decisions when making a diagnosis.

Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

24. There are disadvantages to having a label of ADHD in life.

Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

25. Children receiving medication for ADHD should have medication 'time outs' during their treatment.

Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

26. Multidisciplinary working is needed to provide a sound diagnosis of ADHD?

Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

27. Parents put children forward for ADHD assessment with a view to State Allowance (DLA) for their child?

Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

28. The information currently available to parents about ADHD impacts upon the number of children coming forward for assessment.

Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

29. How often do you think a positive diagnosis of ADHD is due to:

(Record as percentage for each).

P) A child's actual disabilities and characteristics:.....

Q) To the influence of the parents:.....

R) To the influence of schools:.....

S) The individual judgements of the doctors involved:.....

T) Other:.....

If so, what:

30. How useful do you find the use of scales in the assessment process.

Very Useful, Useful, Neither, Not Useful, Useless

31. I think ADHD rating scales provide a good picture of a child's difficulties.

Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

32. Parent's opinions are an important part of the assessment / diagnostic process of children with possible ADHD.

Strongly Agree, Agree, Neither, Disagree, Strongly Disagree

Appendix 5

Letter to Participants

Date

Dear .....

I am writing following our recent telephone conversation to provide information regarding the doctoral research project I am undertaking. I am also writing to confirm the date, time and location for the interview that you have kindly agreed to participate in.

ADHD is currently undergoing a great deal of debate, in part due to the 2008 National Institute of Clinical Excellence (NICE) guidelines on ADHD. It is my aim to gather and evaluate the perspectives of parents of ADHD children and key professionals (from both health and education services) involved with children described as experiencing ADHD. The research aims to focus particularly on the assessment / diagnosis and treatment of these children. The interview will cover four key areas: referral procedure; assessment / diagnosis; pharmacological treatment and review; professional guidance / response to NICE guidelines. Information will be collected through the process of audio-taping (in agreement with the interviewee). Short questionnaires will also be given out at the end of the interview.

All participants will remain anonymous and any information gathered can be removed at any time at the request of the interviewee. The interview may also be stopped at any time following the request of the participant.

As agreed the interview will take place at ..... on .....

The information provided shall remain confidential, made anonymous and treated in the strictest confidence. My research supervisor will be the only other person who will have access to the data you provide.

You have the right to complain confidentially at any time if you are unhappy with any aspect of this research interview to my research supervisor Dr Ian St James-Roberts at I.StJamesRoberts@ioe.ac.uk or my Educational Psychology supervisor Joanne.winter@x.gov.uk

I greatly appreciate your involvement in this research and thank you for taking the time to be interviewed. I know that your perspectives will be of great interest, value and assistance to this research.

Thank you for taking part and I hope you enjoy the interview

.....

Colm Lonergan

Trainee Educational Psychologist

Appendix 6

Prompt Sheet

Information for participants during Telephone Conversations / Face to Face meetings prior to interviews

The Purpose for the interview and research project of which it is a part:

The research aims to evaluate the perspectives of parents and key professionals involved with children experiencing AD / HD. The interview aims to gather these perspectives to enable an exploration to take place; particularly interested in the assessment / diagnosis of ADHD, the use of medication, the review process, the use of rating scales and the response to the new NICE guidelines on ADHD.

How will the interview be structured?

The interview will take 60 minutes and if possible these interviews will be digitally recorded, as it will enable any analysis of the information gathered to be detailed and accurate. A short questionnaire will be handed out at the end of the interview.

Confidentiality and Anonymity

Names will not be used in the data or the research report and any information can be removed from the transcript if the interviewee so wishes. In addition a copy of the research report can be made available to the interviewee upon completion.

Where and when will the interview take place

The researcher will arrange a specific date, time and location for the interview that best suits the interviewee.

Appendix 7

Informed Consent Form

Dear Participant,

Thank you for taking the time to be interviewed by me, if you have any questions at any stage of the interview please feel free to ask me at the end of the interview. Agreeing to participate in this research involves your consent to being audio taped during this research interview.

Your participation is entirely voluntary and anonymous. All of your responses will be treated in the strictest confidence. Any names or potentially identifying information will be changed in the written report of the research. The interview data will be kept in a secure place within the Educational Psychology service and will be destroyed in two years time. In this interview you will be asked to reflect on your own practice and experience. Additionally the questions asked do not require you to feel constrained to reveal something you would rather not.

You have the right to make an independent confidential complaint through my research supervisor or Educational Psychology supervisor as stated in the information sheet provided. Interview questions and procedure have been approved by an ethics panel prior to the conduction of this research. Interview data will only be shared with the researcher's immediate supervisor. Excerpts of the data provided will be used anonymously within the text of the research dissertation following analysis to illustrate themes.

If at any time during the interview you would like to withdraw from the study, you are free to do so. If you do not wish your interview data to be used at any time you have the right to withdraw your data from the research up to the point of its submission for assessment or publication in July 2010.

Please make sure that you have read and understood the information provided, you may ask questions now before and after the interview which I will do my best to

answer fully. Once again, should you wish to withdraw from the programme, your data will not be included if you so wish.

Please sign below to give your informed consent to take part in this study.

Once again thank you for taking the time to be interviewed and I hope that you enjoy it.

Colm Lonergan
Trainee Educational Psychologist

Name of Participant:……..
Signed by Participant:……
Date:……

Appendix 8

Pilot Study

A pilot study was carried out to test the effectiveness and suitability of the semi-structured interviews and questionnaires that were developed by the researcher. The pilot study is useful in determining whether the intended method of analysis may be used (Gay and Airasian, 2000). Mertens (1998) explains that the researcher should also provide a means for the pilot group to give feedback on the interview questions used. This was particularly important as there were three distinct groups that needed to confirm if interview questions were clear and easily understood. Mertens (1998) also notes that the interview schedule may need to be adapted if it is found that the interviewee's interpret questions differently.

Hayes (2000) also notes that interviews should be piloted to ensure the questions asked are easily understood by the interviewee and are free from ambiguities. Piloting also provides an opportunity to test that methods of recording the information are appropriate. It also allows the researcher to determine the amount of time the interviews will take and whether this is appropriate and acceptable to the interviewees. This was particularly important for healthcare practitioners as their time can be limited. As a result of the pilot interviews, it was evident that the timing of interviews was appropriate and method of recording interviews effective.

The advantages of using interviews are that they enable the researcher to explore complex issues, such as people's perceptions, in detail. They allow the researcher to be personally involved in the data collection process, and provide the flexibility to improvise questions in order to extend or clarify answers (Arksey and Knight, 1999). This was particularly evident during the pilot study as it enabled the researcher to prompt interviewee's to expand on answers and give examples.

The interview schedules and questionnaires used in this research were piloted on two Consultant Paediatricians, two Special Educational Needs Co-Ordinators (SENCo's) and two parents of children with a diagnosis of ADHD. As a result of this

pilot study a number of changes were made to the interview format and wording of questions as well as alterations to the questionnaires.

Pilot interview with Healthcare Professionals

The pilot interview was divided into three parts, each corresponding to a research question. Participants were asked to think carefully about the questions and feedback if there was any ambiguity in the interview questions. They were also asked to fill in the questionnaire and feedback if any questions were difficult to understand etc. As a result of the pilot study a number of changes were made.

- Wording of a few questions were unclear and were therefore changed;
- Some questions were re-ordered to make the interview more fluid;
- New interview questions were added as they were left out in the pilot interview, for example, a question on multidisciplinary working;
- Wording was also changed on a few questions in the questionnaire as it may have introduced bias into some of the questions;
- A few questions in the questionnaire were made more specific;
- New questions were added to the questionnaire, for example, multidisciplinary working.

The interview's lasted approximately 50 minutes. Participants reported that the length of the interview seemed appropriate. The researcher adjusted the semi-structured interview and questionnaire based on the above feedback to accommodate participants concerns. This enabled the researcher to highlight any new themes that could be investigated further in the final interviews and questionnaires. Verbal feedback from participants also helped in the formulation of the final interviews and questionnaires for their group.

Pilot interview with Educational Professionals

The interviews were conducted in school. The format of the interview was explained to the SENCo's and it was confirmed that their responses would be confidential and

anonymous. Participants were once again asked to feedback their thoughts on the Interview questions and their understanding of the questions in the questionnaire. As a result of the pilot study the following changes were made to the educational professional's interview and questionnaire.

- Re-wording of some questions was required as they were unclear;
- Some questions were re-ordered to make the interview more fluid;
- New interview questions were added as they were left out in the pilot interview, for example, a question on multidisciplinary working;
- Wording was also changed on the questionnaire as participants highlighted that some questions were bias, for example, 'Parents personal bias will affect their decision when filling in a rating scale' was replaced with 'Parents personal beliefs will affect their decision when filling in a rating scale';
- Some questions in the questionnaire were made more specific;
- Questions were also introduced to bring a balanced perspective from participants that would access their perspectives on each group. This would allow for later comparison of perspective between and within groups.

Section three of the interview proved difficult for the participants to answer as they had never heard or read about the new NICE guidelines for ADHD. This resulted in shorter interviews and questions that were inaccessible to this particular group. It was decided to introduce three NICE guidelines and ask their perspective on these guidelines so they engage with this section of the interview.

Pilot Interview Parents

This pilot interviews took place in the parent's homes as this was more convenient for them and was likely to make them feel more at ease with the process. It was not specified that the interview should take place with a particular parent, however, in all cases the interviews were conducted with the mother. The format of the interview was explained to the parents and it was reiterated that their responses would be confidential and anonymous.

Feedback from parents allowed the researcher to develop questions that were easier to understand and therefore accessible to all. Participants were once again asked to share their thoughts on the Interview questions and their understanding of the questions in the questionnaire. As a result of the pilot study the following changes were made to the parent's interview and questionnaire.

- Wording of some questions were unclear and were therefore changed;
- New interview questions were added as they were left out in the pilot interview, for example, a question on multidisciplinary working;
- Some questions in the questionnaire were made more specific;
- Questions were also introduced to bring a balanced perspective from participants that would access their perspectives on each group. This would allow for later comparison of perspective between and within groups.
- Participants reported that the numbering of questions in the questionnaire would make it easier to follow.

As with the Education Professionals, Parents had not heard of the new NICE guidelines for ADHD. This resulted in shorter interviews and questions that were inaccessible to this particular group. It was again decided to introduce three NICE guidelines and ask their perspective on these guidelines so they engage with this section of the interview.

Summary of Pilot Study

Piloting provided the researcher with the opportunity to test the effectiveness of the semi-structured interview and subsequent questionnaire for each group. It resulted in a multitude of changes to all interviews and questionnaires, particularly around interview structure, format and effectiveness of questions. The use of a five point scale was deemed appropriate as it was accessed well by all participants. The length of the interview was deemed reasonable and therefore the number of questions did not need to be shortened. The pilot interview was carried out in early June 2009, this allowed the researcher an appropriate amount of time to make the necessary changes to each interview and questionnaire.

The pilot study highlighted that a core group of participants needed to be included to give a more holistic picture on this area. The Educational Psychologist (EP) perspective was not sought in the pilot study; it was therefore decided to introduce a forth group, the EP group. A semi-structured interview and questionnaire was adapted from other groups to form a semi-structured interview and questionnaire that would gain the EP's perspective.

Appendix 9: Quantitative between groups figures

Descriptive analysis of the data is outlined below. Due to the limited number of participants, parametric statistical analysis was not possible. Means and standard deviations are provided.

Between group questions		Teaching professionals (n=5)	Educational psychologist (n=5)	Health professionals (n=5)	Parents (n=5)	Total n=20
The information that was available to me about ADHD impacted upon my decision to put a child forward for an assessment of ADHD.	Mean	3.60	4.20	N/A	3.20	3.66
	STDV	1.14	0.83	N/A	1.30	1.11
How useful do you find the use of scales in the assessment process.	Mean	3.80	3.80	3.40	3.20	3.55
	STDV	0.44	0.83	1.14	0.45	0.76
I think ADHD rating scales provide a good picture of a child's difficulties	Mean	3.40	3.00	N/A	3.20	3.20
	STDV	0.55	0.71	N/A	0.45	0.56
Parent's personal beliefs will affect their decisions when filling in a rating scale?	Mean	4.80	4.80	4.40	4.20	4.55
	STDV	0.45	0.45	0.89	1.30	0.82
There are advantages to having a label of ADHD in school	Mean	4.20	3.40	3.80	3.20	3.65
	STDV	0.45	1.14	0.45	1.01	0.88
Parent's greater awareness of ADHD symptoms is an important factor leading to higher rates of diagnosis of children with ADHD.	Mean	4.80	4.60	3.40	3.40	4.05
	STDV	0.45	0.55	0.89	0.55	0.89
Teacher's personal beliefs will affect their decisions when filling in a rating scale?	Mean	3.60	4.80	4.40	4.20	4.25
	STDV	0.89	0.45	0.55	1.30	0.91
There are disadvantages to having a label of ADHD in school.	Mean	2.60	3.60	2.80	3.00	3.00
	STDV	1.14	1.14	1.01	1.22	1.12
Parent's opinions are an important part of the assessment / diagnostic process of children with possible ADHD.	Mean	4.60	4.80	N/A	3.60	4.33
	STDV	0.89	0.45	N/A	0.55	0.82
Teacher's greater awareness of ADHD symptoms is an important factor leading to higher rates of diagnosis of children with ADHD.	Mean	4.40	4.00	4.00	3.20	3.90
	STDV	0.55	0.71	0.71	0.45	0.72
I want children to take medication for their ADHD.	Mean	3.20	2.40	3.80	4.20	3.40
	STDV	0.45	0.55	1.30	1.01	1.01
Health care professional's greater awareness of ADHD symptoms is an important factor leading to higher rates of diagnosis of children with ADHD.	Mean	4.20	3.80	3.00	4.20	3.80
	STDV	0.84	1.01	1.00	1.30	1.10
There are advantages to having a label of ADHD in life.	Mean	3.40	2.60	3.40	2.00	2.85
	STDV	0.89	0.89	0.52	0.00	0.18

Health care professional's personal beliefs will affect their diagnostic decisions.	Mean	3.60	4.40	3.40	3.80	3.80
	STDV	0.55	0.55	1.52	1.64	1.15
Parents put children forward for ADHD assessment with a view to State Allowance (DLA) for their child?	Mean	3.80	4.00	3.80	2.80	3.60
	STDV	1.01	0.71	1.30	1.50	1.19
Children receiving medication for ADHD should have medication 'time outs' during their treatment.	Mean	4.00	3.80	4.00	4.60	4.10
	STDV	1.00	1.01	0.71	0.55	0.85
There are disadvantages to having a label of ADHD in life.	Mean	3.00	4.00	5.00	3.60	3.90
	STDV	1.00	0.00	0.00	1.34	1.07
Teacher's reports play an important part of the assessment / diagnostic process of children with possible ADHD.	Mean	4.20	3.80	N/A	2.80	3.60
	STDV	0.45	1.01	N/A	1.30	1.22
Behavioural treatment (for example, Cognitive Behavioural Therapy or Parent training) is my preferred choice of treatment for a child with ADHD.	Mean	4.00	4.00	5.00	3.60	4.10
	STDV	0.71	1.00	0.00	0.89	0.88
Multidisciplinary working is needed to provide a sound diagnosis of ADHD?	Mean	4.80	4.80	4.20	4.00	4.45
	STDV	0.45	0.45	1.30	1.00	0.89
Medication combined with behavioural interventions is my preferred choice of treatment for a child with ADHD.	Mean	4.00	3.60	N/A	4.75	4.10
	STDV	1.00	0.89	N/A	0.50	0.92

Appendix 10: Professional group figures

Specific professional group questions		Teaching professionals (n=5)	Educational psychologists (n=5)	Health professionals (n=5)	Total (n=15)
The information currently available to parents about ADHD impacts upon the number of children coming forward for assessment.	Mean	4.20	4.00	3.20	3.80
	STDV	1.30	1.00	1.10	1.15
How often do you think a positive diagnosis of ADHD is due to: **A child's actual disabilities and characteristics**	Mean	0.70	0.66	0.64	0.66
	STDV	0.25	0.34	0.37	0.30
How often do you think a positive diagnosis of ADHD is due to: **The influence of the parents**	Mean	0.68	0.79	0.12	0.53
	STDV	0.28	0.23	0.10	0.36
How often do you think a positive diagnosis of ADHD is due to: **The influence of the schools**	Mean	0.53	0.48	0.55	0.67
	STDV	0.22	0.39	0.28	0.31
How often do you think a positive diagnosis of ADHD is due to: **The individual judgements of the doctors involved**	Mean	0.71	0.78	0.55	0.68
	STDV	0.30	0.33	0.47	0.36
How often is each of the following involved in the process leading to assessment? **SENCO**	Mean	4.80	4.80	5.00	4.87
	STDV	0.45	0.45	0.00	0.35
How often is each of the following involved in the process leading to assessment? **Learning Support Service**	Mean	2.40	3.00	2.80	2.73
	STDV	0.89	0.70	0.84	0.79
How often is each of the following involved in the process leading to assessment? **Behaviour Support Service**	Mean	4.40	3.60	3.60	3.86
	STDV	0.55	0.55	0.55	0.64
How often is each of the following involved in the process leading to assessment? **EP**	Mean	3.80	3.40	2.80	3.33
	STDV	1.01	0.55	0.84	0.90
How often is each of the following involved in the process leading to assessment? **Parents**	Mean	4.60	5.00	4.80	4.80
	STDV	0.55	0.00	0.45	0.41
How often is each of the following involved in the process leading to assessment? **GP**	Mean	3.00	3.60	3.60	3.40
	STDV	1.22	1.14	1.52	1.24
How often is each of the following involved in the process leading to assessment? **School Nurse**	Mean	2.60	2.60	3.00	2.73
	STDV	0.55	2.34	1.00	0.96
How often is each of the following involved in the process leading to assessment? **Health Visitor**	Mean	2.60	3.20	3.00	2.93
	STDV	0.54	1.01	0.70	0.79

Appendix 11: Healthcare professional's specific figures N: 5)

On Average, how many new referrals do you receive per week (1) **for ADHD**	Mean	4.00
	STDV	1.73
On Average, how many new referrals do you receive per week (1) **in General**	Mean	5.20
	STDV	2.17
On Average, how many children do you see in one week (1) **for ADHD**	Mean	12.25
	STDV	12.18
On Average, how many children do you see in one week (1) **in General**	Mean	11.25
	STDV	6.99
There is time pressure when assessing a child for ADHD.	Mean	3.60
	STDV	0.89
There is an excessive caseload / number of children for ADHD assessment	Mean	4.60
	STDV	0.55
Parental discussion forms a major part of my assessment decision.	Mean	4.20
	STDV	0.45
What is the percentage of the children with ADHD receive Medication as a treatment?	Mean	80.60
	STDV	14.89
What is the percentage of the children you see who receive professional behavioural intervention as a treatment?	Mean	30.00
	STDV	28.28
What is the percentage of the children that you see that receive both Medication and professional behavioural intervention as a treatment?	Mean	32.00
	STDV	22.80
Budget constraints impact on our ability to provide multi-modal assessment options?	Mean	4.80
	STDV	0.45
Lack of skilled professional's impact on our ability to provide multi-modal assessment options?	Mean	3.60
	STDV	1.51
Budget constraints impact on our ability to provide multi-modal treatment options?	Mean	4.80
	STDV	0.45
How often are children reviewed for their ADHD symptomology?	Mean	4.40
	STDV	0.89
Children diagnosed with ADHD are usually reviewed by the same diagnosing professional e.g. psychiatrist/paediatrician.	Mean	4.20
	STDV	0.84
Teachers are an important part of the diagnostic review process for children with ADHD.	Mean	5.00
	STDV	0.00
Parent's views impact on my decision to prescribe stimulant medication as a treatment for their children's ADHD.	Mean	4.60
	STDV	0.55
Teacher's views impact on my decision to continue to prescribe stimulant medication as a treatment for children with ADHD.	Mean	4.40
	STDV	0.55

Appendix 12: NICE Guidelines priorities for implementation

- Trusts should ensure that specialist ADHD teams for children, young people and adults jointly develop age-appropriate training programmes for the diagnosis and management of ADHD for mental health, paediatric, social care, education, forensic and primary care providers and other professionals who have contact with people with ADHD.

- For a diagnosis of ADHD, symptoms of hyperactivity/impulsivity and/or inattention should:
  - meet the diagnostic criteria in DSM-IV or ICD-10 (hyperkinetic disorder) **and**
  - be associated with at least moderate psychological, social and/or educational or occupational impairment based on interview and/or direct observation in multiple settings, **and**
  - be pervasive, occurring in two or more important settings including social, familial, educational and/or occupational settings.

  As part of the diagnostic process, include an assessment of the person's needs, coexisting conditions, social, familial and educational or occupational circumstances and physical health. For children and young people, there should also be an assessment of their parents' or carers' mental health.

- Healthcare professionals should offer parents or carers of pre-school children with ADHD a referral to a parent-training/education programme as the first-line treatment if the parents or carers have not already attended such a programme or the programme has had a limited effect.

- Teachers who have received training about ADHD and its management should provide behavioural interventions in the classroom to help children and young people with ADHD.

- If the child or young person with ADHD has moderate levels of impairment, the parents or carers should be offered referral to a group parent-training/education programme, either on its own or together with a group treatment programme

(cognitive behavioural therapy [CBT] and/or social skills training) for the child or young person.

- In school-age children and young people with severe ADHD, drug treatment should be offered as the first-line treatment. Parents should also be offered a group-based parent-training/education programme.

- Drug treatment for children and young people with ADHD should always form part of a comprehensive treatment plan that includes psychological, behavioural and educational advice and interventions.

- When a decision has been made to treat children or young people with ADHD with drugs, healthcare professionals should consider:
  - methylphenidate for ADHD without significant comorbidity
  - methylphenidate for ADHD with comorbid conduct disorder
  - methylphenidate or atomoxetine when tics, Tourette's syndrome, anxiety disorder, stimulant misuse or risk of stimulant diversion are present
  - atomoxetine if methylphenidate has been tried and has been ineffective at the maximum tolerated dose, or the child or young person is intolerant to low or moderate doses of methylphenidate.

- Drug treatment for adults with ADHD should always form part of a comprehensive treatment programme that addresses psychological, behavioural and educational or occupational needs.

- Following a decision to start drug treatment in adults with ADHD, methylphenidate should normally be tried first.