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Educational psychologists' perspectives on the medicalisation of childhood behaviour: A focus on Attention Deficit Hyperactive Disorder (ADHD)

Vivian Hill & Horatio Turner

Aim: This study explores the views of Educational Psychologists (EPs) practising in the UK regarding the assessment, diagnosis and treatment of Attention Deficit Hyperactivity Disorder (ADHD).

Method: An online survey collected from 136 EPs, representing 70 local authorities across the UK.

Findings: Responses highlighted how currently EPs are rarely engaged in the assessment of ADHD. However, the data indicated that EPs play an important role in increasing the awareness of contextual factors in children's behaviour, and are well placed to support the development of individually tailored interventions. It was identified that in many local authorities, current diagnostic practices do not conform to government guidelines regarding both access to psychological interventions and the prescription of medication to pre-school children. Furthermore, few children were involved in decision making about their treatment. Where Local Authorities have developed standardised pathways or protocols governing the diagnostic process, EPs are involved in the assessment process and children are more likely to access psychological interventions, and for contextual factors to be taken into account.

Limitations: Consistent with the research aims the study focuses exclusively on EP perspectives. As a survey it was not possible to probe for meaning or clarification of issues that emerged. There is a need for further research into successful examples of ADHD treatment pathways that take advantage of the unique contribution of EPs.

Conclusions: Priorities for future work include the need to develop a nationally agreed protocol for a multi-professional approach to assessment and treatment of ADHD. There is an urgent need for careful monitoring of prescription rates, particularly in pre-school children and across different ethnic and social groups. Furthermore, steps should be taken to address the lack of participation by children and young people in decisions about their treatment.

Keywords: Medicalisation; ADHD; Educational Psychologist.

Introduction

THIS SURVEY was commissioned by the Division of Educational and Child Psychology (DECP) Medicalisation of Childhood Working Group to gain a clear view of current EP practice and perspective on the assessment and management of ADHD in the UK.

There is growing international concern regarding the escalating rates of diagnosis of mental health disorders and the associated prescribing of psychotropic medication in children and young people (Frances, 2013; Hill, 2013). Recent media attention has

focused on the exponential growth in the use of Methylphenidate to treat ADHD in children and young people (Dixon, 2013). Methylphenidate prescriptions in the UK have increased by 56 per cent in the five years from 2007 to 2012 (The Care Quality Commission, 2013). Of particular concern is the increasing number of Methylphenidate prescriptions made to pre-school children despite official guidelines that these drugs are not indicated for use in children under the age of 5 years (Doward & Craig, 2012). This mirrors recent trends in the US where

research indicated that 25 per cent of 4- to 5-year-olds diagnosed with ADHD were treated with stimulant medication without any form of behavioural treatment (Visser et al., 2015). Diagnosis and treatment of ADHD at this young age is a controversial issue, not least because the key characteristics of ADHD in terms of inattention, hyperactivity and impulsivity can reflect prominent presentations typical of behaviour in preschool children (Smith, 2014).

The concern is that in describing patterns of childhood behaviour as medical disorders, it highlights how society increasingly presents a narrow definition of 'normal', thereby pathologising individuals who do not fit in with established expectations (Conrad, 1976; Porter, 1987). The consequence of this medicalisation process is that following diagnosis, the majority of these children are treated with stimulant medication which has been linked to a number of side effects including: reduced growth rate, insomnia, and cardiac problems (Graham et al., 2011). This is despite government recommendations that, in most cases, psychosocial treatments such as behavioural training should be the first line of treatment (NICE, 2013). However, there are mounting concerns among professionals that psychological treatments are not being offered due to budget constraints in local authorities and as a result, medication is often the only available option for many families (Dixon, 2013).

Definition and prevalence

ADHD describes a pattern of behaviours that includes inattention, hyperactivity and impulsivity. Children with ADHD often experience difficulty attending to details, organising activities, and remaining seated and focused on tasks. ADHD is a relatively common condition estimated to affect 5.9 to 7.1 per cent of the population worldwide (Willcutt, 2012). In the UK, ADHD is estimated to affect 0.9 per cent of girls and 3.6 per cent of boys between the ages of 5 to 15 (NICE, 2013). There are large variations in prevalence rates between countries and

regions with up to 20 per cent of boys aged 4 to 17 in some areas of the US receiving a diagnosis of ADHD (Centers for Disease and Prevention, 2014). These variations reflect the differing cultural expectations and subjective nature of diagnosis that has led to what Timimi (2009) describes as an 'ADHD epidemic'.

ADHD has been shown to have a high degree of comorbidity with other disorders including but not limited to: conduct disorder, anxiety, developmental coordination disorder and depression. As many as three-quarters of children diagnosed with ADHD also exhibit another psychiatric disorder (Timimi & Taylor, 2004). Research indicates a range of negative long-term educational outcomes for children with ADHD. This often results in a self-perpetuating cycle of low academic attainment and behaviour difficulties, with one-third of children with ADHD experiencing exclusion from school (Office for National Statistics, 2005).

Diagnosis

Diagnostic practices vary between countries and regions; however, diagnoses are frequently based on the criteria established by the *Diagnostic and Statistical Manual of Mental Disorders*, currently in its fifth revision (DSM-5; American Psychiatric Association, 2013). Children can meet the criteria for diagnosis if they demonstrate six or more criteria from a list of 18 common behavioural descriptors. This diagnostic process encourages a categorical distinction between individuals with ADHD and those who are typically developing. However, it is essential to bear in mind that the key diagnostic features of ADHD in terms of inattention, hyperactivity and impulsivity exist on a continuum within the general population. Therefore, the presence of these features does not in itself define any particular individual with ADHD as being qualitatively different. Furthermore, there is currently no commonly accepted biological model or test for ADHD (Timimi, 2009). As a result, diag-

nosis is based on clusters of observable symptoms – an approach that has been largely replaced in other fields of medicine as behavioural symptoms represent only one layer of a complex system involving genetic, neurobiological, cognitive, social and affective factors. The American National Institute for Mental Health (2013) argues that classification of mental health disorders should move away from the *DSM* criteria. They suggest developing new constructs to define mental health disorders that are based on objective assessment of the underlying complex factors, rather than just behavioural symptoms that ‘rarely indicate the best choice of treatment’.

Aetiology

ADHD can be considered to have a complex aetiology, whereby multiple genetic and environmental factors contribute to the likelihood of an individual developing the condition and the severity of their symptoms (Curatolo, 2010). Research has identified a high level of heritability for ADHD in children and young people; a recent meta-analysis of twin studies conducted by Nikolas and Burt (2010) concluded that genetic factors accounted for 71 to 73 per cent of the variance in ADHD symptoms between monozygotic (identical) and dizygotic (non-identical) twins. Furthermore, prenatal exposure to nicotine, alcohol and maternal stress have all been identified as risk factors for the development of ADHD (Linnet et al., 2003).

Physiological models of ADHD have identified significant changes to the structure and chemistry of the brain in individuals with ADHD. The role of the neurotransmitter dopamine is frequently implicated due to Methylphenidate’s effect at increasing levels of dopamine in the brain (Curatolo, 2010). Furthermore, imaging studies have identified reduced brain volume and thickness in children with ADHD, particular in the prefrontal cortex, an area associated with attention and planning skills (Weyandt & Swentosky, 2012).

Nevertheless, further research has identified that structural variations in brain development appear to be delayed rather than abnormal. A neuroimaging study on 446 children and young adults by Shaw et al. (2007) identified that individuals with ADHD demonstrated a three-year delay in the development of cortical thickness, particularly in prefrontal regions, compared to their typically developing peers, potentially providing hope to families of children with ADHD that many young people will eventually grow out of the disorder.

Cognitive models of ADHD are largely informed by the difficulties that these individuals demonstrate on tests of executive function (EF). The concept of EF includes problem-solving cognitive processes such as goal planning and working memory, which in turn depend on a process of response inhibition in order to function correctly. Deficits in this response inhibition are thought to manifest as inattention or impulsivity (Barkley, 1997). Nevertheless, EF can be criticised as an overly broad construct that offers little explanatory power (Willcutt et al., 2005). Other authors argue that ADHD may be attributable to a more complex model whereby deficits in EF interact with motivational factors and decrease the individual’s tolerance of delays (Sonuga-Barke, 2003). This is theorised to lead to self-stimulatory behaviour, which presents as fidgeting or being off-task.

Theoretical debate

A purely biological perspective of ADHD would present a reductionist explanation that could not account for the multiple environmental influences that impact on a child’s development. An alternative perspective takes full account of these influences and emphasises the risk of socially constructed explanations of why children’s behaviours do not conform to social norms. The systemic framework proposed by Bronfenbrenner (1979) emphasises the importance of the child’s interactions within their immediate family and peer group and their

wider community. This perspective highlights the range of risk factors, which have demonstrated associations with increased rates of ADHD including prenatal alcohol and tobacco use, socio-economic status, maternal mental health and family conflict, together with gene – environment interactions (Banerjee, Middleton & Faraone, 2007). The link between socio-economic status and ADHD is a robust finding in both Europe and the US. Research from Sweden identified that social adversity, defined as low maternal education, lone parenthood and receipt of welfare payments, doubled the risk of ADHD diagnosis in a population sample of 1.1 million children aged 6 to 19 (Hjern, Weitoft & Lindblad, 2010). It has been suggested that the link between poverty and ADHD creates a self-reinforcing cycle of underachievement as these children go on to experience economic disadvantage in adulthood. Furthermore, the link between socio-economic status and ADHD may lead certain groups in society to become disproportionately medicated, generating an accompanying social stigma. Walker (2006) argues that this phenomenon is very much evident in certain Native American populations. However, advocacy groups for racial equality have criticised the lack of official data on the diagnosis and prescription rates for different ethnic groups in the UK (Race on the Agenda, 2013).

A child's early attachment experiences have a significant impact on their ability to learn and maintain attention in the classroom (Moss & St-Laurent, 2001). Children who have experienced trauma or abuse exhibit many symptoms consistent with a diagnosis of ADHD such as difficulty concentrating, externalising behaviour and sleep disturbance (Banerjee et al., 2007). Research by McLeer et al. (1994) identified that 43 per cent of their sample of 26 sexually abused children also had diagnoses of ADHD. This demonstrates the complex interaction between genetic, environmental and biological factors. As a result, the symptoms of ADHD could be understood as a normal

response to extreme adversity. Brown (2014) argues that many children growing up in conditions of violence and 'relentless stress' present with hyper-vigilance and dissociation that could be misinterpreted as impulsivity and inattentiveness. The previous version of the *DSM* (APA, 2000) provided some guidance to tease out the distinctions between within-child and contextual factors. It encouraged clinicians to distinguish between children with ADHD symptoms and those with behaviour difficulties resulting from 'inadequate, disorganised or chaotic environments'. However, this essential qualification has been removed from the *DSM-5*. Disentangling this web of symptoms presents a serious challenge to mental health professionals. The fact that one professional may attribute a child's behaviour to attachment disorder but another may view it as ADHD, highlights the fact that the mental and behavioural disorders ultimately depend on clinical judgement, and multiple views may co-exist (Taylor, 2009).

The lack of clear consensus on many aspects of the nature of the disorder raises the question of what purpose a diagnosis serves. Previous research has highlighted how parents may seek a diagnosis or label to explain their child's difficulties, especially when this diagnosis is linked to access to resources such as extra help in school and financial support for the family (Simandl, 2013). Furthermore, increased recognition of the difficulties faced by children with ADHD may serve to reduce the stigma traditionally associated with 'naughty children' and 'ineffective parenting'. However, as Hill (2013) argues, inappropriate use of labels can trap people by limiting how they view themselves and encouraging others to view them through the filter of the label. Similarly, Timimi (2004) maintains that the label of ADHD creates a self-fulfilling prophecy that can only be treated with medication and so relieves parents, teachers and society more generally of the responsibility to raise well-behaved children and to provide the social conditions necessary for

this. Although this may happen in some cases, it could be argued that the problem is not the label but how ADHD is defined, the concern being the extent to which contextual factors are adequately taken into account in diagnosis and how health authorities decide on the most appropriate intervention.

Treatment

There is a large body of research into treatments for ADHD (Fabiano et al., 2009; Prasad et al., 2013; Sonuga-Barke et al., 2013). Treatments generally fall into two categories: medication (usually stimulants, but non stimulant medication also exists) and psychosocial approaches including parenting classes or individual psychological approaches (NICE, 2013). There has also been considerable interest in dietary changes and supplements for ADHD, but the assessment of the evidence base has not led to these being recommended in the NICE guidelines. Currently, it is estimated that 43 per cent of children in the UK who are diagnosed with ADHD are taking some form of medication (Office for National Statistics, 2005). Research into the efficacy of ADHD medication has generally shown it to have small positive effects in the short term (NICE, 2013). A recent meta-analysis by Prasad et al. (2013) demonstrated that a range of medications resulted in significant improvements of 15 per cent for on-task behaviour and quantity of work completed compared to a placebo. However, there was no clear indication of whether medication improved the accuracy of children's answers with studies showing mixed results. These results are consistent with Moncrieff's (2013) view that stimulants improve attention on repetitive tasks over the short term, but there is no evidence that they improve attention on complex tasks or over a longer time span.

A more promising approach to ADHD treatment involves the use of psychological interventions. Most reviews have focused on the well-established group courses in behaviour management for parents and educa-

tional interventions in schools. A meta-analysis by Fabiano et al. (2009) reviewed the evidence for the effectiveness of behavioural treatments for ADHD. This revealed overall large effect sizes ranging from 0.7 to 3.8 depending on the nature of the study design. Studies based on between-group designs showed a large average effect size of 0.83, this allows for comparison with the previous results reported for studies assessing the effectiveness of medication, which almost exclusively compare a treatment to a placebo condition. Based on effect size, this study suggests that behavioural treatments may be more effective than medication alone.

The EP role in ADHD assessment

Very little research has been conducted into the role of the EP in ADHD. One notable exception is the study conducted by Loneragan (2010) which interviewed a small group of EPs, teachers, parents and health professionals (each group containing five participants) in one local authority. Respondents expressed concern over the limited resources which meant that there were few alternatives to medication available, making it difficult to adhere to NICE (2013) guidelines regarding the use of psychological interventions. Furthermore it was noted that diagnosis was a rather subjective process that did not involve joined-up working with other professionals. EPs in this study identified that they played only a limited role in diagnosis. However, the fact that they were not constrained by school systems or individual targets such as in the health service, meant that they were ideally placed to support systems around the child by developing a broader understanding of contextual factors among key stakeholders.

This study, therefore, aimed to explore current EP practice through five research questions:

1. How do EPs view their role in the assessment and intervention of ADHD?
2. To what extent are contextual factors taken into account as part of the assessment process?

3. How do EPs deal with tensions between medical and social perspectives of ADHD?
4. What is the child's role in diagnosis and treatment of ADHD?
5. What is current and best practice regarding assessment and treatment of ADHD?

Methodology

Participants

Participants were recruited by email to all members of the Division of Educational and Child Psychologists (DECP) and several local authorities in London. A total of 136 EPs, representing 70 local education authorities responded to the survey. To provide some context for these figures, the educational psychology profession remains fairly small in the UK with 4200 practitioners registered in 2015 with the Health and Care Professions Council (HCPC). The nature of EP work in the UK differs from School Psychologists in many countries. The majority of EPs work for one of the 211 local authorities in the UK and provide psychological services to groups of schools or across a range of different roles within local government and occasionally within the National Health Service.

The experience of EPs in this study ranged from less than one year post-qualification to 41 to 45 years. The survey appears to be representative of the main roles carried out by EPs working in local authorities. Job titles were reported as: Main grade EP (59 per cent); Senior and/or Specialist EP (22 per cent); Principal EP (13 per cent); Private (2 per cent); Other (4 per cent).

Materials

The items included in the online questionnaire included quantitative questions inviting a range of responses to three- or six-point Likert scale questions. Open-ended questions, where EPs were asked to provide a written response, were used to generate qualitative data. The selection of items for inclusion in the questionnaire was based on focus group discussions at workshops held by

the DECP during the 2013 annual conference, and contributions from the DECP Medicalisation of Childhood Working Group, and previous research with EPs (Loneragan, 2010; Simandl, 2013). The Ethics Committee at the Institute of Education approved this study.

Quantitative data

Responses to questions were analysed using either descriptive statistics or one-way ANOVA and other relevant non-parametric tests.

Thematic analysis

The responses to the open-ended questions were analysed using an inductive thematic analysis (TA), a flexible approach that can be both descriptive and generate new theoretical frameworks from the data (Robson, 2011). The model of TA adopted conforms to that described by Braun and Clarke, (2006, 2013).

It is considered good practice to demonstrate inter-rater reliability by comparing the identification of themes with another researcher (Boyatzis, 1998), in this case the authors worked first in isolation and during this stage generated a very high level of consensus in the initial themes. The authors then worked in parallel to agree the final themes and subthemes.

Key findings

Quantitative data

The survey questions are available in Appendix A and details of the statistical analyses conducted are provided in Appendix B.

Descriptive analysis

Responses to the survey questions posed, provided the following data:

Question 1: 60 per cent of respondents reported that they were never, or rarely consulted as part of the diagnostic process, 25.9 per cent were sometimes consulted, but only 14 per cent indicated that they were often or always consulted.

Question 2: 48 per cent of respondents indicated that in their experience contextual and systemic factors were never or rarely considered during diagnosis, 37.5 per cent felt these were sometimes taken into account, whereas only 14 per cent indicated that these factors were often or always taken into account.

Question 3: 19 per cent of Respondents indicated that they rarely or never felt confident about challenging diagnoses of ADHD that they disagreed with, 34.6 per cent would sometimes challenge a diagnosis, and 42 per cent of respondents indicated that they would often or always feel confident to express a different view of a child's diagnosis.

Question 4: 56 per cent of respondents indicated that in their experience families are rarely or never offered psychological interventions prior to being offered medication, 17 per cent felt this was sometimes the case, whereas 16 per cent indicated that this was often or always the case.

Question 5: 51 per cent of respondents indicated that children were rarely or never involved in decisions about their treatment, whereas 13 per cent indicated that this was sometimes the case. Only 3 per cent of respondents indicated that this was often or always the case.

Question 6: The vast majority of respondents, 83 per cent, felt that it was appropriate for EPs to be involved in the diagnosis of ADHD.

Question 7: 21 per cent of respondents worked in services with a standardised protocol for ADHD assessment, 40 per cent did not and 39 per cent were unsure if such a process was in place.

Question 8: 22 per cent of respondents indicated that they were aware of preschool children being prescribed medication for ADHD, 22 per cent were unsure and 56 per cent indicated this was not their experience.

Question 9: Only 10 per cent of respondents were aware of local records being kept about ADHD diagnosis. 78 per cent indicated they were unsure if records were kept and 12 per cent worked in local authorities where no records are kept.

Statistical analysis

Further analysis was conducted to investigate whether services having a standardised protocol in place made any difference to practice in relation to ADHD assessment and management. The data from the groups with a protocol, and those without were compared and the data collapsed to include positive and negative responses only. 'Not sure' responses were removed. Using a one-way analysis of variance in each case the following findings emerged:

EPs working in local authorities with a standardised protocol were not significantly more likely to be consulted as part the diagnostic process ($p>0.05$). However, in these contexts, systemic and contextual factors were significantly more likely to be taken into account. $F(1,75)=16.37$, $p<0.001$; a small overall effect size of 0.179 (partial η^2) showed that the use of a protocol accounted for 18 per cent of the variance in whether systemic factors were taken into account.

Families are significantly more likely to be offered psychological interventions in local authorities that have a protocol in place. A Levene's test revealed that the data did not meet the assumption of homogeneity of variance. Therefore, a Welch's F statistic was used to provide a more robust analysis. $F(1,30)=5.57$, $p=0.025$; a small overall effect size of 0.098 (partial η^2) showed that use of a protocol accounted for 10 per cent of the variance in the use of psychological interventions.

Analysis explored whether children were more likely to be involved in decision making in local authorities with a protocol in place. The result approached statistical significance: $F(1,44)=4.06$, $p=0.05$. Although this result does not meet the conventional significance value of less than 0.05 per cent, it was thought to be a relevant finding nonetheless. There are substantially fewer responses to this question due to a high number of 'not sure' responses.

A Spearman's R correlation analysis indicated that there is a medium, positive correlation ($r=0.6$, $p<0.001$) between consideration

of systemic factors and use of psychological interventions.

A further Spearman's R correlation analysis indicated that there is a medium, positive correlation ($r=0.52$, $p<0.001$) between how often EPs are consulted and use of psychological interventions. This finding suggests that increased involvement of EPs during diagnosis is associated with increased use of psychological interventions.

Qualitative data

Theme 1: Social understandings of behaviour and medicalisation

This theme captures the narratives from two subthemes: conceptualising behaviour and labelling and medicalisation.

The first, *conceptualising behaviour*, acknowledged the growth of medical terminology within society to describe behaviour that was felt to reflect 'low tolerance of difference'. Reflecting the prevalent social view that many behavioural issues are considered to be constitutional, and 'within child', leading teachers and parents to 'believe something is 'wrong' and their extension of that, is that it must be medical or biological'.

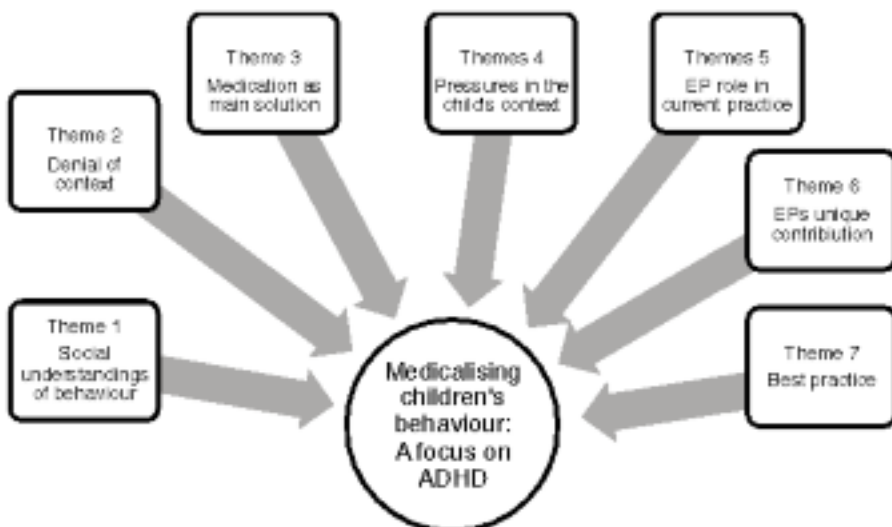
The second subtheme, *labelling and medicalisation*, reflected the views that in an effort to make sense of complex behaviour, families and teachers often seek a diagnosis. They hope the label will help inform interventions and 'provide clarity about the needs of the child in question'. The growth of the medical model has meant that few people question the value of the diagnosis, and for parents: 'There is a belief that if their child does have ADHD, then not diagnosing it, is failing the child in some way'. Implicit in these views is the strong belief that medical explanations of behaviour are key to understanding and intervening. These views are seen as significant contributory factors in the increased rates of diagnosis of ADHD in the UK.

Theme 2: Denial of contextual factors

Respondents felt that 'within child' medical explanations of behaviour were dominant whilst social constructivist perspectives that acknowledge context were less prominent. Two subthemes illuminated this view:

The first, *abdicated responsibility*, described how locating problems within children often excused parents and teachers

Figure 1: Thematic map of the seven themes.



of the need to consider their contribution to the behaviour:

It's an easy explanation which is convenient and comforting and absolves everyone of blame/guilt/responsibility by locating the problem within the child and medicalising it.'

It was also recognised that children displaying patterns of behaviour consistent with this ADHD are immensely challenging and the label perhaps acknowledges this:

I think a diagnosis is the only option that is seen to validate the difficulties that the school and family experience in managing the behaviour and learning.'

It was observed that children with challenging behaviour can undermine the confidence of the adults working with them and that the label is often of greater value to them:

Both parents and schools sometimes feel ill equipped to manage behaviour and see medication as the 'answer' to their problems. This is obviously meeting the needs of the adults and not the child or young person.'

The second subtheme, **ignoring contextual issues**, highlighted concerns that influential factors and experiences in the child's life, that might support different explanations of their behaviour, may not be known at the time of diagnosis. This may include attachment issues or exposure to trauma. Furthermore, factors such as 'overcrowding and poverty are... highly implicated but often ignored'. Whilst the diagnosis requires the behaviour to be observed in at least two settings, there was little evidence of adequate liaison with schools. EPs described diagnoses that were 'almost completely informed by parent's perspectives'. Many EPs described experiences of children having the diagnosis yet showing no evidence of behavioural concerns at school. EPs described 'marked variations and inconsistencies' between different service providers in terms of the importance and consideration afforded to contextual variables during diagnosis. This lack of consistency was seen as a significant contributor to what respondents described as false diagnoses.

Theme 3: Medication as the main solution

This theme emerged from two subthemes:

The first, **quick and easy treatment**, described an over reliance on medication as the dominant form of intervention. It was seen as a 'quick fix treatment' that will 'make everyone's life easier'. Even in cases where psychological interventions were offered, it was often in parallel with medication. Some EPs felt more positive about medication and described how it had eased difficult situations and enabled children to 'make sense of their thoughts...so that they can organise themselves'.

The second subtheme, **lack of alternatives**, provided an explanation for the reliance on medication. Many EPs described the difficulties experienced accessing Child and Adolescent Mental Health Services (CAMHS):

'Our biggest difficulty is that our CAMHS and Paediatric teams are so short staffed they go straight to medication and completely ignore NICE guidance.'

Respondents described marked regional variations in CAMHS, some offering 'one off advice' and others offering more comprehensive support. Where psychological interventions were offered, they were often difficult for families to access due to their location. Furthermore, interventions were only available during working hours presenting challenges to working parents.

Theme 4: Pressure in the child's context and systems

EPs identified multiple interacting factors that influence the systems around the child, creating pressure for a diagnosis and medication.

The first subtheme, **schools**, highlighted the pressures on schools to reach academic targets that could often influence their willingness to work with the most challenging behaviours in the long term:

'The pressure from Ofsted to demonstrate progression for all pupils means that children with challenging behaviours who are living in adversity are a real problem for the school.'

Having a label like ADHD was somehow seen

as an explanation that would take the pressure off the school.

The second subtheme, *families*, identified the significant support resources that a family might access via a diagnosis of ADHD, whether additional support at school or access to other professionals. EPs also highlighted 'perverse [financial] incentives' for families to seek diagnosis for a child; these included access to increased welfare payments, improved housing, transport and, in some instances, profiting from selling the medication illegally.

Theme 5: EP role in current practice

This theme is derived from three subthemes:

The first, *EP role in diagnosis*, includes comments indicating recognition that EPs could make a significant contribution to the assessment process. However, in the absence of an agreed role this can be hard to negotiate and operationalise. EPs were often involved post diagnosis to support schools and families with behaviour management:

'Usually when the EP gets involved the die is cast and is predominantly problem-focused, so much so that the only perceivable solution is medication.'

It was felt that earlier EP involvement in the process would enable a more child-centred and solution focused form of intervention. By targeting systemic issues within the school, community or family, and avoiding the immediate focus on medication.

The second subtheme, *communication between education and health*, highlights the challenges in working collaboratively with colleagues in health. Despite a considerable focus on the importance of multi-professional working over the past decade the current climate of financial and time pressures limits opportunities for participation in multi-professional meetings. Many EPs commented that even if they were actively involved in work with a child that colleagues in health had not sought their views, or explained their involvement. Even when reports were shared there was a sense that contextual information was ignored:

'Although I had sent reports highlighting the environmental or developmental issues that could explain the behaviours, these were mainly ignored or at least this is how it felt.'

The third subtheme, *power imbalance*, described how views from professionals in education appeared to be treated with lower priority in decision making than those from health, *'The psychiatrist was always the most powerful member of the team and their view usually prevailed.'* This means that inappropriate decisions about diagnoses might not be challenged as *'School professionals in particular can be reluctant to challenge health colleagues.'*

Theme 6: EPs' unique contribution

Three distinct subthemes contributed to this theme:

The first, *raising awareness of contextual factors*, highlighted how EPs are uniquely placed to support the understanding and recognition of wider contextual considerations and alternative formulations to explain a child's behaviour: *'I am often a lone voice in identifying systemic and contextual factors.'* Furthermore, EPs considered that they have a clear role to support effective working partnerships with parents, schools and other professionals. *'[I provide] clear dialogue with parents and Head Teachers... I offer to work with the medical team on monitoring the child's progress in school.'*

The second subtheme, *providing tailored interventions*, describes how EPs could help schools to develop strategies that are 'tailored to the individual needs of a child' and 'involve the child in developing strategies to support their own needs'. This individually focused, and child centred approach was considered the most effective way of addressing the child's needs in school. Advice and training for school staff and parents was considered essential to develop the skills to effectively intervene and promote change:

'I see our role as helping to include the child with ADHD in the mainstream setting, to raise awareness amongst parents and teachers about

the condition and what they can do to help, promote resilience, raise academic attainment, find the child's strengths and build on them.'

The third subtheme, *the child's voice*, relates to how EPs frequently described their work with children and young people as eliciting their views, helping them to understand their diagnosis and engage in plans for the intervention. In most cases this was the first time the child had been asked their views or had the opportunity to discuss their diagnosis. It was reported that children often viewed themselves as 'being the source of the family's problems' or as being 'terrified that there is something wrong with their brain'. These views highlight the importance of this aspect of the EP role.

Theme 7: Best practice

The data helped identify a number of factors that either promote or prevent best practice.

These are reflected in three subthemes:

The first, *the development of a multi-agency pathway*, or protocol was seen as the most important way of addressing the systemic pressures leading to increased diagnoses and medication rates. Key elements of successful pathways included: involvement with an EP prior to a referral being made; a multidisciplinary panel to assign assessments to relevant professionals; the use of high quality information to inform assessments; and joint diagnosis and review.

'[My local authority] has a behaviour pathway that includes ADHD. Following its introduction and the insistence that a behavioural observation by an EP should take place, diagnosis of and medication for ADHD fell significantly.'

Other innovative approaches included a 'community-based model via a helpline... not attached to schools' and some respondents described how they were developing links with new Clinical Commissioning Groups (CCGs) who 'might be persuaded to commission an integrated service that included paediatricians and EPs, so that

children could have a more consistent and coherent service'.

The second subtheme, *psychological interventions in context*, described the importance of providing support in the context in which the behaviour occurs. EPs described a range of interventions they currently provide including locality and within school nurture groups based on the 'Safe to Learn' programme. Others described home visiting programmes for pre-school children 'to enhance the parent-child relationship'. Other interventions described included a variety of parenting programmes that focus on attachment and include the 'Nurtured Heart', 'Solihull Approach', and 'Incredible Years'.

The final subtheme highlighted *barriers to best practice*; EPs described the barriers that they had experienced in developing multi-agency pathways. These included professional rivalries and resistance to change from some professional groups.

'A pathway is in the process of being prepared for ADHD but we have had to fight to be involved in this.'

It was felt that strong management and leadership was essential to negotiate the necessary systemic changes at higher levels within the local authority.

'I am very uneasy about the situation in my local authority and the lack of will to do anything about it at a systemic level.'

EPs highlighted the additional challenges posed by traded services, where financial constraints can be a barrier to working in different ways and pose challenges in determining who pays.

'EPs were much more heavily involved in attending umbrella panels and for providing evidence before we had significant LA cuts and more than half of EPs left.'

Discussion

The first research question focused on how EPs view their current role in the assessment and intervention of ADHD. Many EPs

responding to the survey expressed concerns at their current role in this domain. They described feeling excluded from the early stages of the assessment process. Many felt that a more formalised role, and improved systems of communication with colleagues working in health, would ensure that all relevant information about the child's development and life circumstances informed the assessment. It was felt that EPs could support the development and implementation of individually tailored interventions. The data suggested a significant correlation between EP involvement in the assessment process and the increased use of psychological interventions.

The second research question investigated the extent to which contextual factors are taken into account during the assessment process. The data suggests that in current practice the medical model dominates, and insufficient attention is paid to wider contextual data about the child's behaviour including social and psychological dimensions. The evidence, both nationally and internationally is that the consequences of this narrow conceptualisation of behaviour is fuelling the ever increasing numbers of children being treated, often inappropriately, with psychotropic medication. The need to embed an alternative and more holistic understanding of behaviour into the process of assessment is indicated, and the evidence presented here suggests that when contextual data is taken into account, it is more likely to lead to psychological interventions. EPs provide an important means of accessing contextual information and would facilitate improved practice as indicated by the current NICE (2013) guidance.

The third research question explored how EPs deal with tensions between medical and social perspectives of ADHD. The data indicated that EPs felt confident to discuss and challenge diagnoses that they felt were not based on a full understanding of a child's behaviour, and colleagues in health valued these contributions. What emerged from the data was evidence of the impact

that austerity measures and cuts in funding have had on the levels of professional liaison, and the ability of some local authorities to deliver the requirements of the NICE (2013) guidelines. The national context indicates ever-increasing concerns about children's mental health and wellbeing, and highlights that under-funded services such as CAMHS are not able to respond to the demand. The data indicates that EPs have a valuable contribution to make to support the delivery of more effective mental health services for children and young people, particularly when delivered in community settings like schools.

The fourth research question investigated the child's role in the diagnosis and treatment of ADHD. More than half of the EPs sampled expressed concern about how infrequently children's views were sought as part of the diagnostic process, or in decisions regarding their treatment. This is a cause for concern since government guidelines require professionals to take account of the views of children (DFE SEND Code of Practice, 2014; NICE, 2013). There is substantial research evidence (Swift & Callahan, 2009), to indicate that children's participation is felt to be critical to the efficacy of treatments, regardless of whether medication or psychological approaches are used. This was particularly important in terms of the child and key stakeholders retaining a sense of ownership of the problem and control over the outcomes. It is noted that EPs are suitably skilled and well placed to support and promote the engagement of children and young people in their assessments and in plans for interventions.

The final research question focused on best practice in the assessment and treatment of ADHD. The results of this study provide strong evidence that adopting an agreed local protocol, or assessment pathway that incorporates a multi-professional model of assessment, and involves EPs at an earlier stage in the process has many benefits. It ensures the consideration of wider contextual variables during the formulation stage,

and that families are significantly more likely to be offered psychological interventions before being prescribed medication. This process results in a more preventative and holistic approach to treating children. Furthermore, EPs reported that where a protocol was in place, the prescription of medication had been significantly reduced.

A key finding of this study is that 22 per cent of EPs reported being aware of pre-school children taking psychotropic medication in their local authority, despite NICE (2013) guidelines that it is not indicated for use in pre-school children. This finding lends weight to previous informal research by the Association of Educational Psychologists (AEP) which also suggested an increase in Methylphenidate prescriptions for pre-school children in the Midlands (Doward & Craig, 2012). The results of this study provide strong evidence that adopting a multi-professional model of assessment may result in a more preventative and holistic approach to treating young children, thereby reducing the need for medication. This research identified that few families are offered psychological therapies before being prescribed medication. It was strongly felt by respondents that an increased role for EPs in the assessment process would create more effective and long-term treatment options. However, many EPs commented on the difficulty in changing established practices, and the need for strong leadership to challenge current models of practise at management levels within local authorities.

Finally, the vast majority of respondents reported being unsure about whether their local authority collected data on ADHD diagnosis rates. As result, it is not clear to what extent prescription and medication rates have a differential impact on certain groups in society, despite the risk that disadvantaged groups may be disproportionately medicated.

The survey indicates the urgent need to ensure that robust systems are in place for monitoring assessment outcomes and the

use of medication with children and young people. Data collection systems should be implemented locally and nationally, and will help to develop an evidence base of effective assessment and intervention approaches. This data would then support future policy development and help prioritise funding for at-risk groups.

Strengths and limitations

A strength of the study was the range of EPs that participated, and the geographical spread, which indicates that the data is representative of the profession and highlights examples of best practice.

In terms of limitations, this was an online survey and it may have attracted those with strong views and, therefore, there may be some bias in the data. As a survey it was not possible to probe for meaning or clarification of issues that emerged. Also, the study relied on self-report data from educational psychologists and did not seek corroborative sources of evidence regarding diagnostic and treatment practice in the areas surveyed.

Conclusions

Priorities for future work include the need to develop a nationally agreed protocol for a multi-professional approach to assessment and treatment of ADHD. There is clear evidence that EPs can make a substantial and significant contribution in this area. Increased EP involvement could reduce the number of children taking psychotropic medication and increase their access to psychological interventions that focus on their full range of needs. Ultimately, the need to change the current assessment paradigm and move from a medical model to a more holistic view of children's behaviour is considered crucial.

Furthermore, there is an urgent need for careful monitoring of prescription rates, particularly in pre-school children and across different ethnic and social groups. Further research focused on these groups would provide valuable insights and help to develop specific guidance. Steps should be

taken to address the lack of participation by children and young people in decisions about their treatment and EPs are well placed to facilitate this process.

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Appendix A: Questionnaire sent to Educational Psychologists.

Demographic:

1. Which local authority do you work for? (Responses will be kept strictly confidential).
.....
2. Please write your main job title (i.e. Main grade / Senior EP).
.....
3. How many years have you been practising as a qualified EP?
.....
4. In your service, how many schools or other educational settings would an EP typically have on their caseload?
.....

Diagnosis:

5. How often are you consulted as part of the process of diagnosis of children and young people with ADHD?
Never / Rarely / Sometimes / Often / Always / Not sure
6. Do you feel that it is appropriate for an EP to be involved in the process of diagnosis of children and young people with ADHD?
Yes / No / Not sure
7. In your view, to what extent are systemic and contextual factors taken into account when assessing a child or young person for ADHD?
Never / Rarely / Sometimes / Often / Always / Not sure
8. Does your local authority have a standardised protocol for the assessment and diagnosis of ADHD in children and young people?
Yes / No / Not sure
9. Please describe the process (or processes) of ADHD diagnosis for children and young people in your local authority and the role the EP plays in this.
.....
10. If you work in multi-agency teams, do you experience tensions between professional perspectives of ADHD diagnosis and treatment? (For example, between education and health).
If so, how are these resolved?
.....
11. Do you experience pressure from families or schools to seek a diagnosis of ADHD for a child?
Families: Never / Rarely / Sometimes / Often / Always / Not sure
Schools: Never / Rarely / Sometimes / Often / Always / Not sure
12. If you have experienced pressure from families or schools, what do you feel is the motivation for this? (Please mention whether you are referring to families, schools or both in your answer)
.....
13. Do you feel confident challenging a diagnosis of ADHD (or other condition) with which you disagree?
Never / Rarely / Sometimes / Often / Always / Not sure
14. Please describe how you or your service might deal with disagreement about a diagnosis.
.....

Treatment:

- 15. Are you aware of pre-school children in your local authority being prescribed psychotropic medication for ADHD?
Yes / No / Not sure
- 16. In your experience, are families normally offered psychological interventions before being prescribed medication for ADHD?
Never / Rarely / Sometimes / Often / Always / Not sure
- 17. What psychological interventions are available for children and young people with ADHD in your area?
.....
- 18. Are you aware of any interventions that you would consider particularly good practice regarding the treatment of ADHD?
.....

Child's views:

- 19. To what extent are children involved in decision making around medication and treatment?
Never / Rarely / Sometimes / Often / Always / Not sure
- 20. How is the child's voice sought?
.....

Local and national issues:

- 21. Does your local authority collect data on the current numbers of children and young people diagnosed with ADHD?
Yes / No / Not sure
- 22. What do you perceive are the drivers for the increasing numbers of children being diagnosed nationally (i.e. school, family, community)?
.....
- 23. Further comments: please feel free to write any views or experiences here. We are particularly interested in comments on the EP's role in working with children with ADHD.
.....
- 24. If you are happy to be contacted by a researcher to discuss your views on this matter further please write your name and email address here.
.....
.....
.....

Appendix B: Breakdown of statistical analyses.

Hypothesis 1: How often are EPs consulted as part of diagnosis?

Standard protocol	Never	Rarely	Sometimes	Often	Always	Total
Yes	5	9	7	5	1	27
	18.5%	33.3%	25.9%	18.5%	3.7%	100.0%
No	18	12	14	6	0	50
	36.0%	24.0%	28.0%	12.0%	0.0%	100.0%

Hypothesis 2: Are systemic factors taken into account?

Standard protocol	Never	Rarely	Sometimes	Often	Always	Total
Yes	1	4	12	5	5	27
	3.7%	14.8%	44.4%	18.5%	18.5%	100.0%
No	4	21	23	1	1	50
	8.0%	42.0%	46.0%	2.0%	2.0%	100.0%

Hypothesis 3: Are families offered psychological interventions?

Standard protocol	Never	Rarely	Sometimes	Often	Always	Total
Yes	3	7	4	3	5	22
	13.6%	31.8%	18.2%	13.6%	22.7%	100.0%
No	11	21	10	4	1	47
	23.4%	44.7%	21.3%	8.5%	2.1%	100.0%

Hypothesis 4: Is the child involved in decision making?

Standard protocol	Never	Rarely	Sometimes	Often	Always	Total
Yes	2	8	4	1	1	16
	12.5%	50.0%	25.0%	6.3%	6.3%	100.0%
No	10	13	7	0	0	30
	33.3%	43.3%	23.3%	0.0%	0.0%	100.0%