Are Schools Meeting the Needs of Students with ADHD?

Daryl Efron*, Emma Sciberras and Phillip Hassell

Centre for Community Child Health, Royal Children’s Hospital, Parkville, Australia

Attention Deficit Hyperactivity Disorder (ADHD) can have a major impact on students’ functioning at school—academically and socially. This study examined parental perceptions of schools in relation to their understanding of ADHD, information provided and general support. Parents of consecutive children with ADHD seen at the Centre for Community Child Health, Royal Children’s Hospital, Melbourne completed a questionnaire that assessed their beliefs about ADHD and schools. Questionnaire data were obtained from 66 parents (43 mothers, 23 fathers) of patients aged from 6 to 19 years (M=10.4). The results indicated that parents of children with ADHD perceive that teachers have inadequate understanding, and schools insufficient resources, to support their children’s special needs. Schools need more resources, and teachers need more training, to promote positive experiences and outcomes for children with ADHD.

Attention Deficit Hyperactivity Disorder (ADHD) is defined as a persistent pattern of inattention and/or hyperactive and impulsive behaviour that is more frequent and severe than is typically observed in individuals at a comparable level of development. The Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) describes three subtypes of ADHD: Combined type, with both inattention and hyperactivity/impulsivity; Predominantly Inattentive type, with inattention but not significant hyperactivity/impulsivity; and Predominantly Hyperactive-Impulsive type, with hyperactivity/impulsivity but not significant inattention (American Psychiatric Association, 1994). Prevalence estimates of ADHD among schoolchildren have ranged from 1.7 to 16% (Goldman, Genel, Bezman, & Slanetz, 1998; Jadad, Boyle, Cunningham, Kim, & Schachar, 1999). Structured diagnostic interviews with parents of a large representative sample of Australian children aged 6–17 years found a prevalence of 7.5%, 6.8% with impairment (Graetz, Sawyer, Hazell, Arney, & Baghurst, 2001). Methodological differences used in case definition contribute to variation in reported prevalence (e.g., diagnostic system used, consideration of teacher-reported symptoms, requirement for impairment, use of rating scales versus clinical interviews, exclusion of coexisting conditions). It is common for prevalence
figures in the order of 3–8% to be cited in review papers on ADHD (Daley, 2006; Rappley, 2005; Remschmidt & Members of the Global ADHD Working Group, 2005). In any case, there is no doubt that many children are impaired by these types of difficulties.

The authors of this article come from a health background, and are aware that this may bring certain assumptions regarding the definition or even validity of ADHD that might not necessarily be shared by all colleagues in education. We hope, however, that this perspective might be of interest to educationalists, and foster some shared understandings and common ground on which children with learning and behavioural difficulties might be best supported across the education–health interface. The data in this article concern a group of children diagnosed with ADHD in a medical setting. Although some challenge the wisdom of employing a categorical approach to describing clusters of behavioural symptoms, this model has been used in this research, consistent with the mainstream ADHD literature in mental health and paediatrics (Remschmidt et al., 2005). It is beyond the scope of this article to address the important philosophical issues associated with applying the medical model to children with educational and behavioural difficulties.

School constitutes a challenging setting for children with ADHD. The deficits in executive function inherent in this condition (Barkley, 2000), whether predominantly biological or environmental in nature, render many aspects of school life difficult for these students. Students with ADHD are at risk of academic underachievement, antisocial behaviour, social exclusion, and leaving school prematurely (Barkley, Anastopoulos, Guevremont, & Fletcher, 1991; Loe & Feldman, 2007; Mannuzza, Klein, Bessler, Malloy, & LaPadula, 1993). A number of interrelated mechanisms, including attentional difficulties, specific learning disabilities, conflict with peers and staff, and emotional disturbance, can result in compromised learning.

Much research has been published into causes, higher cognitive functioning, interventions (medication, psychological therapies, educational interventions) and outcomes of children with ADHD (Fitzgerald, Bellgrove, & Gill, 2007; Gozal & Molfese, 2005). The dominant neurobiological paradigm suggests that disordered fronto-striato-cerebellar brain circuitry underpins the executive function deficits at the core of this condition (Castellanos & Tannock, 2002). Environmental factors including early childhood experiences, parenting style, and school environment influence the manifestations of ADHD. Children with ADHD are heterogeneous, with differences determined by their underlying personalities, individual strengths, and other associated developmental difficulties. Nonetheless, they share the characteristics of poor self-regulation, planning, execution and monitoring of their behaviour (Barkley, 1997).

The successful management of ADHD typically requires a combination of pharmacological, behavioural and educational strategies (Pliska & the AACAP Working Group on Quality Issues, 2007). Medication treatment can significantly reduce symptoms, at least in the short to medium term (MTA Cooperative Group,
helping the student function more adaptively in both the classroom and playground. Behavioural and educational interventions, as well as psychosocial supports, are also necessary for most children with ADHD (Jensen et al., 2007). Non-medication interventions may be particularly suited to children with ADHD Predominantly-Inattentive Type (Pfiffner et al., 2007).

A strong and positive collaborative relationship between parents and teachers/school staff is often considered to be an important element in the successful functioning of students with ADHD (Barkley, 1990; Dunne et al., 1997; Loe & Feldman, 2007; Pfiffner, 1996). Parents of children with ADHD often report the expertise and support of teachers and schools to be of high quality and great value. However, during paediatric consultations, anecdotally a significant proportion of parents have reported feelings of frustration regarding their child’s school and their knowledge and attitudes toward ADHD. To the authors’ knowledge, no specific research has investigated parents’ perceptions of teachers and schools to support this clinical impression of paediatricians.

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; Brook, Watemburg, & Geva, 2000; Jerome, Gordon, & Hustler, 1994; Sciutto, Terjersen, & Bender-Frank, 2000). The results of these studies are largely consistent with more specific studies of teacher knowledge about stimulant medication (Kasten, Coury, & Heron, 1992; Snider, Busch, & Arrowhead, 2003).

Three Australian studies have investigated teacher knowledge about ADHD (Bekle, 2004; Kos, Richdale, & Jackson, 2004; West, Taylor, Houghton, & Hudyma, 2005). Kos et al. (2004) found that teachers were able to correctly answer 60.7% of the items on a 27-item ADHD knowledge questionnaire. Bekle (2004) compared trainee and in-service teachers’ knowledge about ADHD and found that both groups had a similar level of belief in myths about ADHD (for example, that food additives can cause ADHD). West et al. (2005) used the 67-item Knowledge about Attention Deficit Disorder Questionnaire (KADD-Q) to assess teacher knowledge and found that teachers knew most about causes of ADHD, less about the characteristics of the disorder and least about the treatment for ADHD.

A recent Australian study identified significant differences in beliefs between paediatricians and teachers with regard to developmental disorders (O’Keefe & McDowell, 2004). It is possible that these differences are reflected in variation in conceptualisation, understanding, and in turn management of children with these problems, including ADHD. However, these findings are of concern given that school is a common source of ADHD-related information for parents (Bussing, Schoenberg, & Perwein, 1998) and that research has shown that teachers have provided inaccurate and inappropriate advice to parents of children with ADHD (DiBattista & Shepherd, 1993).
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 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 possible so their educational needs can be met (Fell & Pierce, 1995; Montague, McKinney, & Hocutt, 1994).

An investigation of the literature examining teacher training with respect to ADHD can help to clarify why teachers may have limited knowledge in the area of ADHD. Jerome et al. (1994) reported that 99% of Canadian teachers and 89% of American teachers reported receiving no training in the area of ADHD. Similarly, Piccolo-Torsky and Waishwell (1998) reported that 80% of teachers had received no or very informal pre-service training and no in-service training in the area of ADHD. A more recent study by Bussing, Gary, Leon, Wilson-Garvan, and Reid (2002) reported that over 65% of teachers had received some form of ADHD training since graduation but that teachers self-reported a lack of confidence in managing ADHD classroom-related behaviours. Almost half of teachers in this study reported having minimal confidence in their ability to establish a behaviour contract with students with ADHD.

The relationship between teacher knowledge and years of teaching experience is unclear. Kos et al. (2004) reported that teacher performance was significantly correlated with experience of teaching a child with ADHD, and not years of teaching experience more generally. Other studies have found some support for years of teaching experience being related to ADHD knowledge (Jerome et al., 1994; Sciutto et al., 2000). Furthermore, results vary when comparing the knowledge of in-service and pre-service teachers, with Jerome et al. (1994) reporting minimal differences in knowledge, whereas Bekle (2004) found that in-service teachers had more accurate knowledge about ADHD.

In this study we aimed to ascertain parents’ views of schools in relation to their children’s ADHD. We hypothesised that a significant proportion of parents would report schools as having a limited understanding of ADHD and providing insufficient support for their children.

**Method**

**Participants**

Parents of children attending a paediatric clinic with a diagnosis of ADHD at the Centre for Community Child Health, Royal Children’s Hospital, Melbourne, were invited to participate in the cross-sectional survey.
Respondents were 66 parents (43 mothers, 23 fathers) of children aged from 6 to 19 years (M=10.37, SD=2.85) diagnosed with ADHD. Children were predominantly male and in primary school (Table 1). The child’s family characteristics largely represented low- to middle-income households. Most parents had completed at least year 10 level schooling.

With regard to academic characteristics, 49% of parents reported that their child received extra help at school, 23% indicated that their child had repeated a school year, and 19% of parents reported that their child had received funded disability assistance in class. Seven per cent of children had attended a special school. Thirty-five per cent of children had been suspended (Table 1).

**Instruments**

The questionnaire was adapted from the Attitudes, Satisfaction, Knowledge, and Medication Experiences (ASK-ME) questionnaire used in a similar study in the United States (Dosreis et al., 2003), with the permission of the author. The sections of the questionnaire relevant to this article were developed to obtain the following information:

1. general demographic characteristics of the child with ADHD and the family (completed by mother only);
2. management characteristics, including the problems before treatment, the individual who first suggested assessment, age at first diagnosis, medication use (duration, administration schedule), use of counselling, and the parents’ information sources regarding ADHD (completed by mother only); and
3. parental beliefs and attitudes about ADHD and schools, assessed using four statements each rated on a 5-point Likert scale, from ‘strongly agree’ to ‘strongly disagree. These statements were as follows: (1) I believe most teachers have a good understanding of ADHD; (2) I believe schools are supportive of children with ADHD; (3) I believe class sizes are too large for teachers to properly support children with ADHD; and (4) It is difficult for schools to give a lunchtime dose of medication (completed by both mother and father).

**Procedure**

Parents were asked to complete a 10–15-minute questionnaire (described in the instruments section). Parents were required to have attended the clinic at least twice to be eligible to participate in the study, as there was also a quality assurance component attached to this questionnaire, which is not reported here. If only one parent attended the appointment, permission was requested to contact the child’s other parent by telephone to discuss the study to maximise participation from both mothers and fathers, as research tends to only include mothers as respondents. If verbal consent to participate was given, an information letter, a questionnaire, and
two written consent forms were mailed to the study participant together with a reply-paid envelope to return their completed questionnaire and one copy of the consent form. Parents with insufficient English to consent for the study or complete the questionnaires were excluded. The study was approved by the Ethics in Human Research Committee of the Royal Children’s Hospital (EHRC no. 24102A).

Results

Descriptive data analysis was conducted of the child and family’s socio-demographic characteristics, school characteristics, the child’s medication and treatment experiences, and parental beliefs and attitudes about their child’s school.

Description of ADHD Referral Factors, Difficult Behaviours, and Treatment Issues

Two-thirds of parents reported that they themselves first suggested that their children be assessed for ADHD (Table 2). Children were on average 5.88 years old (SD=2.33) when they were diagnosed with ADHD. Common problems before medication treatment for ADHD was commenced included disruptive behaviour (84%), hyperactivity (84%), short attention span (98%), not finishing tasks (88%),
impulsivity (88%), poor school performance (79%), fidgety (91%), aggression (58%), and difficulty with others (65%).

Children were on average 6.63 years (SD = 2.13) when they first started taking medication for ADHD. Of the 93% of children who were taking stimulant medication at the time their parent completed the questionnaire, 46% of the children took stimulant medication daily, 37% took stimulant medication only on school days, and 17% took medication on school days and some non-school days (Table 2). Eighteen per cent of parents reported that their child occasionally misses their ADHD medication (Table 2). The most common reason was the child forgetting to take it (32%).

Most parents (72%) reported receiving advice regarding strategies to help manage their child’s behaviour. Approximately half of parents reported that their child had received counselling, while 28% of mothers reported receiving counselling for themselves. The most frequent providers of counselling were psychologists (26%), followed by paediatricians (14%) and school personnel (14%).

Parental Beliefs and Attitudes Towards Schools

Only 23% of parents agreed that most school teachers have a good understanding of ADHD. Almost half of parents (47%) agreed that schools are supportive of children with ADHD. Most parents (83%) agreed that class sizes are too large for teachers to properly support children with ADHD. Thirty-six per cent of parents (36%) agreed that it is difficult for schools to give a lunchtime dose of medication.

<table>
<thead>
<tr>
<th>Medication-related treatment characteristics</th>
<th>n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Who first suggested treatment?</td>
<td></td>
</tr>
<tr>
<td>Yourself/Parent</td>
<td>28 (65)</td>
</tr>
<tr>
<td>Teacher</td>
<td>12 (28)</td>
</tr>
<tr>
<td>General Practitioner</td>
<td>1 (2)</td>
</tr>
<tr>
<td>Other</td>
<td>2 (5)</td>
</tr>
<tr>
<td>When is medication administered?</td>
<td></td>
</tr>
<tr>
<td>Every day of the week</td>
<td>19 (46)</td>
</tr>
<tr>
<td>School days only</td>
<td>15 (37)</td>
</tr>
<tr>
<td>School days &amp; some non-school days</td>
<td>7 (17)</td>
</tr>
<tr>
<td>How often does child not take medication?</td>
<td></td>
</tr>
<tr>
<td>Rarely</td>
<td>32 (82)</td>
</tr>
<tr>
<td>Occasionally</td>
<td>7 (18)</td>
</tr>
<tr>
<td>Frequently</td>
<td>0 (0)</td>
</tr>
<tr>
<td>Why does your child miss their medication?</td>
<td></td>
</tr>
<tr>
<td>Embarrassed to take it</td>
<td>2 (6)</td>
</tr>
<tr>
<td>Child forgets</td>
<td>11 (32)</td>
</tr>
<tr>
<td>School forgets</td>
<td>5 (15)</td>
</tr>
<tr>
<td>Does not like taking pills</td>
<td>4 (12)</td>
</tr>
<tr>
<td>Unpleasant side-effects</td>
<td>2 (6)</td>
</tr>
<tr>
<td>Other</td>
<td>7 (21)</td>
</tr>
</tbody>
</table>
Parental ADHD Information Sources

Approximately one-third of parents (30%) reported receiving information about ADHD from teachers. Parents reported teachers as their fifth most valuable ADHD information source, behind doctors, other health professionals, the media and family and friends. Approximately one-fifth of parents (21%) listed teachers as within their three most valuable sources of ADHD information.

Discussion

This study set out to examine the views of parents of children with ADHD with regard to the support they experience from schools. These data confirm clinicians’ anecdotal impression, that parents frequently perceive that schools are inadequately equipped to optimally support the needs of children with ADHD. Most parents reported that teachers have poor knowledge of ADHD, and only half felt that schools are supportive of children with ADHD.

Although this is the first study to report the parent’s perspective of their child’s school in managing and understanding their child’s ADHD, these findings are essentially consistent with the body of literature reporting teachers’ lack of knowledge of and confidence in dealing with ADHD, as well as misconceptions regarding ADHD (Barbaresi & Olsen, 1998; Bekle, 2004; Brook et al., 2000; Jerome et al., 1994; Kos et al., 2004; Sciutto et al., 2000; West et al., 2005).

This study had some limitations. The knowledge and attitudes of teachers were not evaluated directly. It is possible that parents have underestimated teachers’ knowledge and misinterpreted their attitudes towards ADHD. However, the parents’ estimates of teacher knowledge about ADHD are consistent with research that has assessed teachers’ knowledge directly. In any case, the perceptions of parents are ecologically valid, in that they underpin and influence their relationship with teachers, and to some extent, their children’s attitude toward and experience of school life. Another methodological problem was that we did not seek to ascertain which type of school the children attended. The findings may not be equally applicable to all three of the main school systems (state, Catholic, and independent). Our questionnaire collected information about parents’ perceptions using only categorical data points, whereas an open-ended format would have allowed for further elaboration and clarification. Furthermore, the parents in this study were recruited from a public hospital, outpatient setting (a medically-based model). Parents who manage their child using a purely behavioural approach, for example, may perceive schools differently.

Nonetheless, these data raised some important questions. Why are only half of a group of children with a common and fundamentally educationally-impairing condition receiving extra assistance (and only 19% integration assistance)? These children were at high risk of academic underachievement. Without additional support in schools many of these students may not reach their potential. Why had 23% repeated a school year? What was the evidence that this will be an advantage to
them? Over one-third of the children with ADHD in this study had been suspended. What does that indicate about the resources available in schools to manage these challenging students? Finally, why don’t parents rate the information they receive about ADHD from teachers particularly highly?

By virtue of the executive function difficulties inherent in this condition, it could be argued that all students with ADHD have some special educational needs to a greater or lesser extent. The resource implications of this proposition are readily apparent. In Australia, legislation regarding the provision of special educational supports for children with ADHD has varied between states, with equal opportunity legislation generally being the conceptual basis on which funding decisions are made. In practice, very few students with ADHD (with or without comorbid learning difficulties, emotional disorders, etc.) have been granted funding for their schools to provide increased resources to support them. The expectation that children with ADHD should be able to access the curriculum and achieve their potential academically without any additional resources can result in enormous frustration for parents. Prosser, Reid, Shute, and Atkinson (2002) argued that a shift from the medical/disability model of ADHD, toward a broader conceptualisation incorporating social and psychological dimensions, might lead to more rational supports within schools for children with ADHD.

Of course, children with ADHD are as different from one another as are children without ADHD. Each student has a particular set of individual needs depending on his profile of strengths and weaknesses. The special needs of a hyperactive 5 year-old are quite different from those of an impulsive, aggressive, defiant 12 year-old, whose needs are different again from those of an inattentive, learning disabled 15 year-old with ADHD and Asperger’s Syndrome who has become depressed from a life of academic failure and social exclusion. It might seem sensible to some to have an individualised academic and behavioural plan to meet the needs of students with ADHD, with periodic review, evaluation of progress, and resetting of goals and strategies to achieve these goals. However, as ADHD is not a recognised category for disability funding in any state in Australia, individualised education programs are not routinely written for these students.

The often complex needs of families of children with ADHD and related difficulties have involved professionals from different service sectors including health, education, social welfare, and juvenile justice. It is unrealistic to think that these services can be delivered effectively in isolation from each other (Bouhours & Bryer, 2005). Consumer groups have led the way in helping us to understand the challenges faced in caring for a child with behaviour problems from the family’s perspective (Association for Children with a Disability, 2005). Families have commonly reported a lack of integration and communication between services, and enormous difficulties accessing supports at home and in schools (Sawyer et al., 2004). Case management has been too often neglected, leaving families to fend for themselves in a confusing maze of services, each with its own bureaucratic barriers.

Recently resource materials about ADHD have been developed specifically for teachers, such as the website ‘TeachADHD’ created by Professor Rosemary
Tannock (see www.teachadhd.ca), and the CD-ROM ‘ADHD: A practical guide for primary school teachers’ by the Centre for Community Child Health, Melbourne (see www.rch.org.au/ccch). However schools cannot be expected to bear the responsibility for managing all aspects of ADHD. Collaborative management at the interfaces between education, health and social services is essential in achieving optimal outcomes for children with ADHD (Steer, 2005).

References


