

LETTER TO THE EDITOR

Attention Deficit/Hyperactivity Disorder among Schoolchildren in Baghdad

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Dear Editor:

A number of studies have examined the prevalence of ADHD in various countries. Variations in prevalence rates of ADHD exist between different studies due to such factors as the sources of information, assessment of clinical impairment, population characteristics, methodological features, ethnic and cultural differences and diagnostic criteria (Skounti et al., 2007). Studies of ADHD among school children yield prevalence rates ranging from 2.4% to 19%. Therefore the characterization of these factors is critical and the differences could throw light on identifying causative agents (Faraone et al., 2003).

In children and adolescents the estimated male to female ratio is 4:1, and females tend to present as the predominately inattentive type, which may lead to underdiagnosis and undertreatment (Cantwell, 1996). Around 60% carry symptoms into adulthood (Schweitzer, 2001). Recognition of ADHD as a disorder affecting a significant percentage of children in many countries has important implications for their psychiatric care. Numerous studies have shown that appropriate management can significantly impact on the symptoms of ADHD and thus help children and their families live with or overcome the burden of this disorder (Multimodal Treatment Study Group, 1999).

Studies on ADHD among children in the Arab countries are scarce (Al-Sharbati et al., 1998) despite the fact that the percentage of children and adolescents constitute a greater part of the total population, for example 40% in Egypt and 53% among Palestinians (UNICEF). The objective of this study was to quantify the rate of ADHD among schoolchildren in Baghdad, the capital city of Iraq where almost 50% of population are below 18 years of age.

In 1999, formal consent was obtained from the education authority to examine schoolchildren at 8 elementary schools in Baghdad.

Children had been screened using the Arabic version of DSM IV to diagnose ADHD. The sample consisted of 1043 children with an age range of 6 to 10 years, 529 (50.4%) were males and 517 (49.6%) were females. Both teachers and parents were involved in assessment and socio-demographic variables like age, sex, child rank in the family and parent's level of education were reported.

By using a scale based on DSM IV devised by local experts, teachers recorded that 110 (10.5%) out of the total sample of 1043 children had symptoms of ADHD, the male: female ratio was 1.8:1. Of the total, 48% presented with combined type, 31% predominately hyperactive-impulsive type, and 21% predominately inattentive type. In a second step procedure, the same rating scale, modified for parents, was used, where parents reported 62 (5.9%) children with ADHD with a male:female ratio of 2.2:1. Combined type was found among 29 children. Predominately hyperactive-impulsive type was reported in 17 and 16 had the predominately inattentive type. In all subtypes males rates were nearly double the females' rates.

We concluded that ADHD exists in our country and with a similar clinical picture as reported by studies in other parts of the world. However as reported above there seems to be a relatively higher number of female students exhibiting ADHD symptoms and a discrepancy between teacher and parent ratings. The contribution of trauma in developing behavioural problems among children and adolescents is well recognised (Allwood et al., 2000). Iraqi children have been exposed to the severe adverse consequences of violence and instability. While speculative at this point, there could be a link between exposure to trauma and the higher relative female to male prevalence but further studies are needed to clarify this relationship. The higher prevalence in teacher

ratings could be explained by teacher's perceptions that children are more distractible as a result of trauma or other preoccupations they may have about their families. Alternatively, parents who are traumatized themselves may under report their own children's difficulties.

This study has yielded some important indicators about the presence of ADHD among children in Iraq. However, the UN embargo imposed on Iraq from 1990 to 2003 has impeded educational and scientific work including research and publication. In addition, factors such as low community awareness and the lack of will by the state government to provide funding for research and treatment has negatively impacted the mental health of Iraqi children, in turn impacting on Iraqi society.

Sincerely,

Dr. Abdul Kareem Salman AIObaidi

Dr. Numan S. Ali

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Commentary to Attention Deficit/Hyperactivity Disorder among Schoolchildren in Baghdad

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Dear Editor:

I read with interest the letter sent by our colleague in Iraq, Dr. Abdul Kareem Salman AIObaidi, who reported on the prevalence of ADHD in that country. I am writing to you as a child psychiatrist who has lived, researched and practiced in a neighbouring country, Iran, for the most of his professional life and served, for a few years as the president of the national academy of child and adolescent psychiatry there, among other responsibilities. It is hard to overlook the enormity of courage and challenges endured by Dr. AIObaidi and his colleagues to conduct research in a country devastated by a number of wars, occupation and decade-long UN sanctions leading to documented high infant mortality rates and malnutrition among other things. Lack of resources

including lack of research infrastructure, I assume, would make research involvement as heroic as fighting in a battlefield. Keeping in line with Dr. AIObaidi's report, I am reporting here the preliminary data from a very large national survey in Iran (N=12164) on the epidemiology of child and adolescent psychiatric disorders including ADHD. In the survey, we used households as the sampling frame and drew proportional samples, from each province, in a probabilistic fashion nationally. The point prevalence for ADHD in the general population of those Iranians aged 18 or under was 8.5% with a 1.7:1 male preponderance (Alaghband-rad et al., unpublished data).

I agree with Dr. Abdul Kareem's assertion regarding variations in terms of reported prevalence of ADHD across different studies. In fact,

epidemiological studies have shown even a wider range of prevalence estimates, ranging from a very low estimate of 0.2% (Essau et al., 1999) to a much higher estimate of 27% (Vasconcelos et al., 2003). Excluding those studies that report extreme rates or use flawed methodologies, the rate still remains between 5 and 12 per cent (Rowland et al., 2002). In one of the most recent comprehensive systematic literature reviews (Polanczyk et al., 2007), based on a statistical computation, the pooled prevalence rate of ADHD was estimated to be 5.23%, although with significant heterogeneity among various estimates. As expected, studies using DSM-IV criteria generated higher prevalence rates than those using ICD-10. Likewise, the studies which did not require functional impairment for diagnosis reported higher prevalence estimates than those that did. This seems to be one of the limitations of this Iraqi study as well in which measurement of impairment remains unreported. The other methodological limitations, not uncommon among other studies as well, include issues around sampling, generalizability of the sample, sample size, reliability and validity of the interview instrument and process. The varied range of prevalence rates, however, would not be attributed to any meaningful differences among countries unless cross-national studies are conducted using parallel diagnostic interview methods, identical or comparable sampling frames and similarly defined population.

Yet, speculations about various potential risk factors and psychosocial correlates of ADHD, unique to Iraqi society, would be tremendously interesting. As mentioned, Iraqis have suffered for decades from different wars and their various consequences. Psychosocial stressors during pregnancy and low birth weight, perhaps common in today's Iraq, are among the well-studied risk factors for ADHD. Putting DSM classification aside, many of the mental health problems could plausibly arise

from an adaptive response to pathogenic environments such as trauma and neglect. As suggested elsewhere (Jensen et al., 1997), increased motor behaviour (hyperactivity) especially during juvenile years may serve to "wire the brain" to the external environments in a way to fit the environment.

I am delighted to get a chance to comment on Dr. AlObaidi's letter and wish him success for his courageous efforts and career.

Sincerely,
Dr. Javad Alaghand-rad

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