Attention-deficit hyperactivity disorder and use of psychostimulants among children in Turkey

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Recently, the use of psychostimulant medication in children with symptoms of attention-deficit hyperactivity disorder (ADHD) has been subject to extensive debate. The problems faced while assessing and diagnosing ADHD, unnecessary prescribing of psychostimulants, the possible side-effects of psychostimulants on the developing brain, the risk of drug dependency, and the risk of stigmatising children through medicalisation of normal life events are considered among the principal objections to the use of psychostimulant medications. On the other hand, what also need to be taken into account are the increasing evidence on the genetic, biochemical and diagnostic validity of the disorder, the data showing the therapeutic effects of psychostimulants and the rarity of the above-mentioned side-effects, as well as the ethical problems created by insufficient treatment of children because of the concerns of parents. A critical evaluation of these conflicting opinions by mental health professionals might contribute to the application of ethical principles. While making this kind of evaluation, it is important to pay regard to the specific sociocultural features of the country, as well as the prevailing worldwide discussion.

Sociocultural overview of Turkey

Turkey, a secular state which wants to be a member of the European Union, is at the crossroads of two continents. Two-thirds of its population of 70 million live in urban areas and about a quarter live below the poverty limit. According the 2005 ‘world indicators’ of the World Bank, Turkey is 55th among 124 countries with respect to unfair distribution of income (Radikal, 2005).

One-third of the population in Turkey is 15 years of age or younger and the number of students in primary education is 10.5 million. The average class size is about 35–40, whereas the appropriate number of students in a class is generally considered to be 15–20. Since 1998, the duration of compulsory education has increased from 5 years to 8 years. Nevertheless, 10% of children (13% for
girls and 7% for boys) of primary education age cannot attend school.

There are problems in directing students towards vocational education. In most higher-income countries, two-thirds of students are in vocational education, but in Turkey the proportion is only one-third. As a result, in the year 2005, 1 730 850 students took the Student Selection Examination for university, but only 23.5% of these found the opportunity to attend any college or university (CNN TURK, 2005). Also, higher education does not simply equate with job opportunity, as approximately one-third of high-school graduates are unemployed. This competitive economic and educational environment means that a great deal of importance is attached to academic performance. Families think that academic success is essential to social status, which in turn increases the anxiety of families and teachers about children who might have educational difficulties. Meanwhile, ordinary schools have no facility for children who have intellectual disability or other special needs. There are examples of labelling and exclusion of those children who have special needs.

The prevalence of illiteracy among women in Turkey is one in five of the adult population, while it is one in eight of the total adult population (State Institute of Statistics, 2004). Turkey is one of the foremost countries in television viewing: the average time spent watching is about 4 hours per day per person. About one-fifth of all television news broadcasts include homicide, suicide or violence.

Migration from rural to urban areas and from eastern to western cities, breaking the traditional family structure, and violence in family or in school, high rates of unemployment and poverty as well as unsatisfactory conditions of education may be counted among factors which increase the risk of psychiatric problems among children and young people in Turkey. Visits from doctors to attend children with reported inattention and hyperactivity increase with these sociocultural circumstances. There is considerable discussion in the media about ADHD and the scientific studies of it.

Prevalence studies of ADHD in Turkey

There are relatively few studies of the clinical features of ADHD in Turkey. In a community-based study carried out in the city centre of Sivas, 8.1% of 1425 students aged 5–15 years were found to fulfil the DSM–IV criteria for ADHD, according to the ratings of their teachers and parents (Ersan et al, 2004). In the child and adolescent psychiatry clinic of Ankara University, 8.6% of the 1556 cases seen in the out-patient unit in 22 months were diagnosed with ADHD, making it the third most common diagnosis, after anxiety and affective disorders (Senol & Sener, 1998). In a university child psychiatry out-patient unit in Trabzon, 37.3% of 43 adolescents with attention deficit symptoms at admission were diagnosed with ADHD (Oner et al, 2002).

In a study by the first author (Aras et al, 2004) carried out with 822 new patients presenting to the child psychiatry out-patient clinic at Dokuz Eylul University Hospital, it was found that presentations with ‘distractibility and overactivity’ accounted for 27.7% of the total, the rate of ADHD was 12.5% and the rate of psychostimulant use was 3%. The rate of psychostimulant use and ADHD diagnosis had shown a 7- to 10-fold increase in the same department over the course of 10 years. Symptoms of ADHD were the most common presenting complaints and ADHD was the most common disorder. Boys were predominantly affected: 87.4% of children with ADHD and 84.0% of children using psychostimulants were males. In children with ADHD, the rate of medication use was 38.8% and the rate of psychostimulant treatment was 24.3%.

The role of psychostimulant medication

Recently, the Ministry of Education considered screening all the country’s school students for ADHD. Such community-based programmes are regarded as effective methods for the advertisement of drug products and as a consequence drug use may become widespread. This plan in Turkey was widely discussed and criticised because of the risk of labelling children with ADHD and increasing psychostimulant use.

Up to 2005, methylphenidate was the only psychostimulant available within Turkey. Psychostimulants in Turkey can be obtained only with special receipts used for ‘narcotic substances and medication under state control’ since 1985 and their distribution is controlled by the state. The amount of methylphenidate imported was 2 kg in 1998, but this had increased to 23 kg by 2002 (International Narcotics Control Board, 2004).

It was reported that approximately 10 000 children were using methylphenidate in 2002 (Aktas, 2003). When 20 mg/day doses are used, the monthly cost of methylphenidate (Ritalin) is approximately US$12. If pharmacotherapy becomes more widespread, psychostimulants could become a profitable group of drugs in Turkey, with its predominantly young population. This fact could accelerate the importation of a wider range of psychostimulants; at the beginning of 2005, a longer-acting and more expensive form of methylphenidate came on the market.

In Turkey, psychostimulants can be prescribed only by specialists in child and adolescent psychiatry, psychiatry, neurology and child neurology. The total number of child psychiatrists and residents is about 200, and most of them are in the bigger cities and university clinics. Especially in state hospitals, a child psychiatrist has to see 30–40 patients a day, limiting the length of a visit to 10–15 minutes. Meanwhile, other doctors who are able to prescribe psychostimulant medication have limited education regarding ADHD. Taking the patient history and the administration of the treatment plan, without detailed evaluation of psychosocial circumstances, which in turn increases the anxiety of families and teachers before they are seen by a doctor. Visiting a doctor with this label may result in a rapid diagnosis and treatment plan, without detailed evaluation of psychosocial and developmental factors.

As psychostimulants can improve cognitive and motor functioning in normal people, there are worries about their use in the general population to increase performance (Searight & McLaren, 1998). In Turkey’s socio-economic circumstances, for some children with symptoms of ADHD, medication can be prescribed inappropriately, to increase...
school performance according to the expectations of parents and teachers. Such prescriptions for children with academic or behavioral difficulties may serve to hide the responsibilities of parents, schools and the public for the child’s problems. Besides inadequate educational conditions, having a small number of child psychiatrists can make it harder to plan rational medication use in ADHD. On the other hand, many children whose symptoms are severe enough for a diagnosis of ADHD have difficulties in obtaining psychiatric care.

**Conclusion**

There are limited data regarding the prevalence, comorbidity, effects of treatment modalities, useful diagnostic procedures or diagnostic criteria for ADHD in Turkey. In order to receive the correct diagnosis and to find appropriate treatment, these data are very important in a country like Turkey, whose population is culturally different from those of most higher-income countries (Rohde, 2002). The evaluation and the treatment phase should take account of cultural and socio-economic variables. Unlike in some higher-income countries with better measures of education and health, it is not realistic to expect the psychosocial and behavioural problems of Turkish children to be resolved by prescribing pills. Education and health policies that take into account current debates in the world on ADHD also need to be implemented in Turkey.

**Definitions of disability**

Under Law 104 of 1992, ‘disability’ is defined as a loss of the ability of the person to perform basic daily activities unaided. However, this is just a legal definition and differs in its parameters from the eligibility criteria that are used to determine whether an individual is able to receive state assistance in the form of services and benefits. For the latter purpose, ‘invalidity’ gives the right to receive financial benefits when an individual is unable to perform most basic daily activities (Rohde, 2002). The inability of the person to perform basic daily activities unaided.

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**Intellectual disability: an Italian perspective**

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