Several studies were performed in order to define the relationship between socio-demographic characteristics and ADHD, cross validations were performed. Crude and adjusted prevalence ratios were obtained using binary regression model. Prevalence ratios of ADHD and specific adaptive functioning category. The level of significance adopted was 5%. Statistical analysis was performed with the aid of the SPSS 13.0 for Windows (SPSS Inc., Chicago IL).

**Methods**

This study was conducted with a large sample of school-age children from a poor community in Brazil. The detected prevalence is in accordance with estimates found in diverse settings, with different cultural and social characteristics. Children with ADHD were found to be more impaired in all domains of mental health. Health care providers and educators should be adequately prepared to identify and provide medical and educational support to children with ADHD.

**Conclusions**

**Results**

The prevalence of ADHD diagnosis in children aged 5 to 12 years in the selected sample was 9.7% [95% CI = 6.2; 14.3] among boys and 2.7% [95% CI = 1.7; 4.7] among girls. This is the highest prevalence of ADHD in childhood described so far. Children with ADHD have a high rate of co-occurring disorders, reaching 90.8% in the sample. Children with ADHD diagnosed with the highest prevalence of comorbidities were found to be significantly more impaired in all domains of mental health (social functioning, emotional functioning, and behavior problems).

**Characteristics of the Sample**

The target sample consisted of 2,172 children from 5 to 12 years. Of the target sample, 1,014 children (47%) were boys, and 1,158 (53%) were girls. The mean age was 9.9 years (SD = 1.7). The sample was distributed as follows: 1,379 (64.1%) in the first stage of schooling, 431 (19.9%) in the second stage, and 362 (16.6%) in the third stage. The children were distributed according to the socio-economic index of the Brazilian Research Committee for the Evaluation of the Federal Government (IBGE). The prevalence of ADHD was 9.7% among boys and 2.7% among girls. This is the highest prevalence of ADHD in childhood described so far. Children with ADHD have a high rate of co-occurring disorders, reaching 90.8% in the sample. Children with ADHD diagnosed with the highest prevalence of comorbidities were found to be significantly more impaired in all domains of mental health (social functioning, emotional functioning, and behavior problems).

**Background and Objectives**

Attention Deficit Hyperactivity Disorder (ADHD) is the most prevalent neurodevelopmental disorder of childhood (1) and is characterized by pervasive and impairing symptoms of inattention, hyperactivity, and impulsivity (2). The condition has been associated with a broad range of negative outcomes for affected subjects and with a serious financial burden to families and society, which characterizes it as a major public health problem (3). Despite the large variability of prevalence rates around the world, studies showed that the world-wide pooled prevalence of ADHD is 5.3% (4). Important variables determining ADHD prevalence (other than adopted diagnostic criteria) include the source of information, and the requirement of impairment for diagnosis. Studies on the topic concluded that Brazil reported discrepancy rates ranging from 4 to 9% of children and adolescents (5). Lower prevalence rates were also found among the studies requiring impairment for the diagnosis, from 0.9 to 5.8% (6,7), and the opposite was seen when impairment was not required for the diagnosis, or when the teachers were the source of information (from 1 to 28.8% (8,9)). These limitations can be largely addressed by the Attention-Brasil Project, where diagnosis was performed according to standard criteria, and both parents and teachers were directly interviewed. Accordingly, herein we conducted a population study to estimate the prevalence of ADHD in Brazilian schoolchildren as well as to compare the mental Health-Status of the affected children with controls.

**Methods**

This study was conducted in a large, ongoing population study aiming to improve the mental health of children and adolescents in Brazil (Attention-Brasil Project). The project consists of two phases. In Phase I (descriptive phase), target sample consisted of all children from 5 to 12 years registered in the public schools of a city (Santos) in the state of São Paulo, Brazil. Descriptive variables were collected from the parents in January 2009 and with their teacher in May 2009. The aim of this phase was to provide the descriptive component of Phase 2: analytical-based, where children will be assessed (see Phase II). Hence we present data from Phase I of the study. According to the demographic characteristics of the studied region covers an area with 2,126,210 inhabitants (Year 2009). Of them, 20,287 (95.4%) are in the urban area. Life expectancy is 77.9 years, and fecundity rate is 3.1% rates that are similar to the Brazilian rates (10). The target sample consisted of children from 5 to 12 years, registered in any of the 5 public elementary school of the city in = 2,172. Of the target sample, controls were obtained from 1,994 (91.7%), and analyzable data from 1,935 (97.9%) of target sample and 91.7% of respondents. Of them, complete information was obtained from 1,877 girls (94.0%) and 1,093 boys (98.0%). The mean age of the target sample stratified by age, gender, race, and income. It also displayed demographic characteristics of children with complete information.

**Prevalence of ADHD**

The overall prevalence of ADHD was 6.7%, being more prevalent in boys (7.7%) than in girls (5.7%) (11). Prevalence was 8.5% among white children and 2.6% among non-white (significant difference). Prevalence increased with age. Using the age of 5 and 12 as the reference (73), prevalence was numerically increased in all subsequent ages, and significantly increased at the age of 6 or 8. (0.4, 0.8, 0.9, 1.0, 2.1, 3.1, 5.4, 7.1, 9.1, CI = 95%). Concerning the sex, the outcomes was numerically increased from class A and B (4%) to class C (2%) (8) and D (8%). Using the classes A and B as the reference, prevalence was significantly increased in the class C (1.0, 1.2, 1.6, CI = 95%) (9). Concerning the ADHD subtypes according to DSM-IV, 77.1% of the sample was classified as combined, 30.4% as inattentive and 26.3% as hyperactive-impulsive (non-significant difference). The prevalence of the ADHD subtypes did not vary significantly across phases (see Table 2).

**Behavior and emotional symptoms as a function of ADHD diagnosis in subtypes.** Table 2 displays the prevalence of behavioral and emotional symptoms as a function of ADHD diagnosis in subtypes. The results show that the ADHD combined subtype had the highest prevalence of behavioral and emotional symptoms in all domains of the CBCL (10). The results also showed that children with ADHD combined subtype had higher prevalence of clinical scores in all domains with the exception of “inattentive” and “distractible.” Comparing to the controls, children with ADHD inattentive subtype showed higher prevalence in the following domains: attention (77.1% vs. 7.7%, 2.1, 2.5, 3.1, CI = 95%), delinquent (31.2% vs. 4.6%, RR = 2.1, 5.4, 9.6, CI = 95%), aggressive (99.4% vs. 2.2%, RR = 2.2, 9.4, CI = 95%), and total (77.7% vs. 16.3, 21.7, 37.5, CI = 95%). Comparing to the controls, children with ADHD hyperactive-impulsive subtype showed higher prevalence of clinical scores in all domains with the exception of “inattentive,” “distractible,” and “hyperactive.”

**References**