ADHD: Prevalence and Etiology
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Presented at The 2nd Annual Child Health Research Day: Celebrating Collaborative Research
January 28, 2012

ABSTRACT
ADHD is a neurological disorder. It is one of the leading causes of academic underachievement and disruptive behavior in school age children. Untreated ADHD is a principal cause of lack of success for many adults. The social and emotional impairments involved in ADHD affect the quality of life for patients and their families. Left untreated these people often become a burden or drain on their family and society (Wehmeyer, Schacht, & Barkeley, 2010). A survey was distributed to 10 randomly selected Qatari Independent school and one private school catering to Qatari students. Teachers were asked to complete the SNAP teacher rating form for each student in their classrooms. More than 4000 students were surveyed. Parents of students who scored in the range of ADHD as reported by teachers were then asked to participate further and through a telephone interview were administered the SNAP rating form. Results indicated a much lower prevalence of ADHD than a previous study. Furthermore, there was a huge difference between the prevalence reported in Qatari Independent Schools and the private school. Suggestions for differences and further study are provided.

OBJECTIVES
• To expand the current literature in Qatar on the prevalence of ADHD to include students from grades one to twelve
• To use this expanded data set to draw further conclusions about this population of children and adolescents
• To compare teacher and parent ratings on a commonly used rating scale for ADHD
• To apply a treatment plan (not part of this poster) and compare the results

RESEARCH QUESTIONS
This paper is part of a larger study addressing the following questions:
1. What is the current literature on ADHD in Qatar and the Middle East saying?
2. What is the prevalence and etiology of ADHD in Qatar children 6-18 years?
3. What is the correlation between parent and teacher rating scales of ADHD?
4. What is the effect of three different treatments for ADHD a) stimulant medication, b) working memory training, and c) stimulant medication and working memory training?

PREVALENCE
Prevalence of ADHD in primary school children in Qatar has been estimated as high as >15% (Bener et al., 2006). The current study examined children from 6-18 years old and found a much lower incidence. The Independent school 6-12 year old group studied by Bener et al. (2006) exhibited a much lower overall prevalence of 5%. The older age group 12-18 years (not previously studied), showed a much lower prevalence of ~2.9%. Looking at just the primary grades the overall prevalence rate was 6.5% and the overall rate for the private school was 10.9%. The questions of the differences are addressed in the discussion section.

POPULATION
This study will benefit Qatar’s educational community by furthering understanding of the prevalence of ADHD in Qatari school age children. It is the number of children who are receiving intervention and c) the effectiveness of three interventions – cognitive training, medication and combined medication and cognitive training. It will assist the public health community with a) identification of co-factors that may affect ADHD such as family structure and size, socio-economic status, etc., b) correlation of the rating scales information and c) assessment of treatment options. Parents will be assisted by receiving information on evidence based interventions for different treatments. Furthermore, results from this study will assist public health and educational services to allocate an equitable proportion of their time and finances to providing strategies and solutions for children with ADHD.

TEACHER PARENT CORROBORATION
Every effort was taken to ensure both teachers and parents completed the Expanded SNAP IV rating scale for ADHD. What became apparent was that many parents declined to participate, citing that their child was fine, there were no problems at home or at school. More than 20% of the parents declined to respond to all the survey. In addition, comparison of teacher and parent answers on the Expanded SNAP IV found that less than 1% of parents identified their child has on the scale for ADHD thus using the standard method there was a lack of substantiation of a diagnosis of ADHD. For a diagnosis of ADHD the condition should exist in more than one setting. In Qatar, it has been observed, parents, in general, do not report the same inattentive and hyperactive behaviours observed by teachers. Data was collected to prove or disprove this observation.

RESEARCH RESULTS
Preliminary analysis of this study are outlined below. Treatment plans are to be begin in February. Further analysis of all results will continue throughout the treatment plan stage. Teachers and parents will again be completing the expanded SNAP IV student rating form and students will undergo other assessments to measure working memory and academic changes.

DISCUSSION
First consideration taken by the researchers was the discrepancy in prevalence of ADHD between this study and the only other study done in Qatar by Bener et al. in 2006. Bener et al. only surveyed teachers and he is not clear if he surveyed all nationalities or only Qatari students. Also, his study refers to criteria for identification as the “DSM IV”. There is a question as to which checklist or what criteria for ADHD he used on the checklist or if the checklist was validated. The absence of these factors makes it impossible to make comparisons.

More than double the number of students in private school compared to Independent school were identified with possible ADHD by teachers. Possible explanations include differing expectations for students in private and independent education. Another explanation is that the private schools are staffed with mainly expatriate teachers from North America, Europe and Australia and New Zealand compared to the expatriate teachers from countries nearer to Qatar whom may have similar expectations of students. There is also the possibility that the randomly chosen Independent schools actually had fewer students with ADHD or provided a program and strategies more inline with the needs of ADHD children although during observations at these schools by one of the researchers, this was not apparent.

Whatever the environments, it was apparent that the teachers and parents did not agree on the behaviours exhibited by the students. Less than one percent of parents identified the child as having characteristic of ADHD illustrating that parent reporting is not a reliable form of collecting data to determine ADHD.

REFERENCES