

Attention Deficiency Hyperactivity Disorder:  
The Hidden Disorder in Government Schools in the  
United Arab Emirates – Dubai  
An Investigative Study

اضطراب نقص الانتباه وفرط الحركة:  
دراسة بحثية حول الاضطراب الخفي في المدارس الحكومية في دولة  
الإمارات العربية المتحدة – دبي

By  
Sana Butti Al Maktoum

Dissertation submitted in partial fulfillment of  
Masters in Education

Faculty of Education

Dissertation Supervisor  
Dr. Eman Gaad

December-2011

## Abstract

ADHD is a common disorder that can be evident in classrooms. Yet, there is a scarce amount of research done on this topic in the Arab World and specifically in the United Arab Emirates. This study examines ADHD in two different government schools in Dubai. The first is a model school and the second is a government school. The research demonstrates the different approach of the two schools to a student with ADHD based on observations, questionnaires and case studies. This study asks three main questions, the first is how are learners with ADHD identified in Dubai. The second is what are the educational services that are available for children with ADHD in model and government schools in Dubai and the third question is what can be recorded and recommended on the status of ADHD in Dubai schools. The results have shown a lack of knowledge by the educational figures in schools including teachers and social workers. An alarming number of teachers related ADHD to family problems and sugar additives. Moreover, individuals chosen by teachers as potentially having ADHD were not diagnosed before and there was no differentiation in the teaching methods to the students.

يعتبر اضطراب نقص الانتباه وفرط الحركة اضطراب شائع وملاحظ في الفصول الدراسية، إلا أن البحوث والدراسات حوله في الوطن العربي عامة وفي دولة الإمارات خاصة تعتبر قليلة. لقد تم تطبيق دراسة اضطراب نقص الانتباه وفرط الحركة التي بين أيديكم على مدرستين حكوميتين في دبي ، مدرسة نموذجية ومدرسة حكومية. كما استعرضت الدراسة الطرق والوسائل المختلفة التي تم تطبيقها في المدرستين عند التعامل مع الطلبة الذين يعانون من هذا الاضطراب، وذلك بناءً على مراقبة السلوك أثناء الحصص الدراسية وتطبيق الاستبيانات ودراسة الحالات الفردية. كما تبحث الدراسة عن إجابات لثلاثة أسئلة أساسية، أولاً: كيف يتم تحديد وتشخيص الطالب الذي لديه اضطراب نقص الانتباه وفرط الحركة في مدارس دبي . وثانياً: ما الخدمات التعليمية التي يتم توفيرها للطلبة الذين لديهم هذا الاضطراب في المدارس سواء النموذجية والحكومية. وثالثاً: ما الملاحظات والتوصيات التي خرجت بها هذه الدراسة عن وضع هؤلاء الطلبة في مدارس دبي . لقد أسفرت نتائج الدراسة عن ما يعاني منه التربويين سواء المعلمين أو الأخصائيين الاجتماعيين من نقص في المعرفة حول هذا الاضطراب، كما أرجأ عدد ملحوظ منهم أسباب اضطراب نقص الانتباه وفرط الحركة إلى المشاكل العائلية وزيادة كمية السكريات التي يتناولها هؤلاء الطلبة. وبالإضافة إلى ذلك ، تبين أن الطلبة الذين تم اختيارهم من قبل مدرسيهم كمصابين محتملين بالاضطراب المذكور لم يتم تشخيصهم مسبقاً ولم تكن هناك أية أساليب للتعليم خاصة بهم أو مختلفة عما اتبع مع قرنائهم.

## **Acknowledgments**

My gratitude and thanks go to my family, my Father, Mother, Sisters and Brothers, my first and foremost source of support, inspiration (proud of you Brother Omar) and sheer love. Thanks for being there through the ups and downs of this great journey. My two beloved Sisters, whom I tortured to read and edit my work. My soul sister Hamdah for the mental support, my dear cousin Hind for the continuous nods. To all my friends, relatives and any person who applauded, listened and appreciated the importance of Special Education knowledge this country truly needs. A special thanks to the schools who opened their hearts before their doors for research and a big applause go to the respected staff and tutors of the British University in Dubai, my Supervisor Dr. Eman, the great editor Mrs. Radhikha and all the tutors who taught me in the teaching modules. I truly enjoyed and learned a lot.

## **List of Abbreviations**

ADD: Attention Deficiency Disorder

ADHD: Attention Deficiency Hyperactivity Disorder

BUiD: British University in Dubai

CD: Conduct Disorder

CTR-S: Conners' Teacher Rating Scale

DSM-IV: Diagnostic and Statistical Manual of Mental Disorders, 4<sup>th</sup> edition

EBD: Emotional Behavioral Disorder

GCC: Gulf Co-operation Council (referred in context to countries)

I.Q: Intelligence Quotient

IEP: Individual Educational Plan

LD: Learning Disability

ODD: Oppositional Defiant Disorder

SEBD: Social Emotional Behavioral Disorder

U.A.E: United Arab Emirates

## Table of Contents

Chapter One: Introduction.....	9
Background of the Research .....	9
Outline of the Research.....	12
Statement of the Study .....	12
Rational of the Study.....	13
Chapter Two: Literature Review.....	14
History of ADHD.....	14
What is ADHD?.....	14
Scientific Explanation .....	14
Types of ADHD .....	15
Co-existing Disorders.....	15
Skills and Academic Performance .....	16
How is ADHD diagnosed?.....	17
Studies conducted on ADHD .....	18
Worldwide Studies .....	18
Arab World Studies.....	19
Chapter Three: Methods and Conduct of the Research.....	24
Methods:.....	24
Observations.....	24
Questionnaires.....	25
Conners' Teacher Rating Scale (CTRS).....	26
Interviews.....	27
School Records.....	28
Ethics in the Data Collection.....	29
Chapter Four: Findings of the Research.....	30
Results from the Questionnaires .....	30
Participants from the two schools .....	30
Teacher Nomination of Students.....	31
General Knowledge of ADHD.....	34
Open Ended Question Results.....	38
Observation Results .....	41
Case Study Results.....	42

Case Study Procedure in the Two Schools.....	42
Case One: Model School.....	43
Case Two: Government School.....	47
Chapter Five: Discussion, Recommendations and Conclusions .....	51
Discussion .....	51
How are learners with ADHD identified in Dubai? .....	51
What are the educational services that are available for children with ADHD in model and government schools in Dubai? .....	57
What can be recorded and recommended on the status of ADHD in Dubai schools? .....	61
Recommendations .....	63
Conclusion.....	65

[List of Figures and Tables](#)

[Figures](#)

Figure 1 Model School “Number of teachers and teaching experience” .....	31
Figure 2 Government School “Number of teachers and teaching experience” .....	31
Figure 3 Model School “Do you think any of your students have ADHD?” .....	32
Figure 4 Government School “Do you think any of your students have ADHD?” .....	32
Figure 5 Model School “Do you think any of your students have ADD?” .....	33
Figure 6 Government School “Do you think any of your students have ADD?” .....	33
Figure 7 Model School “Do you think that the student acquires the same behaviour in different settings?” .....	33
Figure 8 Government School “Do you think that the student acquires the same behaviour in different settings?” .....	33
Figure 9 Model School “Did you get any prior knowledge about the cases?” .....	34
Figure 10 Government School “Did you get any prior knowledge about the cases? .....	34
Figure 11 Model School “How did you know about ADHD” .....	35
Figure 12 Government School “How did you know about ADHD?” .....	36
Figure 13 Model School “Which in your point of view is the best intervention?” .....	37
Figure 14 Government School “Which in your point of view is the best intervention?” .....	37
Figure 15 Model School “Do you think there is support for teachers in the U.A.E to best accommodate for the students’ needs?” .....	38
Figure 16 Government School “Do you think there is support for teachers in the U.A.E to best accommodate for the students’ needs?” .....	38
Figure 17 “The Case Study procedures” .....	0
Figure 18 Model School “Arabic teacher CTRS Interpretive T-score results and guideline” .....	0
Figure 19 Government School “Math teacher CTRS Interpretive T-score results and guideline” .....	0
Figure 20 Government School “Math teacher CTRS Interpretive T-score results and guideline” .....	0

[Tables](#)

Table 1 “What do you think are the symptoms that exhibit a student with ADHD?” .....0

Table 2 “What do you think the reason is behind the ADHD disorder?” .....39

Table 3 “How do you deal with him in class? Which strategies do help?” .....40

Table 4 “Suggestions to support teachers in the U.A.E to best accommodate for students with ADHD” .....41



## **Chapter One: Introduction**

Hidden disorders in mainstream classrooms are evident in schools around the world. Hidden disorders can go without any identification or intervention throughout the school life of a student as students are admitted to regular classes. Examples of hidden disorders are “ADHD” Attention Deficiency Hyperactivity disorder, Dyslexia, Conduct disorder, “ODD” Oppositional Defiant disorder to name just a few. On the other hand, visible disorders such as visual or hearing impairment, Down syndrome, Cerebral Palsy to name just a few are easily identified. According to Mittler (2000), mild developmental delays are not being identified and have been less noticed by special needs figures in preschool years. Mittler points out that on the contrary significant impairments of children are getting more attention by parents and advocacy groups. A study conducted in the (U.A.E.) United Arab Emirates has proven the same point regarding unnoticed disorders, Gaad (2004, p.160) explains “Those children with less apparent exceptional learning needs can go without any form of identification or referral to specialists.” Thus, the delay in identification can have tremendous effects on students in their present and in their future lives.

This research paper is studying one of those hidden disorders which is ADHD. The following section will clarify more on the background of this research study. The background will include studies about the prevalence of ADHD and the consideration of this disorder worldwide. Then, it will move on into presenting an outline of the present study including its main objectives and the research questions of this study. The last two sections of this chapter will include the statement and rationale of the study.

### **Background of the Research**

ADHD as described previously is a disorder that can be hidden in mainstream classrooms. Even though, the studies show the existence of a number of students being affected in each classroom it is yet a disorder that can go without any diagnosis. Studies in the United Kingdom regarding the prevalence of ADHD showed that 3-5% of schoolchildren are affected (Kewley 2005). The figures are similar in the United states where 3-5% of school age children are affected by ADHD according to the American Psychiatric Association and Barkley (cited in Resnick 2000). ADHD is also evident in

other parts of the world as Barkley (2006) points out. Barkley indicates that several countries have used the DSM based diagnostic scale to gauge the prevalence of ADHD such as Australia which estimated as much as 7.5% have ADHD. Barkley also mentions India which got a prevalence of 29% for the age group 11 to 12 years old. Barkley indicates that the difference of prevalence in different countries could be due to many reasons such as culture, socio-economic factors and the different interpretation of the scale. However, Barkley is able to confirm that ADHD is prevalent in several countries around the world. In the Arab world a study undertaken by Farah et al. (2009) reveals the different prevalence in the Arab world. The study states that ADHD in Egypt was a total of 7.48% for boys and girls. Unlike past worldwide studies the past study has used the Conners' rating scale for teachers and parents. Farah et al. mentions another study that has used the Conners' rating scale in getting the ADHD prevalence in Qatar which showed a prevalence of 9.4% on a sample of children. Specially in the United Arab Emirates a study by Bu Haroon et al. (1999) has revealed the prevalence of ADHD at 14.0% of primary school children. This was the only study found in the U.A.E and specifically in Sharjah. Bu Haroon et al. concluded that the high prevalence could be due to getting information on students from one source. Yet, this study implies the existence of ADHD in this country.

The prevalence of ADHD in different parts of the world indicates the significance of this disorder. ADHD is a common disorder that classroom teachers encounter daily. Indeed Kewley (2011) declares that one to two children in each class has ADHD. Therefore, ADHD is a serious disorder inhibiting many classrooms around the world. ADHD as Kewley (2011) reports "... is not an American fad". Additionally, Barkley (2006) declares that the misconception and poor representation of ADHD in the media with regard to its causes and treatment, led him to produce a declaration signed by eighty renowned scientists from around the world. The declaration or statement is called "International Consensus Statement". This statement emphasizes the reality of the disorder and the way it manifests in a person's life. It also emphasizes the treatment available and recommends media play a positive role in educating people about this disorder.

Furthermore, Kewley (2005) states ADHD has been recognized in the U.K by the National Institute for Clinical Excellence (NICE) in their reports in 2000 and 2005. In the U.S, as mentioned by Rief (2003), ADHD has been approved by several organizations such as the U.S Department of Education, the National Institutes of Health and the American Academy of Child and Adolescent Psychiatry.

ADHD is recognised by many worldwide organizations as a disorder, so what do we know about ADHD in the United Arab Emirates? Recent developments have included establishing laws regarding special needs in general. The Federal disability Law No.29/2006 states the right of special needs students to be educated in schools (U.A.E. Federal Law No. 29/2006). The former law has been changed by Sheikh Khalifa Bin Zayed Al Nahyan, the president of the United Arab Emirates from the general term of 'special needs' to people with 'disabilities' specifically (Gaad 2011). Indeed, Gaad (2011) indicates that the law is far from being implemented fully. The law makes a general statement on disabilities and nothing specific regarding disorders nor ADHD. Furthermore there is no evidence to suggest that there is much media coverage or the presence of ADHD advocacy groups in the UAE. It is also important to note that there is a lack of ADHD specialists in the country. It could be argued that the lack of information about this disorder is due to the non existence of ADHD here in the Emirates. Yet in addition to the previous prevalence study in the U.A.E, the latest report of the Ministry of Education regarding student drop-out rates from schools could also indicate the prevalence of ADHD. The government report indicates that in the year of 2008, a number of 37,061 male students dropped out from cycle 3 or secondary stage education (Ministry of Education 2011). School drop-out rates have been linked to ADHD in several international studies, Du Paul & Stoner (2003) indicates that dropping out of school is highly noticeable in the population who have ADHD. He indicates that follow up studies of children with ADHD into adolescence had proven such. Therefore, the drop-out rate statistics in schools in the U.A.E could be attributed to ADHD yet still there is no clear law with respect to ADHD and there has been no move to date to establish a process to find and diagnose students with ADHD and subsequently find the best accommodation for them in schools.

### **Outline of the Research**

Therefore, this research study attempts to understand ADHD disorder in the U.A.E and in Dubai specifically. The main focus of this research study is schools, a model and a government school will be studied, a descriptive comparison between the two is in the Appendix (2) p. 74. The sample study are male students in particular as ADHD is more evident in males, according to Barkley (2006, p.108), "... boys are three times more likely to have ADHD than girls...". Furthermore, a medical view of ADHD will be reflected through a specialist interview. The outline of the research study is divided into five chapters. The first is the introduction which has begun by laying out the theoretical dimension of the research and looked at how ADHD is perceived in this country. Chapter two deals with the literature and previous studies about ADHD worldwide and in the Arab world in particular. In chapter three the different methods are explained in which the data will be collected. Chapter four displays the results visually and describes and comments briefly on some of the data. The last chapter, chapter five includes the analysis of the results and provides recommendations and conclusions to the study. All of the following chapters are drawing into finding answers for the three main research questions of this study:

1. How are learners with ADHD identified in Dubai?
2. What are the educational services that are available for children with ADHD in model and government schools in Dubai?
3. What can be recorded and recommended on the status of ADHD in Dubai schools?

### **Statement of the Study**

Due to the lack of information and clarity as to the existence and treatment of ADHD in the UAE this study has determined to find some knowledge about this disorder in the U.A.E. This study will be looking at Dubai schools specifically. To date there has been little research regarding ADHD in the U.A.E. Some studies have reported on mental health problems in general (Eapen et al. 1998; Eapen & Jariam 2009) and have referenced ADHD briefly (Eapen et al. 2003) but have not explored ADHD in detail. A total of three studies were found in Dubai, one was conducted to study the implication of social rapid change to female nationals (Ghubash et al. 1994) the second was a study by Swadi in 1999 which revealed the different provisions available in the U.A.E. with regard

to child mental health. The third study which was directly connected to ADHD was the aforementioned study of ADHD prevalence of a sample of students in Sharjah (Bu Haroon et al. 1999).

My study hopes to bridge the gap and provide insightful information regarding this disorder. The information gathering will be directed toward teachers to gain an understanding of ADHD in schools. Furthermore, will be able to present case studies to portray the reality of a student who has ADHD. It is important to study ADHD in schools for two reasons. Firstly, this disorder appears when students who have ADHD are in a restricted setting. Secondly, this study will aim to determine what is missing in schools in Dubai.

### **Rational of the Study**

There are many reasons why I have chosen this topic. In addition to the reasons indicated above about the lack of information and understanding of the disorder I have a personal motivation for researching the condition. First, my Brother was diagnosed as having ADHD when he was seven years old. The journey of teaching him has made me more aware of ADHD and in general made me aware of the importance of using different teaching methods. My Brother has struggled in school and it was difficult to explain his disorder to academic personnel who in most cases did not understand or had never heard of this disorder. Secondly, my own personal experience as a teacher in schools and encountering ADHD in the classroom. Even though, I have only taught for two years but I have witnessed symptoms of ADHD in students ranging from one to two cases in each class. Regretfully I admit that there was no time to differentiate or support a child with ADHD. Therefore, I hope this study generates first of all some awareness about the disorder and then perhaps it may lead to a programme in the future within government schools that will help not only children with ADHD but support teachers in finding cases of hidden disorders in classrooms.

## **Chapter Two: Literature Review**

The earlier chapter has introduced the topic of this research study pointing on some of the main issues of ADHD in the U.A.E. context. Indeed, this chapter will include specific points regarding this disorder such as the history of the disorder, what is ADHD, the diagnosis of ADHD and an exposure to worldwide and Arab studies conducted about this disorder. All of the latter will work on identifying major points about this disorder and focus on studies in the Arab world to best criticize the approach on understanding this disorder and later on find the best recommendations about further research. The last segment of this chapter will again summaries the main objectives of the present study.

### **History of ADHD**

According to Rief (2003) ADHD is not a new discovered disorder. It has been around since 1902. Resnick (2000) dates back to 1865 when a German physician called, Heinrich Hoffman wrote a nursery rhyme about the character 'Fidgety Phil'. This nursery rhyme describes a child's behavior at dinner time were Phil is overactive and can't sit still for dinner. Furthermore, the term ADHD has evolved after several previous terms such as 'Minimal Brain Damage', 'Minimal Brain Dysfunction', 'Hyperactive Child Syndrome', 'ADD' or 'without Hyperactivity' (Rief 2003, p.12). The most commonly used term in literature nowadays is ADHD or ADD. ADHD is also referred as Hyperkinetic disorder in the United Kingdom (Hart and Benassaya 2009). Wender goes further in specifying ADHD as a syndrome. Syndrome is a medical term, as Wender states, that describes a group of difficulties that can "...clump, cluster, or move together." (Wender 2000, p.31). Wender's use of this term is crucial as a person with ADHD might have some of the characteristics and not necessarily all.

### **What is ADHD?**

#### ***Scientific Explanation***

The above description of ADHD leads us to know the core symptoms of ADHD which are hyperactivity, impulsivity and inattention (Mash and Wolfe 2005). A child with ADHD might exhibit some of the characteristics or all and the severity of the disorder varies from one person to the other. (Mash and Wolfe 2005; Wender 2000). Yet, if the severity of the characteristics are above the normal range then ADHD is present (Wender

2000). Rief (2003, p.3) defines this disorder by stating that, "ADHD is a neuro-biological behavioral disorder characterized by chronic and developmentally inappropriate degrees of inattention, impulsivity, and , in some cases, hyperactivity." Thus, the science behind it explains the deficiency of the amount of neurotransmitters to a person with ADHD. This deficiency, as Wender further explains, contribute to the efficiency of the activity of the brain in basic functions such as attentiveness and the regulation of impulsive behavior witnessed in people with ADHD (Wender 2000).

### ***Types of ADHD***

According to Rief, there are two main types of ADHD. One is the predominantly inattentive type. This type has no hyperactivity symptoms and is often referred to as "ADD". The other type is predominantly hyperactive/impulsive type of ADHD, which may have some symptoms of inattentiveness. Yet, children with this type will struggle by controlling their behavior and be impulsive in times. The writer above suggests that this may be normal at certain age but when it exceeds the normal behavior of the same age group it will be considered different (Rief 2003). DuPaul and Stoner add to the two types a third type of ADHD which is called the combined type. A person with the combined type will exhibit at least six criteria (from the DSM-IV criteria) of inattention and at least six of the hyperactive and impulsive criteria (DuPaul and Stoner 2003).

### **Co-existing Disorders**

In addition to the types of ADHD there are co-morbid disorders associated with ADHD. The term 'co-morbidity' is a medical term that means a person who has co-existing disorders (Rief 2003). According to research, the number of co-existing disorders affect two-third of children with ADHD (Rief 2003). Some of the co-existing disorders are Oppositional Defiant Disorder (ODD) that can affect, as Kewley states, 40-60% of children with ADHD (Kewley 2005). The latter co-existing disorder is described as "...recurrent pattern of negativistic, defiant, disobedient, and hostile behavior toward authority figures" (Wender 2000, p. 32). Mash and Wolfe add to the severity of ADHD accompanied with Oppositional Defiant disorder when 'Conduct disorder' overlaps with ADHD. Conduct disorder, as described by the mentioned writers, involves a set of extreme behavior such as violating rules, using drugs, cheating, stealing and having trouble in school and society (Mash and Wolfe 2005). Waschbusch (cited in Mash and

Wolfe 2005) states that 30-50 % of children will progressively have Conduct Disorder. The other co-existing disorder to ADHD is Learning disability, "Averaging across studies, approximately one out of every three children with ADHD was found to have Learning disability (M=31.1%; Median=27%)." (DuPaul and Stoner 2003, p.80). Yet, the association between ADHD and Learning disability is a complex issue. Wender also states that ADHD in most cases is associated with underachievement. The characteristics of a child with ADHD can suppress him from gaining knowledge and being disciplined in class. Therefore, the underachievement label may link a person with ADHD to a Learning disability. Therefore, the clinical side of finding out if a child has ADHD is a challenging task. According to Resnick, the clinicians must be aware of the co-morbidity in ADHD or as Resnick refer it to 'mimicking disorders' of ADHD. Resnick and in addition to the former disorders mentions the co-morbidity of other symptoms such as depression, anxiety, anti-social behavior and bipolar disorder (Resnick 2000). A complete list of ADHD co-existing disorders is enclosed in the Appendix (3) p. 75.

### ***Skills and Academic Performance***

A child with ADHD, as mentioned above, can face underachievement in the school. Literature points out that "... the association of ADHD with academic underachievement: up to 80% of children with this disorder have been found to exhibit learning and/or achievement problems." (DuPaul and Stoner 2003, p. 72). Underachievement which affects children with ADHD can also develop to further problems such as being suspended and expelled from schools. A student with ADHD, as Rief (2003) mentions, is more likely to repeat a class. The reason behind the underachievement of children with ADHD is due to the deficit and sometimes absence of skills which are needed in an academic setting. Those skills, as DuPaul and Stoner explain, consist of fine and gross motor skills, problem solving and organizational skills and expressive languages difficulties, a child with ADHD will have problems with those skills. Moreover, Barkley 1998 (cited in DuPaul and Stoner 2003) states that handwriting can be a problem to children with ADHD as teachers have reported. In addition, the absence of one or more skill can affect the student in the academic setting. Wender draws an explanation of school behavior that is required and a student with ADHD. He describes that the skills needed in class such as attentiveness is absent in a student with ADHD. Wender points



out that despite a student having a normal I.Q the behavior can interfere in him/her obtaining the knowledge (Wender 2000). The skills, as mentioned above, will also interfere and affect the student scholastic progress. Therefore, as Barkley (cited in DuPaul and Stoner 2003) points out that children with ADHD have a shortfall in performance and not a lack of ability.

### **How is ADHD diagnosed?**

The diagnoses of ADHD is a comprehensive process involving stages, scales and interviews. According to DuPaul and Stoner the diagnostic criteria of finding out about ADHD was developed by physicians, yet school personnel should be aware of the evaluation of ADHD and the procedures that follow (DuPaul and Stoner 2003).

Moreover, Du Paul and Stoner 2003 has also emphasized on the role of the teachers to be the first witness of any symptoms of ADHD and the referral agent following five stages of screening of a child with ADHD in a school based assessment.

Invariably, teacher knowledge on ADHD and misconception about this disorder and its symptoms have a great effect. As proven in literature, a study by Arcia et al. 2000 (cited in Barkley 2006) that made a survey for teachers about the knowledge of ADHD found that a poor understanding of this disorder and the misconception about interventions can have less effect on students. Another study done by Kos et al. (2004) has added that teacher's knowledge of ADHD can affect the way they teach children with ADHD in class. Indeed, the effect of this perception can soon interfere in the student's academic attainment and hinder the help that a student with ADHD can receive. ADHD children, as described by O'Regan (2006, p.13), experience a set of stages. They will first be in a phase of 'can't learn but want to'. This phase is removed as students get older when they are affected negatively or, as described by the writer 'battered and bruised', by the teachers and parents to a phase where 'won't learn', 'don't care' is observed by students with ADHD. In addition to the affect this has on a student, teachers' views on ADHD can affect intervention. Barkley (2005) states that the misperception of teachers about ADHD can hinder any intervention or behavioral management strategies in class.

Therefore, discovering ADHD in a younger age can help to intervene and provide help and support in educational setting. The latter is not the only way to witness symptoms of

ADHD as the same can be seen at home and noticed by parents. Parents do play an important role in finding out and working in collaboration with teachers and school to best support a child with ADHD. The five stages of screening, as mentioned above by DuPaul and Stoner, recommends the parents interviews to be the second after the teacher referral (DuPaul and Stoner 2003).

ADHD is typically diagnosed when the child reaches elementary school. This is due to the slight changes in the teaching method, where the child is expected to show discipline and have independent abilities to work on tasks. (Rief 2003; DuPaul & Stoner 2003). According to CHADD, diagnoses can be made before the age of seven when symptoms of ADHD are exhibited for at least six months (CHADD 2011). Evaluation of ADHD is a broad initiative that involves a tremendous amount of scales. Yet, the widely popular scales are the DSM-IV and the Conner rating scale for teachers and parents. Evaluation not only consists of filling out scales but it also involves observing the child and interviewing the parents. This point was mentioned in DuPaul and Stoner and Rief, the first suggests the importance of excluding biases that may appear in scales and interviews and being able to observe the child in different setting to formulate a fair opinion on the case (DuPaul and Stoner 2003). On the other hand, Rief points out the importance of looking at past records in addition to a physical, performance and academic intelligence test (Rief 2003). Therefore, the scales used are only one step toward finding if a child has ADHD. Many people including teachers, parents and psychologists need to work hand in hand to identify and then help a child with ADHD.

## **Studies conducted on ADHD**

### ***Worldwide Studies***

ADHD is a disorder that has been studied internationally. As mentioned earlier, United States and United Kingdom have revealed the prevalence of ADHD in classrooms. In addition to the prevalence of ADHD in school age children, studies have gone further to examine other implications of this disorder. Rief mentions that 35% of children with ADHD leave without completing school (Rief 2003). Moreover, Rief asserts that 25-35% of teenagers with ADHD display antisocial behavior and Conduct disorder that lead them to juvenile court appearances more frequently than others with no ADHD (Rief 2003).

There are other comprehensive studies that focused on the use of medical and behavioral treatment for children with ADHD. In one particular study, Rief (2003) summaries the points of the largest study called the Multimodal Treatment Study of Children with Attention-Deficit Hyperactivity Disorder. The study was concerned in knowing whether medication alone, behavioral treatment alone, or the combination of both best treat children with ADHD. The study concluded that the combination program involving medication and behavioral strategies in addition to parent and teachers' participation has reaped the most significant results.

Another study conducted in 2001 by the National Institute of Mental Health, (cited in Kewley 2005) examines the use of medication in children with ADHD. The study looked at 600 children who had medical and psychosocial intervention. There was a slight benefit from this intervention but the most remarkable changes were in areas of self-esteem and social skills. This study concluded that using medication with poor monitoring does not result in reducing symptoms.

The above studies are just some of the worldwide studies. There are other studies that this research will not be able to cover. Furthermore, the subsequent section will present a thorough analysis of studies in the Arab world that directly affect this investigative study and the direction that it will take.

### ***Arab World Studies***

*Studies that are conducted in the Arab world on ADHD are limited. There are a number of articles dealing with mental health in general but very few on ADHD. According to Osman and Afifi (2010) who searched for mental health publication through PubMed search from 1989 to 2008 they found a total of 192 publications in the Gulf Cooperation Council (GCC) in the past 20 years. They suggest that the U.A.E has the most extensive research in the field of mental health and that most of the journals were from the U.A.E University. Their study initiated a general search on mental health articles in the GCC countries. This study compiled a thorough search to find any study that dealt with ADHD in specific. Three journals about ADHD in Oman were looked and found. One study was located in Saudi Arabia and another in Qatar was found dating back to 2006. This 2006 study states that the prevalence of ADHD was found higher in the U.A.E than in Qatar*

*(Bener et al. 2006). This might be one of the reasons for the amount of research done in the U.A.E in particular.*

*In a broader epidemiological study that concerned other countries in addition to the GCC countries was a study by Farah et al. (2009) that reviewed past journals on ADHD. They searched from 1966 to the present and found 12 articles that studied ADHD in specific. The articles were from different countries which included Egypt, Palestine, Qatar, Oman and the U.A.E. They document the prevalence of ADHD and the studies conducted about this disorder which is described as limited amount of research on this topic in the Arab world.*

*In addition to journals, there has been some dissertations that have dealt with this topic. Although no dissertations have been done in BUiD on ADHD, one of the dissertations pointed out the overlap that can happen between ADHD and social, emotional and behavioral disorders (Dhaoui 2008). Dhaoui has explained that there are other 'mental health problems' that can overlap with SEBD and ADHD is one of them. This point is crucial when looking at ADHD and any co-morbidity that could be existent especially in the cases that would be studied further on.*

*Furthermore, the researcher has also found another dissertation done primarily on ADHD in children in a government kindergarten in Dubai. This study evaluates the disorder of ADHD in a specific government kindergarten. It explains that this disorder has increased and even though two teachers are available in each classroom it is difficult to control and deal with children who have ADHD. The study has worked on collaborating a 'Psychodrama Program' to the curriculum which as stated has helped in reducing the hyperactivity symptoms in class (Al Mulla 2008). This research hopes to add to the magnitude of this disorder and proves the prevalence and the increase of this disorder in government schools. To my knowledge those above two dissertations were found that mentioned and discussed ADHD which can help in enlightening some of the data acquired in my research.*

*On the other hand, most of the journals found that discussed ADHD were trying to obtain a prevalence of ADHD mostly in school age children. Yet, there were no further studies*

*that initiated intervention or support plans and their implications in students with ADHD. One of the most interesting journals took place in juvenile detention centers in the U.A.E. It highlighted a new dimension to the studies other than finding prevalence. The former assessed 77 young people in 4 juvenile detention centers in Abu Dhabi, Dubai and Sharjah. The evaluation aimed to find out Conduct disorder and if there is any co-relation between social life and the disorder. The findings showed that participants who had Conduct disorder were also living with a single parent or relative, the parents most likely had low educational level and at the time of the study were unemployed (Al Banna et al. 2008). Even though, Conduct disorder is another disorder and not ADHD yet it can develop especially if no treatment or intervention undergoes. This point of co-morbidity was mentioned earlier in the previous section about co-existing disorders of ADHD. Indeed, Al Banna et al. (2008) mentions ADHD and the need for more attention in early childhood to avoid any conduct disorder developing in later years. They rely this connection to a study in Tunisia done by Bouden et al. 2004 cited in (Al Banna et al. 2008) where 44% of children with ADHD were found to have co-morbid Conduct disorder. Therefore, co-morbidity is worth investigating as it can lead to Conduct disorder that can lead to crime and juvenile detention centers as proven on the study above.*

*Furthermore, a number of the journals that discussed ADHD in the Arab world, in specific the GCC, made a correlation between the social rapid change and this disorder. According to Osman et al. there are social factors that has changed the GCC in the past 40 years. It mentions many factors including the change in the family structure from an extended to a nuclear family. There is also as stated an impaired social unity in the society that might have contributed to the mental health impairment (Osman et al. 2010). Jensen 1997 (cited in Al Sharbati 2003, p.46) refers that ADHD "...maybe a disorder of adaptation". Al Sharbati et al. add that there is little known about the co-relation between rapid shift in the societies and the affect of the modern life to children with ADHD. In a study that took place in Al Ain in the U.A.E, Eapen et al. refers to the affect of social rapid change and disorders pointing out that schoolchildren had mental health problems that occurred in the past two decades may be due to the social change (Eapen et al. 1998).*

*The link between social change and ADHD mentioned above may have an effect but not a reason in developing ADHD. Many of the articles that were written in the Arab world were trying to find correlation between ADHD and other factors contributing to the disorder. Some of the factors that were mentioned in the studies is the family size, birth order and multiple marriages. Yet, the results in finding a co-relation between external factors and ADHD failed to formulate a link. An example on that is the study by Eapen et al. (2003) on sample of children in Al Ain community. The writers declare that there was no link between mental health disorders and the composition of the family, socioeconomic status parental education and occupation nor the loss of any parent in death or divorce. On the other hand, a study that took place in Qatar found a relation between hyperactivity symptoms and divorce or multiple marriages occurring in the family. Bener et al. explains that due to the changes in the family structure whether multiple marriages or divorce there might be insufficient care that can escalate symptoms of ADHD (Bener 2006). Bu Haroon et al. (1999) found a higher correlation in ADHD in cases where a single parent raises the child. Many of the studies try to find a correlation between ADHD and other factors. Al Sharbati (2008, p.265) declares that his study is contributing to the debate on "...whether ADHD is triggered by modern lifestyles or is neurogenetically determined". There is no evidence that clearly indicates that ADHD is created due to external factors and what is known from literature is that ADHD is a neurological disorder.*

*The debate over whether ADHD is socially affected is ongoing through the Arab World studies making a lot of the research in favor of finding reasons rather than researching in other areas concerned in the ADHD disorder. In addition, none of the Arab journals have eluded on other disorders that can have the same symptoms of ADHD as SEBD. The latter disorder as mentioned above by Dhoui (2008) has pointed out the link between ADHD to SEBD. Additionally, Kauffman 2005 has illustrated a hypothetical relation between the two disorders in a graph, see Appendix (4) p.76. Kauffman has added that not all children and adults with ADHD have EBD's, yet a big percentage of severe cases of ADHD have co-morbidity with EBD's. Indeed, co-morbidity of ADHD is not only present in SEBD, or as referred EBD's, but there are number of other disorders that can be overlapped with ADHD. A study done by Connor et al. has looked at ADHD, ODD*

*and CD in clinically referred children with ADHD. Co-morbidity was present in the disorders mentioned above, the study recommend, in hand with previous research on this topic, that the above disorders should be studied without putting it in one general category of disruptive behavioral disorders (Connor et al. 2008). Furthermore, ODD and CD disorders are linked to external factors that can contribute to the disorder unlike ADHD. This point was mentioned in Connor et al. study were it has revealed that "pure" ADHD with no co-morbid disorders in comparison to ADHD with either ODD or CD has proven lack of agreement between parents and negative parenting strategies. Connor et al. have added this point through the results of the study done by Pfiffner et al. 2005 which co-relates with past studies that declared the same point. Therefore, understanding co-morbidity is crucial in understanding ADHD and the role of external factors discussed in the Arab world studies can be due to other disorders overlapped with ADHD and not necessarily ADHD solemnly.*

*Furthermore, another aspect has been discussed in journals and that is the social stigma associated with mental health impairments. Lack of awareness to mental health impairments and the social stigma can contribute towards effective treatment. Studies in the Gulf have shown that many families refer to traditional healing system claimed by Al Adawi et al. (cited in Al Sharbati 2010). According to Eapen et al. (1998) which reported in studies in primary care units found low and unexpected referral and that was due to the social stigma of referring a child to traditional healers rather than seeking medical assistance. The delay in finding treatment can increase the symptoms of any disorder including ADHD. Therefore, there is a need of awareness as much as there is a need of research in this part of the world.*

*The present study will add to past research done specifically in the Arab world and in specific on ADHD. In addition to understanding co-morbidity as mentioned above there are other factors worth investigating. The most important one is teachers' knowledge and absent perception this disorder has as there is a lack of studies on the topic in the Arab world. In addition, worldwide studies according to Sherman et al. (2008) have found a lack of research on teachers' impact on ADHD. Specific cases that will be studied will focus on the two above points and generalize ADHD in government schools in Dubai.*

## **Chapter Three: Methods and Conduct of the Research**

The earlier chapter has mentioned ADHD in literature worldwide and in the Arab world. Studies regarding ADHD in the Arab world as mentioned are limited. Furthermore, most of the studies specifically in the U.A.E found focused on external factors that might be linked to ADHD. Some have looked at mental problems in general without focusing on one disorder. Furthermore, none of the Arab world studies criticized the teacher's knowledge in accordance to this disorder.

The present study have made use of previous research that has relied on the CTR-S scale to obtain knowledge about ADHD. Yet, that will not be the only source of information as this study is aiming to triangulate information from different resources, such as teachers, parents and social workers. A combination of qualitative and quantitative methods will be used to best obtain the necessary information. Qualitative methods will include observations, questionnaires and interviews. On the other hand, quantitative methods will include the CTR-S scale used to measure ADHD symptoms. Furthermore, this study will be focusing in schools. According to a number of studies, symptoms of ADHD are noticed in schools and recorded by teachers (Barkley 2006, Du Paul and Stoner 2003, Kewley 2005, Rief 2003, Wender 2000). Therefore, the most logical way to investigative this disorder is to carry it in schools in Dubai. The study will focus in two schools, a model and a government school. A detailed account of each method used will follow in this chapter. In addition, the last two sections of this chapter will include the ethics and limitations of this study.

### **Methods:**

#### **Observations**

One of the main methods used that formed the largest part of the field visits was the observation. Observations are depictees of reality and they justify interactions and behaviors. Direct observations can be more reliable than when people say how they behave in certain occasions (Bell 1999). Direct observations in the context of this study and the specific disorder of ADHD is crucial. According to Du Paul and Stoner (2003, p. 40) observations in multiple settings help in assessing if a student has ADHD, "Direct observation of student behavior on several occasions and across settings and situations is



one of the best methods to achieve this goal”. ‘This goal’, is referred to the chapter that explains the procedures in assessing a student with ADHD. Barkley has also stated that teachers and parents can be biased and the reliability of the information from the participants should be considered (Barkley 2006). Therefore, it is not recommended to rely on teachers and parents only in understanding ADHD. A third person, the observer, considered as an outsider can further clarify and witness issues related to the cases of ADHD without formulating any biases.

Furthermore, the study observed students that were nominated by the teachers as having ADHD in different settings. The observation took place in core subjects such as Arabic, English and Math, in addition to other subjects including Physical Education, Art and Music. The observation was also carried on break time and playground time to observe the interaction away from a rigid setting. The total observed classes in the Model school were 44 observations. The Government school observation were 36 observations. A total of eighty observations took place that started from end of November 2010 until the beginning of March 2011. The field notes that were taken in the observation will be further analysed to support the research questions of the study.

### **Questionnaires**

Questionnaires also took place in both schools where the researcher implemented a ‘face to face questionnaire’. The questionnaire was filled out in the presence of the researcher and after the observation has undergone to make it easier to refer to the nominated students and be there to help in any questions posed by the teachers.

Furthermore, the questionnaire was piloted in the Research Method Module where a number of teachers in other schools participated in answering the questions. The pilot questionnaire was edited to best fit the accumulated research questions and the sample group in the two schools. Furthermore, the questionnaire was written in Arabic and English to provide the language options for teachers. A total of 33 respondents to the questionnaire availed some issues about ADHD. One of the main questions were to nominate students. According to Barkley, teachers' views are the second valid source after the parents in understanding the psychological adjustment of a student with ADHD in a school setting (Barkley 2006). Moreover, the questionnaire consisted of other general

knowledge questions about ADHD. The questionnaire also sought out to find the general support teachers feel they are getting from higher authorities in the educational field, see Appendix (5) p.77-82 for a sample and an answered questionnaire. The questionnaire revealed many issues concerning ADHD in schools as Creswell explains that a sample survey can reflect a broad view and be able to generalize data (Creswell 2009), in this study the data reflects the UAE's local population. Not only there would be an understanding of the generalized outlook of teachers regarding ADHD but it will also build a comparison between teachers in model and government schools regarding this disorder. All of the data from the questionnaires will be further analyzed and demonstrated quantitatively.

### **Conners' Teacher Rating Scale (CTRS)**

In addition to questionnaires, a scale was used for the main subject teachers to justify their nomination and look deeply into the cases chosen. The scale used for this study is the Conners' Teacher Rating Scale (CTRS); the revised edition compiled by C. Keith Conners. This scale has been used in the U.A.E context showing a good approach in understanding ADHD (BuHaroon et al. 1999, Eapen et al. 2009). The CTRS and as described by DuPaul and Stoner "...provides extensive coverage of externalizing symptoms while still being relatively brief." (DuPaul and Stoner 2003 p.38). Therefore, the CTRS is considered a reliable and valid tool in understanding ADHD from the teachers perception of the common behaviors encountered in a student with ADHD. The CTRS has two versions: a short version and a long version. This study has used the long version as it consists of twenty eight items of criteria. This decision was made due to the fact that only subject teachers who teach Arabic, English and Math will be answering it. Moreover, it will show a deeper analysis of the cases chosen for the study. Furthermore, the scale was translated to Arabic to best suit the environment and get an accurate response, see Appendix (6) p. 83-85 for the original and translated scale. The scale is best administered if the teacher has interacted with the student for a minimum of three months. Therefore, the scales were processed in December and the schools started in September which makes a good three months that has elapsed in the school year.

## **Interviews**

Interviews are another tool in providing more information especially on the cases that would be further analyzed. Based on the students that were nominated by teachers and the observations done, the interview proceeded into asking about specific students. The information about those students was sought after another party, the social worker who is involved in the students' academic life. The social worker in the two schools provided an important source in knowing more about the cases chosen. The interview was carried on in Arabic as it is the first language used and it can give a comfortable setting in elaborating on the answers. In addition to the social worker, the parents are also an important source of information. The researcher hoped to interview at least one parent, preferably the mother. The interview was done on the phone to make it easier and accessible it was also conducted in Arabic. The cases chosen were first nominated by teachers, observations were carried on and the interview with the social worker and the parent provided more information on the case. This approach helped shape a triangulated study where information is taken from several sources to best understand the case in hand. Denzin (in Flick 1998, p. 227) defines this approach as 'methodological triangulation' where two methods are used to construct a theory. Denzin mentions an example of the subtypes of a methodological triangulation; the first being a questionnaire and the second as a semi-structured interview. This method was used in this research paper where subtypes of the data collection were used to best explain and enhance the data collected. In addition to the benefit of triangulating information in a study, it is especially crucial in studying case studies and trying to get the facts away from biases. Both the parent and teacher interview serve in comprehending the cases and providing valid information in this regard.

An interview was also carried on as a next step in the research study. A specialist was interviewed who has special background on ADHD and has participated as a speaker in ADHD conferences. This interview will help in answering the last research question, "what can be recorded and recommended on the status of children with ADHD in Dubai?" The specialist provided his personal experience and the cases he was referred to that could enable an understanding of ADHD in Dubai. Other than the investigative study

and shedding light into two different schools from an academic stand point, the specialist's experience can supply essential information from a medical point of view.

### **School Records**

Another means of information is the data records in school. This information provides another focal perspective in understanding the case. As discussed previously, the teacher provides an academic view whereas the social worker provides a psychological view and more facts on the family background of the cases. The parent also provides an essential view as to how a student presumably having ADHD acts at home. Nevertheless, the school records reveal the academic view with a more specific facts on the grades and the academic performance on each subject taught. The school records obtained reveal the latest grades of the cases chosen. The records were collected for all the subjects to obtain a broad understanding of the student's academic profile.

### **Limitations in the Data Collection**

All of the methods above will work on answering the main three research questions of this study. Yet, there are some limitations worth pointing out that might be challenging in obtaining the required information. One of the main limitations is the amount of exposure teachers have on ADHD in general. This is especially crucial in relying their nomination and validating their opinion on cases. The researcher may feel the pressure of explaining this disorder and its symptoms to get an accurate response on nominations. Yet, this can affect the validity of the questionnaires and the nomination. Therefore, the researcher translated the questionnaire and have given the full term of ADHD and will be referring to it without giving away any information to obtain accuracy in knowledge of teachers and their perspective of cases that presumably have ADHD.

Another limitation could be administering the CTR-S scale by teachers. The researcher is using this scale for the first time and abiding to the procedures followed in a manual regarding this scale. Indeed, the researcher will be present in the administration of this scale to make sure help is provided in any inquiry teachers' pose. The scale will be able to provide specific symptoms and their occurrence based on the teachers' perspectives. Indeed, it is only one part of investigating cases in the two schools and is not relied on solemnly to nominate students.

### **Ethics in the Data Collection**

The school, which was the starting point of the field visits, was approached from the principals. A meeting was planned to explain the research and the following procedure. The Model school asked for a presentation for all head teachers regarding the research. After the presentation, the head teachers were given the consent paper to sign and hand it in another day and circulate it to other teachers who will be involved in the study. The consent paper distributed was written in Arabic and explained all the stages required for the research that will be carried out in the school. None of the observation or the questionnaires started unless the consent paper was signed and returned. Additionally, the research was initiated in the government school by meeting the principal. She decided to have a meeting with the teachers and will be allocating some of the meeting to explain the research. The same consent paper was given to the teachers. Indeed, the school has produced a paper with a table including the teachers' names and signatures. In both schools, the researchers has tried not to be present in the signature event to prevent any pressure and to allow teachers to have freedom to decide whether to participate or not.

The consent paper was also given to social workers in stage two as all of the observations have been gathered and questions developed. The Social workers for both schools signed the paper of consent. Parents were also contacted by social workers to explain the research and find if they are willing to have an interview or a phone interview with the researcher. The social workers initiated contacting the parents and that was essential to introduce the topic and get an agreement before the interview was conducted.

All verbal and written consent letters assured participants that confidentiality and ethical procedures were being adhered to best obtain the necessary information while securing the privacy of the participants in this research study. The entire study spanned four months in the two schools. It did consider obtaining information from multiple methods to avoid any biases. The general knowledge of ADHD was provided by educators and social workers. Moreover, the cases that are studied avoided any diagnostic definitions and use except views from different people to understand the impact, if exists, of ADHD to a student in a mainstream school. The following chapter will present a more detailed account on all the information and methods mentioned.

## **Chapter Four: Findings of the Research**

The data was collected from different means as mentioned in the previous chapter to obtain answers to the research question. The first research question is how are learners identified in Dubai. Therefore, an interview with teachers from two different schools in Dubai was conducted to enable a comparison and understand the magnitude of the issue of ADHD in an academic setting. This chapter visualizes the results from the questionnaire in comparison charts to best understand the similarities and differences in the two schools. The chapter also includes observations made in both schools. The observations data will lead up to the case studies that were chosen to move from a general outlook of ADHD in schools to specific cases that best demonstrate the reality of the situation. A thorough analysis of the findings will follow up in the next chapter.

### **Results from the Questionnaires**

#### **Participants from the two schools**

The participants that were chosen for the questionnaires were teachers that teach grade four and five in the two schools. The participants included all teachers of this age group; main subject teachers and specialist activity teachers such as Music, Art and Physical education.

Before the teacher completed the questionnaire, an observation was carried out according to the teachers' schedule and preference of time. The questionnaire was planned to be after the observation to create easiness and knowledge of the teachers' method of teaching and gain some background knowledge of the students.

Thirty three teachers were interviewed in total. The model school had 20 teachers teaching grade four and five. The government school employed 13 teachers for grade four and five. As shown in Figure 1 and 2 the teaching experience of the teachers in both schools is illustrated below.

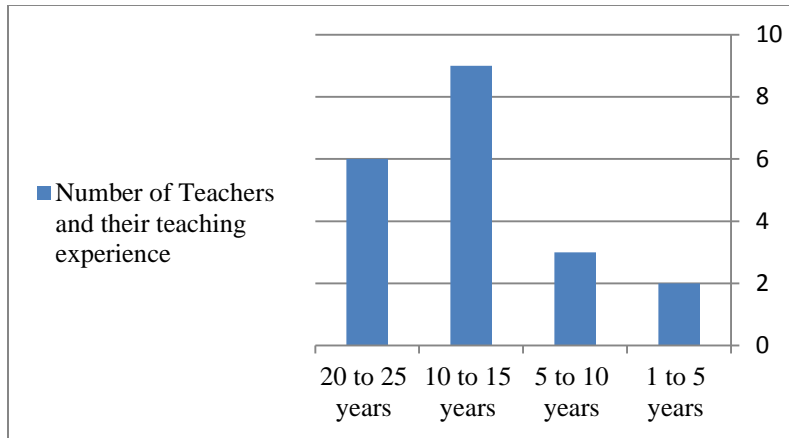


Figure 1 Model School “Number of teachers and teaching experience”

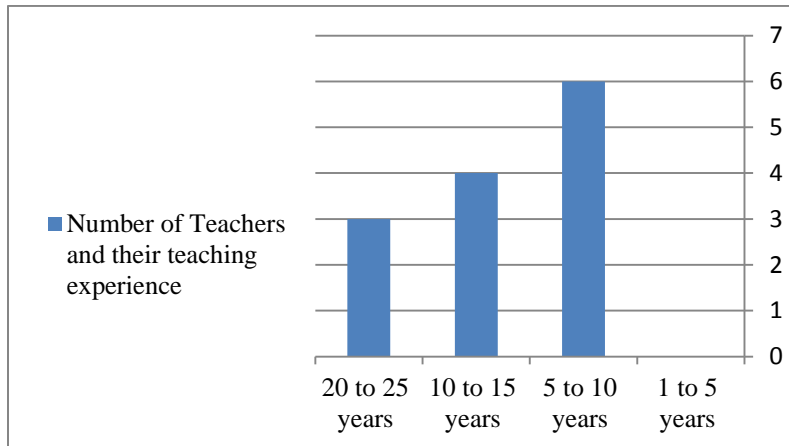
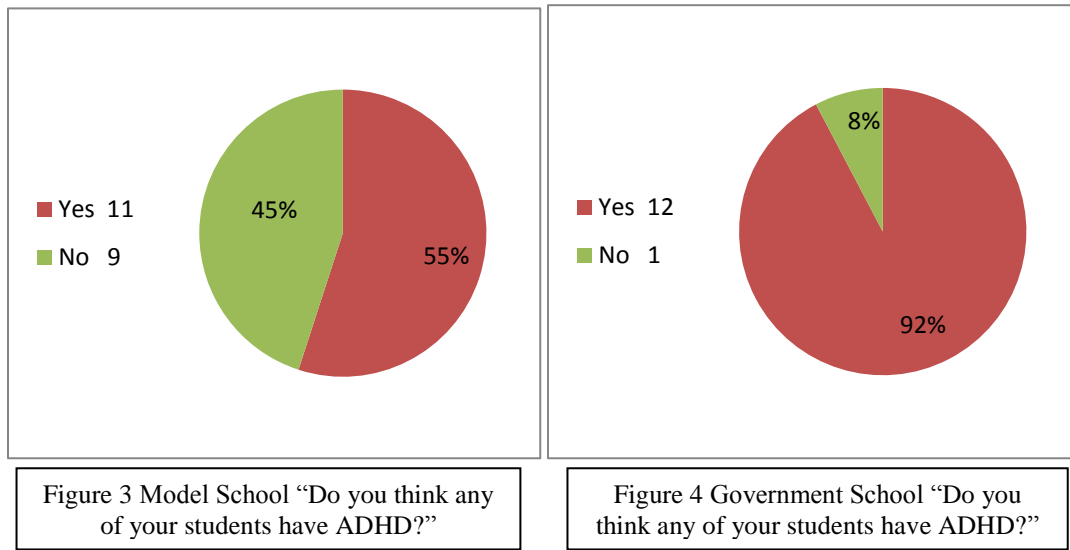


Figure 2 Government School “Number of teachers and teaching experience”

**Teacher Nomination of Students**

The teacher nomination of students enables an understanding of the teacher perspective of ADHD. The first question in the questionnaire asked if the teacher thinks she has a student with ADHD. There is a vast difference in the two responses of teachers in the two schools as shown below:



The model school teachers had a different view in comparison to the government school, 55% of the teachers in the model school think they have a student with ADHD, whereas 92% of the teachers in the government school think so. Furthermore, this question had another part where teachers were asked to nominate students and mention names. The figures below show the nominated numbers versus the original number of students:

- In the model school 23 different names of students were nominated out of the 78 students of grade four and five.
- In the government school 42 different names of students were nominated out of the 82 students of grade four and five.

The data above show some differences in the two schools that is worth investigating later in the following chapter. On the other hand, nominating a student with ADD where hyperactivity is not evident gave a lot of positive responses from teachers especially in the model school. According to figure 5 and 6 below a reasonable number of teachers admitted having a student with ADD. The government school had the exact same nomination for both ADHD and ADD.



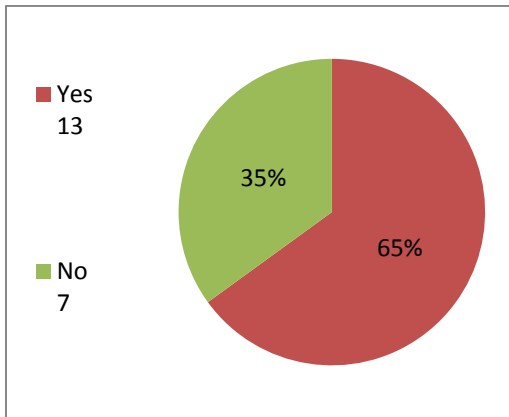


Figure 5 Model School “Do you think any of your students have ADD?”

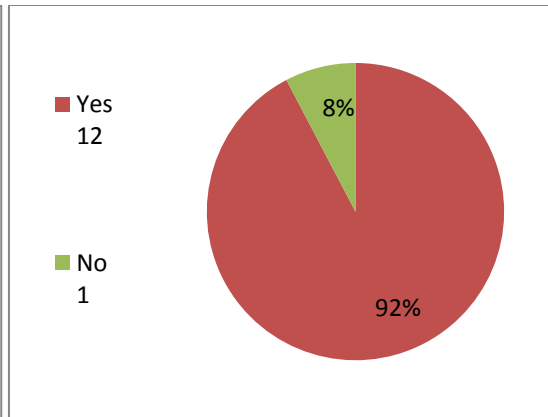


Figure 6 Government School “Do you think any of your students have ADD?”

Following the number of the nominated students as having ADHD two important questions were constructed regarding the nomination. The first one was if they think the student acquires the same behavior in different settings. The figure below illustrates the responses excluding the teachers that did not nominate any student as having ADHD.

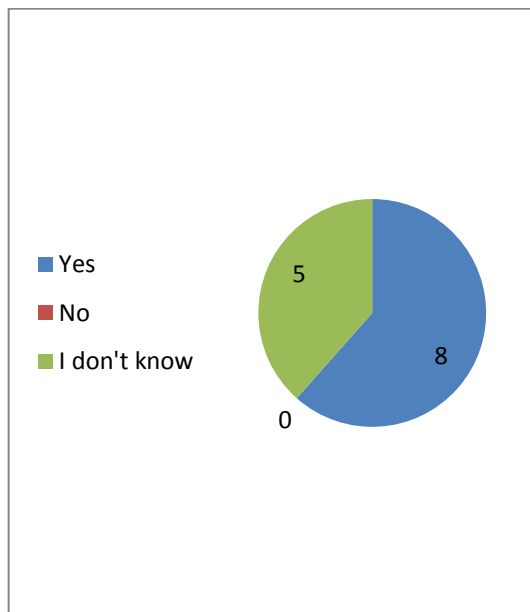


Figure 7 Model School “Do you think that the student acquires the same behaviour in different settings?”

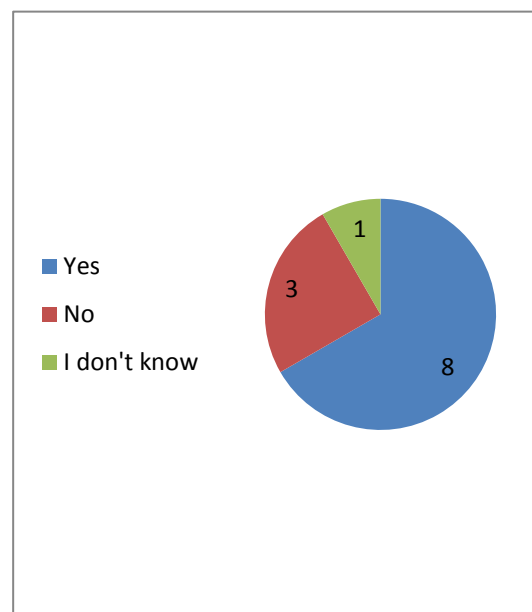
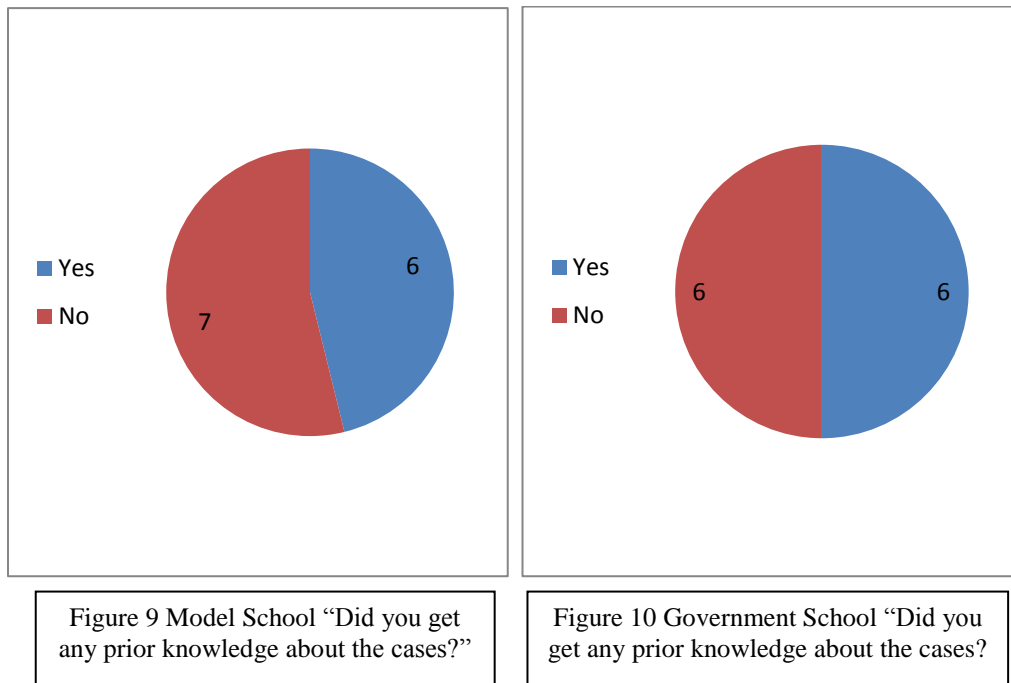


Figure 8 Government School “Do you think that the student acquires the same behaviour in different settings?”

The two figures above show the conviction that the teachers has in their assessment that the student has ADHD. The positive answers are bigger in comparison to the "no" or "I don't know" replies.

The second question that has also looked deeply on the cases nominated was about getting any prior knowledge about the case in hand. Figure (9) and (10) demonstrates the answers to this question.



The respondents who answered with a yes were asked to specify from whom did they get the knowledge about the cases. In the model school figure (9) four of the six teachers got the knowledge from teachers. In the government school figure (10) all of the teachers that answered with yes specified that they got the knowledge from teachers. A total of ten teachers mentioned that teachers are who gave them the prior knowledge. This concludes that teachers consider teachers as a resource when it comes to cases in both schools.

### General Knowledge of ADHD

The questionnaire moved from specific questions about cases in class to a more general look on the knowledge of ADHD in teachers. Figure (11) below directs a question to teachers about the source of knowledge about ADHD. The question had five options and

another option labeled "other" to give the teachers a chance to write their source if it is not mentioned in the choices. Figure (11) below demonstrates the answers from the model school.

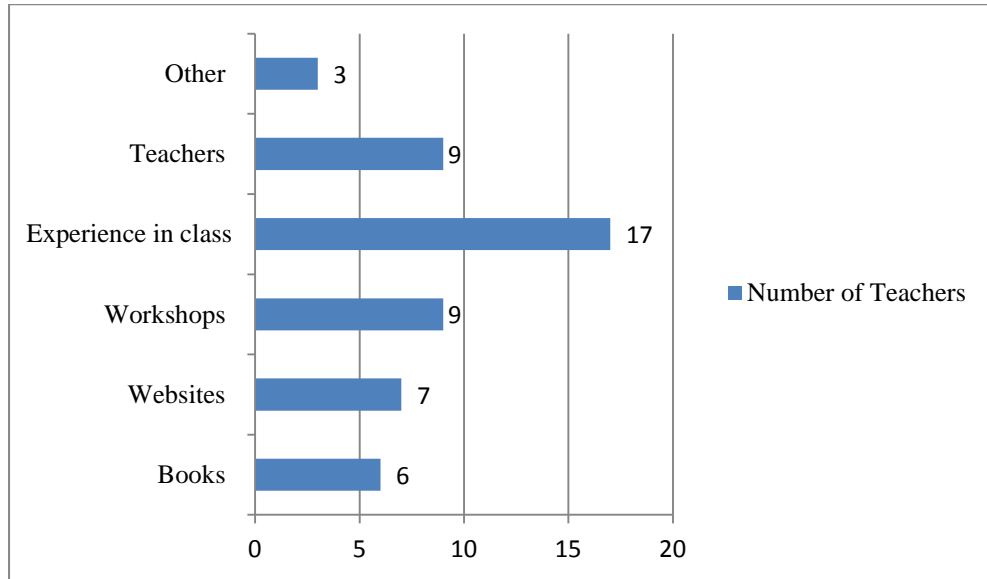


Figure 11 Model School  
“How did you know about ADHD”

Figure (11) shows that the most rated option about the knowledge of ADHD was the experience in class. Teachers relied more on their own experience on knowing about this disorder. Workshops and knowledge from other teachers had the same rating. The other teachers who chose "other" revealed answers such as magazines and newspapers and TV programs. Indeed, only one teacher mentioned knowing about the disorder from a college that introduced a module about learning difficulties. It is also worth noting that the latter respondent was one of the youngest teachers with 1-5 years of experience. This shows that knowledge of special education is taking shape in teaching upcoming teachers.

On the other hand, figure (12) illustrates the respondents answers from the government school. It also reveals that experience in class was the most rated by teachers, 11 out of the 13 teachers chose experience in class as the source of knowledge of ADHD. Again teachers were the second rated option by teachers. Yet workshops in the case of this school was not as big or equal to teacher as the case above. Only three teachers out of the thirteen had learnt about ADHD through workshops.

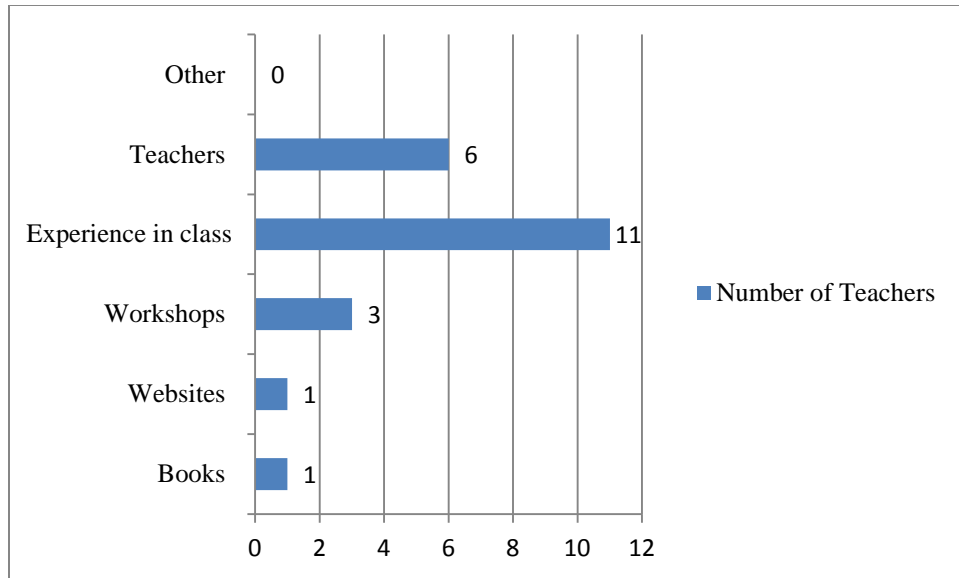


Figure 12 Government School  
 “How did you know about ADHD?”

The next question poses the best intervention of cases with ADHD in the point of view of teachers. The teachers were asked to choose from the option or choose "other" and specify another answer. Furthermore, teachers were also given the freedom to choose more than one answer. This question demonstrated important points regarding medication that was the least voted in the two schools. This goes in line with what has been mentioned that "Public suspicion and concern over medication use for ADHD remains even today. " (Barkley, 2006, p.31). Figure (13) the model school shows only 2 teachers out of the 20 rated medication as the best intervention (10% of the teachers). The top rated intervention was behavioral strategies and educational strategies.

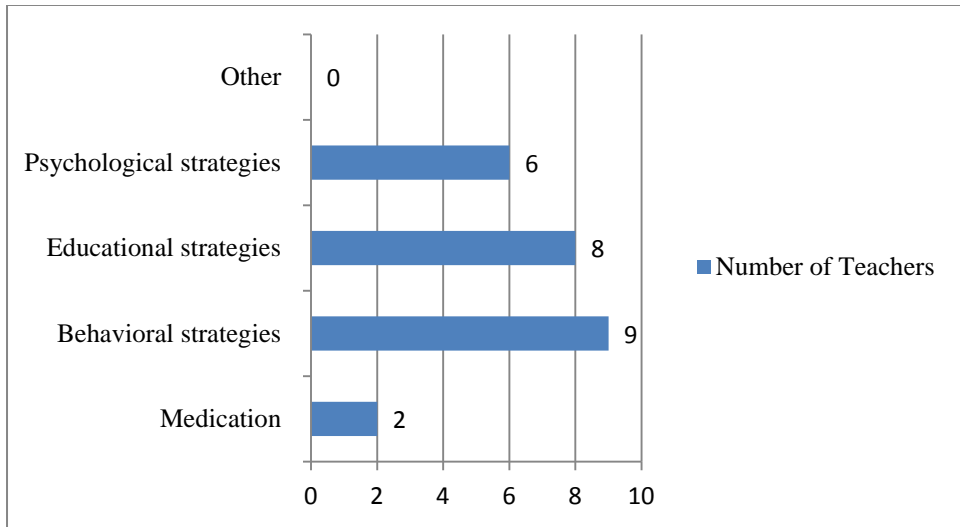


Figure 13 Model School  
 “Which in your point of view is the best intervention?”

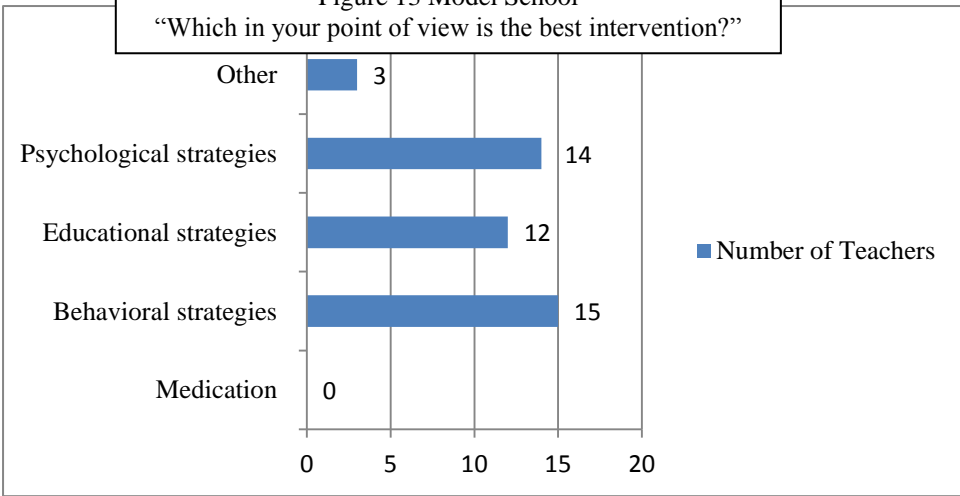


Figure 14 Government School  
 “Which in your point of view is the best intervention?”

On the other hand, figure (14) the government schools none of the teachers chose medication as an intervention. Yet, the most rated intervention is the behavioral strategies coming next is the psychological strategies.

The next question asked about the general support teachers' feel they are getting from the educational system; the question was, "Do you think there is support for teachers in the U.A.E to best accommodate for the students' needs?" Nearly half of the respondents answered by "no" and they have provided various suggestions about what should be included in schools to better support those students. A total of twelve teachers found that there is support in schools. A few of them mentioned the kind of support they are getting

in school such as the social worker help and the amount of workshops they are given in schools. Another teacher mentioned army training that she thinks help in such cases. This issue will be further analyzed in the following chapter. A further account of the respondent suggestions will follow up in details in this chapter.

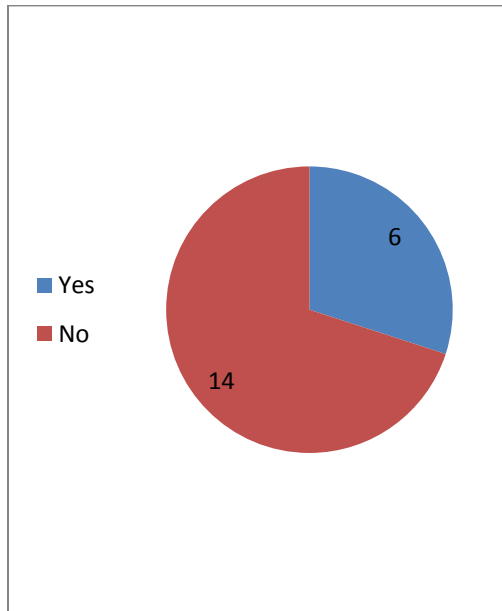


Figure 15 Model School  
 “Do you think there is support for teachers in the U.A.E to best accommodate for the students’ needs?”

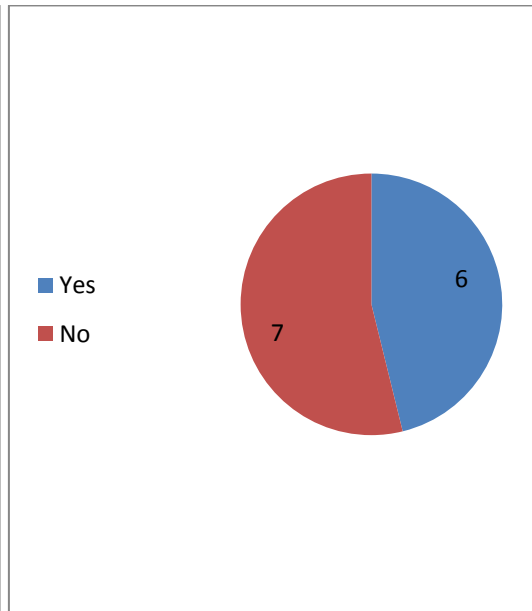


Figure 16 Government School  
 “Do you think there is support for teachers in the U.A.E to best accommodate for the students’ needs?”

### Open Ended Question Results

The open ended segment of the questionnaire allowed a broader spectrum of answers and concerns that were raised by the teachers. The first question that allowed an open ended response concerned the symptoms of ADHD. Table 1 below captures the different answers; from the most rated to the least rated. The answers vary from hyperactivity to handwriting. Hyperactivity got twenty three responses, the other symptoms are listed below:

Table 1 “What do you think are the symptoms that exhibit a student with ADHD?”

1	Hyperactivity
2	Inattention
3	Hyper verbal, side talk to friends and talk without permission

4	Chaos in class and problems with friends
5	Day dreaming
6	Tamper with belongings
7	Doesn't complete his work and doesn't follow up in group reading
8	Grab attention
9	Distracted in playing during explanation
10	Busy all the time
11	Leave class
12	Anger and violence
13	Fidgety
14	Bored easily
15	Stubborn
16	No respect with his classmates
17	Distract others when he can't be attentive
18	Wants to be the leader always
19	Handwriting

Another open ended question and one of the most controversial questions was the reason behind this disorder. This question enabled a deeper look on the knowledge of ADHD and how is it perceived by teachers. The answers are listed below from the top rated to the least. Family problems were chosen as the reason by 16 teachers out of the 33 teachers. There is a significant number of teachers who think family problems are the reason of ADHD some teachers elaborated further by adding excess care and spoiling as the reason or sheer neglect given to the child. On the other hand, only 4 out of the 33 respondents thought that genetics and biological reasons might be the reason of ADHD. The second most rated was food and sugar additives, as shown below in table 2.

Table 2 “What do you think the reason is behind the ADHD disorder?”	
1	Family Problems, lack of care versus spoiled child
2	Food like sugar additives or unhealthy meals
3	Nature of the personality and age

4	Genetics and biological reasons
5	Teacher falling to grab attention
6	Watching T.V and playing video games
7	Not wanting to study
8	Loss of basic academic skills, mental abilities and poor academic attainment
9	Carelessness
10	Pressure at home, don't discharge excess energy at home
11	Wanting to cause trouble
12	Absence
13	Playing in the field
14	Lack of self confidence
15	No fear nor respect
16	Being abused

Another question that allowed an open ended answer was the strategies used by teachers if they have a student that they think has ADHD. The answers are shown in (Table 3).

The most rated answer was encouragement and reinforcement in class; a total of 11 teachers from the two schools found it as the best strategy. More strategies and responses are mentioned below.

Table 3 “How do you deal with him in class? Which strategies do help?”	
1	Encouragement and Reinforcement
2	Grab their attention and concentrate on them
3	Give him a role and responsibility
4	Talk to the student, build a conversation
5	Contact parents
6	Change place, change team
7	Choose them often to participate
8	Give him a time out
9	Alert the student
10	Get help from the social worker
11	Firmness sometimes and reassurance and softness the other
12	Don't provide attention



13	Verbal warning and punishment
14	Class activities and change of activities
15	Be a team or class leader
16	Increase self esteem
17	Tutorials
18	Showcase their art work
19	Choose a leader that can control his team
20	Continuous follow up from the teacher

The last question in the open ended type was the most important; it posed the question about what support teachers would ask for to accommodate for those students better, 13 teachers suggested providing a psychologist in such cases. The second suggestion that was rated by 8 teachers was the availability of ongoing workshops about such topics. There are three teachers who thought special classes is the best accommodation for students with ADHD. Below is a table showing the suggestions mentioned by teachers from the two schools.

Table 4 “Suggestions to support teachers in the U.A.E to best accommodate for students with ADHD”
---

1	Provide psychologists to intervene in such cases
2	Provide ongoing workshops and lectures on the topic
3	Teacher support and unite to help cases
4	Communication with parents
5	Special classes for ADHD
6	Educate teachers on this disorder
7	Student portfolio that includes the social status
8	Punishment

**Observation Results**

The questionnaire above played a role in revealing more about the teachers' perception about ADHD and more importantly started the designation of students that they think may have ADHD. Following up with the designation, an observation was carried out in

all of the settings of the students' concerned. This stage is important as Du Paul and Stoner mention it can be beneficial as interviews can be biased and observations are less biased (Du Paul and Stoner 2003). Moreover, the observation helps take shape in answering the research question about the identification of students with ADHD. Therefore, multiple observations were conducted in the two schools, 36 observations were conducted in the government school and 40 observations in the model school apart from the out of class activities such as break time, restaurant and home time for both schools. Those observations helped in understanding the general environment and teaching strategies in the two schools leading to the understanding of the affect of those teaching strategies with students with ADHD. Additionally, those observations managed to look at individual cases and the interaction in and out of class with teachers and peers. A short account of the general observational points on the two schools is in the Appendix (7) p.86,87. Whereas a critical comparison between the two schools on the bases of the cases chosen will follow up in the next chapter.

### **Case Study Results**

Case studies provided an opportunity to analyse the difference in the two schools and how their approach can affect a student with ADHD. Case studies enable a focused look as Greetz (cited in Cohen et al.) says "Case studies strive to portray 'what it is like' to be in a particular situation, to catch the close-up reality and 'thick description'." (Cohen et al. 2000, p.182). This reflection of reality best suits this research objective and allows deeper investigation into the disorder in the two schools.

Furthermore, case studies provide this study with an insightful specific look which moves the general speculation of ADHD from teachers to particular students. Two cases were selected from the two schools. The cases, as mentioned previously, were nominated by the largest number of teachers. Below is a detailed account of the general procedure and some of the results of the two case studies.

### **Case Study Procedure in the Two Schools**

There were certain steps that were followed in the two schools, starting with observing main subjects in the two schools. The main subjects observed were Arabic, English and Math. The main subject teachers started the nomination of students and administered the

Conners' Teacher Rating scale. The observations continued in other subjects and the nomination by other teachers was considered too. Observation took place in all classes in addition to other settings such as the morning assembly, playground time and home time. The last stage and after taking all of the teacher's views into account and researcher observation and notes was the social worker interview. The social worker interview was conducted to understand other perspectives of the cases in hand. After the social worker account, the parents of the cases selected were interviewed to get their view of the student in the home setting.

### **Case One: Model School**

#### **A. Teacher Designation**

In accordance with figure (17), the case was first designated by teachers. Case one Jamal who is in the Model School was selected by 6 teachers out of the 11 as having ADHD. During the designation of students and completing of the required questionnaire Jamal's Arabic teacher provided more information about this case and allowed an unstructured interview to provide more information regarding the case. The teacher explained the status of Jamal in the earlier grades. Jamal is now in grade five which is the final year in this school. The teacher explained that the situation of this student has improved from the previous years. She said that Jamal had major problems in school last year to the point that staff considered expelling him from school. The teacher said that I will be seeing him swinging on the chair and fidgeting but it is much better than last year. The teacher provided some background information of his family status saying that maybe it is a spoiling matter as he is an only boy between several girls. The teacher explained the lack of co-operation from the mother saying Jamal is like her "prize" after all the girls and this could be the reason.

#### **A1. CTR-S**

The Conners' Teacher Rating scale was used to determine specific symptoms of the assigned students. Only subject teachers who nominated Jamal were asked to complete the chart; the Arabic and Math teacher nominated Jamal and not the English teacher. The

results will be discussed further in the following chapter. See the full interpretive guideline in the Appendix (8) p.88.

	<b>T- Score</b>	<b>Guideline</b>
<b>A. Oppositional</b>	62	Mildly Atypical (Possible Significant Problems)
<b>B. Cognitive Problems/ Inattention</b>	48	Average (Typical score: should not raise concern)
<b>C. Hyperactivity</b>	62	Mildly Atypical (Possible Significant Problems)
<b>D. Conners' ADHD Index</b>	61	Mildly Atypical (Possible Significant Problems)

	<b>T- Score</b>	<b>Guideline</b>
<b>A. Oppositional</b>	69	Moderately Atypical (Indicates Significant Problems)
<b>B. Cognitive Problems/ Inattention</b>	53	Average (Typical score: should not raise concern)
<b>C. Hyperactivity</b>	58	Slightly Atypical (Borderline: Should raise concern)
<b>D. Conners' ADHD Index</b>	64	Mildly Atypical (Possible Significant Problems)

## **A2. Observation**

The case study also examined Jamal's case in multiple settings. According to Barkley 2006 the primary symptoms of ADHD are hyperactivity, impulsivity and inattention. The

following is a short account of the quantity and duration as observed in Jamal in different settings, further information is provided in Appendix (9) p.89.

- **Hyperactivity:**

This symptom was evident in seven academic settings and once in the morning assembly. One example of Jamal's hyperactivity is in the Music lesson when he was seated in a group and moved his hands behind to touch the piano keys.

- **Impulsivity:**

Jamal was also observed as having some impulsive behavior in different settings. One of the incidents that showed his impulsivity was in the Thinking skills class. The teacher chose some students to start a game some sitting on the floor and the other jumping over them on top. Jamal was seated on the floor and lifted his arm high enough to make one of the boys trip on the floor.

- **Inattention:**

All of the above incidents can lead to inattention and inattention can lead to hyperactivity and vice versa. Indeed, there were some incidents where Jamal was showing inattention in classes. Once in the Islamic lesson the teacher has said to Jamal 'Are you here?' as he was daydreaming.

## **B. Social Worker Interview**

A semi-structured interview was administered with the social worker of the school. The following information will only show the information regarding Jamal's case. More details about this interview is in the Appendix (10) p. 90-91. Some of the main points of the interview are as follows:

- Jamal has had problems in schools since grade one.
- Jamal is hyperactive and constantly moves on his chair.
- Jamal is aggressive and has picked on student names in mockery in several occasions. One morning Jamal was shouting in assembly and mocking a boys' family name which led to him being hit by another friend's sport shoes. The social worker doesn't know who started the fight first.
- Jamal is aggressive and can throw anything in his hands.
- Jamal is a snob and spoiled; the reason could be that he is the only son.

- Jamal loves to irritate teachers especially if he finds them fragile.
- When he was in grade three we have informed the parents that this is his last year and he has to leave the school.

### **C. Parent Interview**

The social worker asked Jamal's mother for a phone interview with the researcher. A detailed account of the semi-structured interview is in the Appendix (11) p. 92-94 here are some highlights of the interview:

The Mother of Jamal described him as:

- Stubborn.
- Selfish yet affectionate.
- Doing very well academically.
- A boy between four girls and that could be the reason of his selfishness.
- Problems and complains in schools started when he was in grade one.
- Teachers love him.
- Hyperactive.
- Excitable and impulsive.

The last two points were mentioned by the researcher who asked Jamal's mother to confirm yes or no. At first Jamal's mother answered yes but then ended the interview by saying he is not hyperactive and added 'no it is normal'. The yes and no questions are based on Barkley criteria, see Appendix (12) p. 95, to get the information from the parents point of view.

### **D. Data Documents**

The data gathered for Jamal's case involved his latest grades in all the subjects. Jamal's grades ranged from 89 percent to 99 percent, See Appendix (13) p.96. The highest grade was in English and the lowest grade was in Science. This concludes that his academic attainment is considered high. This could be linked back to the CTR-S scales that showed that his cognitive problems and inattention were presumed average and not raise concern by both his Arabic and Math teachers.

## Case Two: Government School

### A. Teacher Designation:

The same procedure was followed in the government school. Case two Khalid in the Government school was selected by 7 teachers out of the 9 as having ADHD. During the designation and the questionnaire process, teachers opened up about Khalid providing an unstructured interview. The Science and Arabic teachers explained that this student is one of the best academic students in class yet they also stated that he displayed many symptoms of ADHD. The Science teacher said that the father of Khalid has been called to the school several times. She added that once when his father came he explained that Khalid does not act this way at home. She said that Khalid was in tears that day. The Science teacher concluded that there might be pressure at home that makes him come and be hyperactive at school. The Math teacher felt Khalid's actions were due to him being spoiled. She added that it is clear by the way he talks, she said she always tells him 'act like a man'. The Social Studies teacher added a new view on Khalid's case saying that there is a lack of co-operation between the parents of Khalid and the school in general.

### A1. CTR-S

The Conners' Teacher Rating scale was used as before to examine Khalid's case in more detail. Only one core subject teacher nominated Khalid and was therefore asked to complete the scale. The results are shown below:

	<b>T- Score</b>	<b>Guideline</b>
<b>A. Oppositional</b>	76	Markedly Atypical (Indicates Significant Problems)
<b>B. Cognitive Problems/ Inattention</b>	50	Average (Typical score: should not raise concern)
<b>C. Hyperactivity</b>	62	Mildly Atypical (Possible Significant Problems)
<b>D. Conners' ADHD Index</b>	65	Mildly Atypical (Possible Significant Problems)

## **A2. Observation**

As indicated in case one, the three symptoms examined are hyperactivity, impulsivity and inattention, the following comments are a short account of the quantity and duration as observed in different settings, further information is available in Appendix (14) p.97.

- **Hyperactivity:**

Khalid's hyperactivity was witnessed in seven academic settings and once in the morning assembly. One of the incidents that showed Khalid's hyperactivity was in the Islamic lesson. The teacher asked the students to get up and group on four pillars in the school's Mosque. Khalid was standing behind the pillar and climbed and jumped up the pillar when the teacher was not looking.

- **Impulsivity:**

Signs of impulsivity were evident in the observation of Khalid. Khalid showed some impulsivity in four lessons in addition to the break time. In the Physical education lesson Khalid pushed one of the boys to take his spot and he also threw a pencil in the Art lesson.

- **Inattention:**

Khalid inattentiveness was evident in four lessons. Inattentiveness is difficult to record as it can be more easily hidden unlike hyperactivity and impulsivity. Yet, the witnessed inattentiveness was clear in the Physical education lesson when the teacher asked the children to queue and Khalid was not listening. The English teacher on a different setting kept repeating Khalid's name to grab his attention.

### **B. Social Worker Interview:**

A semi-structured interview was administered with the social worker of the school. The complete interview can be found in Appendix (15) p.98-102. The following points are some highlights of the case of Khalid:

- Khalid is an attention seeker.
- Khalid is doing well academically and he is sometimes sent by some of his teachers to my office.



- Khalid is not violent toward his friends.
- Khalid is a leader by nature and we have included him in the police group in school where he takes care of the structure of school in the break time. Yet, he is not admitted to other programs such as the army training or the juvenile care educational program.
- Khalid was not admitted to special education nor did we need to follow up on his I.Q as his grades are fine and his I.Q might be above average.
- Khalid is hyperactive in class as teachers say.

### **C. Parent Interview:**

The social worker asked the parents' of Khalid to attend an interview however a phone interview with Khalid's mother took place instead. A detailed account of the semi-structured interview is in Appendix (16) p.103-106, here are some of the highlights of the interview:

The Mother of Khalid described him as:

- Creative.
- Energetic.
- Technical and like to fix things at home.
- Sensitive.
- Social.
- He started talking when he was three and walking when he was nine months.
- Khalid is the second child of a total of three children.
- Schools have complained about his hyperactivity since he was in KG2.
- Hyperactive.

The last point was adapted from Barkley (2006) criteria as mentioned earlier.

Furthermore, Khalid's mother blamed the school in some aspects commenting on the way teachers handle him at school. She added that Khalid has low self esteem due to the way he is treated at school. She explained about an incident when a teacher has slapped him across the face in front of everyone when they had a school inspection as he was hugging his friend. She carried on that teachers call him the 'devil' and the 'naughty one' which

affects him a lot. It is worth pointing out here that the term ‘devil’ is used occasionally in this culture and is not meant literally. Khalid’s mother has tried engaging him in out-of-class activities such as swimming but due to the missing of lessons and having no support from teachers to recap what he has missed she has withdrawn him from this activity. Khalid's mother anticipates putting him in the Institute of Applied Technology when he grows up so that he can pursue his dream in technical studies like his Uncle.

#### **D. Data Documents**

The data gathered for Khalid's case involved his latest grades in all the subjects. Khalid's grades ranged from 75 percent to 96 percent, see Appendix (17) p.107. The highest grade was in Art and the lowest grade was in Computer Studies. The grades show that Khalid academic attainment is fairly well regarded.

Both Jamal’s and Khalid’s cases will be further analyzed in the coming chapter. Furthermore, analyses of all the above results will be demonstrated in connection to the research questions in the following chapter.

## **Chapter Five: Discussion, Recommendations and Conclusions**

The results obtained from the field visits and the analysis of the results in the past chapter enabled a visual comparison of ADHD and how it is viewed and handled on cases in both schools. Indeed, this chapter will focus on analyzing results and understanding the impact of ADHD in an attempt to correlate with the research questions of this investigative study. This chapter will start by a research question for each section. The research question will be able to link the analysis in each section.

### **Discussion**

#### **How are learners with ADHD identified in Dubai?**

Teachers' knowledge about this disorder is the first step in the identification procedure. To be able to analyze the identification and the specific nomination of students in the two schools it is valuable to understand first the knowledge teachers have about ADHD. The questionnaires played an important role in revealing information about the view teachers have on students with ADHD. As mentioned earlier in the literature review, teachers' knowledge play an important role in educating students with ADHD. The research question above will be discussed in tandem with the below points:

#### **Questionnaire Analysis**

The questionnaire played a role in finding more about the identification of children with ADHD. There are some points in the questionnaire that relate to the identification and are discussed below.

- **Prevalence**

As discussed earlier, documented literature shows the prevalence of ADHD in the United Arab Emirates as 14.9% (Bu Haroon et al. 1999). As mentioned in chapter two, the later study has compared the U.A.E to Qatar and found the former with a higher prevalence to ADHD. The prevalence of the U.A.E found in this study is also high in comparison to worldwide studies. Furthermore, this research has also found high rates of nomination of students by teachers which could explain the above statistics from the United Arab Emirates study. Teachers nominated 65 students out of the 160 students, attending grade four and five, as having ADHD in the two schools. This is a high number of nomination of students who have ADHD. Indeed, teachers' perception is held accountable in

diagnosing ADHD, this point was previously mentioned in the literature review as teachers' views being an important indicator of ADHD.

Furthermore, there are some points regarding the nomination of teachers that are worth investigating. The Model school nominated 23 names out of the 78 students, as mentioned previously. Indeed, the government school nominated half of the total of number of students as having ADHD. It is worth noting here that model schools have admission exams which involve a written version and an interview as an entry which might have a lower threshold of accepting a student with ADHD or a child that is hyperactive. On the other hand, government schools have no admission exam and expelling a student from all public schools only happens after a number of notices and signed agreements according to the five level of violations explained in the Ministry of Education website (Ministry of Education 2011). Those points are relevant in understanding the reason of the nomination done by teachers. Nonetheless, there are other observational points in the government school that could be associated to the number of nominations. Based on the observation and the interview with the social worker, a big number of students were having family problems such as divorce, or were orphan living with one parent or a relative. Those students were the ones nominated as having ADHD. Some of the nominated students were admitted to special education classes at a younger age, based on the special education teacher interview, and are currently in mainstream classes. In addition, some of the nominated students had remedial classes after school which can be inferred as a Learning disability by its own or a co-morbidity with ADHD. Learning disability can also be co-existent as mentioned in the literature review. Yet, there is no definite answer in diagnosing students but all of those factors can play a role in the diagnosis.

Another point that is worth investigating is a program held in the government school called 'Army training'. This program is made in association with Dubai police. The teachers and the administration admit students 'who cause problems', as described by them, to be enrolled. The view of teachers contradicts each other as some found it helpful and the others criticized it negatively. According to (Al Dhaheri 2011), this program has been running for ten years. It also proves some significant statistics in terms of the

behavior of the students enrolled. The article mentions the low numbers of misbehavior from 1050 cases in the year 2001 until 350 cases in the year 2005. It also mentions other statistics including a lower rate of running away from school and a higher rate of academic excellence. Indeed, all of the statistics are between 2001 up to 2009. The program includes, as mentioned in the article, training on the use of weapon, different lectures about the danger of smoking, drug use and safety on roads.

In summary, the above points mentioned under the prevalence of ADHD in both schools played a role in the identification procedure. The higher number of students presumably having ADHD in government schools is explained by the different factors that were observed through the field visits and interviews. To be able to identify a student as having ADHD teachers views are considered and the external factors can also be valuable to understand. Yet, those external factors are not the reason of ADHD as it is purely a neurological deficit as explained in the literature review.

- Symptoms of ADHD

This point enabled an open ended answer given by the teacher to give them the freedom of mentioning what they view as symptoms of ADHD. Almost all of the teachers mentioned the two main symptoms of ADHD which are inattention and hyperactivity. None of the teachers mentioned the third symptom of ADHD impulsivity. The questionnaire was held in the presence of the research many of the teachers referred to question one in the questionnaire were the complete term of ADHD (Attention deficiency hyperactivity disorder) is mentioned and teachers pointed to attention and hyperactivity as the two symptoms before answering the question. Those two symptoms are clearly mentioned in the ADHD term above, but not impulsivity. Teachers were unaware of one of the main issues in identifying students with ADHD which is impulsivity. As described by Barkely (2006, p.81), 'poor regulated activity' and impulsivity are the two key components in differentiating ADHD from other disorders. (Barkley 2006, p.81).

Furthermore, there were symptoms that were mentioned that are considered extreme such as anger and violence or could be based on students who are not necessarily ADHD but Conduct disorder maybe the case. Mash and Wolfe (2005) explain that children suffering

from conduct disorder display excessive aggressiveness by verbal or physical disturbance on others.

- Reasons behind ADHD

According to the results from the questionnaire a big number of teachers think that ADHD stem from family problems. This view can complicate matters even further as it triggers a vicious blaming cycle in which teachers blame parents and parents blame teachers as was encountered in the field visits and interviews. This blaming cycle can hinder any possibility of communication between teachers and parents as Barkley (2006) states that the blaming cycle do exist while a communicative environment should form between the two agents to work on a suitable home and school setting. Furthermore, ADHD is not a parenting deficiency or a reason of a family problem, "No forms of raising can produce ADHD problems in a child who is not temperamentally predisposed to them." (Wender 2000,p.34). Wender goes on to explain that parenting techniques can affect ADHD and the severity of the problem yet it is not the cause of it. As part of this investigative study the results obtained from the questionnaire were exposed to a psychiatrist who specializes in ADHD, Dr. Amer a Psychiatrist in Dubai Community Healthcare Center, to get his medical views. The number of teachers who blamed parents were mentioned in the interview. Dr. Amer replied that blaming parents is meaningless and that teachers blame parents because it is easier than finding communication between them. He also added "... and there are no international studies that related family to this disorder."

Another reason of ADHD as mentioned by teachers was sugar additives. Teachers refer sugar additives and food to be the reason behind ADHD. According to literature, Resnick explains, " No clear evidence exists that food additives or diets high in sugar are etiologically related to ADHD." (Resnick 2000, p.14). Furthermore, during the interview Dr. Amer has also approved that there is no evidence up to the minute regarding sugar and hyperactivity, see Appendix (18) p.108-119 for the full interview.

On the other hand, as mentioned in the literature review ADHD is linked to SEBD, or in another case both disorders can be overlapped. This case is worth considering when looking at the number of cases nominated by teachers in the government school. Even

though teachers' are the indicators of ADHD yet the lack of knowledge on the disorder may result in a misdiagnosis. Interviewing other staff in the school including the social worker and the special education teacher proved that other cases in the government school are having external factors that may have contributed to the nomination done by teachers and the referral to the social worker office.

The points mentioned in the questionnaire further enable what goes through the identification procedure done by teachers. The perception of this disorder is important to examine especially when it is through the view of educational figures including teachers. There are as mentioned above some misconceptions about this disorder and a lack of understanding to its main symptoms and reasons. Recommendations regarding those points will be discussed shortly.

### **CTR-S Scale**

The CTR-S as mentioned in the methodology chapter is a well known and valid scale used to identify children with ADHD. This scale has also been used in Arab context in studies done in Qatar, Oman and the U.A.E (Bener, et al. 2006; Al Sharbati et al. 2008; Bu Haroon 1999). The process of identification, in addition to the questionnaire, included the presence of the CTR-S scale. Core subject teachers were asked to fill out the CTR-S scale regarding the students they view as having ADHD. This scale further enabled a closer look on the characteristics of ADHD and to differentiate between a disorder if comorbidity does exist such as cognitive problems or Oppositional disorder.

The results collected showed that ADHD was the case according to the T-score and there was a possibility of a significant problem in the Oppositional category in the two cases. As mentioned previously, oppositional disorder is common when ADHD exists. On the other hand, none of the cases had issues regarding cognitive problems that can be referred to a Learning disability. This is also proven in the grades collected for the two cases who had very good grades in most of the subjects. This proved that ADHD is the case according to the teachers designation at first and the specific score attained from the CTR-S scale. The CTR-S scale played an important role in the identification of ADHD and any possibility of other disorder existent in the cases studied.

## **Interviews**

Questionnaires started the designation of the students whom their teachers thought have ADHD, whereas the CTR-S was able to look into cases and specific symptoms of ADHD and co-morbidity if existent. Indeed, the CTR-S by itself cannot stand alone as a diagnostic tool into referring students with ADHD, "a rating scale is only one mode of assessment; other modes might includes interview, record review, observation, and direct assessment of knowledge, skills, and abilities." (Sparrow et al. 2010, p.5). Therefore, an analysis of the interview is worth investigating to better identify a student as having ADHD.

Interviews about the two cases in hand brought in more information about the cases. Case one, Jamal, who is admitted in a model school was identified by teachers and further the social worker was interviewed. The social worker summarized the academic years of the case in hand since he was in grade one. She has added that he had problems in class since grade one and up to the present as he is now in grade five. The knowledge of the past years helped to identify whether ADHD is a current issue or has been existent for a long time. According to Bener et al. (2006) the symptoms of ADHD appear on a child when he is in the age group of 6 to 9, Kewley (2005) adds that an important feature of ADHD is that symptoms are significant for at least six months (Kewley 2005). Case two, Khalid, who is admitted in a government school was also identified by his teachers and the social worker was interviewed. The social worker interview played in this case a further explanation on whether this student have family problems that can interfere in diagnosing ADHD but as mentioned previously is not the reason of this disorder. Khalid, as explained by the social worker, lives with his parents and no family problem is evident. Moreover, the social worker added that Khalid is not admitted to any other program such as 'army training' or 'Funding programs'. Yet, he is part of the 'Police program' held in school. This interview enabled a wider understanding of the case and other environmental or external reasons that may exist.

Furthermore, the parent interview was also crucial in the identification of a student as having ADHD. The parents' view of their child as having ADHD is a major step in intervention and support provided for the child. It is not easy for parents to admit that



their child has a problem. In case one, the parent described that the teachers do love her son and it is hard for him now to move to a new school as he has reached grade five. There was no mentioning that her son was going to be expelled in the past years. In case two the parent blamed the teachers for not supporting her child. She is even thinking of moving him to a more technical school when he grows up. Although, it is crucial to hear the parents view on the existence of ADHD at a home setting to better identify ADHD yet it was difficult to be done by the researcher. The researcher was trying not to impose any views or transfer any nomination by teachers to the parents. Besides, it is not easy to build trust from a phone interview to get the real facts on cases. Yet, it was needed to obtain some basic concepts regarding the cases to triangulate data as mentioned in the methodology chapter.

### **What are the educational services that are available for children with ADHD in model and government schools in Dubai?**

According to the data above there were different kinds of tools used to get the information on the identification of children with ADHD. Furthermore, the study aimed to understand through the data collected what is available for those children in the two schools. The observation as a major contributor on understanding the academic setting and what is in offer for those children in the two schools. The above research question is answered in two sections discussing the model school first and then the government school and what is available in each.

#### **Model School**

##### **Observations**

The general impression in model schools from administration and teachers was that they have no cases of ADHD in their school. They explained their standpoint referring it to the type of children admitted and the admission policy for every child before entering the first grade. Some school personnel have alleged that government schools do have severe cases if I were to investigate that. Those assumptions contradict literature and the known prevalence of ADHD in school children in general without specifying the socioeconomic standards mentioned by teachers. Yet, the number of nomination was greater in the government school and that would be discussed shortly. The assumption above was soon cleared up during the observation which continued for approximately a month and half

showing different cases in school. The researcher built her acquisition on teachers nomination and interviews. Indeed, there were other cases that were not chosen to be studied in this research as other symptoms were evident through interviews and observation. There were cases of aggression which could be referred to ODD or conduct disorder, knowing through the literature review the possibility of co-morbidity between ADHD and the previous mentioned disorders.

In addition to the assumption above, the school as a whole was directed toward the Gifted and Talented programs. Model schools have special classes that takes place once a week and is called 'Thinking skills', students of grade four and five attend this lesson weekly. This lesson is part of the Gifted and Talented program in schools and based on an informal interview with a teacher, 3 out of the four model schools in Dubai carry out this program. All children are admitted to this class whether they are talented or not. This proves the assumption that all the students in model school can be under the umbrella of the Gifted and Talented and no proper criteria is taken into consideration when students are admitted to this program.

### **Case Study**

The points mentioned previously have generally answered the question on what is available for children with ADHD. The case study enabled a specific consideration to what is available for a child with ADHD in a model school.

The subject of case study one, Jamal does not have a clinical diagnosis of ADHD in his records, even though teachers nominated him the most and the social worker knew from past years that he was about to be expelled from school. In addition to the lack of diagnosis, Jamal is admitted to all lessons without any differentiating of syllabus, teaching method, availability of an Individualized Educational Plan (IEP) or any pull out strategy for a resource room. Therefore, Jamal is treated in mainstream schools with no accommodation provided. Furthermore, as this is an investigative research and the researcher admits not to have the psychological background to be diagnosing any student, yet according to the teachers and the complaints filed there seems to be nothing done to best support Jamal.

The observation specified what is available for Jamal in the model school. Jamal showed a lot of signs of hyperactivity and inattentiveness in classrooms. It was treated mostly verbally to bring back his concentration. Jamal has also shown willingness to participate as an Imam (leader of prayer) in prayer time and the teacher says she will think about it, refer to Appendix (19) Observation # 22, p.120. In another occasion Jamal wanted to clean the table and got distracted in the group work, Appendix (19) Observation # 33, p.120. This incident magnifies the problems Jamal face in group work as it was also noticed in the Music lesson, Appendix (19) Observation # 34, p.121. Jamal was excluded from students in group work activities as was noted in the observation and that could lower his self-esteem. In Jamal's case and if presumably he has ADHD then the social skills can be affected too. Jamal needs tutoring and extra support to make him part of a group and part of the class and the school as a whole.

Through observation it was not witnessed the interest Jamal had in other activities such as Art and Music. Yet, according to the Islamic teacher Jamal is a very good actor. He acted in front of the whole school and the story was emotional. The teacher has added that even some teachers starting crying and were touched by the story and his acting. Jamal has special talents in acting that needs to be considered in school. The school tries its best to accommodate every aspect of life such as academic, Music, Art and other activities. Yet, there are some students who don't find their own interest emphasized in the school.

The above points considered what is available for Jamal in school. Accommodation, support or any diagnosis of the case of Jamal was not observed and further recommendation will follow up.

## **Government School**

### **Observation**

Unlike the model school there was over estimation of cases that were reflected in the number of cases nominated in each class. One teacher has even expressed that the whole class has ADHD. The overall ambience of the school was that there are severe cases of misbehavior and that concluded the number of nomination done by teachers. Indeed, the researcher did not stop in seeking the information on the students and their background.

Many of the cases as mentioned previously are orphans, living with a single parent and some of them were admitted to special education.

In addition to the over estimation of cases without considering external factors that can contribute on other diagnoses, there was an ill treatment of students in and out of class which was also noted. The observer witnessed in several occasions the use of physical discipline in school. One teacher, as observed, enters her class with a cane and uses it. Another teacher also used aggressive physical constraints on students when a fight broke out at break time. The use of physical disciplining is prohibited in accordance to the Ministry of Education (2011). The latter states this law under “Student Conduct Disciplinary by law in School Community” in the Ministry of Education website stating “The following practices should be avoided when rectifying the student’s undesirable conduct: Physical punishment in all its types, forms and manifestations ...”. (Ministry of Education 2011). Additionally, the use of physical disciplining has also been reflected in students in school. As witnessed, one of the students assigned as a police man to take charge in the break, was hitting a boy on the floor as he was regulating the rules of no use of skates in school, refer to the Appendix (19) Break time, p.121.

### **Case study**

Case two Khalid similar to the previous case, was not diagnosed as having ADHD. Based on the teachers’ view Khalid has ADHD and show signs of hyperactivity, inattentiveness and impulsivity. Khalid is not permitted to any of the programs mentioned earlier. Yet, he is admitted to the police program, where he has responsibilities of disciplining other students in break time in school. In addition, based on the special education teacher, Khalid was never admitted to special education in the previous years. It is of note to mention here that the social worker has eluded that Khalid might have an I.Q above average. ADHD can be co-existent with Giftedness and as Webb (2005) suggests that it is not easy to differentiate between ADHD and giftedness. Khalid I.Q was referred to by the social worker but there were no documents or diagnosis to confirm . Similar to the case above Khalid is not given any extra support or accommodation. Even though, he has been

recognised by many of his teachers as having ADHD there is no special teaching strategies directed to him in accordance to the observation. The observation took around a month and a half and Khalid was observed in several academic and non-academic settings. According to the observation, Khalid was given a lot of verbal cues to keep him concentrating and he was punished at different occasions. Once in the Music lesson he was kicked out of class because of his misbehavior. In the Science lesson he answered incorrectly and the teacher was disappointed as she said students needed to revise for the upcoming exam so she asked Khalid to stay standing up for a quarter of the lesson.

Khalid is given the opportunity of participating in swimming classes. As the Physical education teacher explains he is a champion in swimming. Indeed, through the phone interview the mother of Khalid has raised the concern of him being left behind in his studies due to the swimming activity. She has also pointed out that teachers do not cooperate in helping him catch up in lessons when he is in the swimming activity.

Furthermore, Khalid was witnessed as the first to enter the Art lesson with all his equipment. He showed interest in art and his work can be considered as outstanding. The Art teacher complained that the class did not take art seriously and was not working to full potential yet did acknowledge Khalid's artistic talent, refer to Appendix (20) p.122.

The availability of accommodation and support for teachers and students are lacking in the two cases mentioned above. The students are not getting support in class to nurture their needs and help them with their studies. Furthermore, teachers are not equipped with enough help to make that happen for students. The following section will provide recommendations on the cases above and answer and analyze the last research question of this investigative study as to what can be recorded and recommended in the status of ADHD in Dubai schools.

### **What can be recorded and recommended on the status of ADHD in Dubai schools?**

The methods used in this study to record on the status of ADHD included a number of observations and interviews in two schools. Furthermore, a medical view on the status of ADHD in Dubai was sought later from Dr. Amer the specialist in the field of ADHD. All of those were the medians in which information was transferred about what could be

recorded in Dubai in general. The foremost point that was noticed in the two schools was the lack of knowledge in the basic concepts of ADHD. The lack of knowledge as mentioned previously can hinder identification and intervention that could be followed. In addition, teachers are not provided with the help and support to make them able to utilize methods that best support students with ADHD. The lack of support was witnessed in observation and was concluded from a big number of teachers in the questionnaire where they have revealed the lack of support provided to them. Teachers need support to best accommodate and differentiate methods of learning to the students whether there is a student with ADHD, LD, SEBD or any other disorder. There is no shadow teacher or assistant teachers in class. Besides, there is a lack of a well established special education department where teachers can rely on in information and help regarding any case they have in class. Furthermore, the social worker is overloaded with administrative work and is referred to if students misbehave in class. As per the two schools in the study, one social worker was available in each school. The government school had a special education department staffed by two teachers, one was on maternal leave, and the other was teaching a group of students.

The teachers had also revealed the need for a psychologist in school to help them in such cases. This point was mentioned in the two schools not only through the questionnaire but was witnessed in observation and interview by different school personnel. According to research done in the United Arab Emirates, several studies have highlighted on the lack of specialists in schools. A study done by Gaad and Thabet (2009) states the immediate need for specialized therapist in the field of speech therapy. Another study done by Arif & Gaad (2008) states the availability of a multi-disciplinary team that exists in the Ministry of Education but there is a need for more effort to be done for inclusion to work in the United Arab Emirates. In addition, to the limited availability of specialized support in school there is also limited knowledge by specialized people for the different disorders. The latter was discussed in a research by Gaad (2004) where results have proven that specialists will fail in assessing students with exceptional learning needs. Thus, the studies above prove the gap in screening for disorders in the United Arab Emirates in the shortage of specialists and the short fall in diagnosing disorders. Another study by Eapen and Jariam (2009) had emphasized the starting point of screening to be able to provide

services needed at a later stage. The diagnosis of disorders is the first step in integrating a program for children with special needs. This study has enabled a view on the limited availability of diagnostic procedures by the lack of specialist in the field and literature has reported on the limited provision available in this country.

The limited number of psychologists available in schools for screening was also proven in another interview done with a specialist. Dr. Amer has revealed that 300 to 400 cases of children with ADHD visit his clinic. He clarified that some of the referrals are not permanent due to the moving of families in and out of the country. Yet, the number that is revealed in the former interview proves the limited availability of specialists in the field which then places huge demand on available specialists. Furthermore, this point leads to the prevalence of ADHD that was proven in this study through the teachers' nomination, the specialist interview and past literature on the field of ADHD. This concludes that what can be recorded and recommended on ADHD is that this disorder is evident and needs to be targeted by different academic and social figures to build awareness and help in intervention and support.

### **Recommendations**

The above points discussed the last research question that leads into recommendations derived from this research study. Recommendations based on policy in schools, further research on the topic and limitations will follow next.

It was evident through the results above the lack of knowledge teachers have about the disorder. This could hinder intervention and support groups. The lack of knowledge was present in the basic information about ADHD regarding the reasons and the symptoms. Therefore, it is recommended to introduce more workshops and collaborate with psychologists who can introduce this topic to teachers and provide help in the diagnosis of disorders when necessary. A study by Gaad and Thabet 2009 concluded the need for specialists to be training educational staff in schools and that at present "... there are no specialists available to provide such assistance in most schools." (Gaad and Thabet 2009, p.169). This is especially crucial as this study showed the prevalence of ADHD in Dubai schools and the presence of other disorders which may remain unidentified and unsupported.

More specifically, this research study and the case studies revealed the lack of diagnosis for students who face problems in schools. The school personnel were knowledgeable of the students behaviors for years but nothing was done to help. The school cannot be blamed for this issue if higher authorities such as the Ministry of Education is not co-operating and providing the necessary procedure to identify and support any student with a disorder. Thus, based on the Ministry of Education strategy for 2010-2020 and under the student equality it states “Ensure that students with additional needs receive extra and individualized support to integrate them into the educational system.” (Ministry of Education, 2011). This strategy when implemented in schools will benefit students with ADHD and many other students with disorders. Furthermore, this leads to the point in the Model school where the Gifted and Talented program seems to be highlighted in the school. In the point of view of the researcher this program is admitting all students without any prior criteria as mentioned previously. Therefore, rather than admitting everyone to a program that might not necessarily benefit students with ADHD, a resource room with pull out strategies to work on behavioral modification and educational support is needed more than a Thinking skills class.

This study is but a small step into understanding the impact of ADHD in this part of the world. Past studies revealed some points regarding this disorder in the United Arab Emirates and the Arab world. Yet, there is still a need for more research on this topic. It is recommended for future studies to find out the prevalence of ADHD in the U.A.E as the last research on the topic dated back to 1999. As this research has shown high prevalence it is therefore valuable to study if the numbers of students with ADHD has increased. It is worthy for further studies to introduce co-morbidity of other disorders such as SEBD. Many past studies have looked into co-morbidity in relation to ADHD, Oppositional or Conduct disorders. It is valuable to understand co-morbidity of SEBD to ADHD especially if different socio-economic factors are involved in the sample of study.

Furthermore, this research study has found other articles that dealt with ADHD and mental health problems. Indeed, there were epidemiological studies in which the main target was to find co-relation between ADHD and external or environmental causes. This was proven in an article by Osman & Afifi (2010) which cites that studies in the U.A.E in



particular included 48.98% of epidemiological studies and 24.49% psychometric studies. Therefore, there is a need for more different methods of research. Action research is recommended in the topic of ADHD. Suggested topics of investigation would include implementing strategies and support groups to intervene in such cases. Strategies would include behavioral and educational strategies and the impact it has on students with ADHD in this context.

This research study has faced some limitations that is worth mentioning. First, although the sample of study was reasonable to generalize this disorder on government and model schools in Dubai, it is inaccurate to generalize the prevalence keeping in mind the over estimation or under estimation of teachers in the designation of students. Even though, the research has triangulated information about the two certain cases. Yet, it did not triangulate information on the 65 names nominated by teachers this can reduce the certainty of the prevalence of ADHD in accordance to the number estimated by teachers. Second, is a point that is connected to the over estimation of cases. Based on the questionnaire and the lack of knowledge by teachers on ADHD, it is therefore not predicted if the nomination was based on ADHD symptoms or other external factors or co-morbidity existent. This was especially essential when looking at cases in the government school where lower socio-economic circumstances were encountered. Finally, limitation of this study was the time frame of the observation process which extended to three months. This was time consuming for the researcher but it was vital to understand and be able to answer the questions of this study. Moreover, the long period of observation have inevitably build a relationship with students that could have affected on biases.

### **Conclusion**

This study has given an account on the identification procedures for a student with ADHD. The identification procedure contained teachers' nomination, scales and observation methods. The study also went on to explore the educational services available for students with ADHD in a more specific method were case studies were examined. The two points led us to report on what can be recorded and recommended on

the status of ADHD in Dubai schools. In addition to the two schools studied, a medical view was added by a specialist in the field to understand more about the topic in hand.

ADHD and through this research study has proven that it is prevalent, not only according to the teachers' nomination but also according to the numbers mentioned by the specialist in the field. It is therefore valuable to reconsider its implications in the country. As mentioned in this research studies when ADHD is not diagnosed it can have severe consequences that affect the student, the family and without doubt the whole society. Teachers are the indicators who can witness this disorder because of the restricted setting of the classroom. The first step is to educate them on this disorder and have the view of a 'disability' as mentioned by Kewley (2005). He explains that this would help in providing accommodation by the teacher rather than finding excuses as was proven in this research where teachers blame external factors for students displaying ADHD symptoms.

The title of this research study has mentioned that ADHD is a hidden disorder. Yet, through the field study and the observations conducted in classrooms it is clear that teachers were able to identify and nominate students and were knowledgeable that there are students who need help. Indeed, there was no accommodation or help provided for those students. Nevertheless, this disorder can be hidden to higher authorities who have not given it the needed attention through media or in schools and workshops. As proven the main program in the model school was the Gifted and Talented. Indeed, Government schools were focusing on Army Training and Police program to discipline students. Furthermore, in the government school there was a special education department where different cases were admitted such as Learning disability and a case with slight Autism. Cases that are evident as the former are diagnosed and well considered by school personnel but not ADHD. Past research on this topic has given the title of 'other health impaired' to ADHD by the Federal Individuals with Disabilities Act 1997 (Du Paul & Stoner 2003). Studies in the Arab world have recommended the same department 'other health impaired' to be available in schools and students with ADHD go under this category (Bener et al. 2006). This suggests that if there exists a department in schools a diagnosis and intervention will follow up consequentially. Thus, ADHD in this study

seems to be hidden and suppressed from any support marked in school or by the Ministry of Education.

In addition to the consideration of a well laid out category in schools in the U.A.E. it is also worth highlighting some small aspects that play a role in the life of a student with ADHD. It was proven through the cases studies the amount of talent the two cases had, the first being an actor and the second an artist and also a champion in swimming. Yet, those activities were not encouraged as was mentioned previously. The two schools studied emphasize on academics more than out of curriculum activities that could be beneficial to every student and especially effective for a student with ADHD. The overall structure of schools can negatively affect a child with ADHD especially if his other talents are not considered. According to Wender (2000, p.23) “ ...social structure in most schools makes the ADHD child’s problem greater”, this was apparent in the two schools. Therefore, out of curriculum activities whether it is acting or sporting event, this all can play a role in helping a student with ADHD to express himself and discharge some of his energy. Moreover, it can help in building self esteem and social skills.

In conclusion, this research study has highlighted ADHD in two schools in Dubai. ADHD is an evident disorder as proven in literature worldwide, in the Arab world and in this study. ADHD is a disorder that can manifest and create negative outcomes if no diagnosis nor treatment is provided. Therefore, it is recommended to recruit every help needed for teachers in classrooms to make them accommodate for those students. There is a lack of specialist in the U.A.E and the Ministry of Education needs to evaluate the present plan and include a support system for students with special needs in each of its categories whether hidden or evident. In addition, there is a need of a multidisciplinary team to find out hidden disorders in schools such as ADHD. Furthermore, parents also need the awareness to make them identify their children and consult specialists rather than residing in a denial stage that could stop them from getting any help. ADHD needs to be publicized in media and in schools to make the whole community understand that in addition to evident disorders there are hidden disorders in mainstream classrooms that needs consideration.

## Bibliography

- Al Banna, A., Al Bedwawi, S., Al Saadi, A., Al Maskari, F. & Eapen, V. (2008). Prevalence and correlates of conduct disorder among inmates of juvenile detention Centers, United Arab Emirates. *La Revue Sante de la Mediterranee orientale*, vol. 14 (5), pp. 1054-1059.
- Al Dhaheri, A. (2011). "Army Education" Students in uniforms are armies in service of the country. *Education Today*, 3 April, p.8.
- Al Mulla, S. (2008). *Psychodrama Program for reducing Attention Deficit and Hyperactivity Disorder in Kindergarten children in the United Arab Emirates*. MEd Thesis. Cairo University.
- Al Qahtani, M. (2009). The Comorbidity of ADHD in the general population of Saudi Arabian School-Age Children. *Journal of Attention Disorder*, vol. 14 (1), pp.25-30.
- Al Sharbati, M., Al Adawi, S., Ganuly, S., Al Lawatiya, S. & Al Mshefri, F. (2008). Hyperactivity in a Sample of Omani School Boys. *Journal of Attention Disorders*, vol. 12 (3), pp. 264-269.
- Al Sharbati, M., Al Lawatiya, S., Al Adawi, S., Martin, R. & Al Hussaini, A. (2003). Urbanization, Culture and Hyperactivity: An Exploratory Study of Omani Schoolgirls. *Women's Health and Urban Life*[online]. Vol.2 (2). [Accessed 20 November 2011]. Available at [https://tspace.library.utoronto.ca/bitstream/1807/1014/2/al-sharbati\\_et\\_al.pdf](https://tspace.library.utoronto.ca/bitstream/1807/1014/2/al-sharbati_et_al.pdf)
- Al Sharbati, M., Zaidan, Z., Dorvlo, A. & Al Adawi, S. (2010). Characteristics of ADHD Disorder Among Omani Schoolchildren Using DSM-IV: Descriptive Study. *Journal of Attention Disorders*, vol. 1 (8), pp. 1-8.
- Arif, M. & Gaad, E. (2008). Special needs education in the United Arab Emirates (UAE): a systems perspective. *Journal of Research in Special Educational Needs*.vol. (8) 2 pp.111-117.
- Barkley, R. (2005). *Taking Charge of ADHD*. (Revised Edition).New York: The Guilford Press.
- Barkley, R. (2006). *Attention-Deficit Hyperactivity Disorder*. 3<sup>rd</sup> ed. New York: The Guilford Press.
- Bell, J. (1999). *Doing your Research Project*. 3<sup>rd</sup> ed. Berkshire: Open University Press.

- Bener, A., Al Qahtani, R. & Abdelaal, I. (2006). The Prevalence of ADHD among Primary School Children in an Arabian Society. *Journal of Attention Disorders*, vol. 10 (1), pp. 77-82.
- Bu-Haroon, A., Eapen, V. & Bener, A. (1999). The Prevalence of hyperactivity symptoms in the United Arab Emirates. *Nordic Journal Psychiatry*, vol. 53 (6), pp. 439-442.
- Center of Psychiatry and behavioral Health (2011). Conners' Teacher Rating Scale-Revised [Online]. [Accessed 25 October 2010]. Available at: [http://centerforpsychiatryandbehavioralhealth.com.c25.sitepreviewer.com/ESW/Files/Conners\\_Teacher\\_Rating.pdf](http://centerforpsychiatryandbehavioralhealth.com.c25.sitepreviewer.com/ESW/Files/Conners_Teacher_Rating.pdf)
- CHADD. (2011). Understanding ADHD what are the symptoms of ADHD? [Online]. [Accessed 7 October 2011]. Available at: <http://www.chadd.org/Content/CHADD/Understanding/symtoms/default.htm>
- Cohen, L., Manion, L. & Morrison, K. (2000). *Research Methods in Education*. 5<sup>th</sup> ed. London: Routledge Falmer.
- Conner, C. (n. d.). *Chapter 3: Administration and Scoring of the CRS-R*. [Online]. [Accessed on 8 August 2011]. Available at: [http://www.er.uqam.ca/nobel/cspuqam/panieroutils/conners\\_techincal\\_manual\\_ch\\_3.pdf](http://www.er.uqam.ca/nobel/cspuqam/panieroutils/conners_techincal_manual_ch_3.pdf)
- Conner, C. (n.d.). *Chapter 4: Interpretation of the CRS-R*. [Online]. [Accessed on 12 August 2011]. Available at: [http://www.er.uqam.ca/nobel/cspuqam/panieroutils/conners\\_techincal\\_manual\\_ch\\_4.pdf](http://www.er.uqam.ca/nobel/cspuqam/panieroutils/conners_techincal_manual_ch_4.pdf)
- Connor, D & Doerfler, L. (2008). ADHD with Comorbid Oppositional Disorder or Conduct Disorder. *Journal of Attention Disorders*, vol. 12 (2), pp. 126-134.
- Creswell, J. (2009). *Research Design qualitative, quantitative, and mixed methods approaches*. 3<sup>rd</sup> ed. Los Angeles: Sage Publication.
- Dhaoui, S. (2008). *An investigative study of a Dubai-based private mainstream school in meeting the educational needs of its primary students with social, emotional, and behavioral difficulties (SEBD)*. MEd Thesis. British University in Dubai.
- Du Paul, G. & Stoner, G. (2003). *ADHD in the Schools*. New York: The Guilford Press.
- Eapen V., Jakka, M. & Abou-Saleh, M. (2003). Children with Psychiatric Disorders: The Al Ain Community Psychiatric Survey. *Canadian Journal of Psychiatry* [online]. Vol. 48. [Accessed 20 November 2011]. Available at <http://webcache.googleusercontent.com/search?q=cache:http://ww1.cpa-apc.org:8080/Publications/Archives/CJP/2003/july/eapen.asp>

- Eapen, V., Al Gazali, L., Bin-Othman, S. & Abou-Saleh, M. (1998). Mental Health Problems Among Schoolchildren in United Arab Emirates: Prevalence and Risk Factors. *Journal of the American Academy of Child and Adolescent Psychiatry*. vol. 37 (8), pp. 880-886.
- Eapen, V. & Jairam, R. (2009). Integration of child mental health services to primary care: challenges and opportunities. *Mental Health in Family Medicine*. Vol.6, pp. 43-48.
- Farah, L., Fayyad, J., Eapen, V., Cassir, Y., Salamoun, M., Tabet, C., Mneimneh, Z. & Karam, E. (2009). ADHD in the Arab World: A Review of Epidemiologic Studies. *Journal of Attention Disorders*. vol. 13 (3), pp. 211-221.
- Flick, U. (1998). *An Introduction to Qualitative Research*. 2<sup>nd</sup> ed. London: Sage Publications.
- Gaad, E. (2004). Including Students with Exceptional Learning needs in Regular Schools in the United Arab Emirates. *International Journal of Diversity in Organisations*. vol. 4, pp.159-165.
- Gaad, E. (2011). Inclusive Education in the Middle East. New York: Routledge.*
- Gaad, E. & Thabet, R. (2009). Needs Assessment for Effective Inclusion in United Arab Emirates' Government Schools. *The International Journal of Interdisciplinary Social Sciences*. vol. 4 (6), pp.160-171.
- Ghubash, R., Hamdi, E. & Bebbington, P. (1994). The Dubai Community Psychiatric Survey: acculturation and the prevalence of psychiatric disorder. *Psychological Medicine*. vol. 24, pp. 121-131.
- Hart, N. & Benassaya, L. (2009). 'Social Deprivation or Brain Dysfunction? Data and the Discourse of ADHD in Britain and North America', in S. Timimi and J. Leo (eds). *Rethinking ADHD from brain to culture*. London: Palgrave Macmillan, pp.218-251.
- Kauffman, J. (2005). *Characteristics of Emotional and Behavioral Disorders of Children and Youth*. 8<sup>th</sup> ed. New Jersey: Pearson Merrill Prentice Hall.
- Kewley, G. & Latham, P.(2011). *Conference on Attention Deficit Hyperactivity Disorder*. Taj Palace Hotel. Dubai. 26 March.
- Kewley, G. (2005). *Attention Deficit Hyperactivity Disorder What can teachers do?*. London: David Fulton Publishers.
- Kos, J., Richdale, A. & Jackson, M. (2004). Knowledge about Attention-Deficit/Hyperactivity Disorder: A comparison of In-service and Preservice Teachers. *Psychology in the Schools*, vol. 41 (5), pp. 517-525.

Mash, E. & Wolfe, D. (2005). *Abnormal Child Psychology*. 3<sup>rd</sup> ed. California: Thomson Wadsworth.

Ministry of Education. (2011). *Student Conduct Disciplinary by Law in Schools Community* [Online]. [Accessed 16 October 2011]. Available at: <http://www.moe.gov.ae/Movies/Behavioral/arabic/index.html>

Ministry of Education. (2011). *The Ministry of Education Strategy 2010-2020 Aiming in accomplishing a score of 10/10 in all of its initiatives* [Online]. [Accessed 24 February 2010]. Available at: <http://www.moe.gov.ae/Arabic/Docs/MOE%20 Strategy.pdf>

Mittler, P. (2000). *Working Towards Inclusive Education Social Contexts*. London: David Fulton Publishers.

O'Regan, F. (2006). *Troubleshooting Challenging Behavior*. London: Continuum.

Osman, O. & Afifi, M. (2010). Troubled Minds in the Gulf: Mental Health Research in the United Arab Emirates. *Asia-Pacific Journal of Public Health*, vol. 22(3), pp.48S-53S.

Resnick, R. (2000). *The Hidden Disorder*. Washington: American Psychological Association.

Rief, S. (2003). *The ADHD Book of Lists*. California: Jossey-Bass.

Sherman, J., Rasmussen C. & Baydala, L. (2008). The impact of teacher factors on achievement and behavioural outcomes of children with Attention Deficit/Hyperactivity Disorder (ADHD): a review of the literature. *Educational Research*, vol. 50 (4) pp.347-360.

Sparrow, E. (2010). *Essentials of Conners Behavior Assessments*. New Jersey: John Wiley & Sons.

Swadi, H. (1999). Child Mental Health Services in the United Arab Emirates. *Child and Adolescent Mental Health*. vol. 4 (1) pp. 27-29.

U.A.E Federal Law No. 29/2006. Abu Dhabi: United Arab Emirates.

Webb, J., Amend, E., Webb, N., Goerss, J., Beljan, P. & Olenchak F. (2005). *Misdiagnosis and Dual Diagnoses of Gifted Children and Adults*. Arizona: Great Potential Press, Inc.

Wender, P. (2000). *ADHD*. New York: Oxford University Press.