

The Effect of the Label “Giftedness” on United Arab Emirates Pre-Service Teachers’ Diagnosis Decisions

Hala Elhoweris

Faculty of Education

United Arab Emirates University

Address all correspondence to:

Dr. Hala Elhoweris, Department of Special Education

Faculty of Education, UAEU, Al-Ain City, UAE

P. O. Box 15551

Email: halae@uaeu.ac.ae

Abstract

Several researchers have indicated that the inappropriate learning environment could lead gifted children to exhibit inappropriate behaviors that are related to the major characteristics of children with ADHD (Flint, 2001). According to Webb & Latimer (1993), gifted children were diagnosed with Attention Deficit and Hyperactive Disorder (ADHD) in many cases. The misdiagnosis of gifted children as ADHD could be tragic due to inappropriate medical and educational interventions which could be applied to gifted and talented children. The focus of this research, therefore, was to examine the possibility of misdiagnosing gifted children with ADHD. The sample included 50 pre-service teachers who were asked to read two versions of the case vignettes of the gifted and ADHD child and to determine the diagnosis of the case. Significant differences were found among the pre-service teachers’ diagnostic decisions.

Key words: ADHD, gifted, misdiagnosis, pre-service teachers, UAE

1. Introduction

There is no universal consensus on the definition of giftedness. The U.S. Office of Education defined “gifted and talented” as those children who demonstrate high achievement and/or potential in several domains including general intellectual ability, specific academic ability, creativity, leadership, visual and performing arts, and psychomotor skills (Davis & Rimm, 2004). Gifted and talented children are defined in the Gulf and Middle Eastern region as those who have demonstrated high ability, creativity, and who have specific behavioral traits (Subhi-Yamin, 1997). Students identified as gifted and talented are not a homogeneous group. Therefore, it is difficult to identify them. Indeed, one of the most significant problems in the field of Gifted education is the need for the development of appropriate identification procedures for gifted and talented students. In the United Arab Emirates (UAE), there are no federal laws governing the placement and education of gifted children. Gifted children are identified in several UAE schools as those who have demonstrated high achievement in any academic area or creativity. Indeed, almost all schools in the United Arab Emirates base their identification of gifted children mainly on student’s academic achievement and teacher nomination including teachers’ own clinical judgments.

Gifted children are often more advanced than their peers, special accommodations including a broad variety of challenging activities are necessary to maintain a rich and stimulating environment for gifted children. Lacking recognition of and accommodation for gifted learners educational needs, may lead gifted learners to underachieve below their potential. This can be a tragic waste for gifted learners and for society as well. According to Davis, Rimm, and Siegle (2011), several gifted children are bored in schools and find schools intolerable due to the slow pace and lack of challenge. Indeed, several gifted students needs are not met in the general education classrooms due to the fact that several educators believe that the gifted students should be able to succeed on their own and that no challenge is needed to help gifted learners reach their maximum potential (Clark, 1997). Accordingly, several gifted students are frustrated and bored in schools while others find schools intolerable and therefore, they drop out of school (Renzulli & Park, 2002). Therefore, gifted learners should be provided with differentiated curriculum that allow them to reach their full potential (Van Tassel Baska, 1995).

The inappropriate learning environments could lead gifted children to exhibit inappropriate behaviors that are pertinent to the major characteristics of children with Attention Deficit and Hyperactive Disorder (ADHD) (Edward, 2009; Flint, 2001). Although the behaviors of children with ADHD and children who are gifted can be very similar in some situations, the causes of these behaviors differ significantly between the two groups. Many children with ADHD seem to have slight differences in the levels of some chemicals in their brains, but experts don't yet know what causes these, or even whether they are directly responsible for ADHD. Generally, ADHD is known to be caused by neurological abnormality in the brain (Barkley, 1990). On the other hand, situational problems can lead gifted children to be bored, discouraged, and frustrated, especially when there is a lack of appropriate and challenging educational programs. Edward (2009) indicated that since the diagnostic criteria for ADHD and gifted learners are based on behaviors instead of the causes of behavior, the likelihood of misdiagnosing gifted children with ADHD could increase.

ADHD is a developmental disorder of self-control. Although this condition affects people of all ages, it is the most common childhood psychiatric disorder condition (Salend, 2008). “Attention Deficit Disorder (ADD) is defined by the American Psychiatric Association (1994) as “a persistent pattern of inattention, impulsivity that is more frequent and severe than is typically observed in individuals at a comparable level of development” (Salend, 2008; p.77). The definition of DSM-IV of ADHD indicated that ADHD is persistent pattern that is not related to other medical or psychiatric conditions such as schizophrenia or anxiety. It must occur before age seven and it interferes with the individual’s social, educational, and occupational performance in two or more settings (Salend, 2008). A formal diagnosis of ADHD is based on exhibiting these behaviors in multiple settings and over a prolonged period of time. In 2013, there were some changes in the DSM-5 for the diagnosis of ADHD (Grohol, 2013). According to the definition of the DSM-5 of ADHD, ADHD symptoms can occur before age 12 and several symptoms must be present in more than one setting. In addition to that, children with ADHD are expected to have six or more symptoms of the disorder. While teenagers and adults must exhibit at least five symptoms of the disorder (National Resource Center on ADHD, 2013).

The ratio of Attention Deficit and Hyperactive Disorder (ADHD) ranges between 3%-5%, and it varies from one country to another (Salehi, Noah, and Jaafar, 2011). Estimates of the prevalence rate of Attention Deficit and Hyperactive Disorder (ADHD) among Sharjah primary school children in the United Arab Emirates (UAE) is 14.9% (BU-Haroon & Eapen & Bener, 1999).

Although the diagnosis of children with ADHD involves educators, psychologists, and physicians in several countries around the world including the USA, UK, and New Zealand (e.g., Clark, 1997; Edward, 2009; Ysseldyke, 2004), the diagnosis of children with ADHD in the UAE is made mainly by teachers. To date, in the UAE there is no well-established diagnostic and treatment services for ADHD.

Previous researchers indicated that in many cases, a gifted child is diagnosed with ADHD when in fact the child is reacting to an unchallenging and non-stimulating learning environment (e.g., Webb & Latimer, 1993). The fact that children with ADHD and those who are gifted could exhibit the same behaviors in some situations including high activity level, poor attention span, difficulty in following directions, and low academic achievement could lead to the misdiagnosis of gifted children as having ADHD. Indeed previous studies indicated that gifted children could be misdiagnosed as having ADHD due to their disruptive behavior in classrooms (e.g., Lawler, 2000). Evidence from clinical experiences indicated that gifted behaviors are most often mistaken for ADHD, Asperger's Disorder, Obsessive-Compulsive Disorder, Oppositional Defiant Disorder, and Bipolar Disorder (Webb, Goerss, Amend, Webb, Beljan, and Olenchak, 2006). In a recent study that examined a group of gifted adolescents to see whether they exhibit similar characteristics of ADHD, Rinn and Reynolds (2012) found that there is a significant relationship between symptoms of ADHD and characteristics of over-excitabilities within a sample of gifted adolescents. This relationship could lead to misdiagnoses of gifted children as having ADHD because the characteristics of ADHD and over-excitabilities cannot be distinguished easily (Rinn & Nelson, 2009). Web et al. (2006) have suggested that without proper identification procedures and well-

informed school professionals and other professionals (e.g., pediatricians, psychologists, psychiatrists, and counselors) it is difficult to reduce the rate of misdiagnosis among gifted children.

Several empirical studies on ADHD have also examined the possibilities of misdiagnosing gifted children as having ADHD. For instance, in a study that has examined the possibility of misdiagnosis of giftedness and ADHD among graduate students enrolled in a school counseling program, Hartnett, Nelson, and Rinn (2004) found that the label “giftedness” category influenced the diagnosis of behaviors typical of both giftedness and ADHD. In another study that replicates Hartnett, Nelson, and Rinn’s study, Rinn and Nelson (2009) found that the inclusion of the label “giftedness” influenced the pre service teachers’ diagnosis of behaviors that can be typical of both giftedness and ADHD.

The misdiagnosis of gifted children as ADHD could be a serious matter, because the commonly recommended medical interventions for ADHD children could have very damaging effects on those who are gifted. Indeed, the most common interventions for students with ADHD are the prescription of psycho-stimulant medication (Barkley, 2000; Ryan, Reid, Epstein, Ellis, & Evans, 2005) and academically and behaviorally interventions (Miranda, Jarque, & Tarraga, 2006; Salend, Elhoweris, & VanGarderen, 2003). Although the psycho-stimulant medication could be good in helping children exhibit compliant behavior in the classroom, it could prevent gifted children from being creative problem solver and critical thinker (Baum & Olenchak, 2002).

Teachers who lack knowledge of the giftedness and the similarities between gifted children and those who have ADHD may not accurately identify the potentially gifted/talented students (Edwards, 2009) and their nomination may become unreliable. In addition to that, without adequate knowledge of the impact of classroom environment on students’ behavior gifted children could be misdiagnosed as having ADHD (Baum & Olenchak, 2000). Findings from similar studies suggested that college students and pre-service teachers may not have an adequate understanding or training in the area of giftedness and ADHD (Hartnett, et al., 2004; Rinn & Nelson, 2009). It is important that the giftedness of gifted children to be recognized and nurtured. Without effective diagnosis and proper treatment for gifted learners, giftedness may have serious consequences, which may include under performance at school and inappropriate behaviors.

To date, the possibility of misdiagnosing gifted children as ADHD has not been examined empirically in the UAE. Therefore, the focus of this research was to examine the possibility of misdiagnosing gifted children with ADHD by examining the effect of the label “giftedness” on UAE preservice teachers’ diagnosis decisions.

Although the misdiagnosis of gifted children as ADHD has become a focus of several studies around the world (e.g., Bruzzano-Ricci, 2003; Edward, 2009; Hartnett et al., 2004; Rinn and Nelson, 2009). Only few relevant studies have investigated the effect of the child’s characteristics on UAE teachers’ referral decisions in the gifted/talented program (e.g., Elhoweris, 2009).

2. Method

2.1 Participants

Four classes were chosen randomly from a preservice teacher program in one of the major public universities in the United Arab Emirates. All students enrolled in these classes were asked to participate in this study. Students participation was voluntarily in this study. The sample included 50 pre-service teachers. While 40% of the participants were general education pre-service teachers, 60% of the participants were special education pre-service teachers. All participants were females. Seventy three percent of the participants are UAE citizens and the remaining 27% of the participants are from Sultanate Oman. When the study was carried out, 32% of the participants were taking a core course for education majors entitled “Gifted and Talented.” The major objective of this course is to familiarize students with the major characteristics of gifted and talented learners.

An important point that should be noted is that all participants have the opportunity to learn about ADHD and gifted learners from a core course offered by the department of Special Education titled “Education of Exceptional Children.”

2.2 Materials and Procedure

Since this study replicates other US studies (Hartnett et al., 2004; Rinn & Nelson, 2009). The present study has followed the same procedures in these two studies. Participants were placed randomly in either the experimental group or the control group. Two versions of the case vignettes were developed for this study. All traits in the vignettes were similar.

As the participants of this study are trained to teach elementary-aged students and they are all females. It is expected that they will work with only female students in single sex schools. Therefore, the vignette labeled the student as an elementary female student. More specifically, the vignettes described a 4th grade girl with characteristics of both giftedness and ADHD. The first version of the case (Case A) includes the case vignette without diagnostic options and the second version of the case (Case B) includes four diagnostic options as follows: a) ADHD, b) Giftedness, C) ADHD and Giftedness, and d) None of the above. Since the focus of this research was to examine the possibility of misdiagnosing gifted children with ADHD by examining the effect of the “giftedness” option, Case B was given to the experimental group and Case A was given to the control group.

All the characteristics in the vignette were resulting from several sources including descriptions of gifted and ADHD children in introductory special and gifted education textbooks (e.g., Davis & Rimm, 2004, 2011; Friend & Bursuck, 2002; Salend, 2008), instrument (e.g., Hartnett et al, 2004), and professional articles that discussed the similar characteristics of giftedness and ADHD (e.g., Edwards, 2009 & Web, 1993). To assess the content validity a copy of the instrument (case vignettes) was sent to two experts in the field of special education. Each expert assessed the intended content area. Analysis of Variance (ANOVA) was used to determine the difference in choice of diagnosis based on whether the participant was answering Case A or Case B. The independent variable of this study was the case type (A & B). The UAE pre-service teachers’ diagnosis was the dependent variable.

Each packet contained the following: consent form, instruction sheet, short descriptive vignette, and participant information sheet was prepared for each participant. At the end of the classes, packets were handed to each participant to complete. The participants were asked to read the vignette of the child and to answer the question. Ten minutes later, each participant read the vignette and answer the question. In addition to the information, which was gathered from the question, other information on participant demographic information was collected such as participants' nationality, gender, area of expertise, and educational background.

3. Results

Significant differences were found between the participants who answered Case A and those who answered Case B ($F = 14.7, p \leq .05$). Pre-service teachers in this study were more likely to choose the diagnosis based on the case used. For instance, the majority of preservice teachers (97%) who responded to Case (A) without diagnostic options diagnose the student as having ADHD. However, preservice teachers who responded to Case (B) with the diagnostic options diagnose the student as having "Giftedness" or "Giftedness and ADHD." More specially, 91% of the participants who responded to Case (B) diagnose the child as having "Giftedness" or "ADHD and Giftedness." So, introducing the label "Giftedness" affected the participants' diagnostic decisions by attributing the case behaviors to "Giftedness" or "Giftedness with ADHD" diagnosis. No significant differences were found between the general and special education pre-service teachers' diagnosis.

4. Discussion

This study intends to examine the effect of the label "giftedness" on pre-service teachers' diagnosis of a child with characteristics of both giftedness and ADHD. Findings of this study provide an additional empirical support to similar previous studies. For instance, the results of this study corroborate the results of Hartnett et al. (2004) study and Rinn and Nelson findings (2009) who found that the label "giftedness" category influenced the diagnosis of behaviors typical of both giftedness and ADHD. The fact that the majority of the participants who responded to Case A diagnosed the child as "ADHD" is disturbing because the case vignette described a child with both characteristics of giftedness and ADHD. It is expected that the participants who responded to Case A to consider other options. This finding may suggest that more discussions of the similarities between ADHD and giftedness need to be considered in preservice educational programs.

On the other hand, the majority of the participants who responded to Case B diagnose the child as "Giftedness" or "Giftedness with ADHD." This finding suggests that the label "giftedness" influenced the preservice teachers' diagnostic decisions. The fact that more than half of the participants (65%) who responded to Case B diagnosed the child as "Giftedness" and thirty five percent who responded to Case B diagnosed the child as "Giftedness with ADHD" indicates that the participants may not have an adequate knowledge or training to distinguish between "Giftedness" and "Giftedness with ADHD."

Additional findings from this study indicated that all participants who were taking the “Gifted/Talented” course at the time when the study was carried out diagnosed the child as having “Giftedness” or “ADHD and Giftedness” regardless of the type of the case. This result may suggest that the majority of students who were enrolling in the “Gifted/ Talented” course were affected not only by the label “Giftedness” but also by the focus of the course which was on gifted learners. The fact that all participants who were taking the “Gifted/Talented” course at the time when the study was carried out diagnosed the child as either having “Giftedness” or “ADHD and Giftedness” may suggest that one course in gifted education is not enough to prepare UAE pre-service teachers to distinguish between “Giftedness” and “ADHD and Giftedness.”

It has been documented that many of the characteristics of ADHD such as lack of attention and impulsivity are also common among children who are gifted and talented. The overlapping symptoms of ADHD and gifted students could easily lead to a misdiagnosis of gifted students as ADHD. In the United Arab Emirates, there are no federal laws governing the placement and education of gifted children. It is up to schools and teachers to meet the needs of gifted learners. Therefore, it is more likely that gifted students needs to be unmet in the UAE schools which may in turn increase the likelihood of misdiagnosing gifted children as children with ADHD. Therefore, future researchers may need to replicate this study with UAE in-service teachers.

To prevent misdiagnosis of gifted children, UAE pre-service teachers education programs need to help pre-service teachers understand the similarities and differences between gifted, ADHD, and gifted and ADHD children. Additionally, pre-service teachers need to know that although the behaviors of children with ADHD and children who are gifted can be very similar in some situations. The underlying causes of these behaviors differ significantly between children with ADHD and those who are gifted. Examining the situation and setting is critical if we want to diagnose children with ADHD and giftedness properly. Gifted children don’t exhibit problems in all situations. Whereas, ADHD children typically exhibit the behavioral problems across all the settings including home and at school. Indeed, pre-service teachers may need to know that pervasiveness of the distributive behavior is the key factor that can distinguish between children who may be gifted and those who may be ADHD. For instance, if the disruptive behavior is specific to certain situations, the child's behavior is more likely to be related to giftedness; whereas, if the behavior is consistent in all different situations and settings, the child's behavior is more likely to be related to ADHD (Webb & Latimer, 1993).

Lack of knowledge on gifted characteristics could lead pre-service and in-service teachers to misdiagnose gifted children as having ADHD. Those gifted children who do not fit with the classroom expectations as gifted child can easily be unrecognized for their giftedness. It is critical to provide gifted children with an appropriate education for the gifted rather than that which is appropriate for children with ADHD.

Diagnosing students as gifted and talented should not be based on the limited information contained in the case vignettes. More information especially with regard to the causes of behavior or the situation and setting may change the results of this study. In addition to that, the process of identifying students as gifted and talented must not only rely on teachers. Physicians, psychologist,

family and community members must all be involved in the assessment process of diagnosing students as gifted and talented.

Case A

Basma is a 10-year-old girl and in the fourth grade. Basma's behavior in school has never been easy to manage. Basma has high activity level. She likes to interrupt others. Basma can't stop herself from talking or moving in class. Basma fails to complete school work and organize her tasks. Every time her teacher try to stop her she questions authority and refuses to follow the school rules. Her teacher described her lately as having attention problems, high activity level, difficulty in following directions and easily get bored afterwards.

If Basma was referred to you by her teacher for evaluation. Please write your diagnosis decision below.

Case B

Basma is a 10-year-old girl and in the fourth grade. Basma's behavior in school has never been easy to manage. Basma has high activity level. She likes to interrupt others. Basma can't stop herself from talking or moving in class. Basma fails to complete school work and organize her tasks. Every time her teacher try to stop her she questions authority and refuses to follow the school rules. Her teacher described her lately as having attention problems, high activity level, difficulty in following directions and easily get bored afterwards.

If Basma was referred to you by her teacher for evaluation. Please indicate your diagnosis decision by circling the appropriate option.

- a) Giftedness
- b) ADHD
- c) Giftedness and ADHD
- d) None of the above

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