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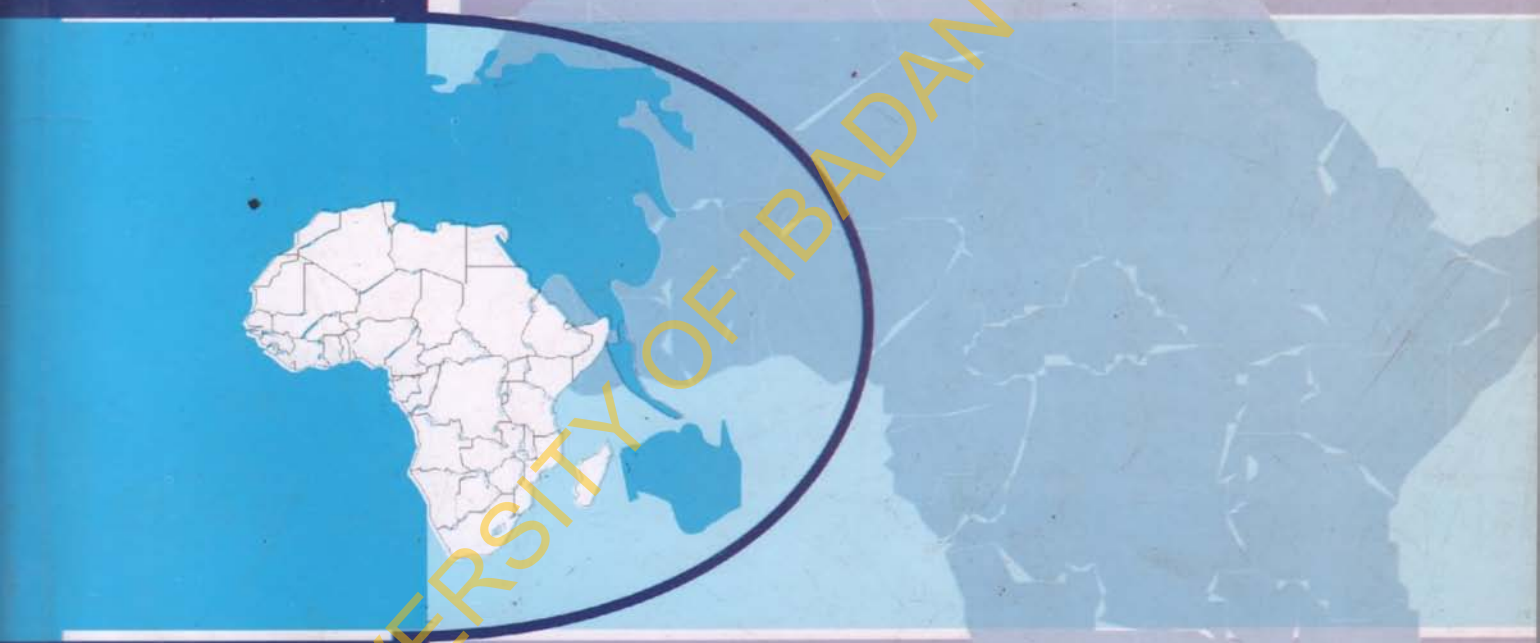

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SELF-REPORTED SYMPTOMS OF ADULT ADHD AMONG THE GENERAL POPULATION IN NIGERIA

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Abstract

This study was designed to find out the prevalence of self-reported symptoms of Adult ADHD among the general population in Nigeria. One thousand two hundred and eighteen (1,218) adults were randomly drawn from the students of University of Ibadan and University of Ado-Ekiti that were 18years and above in Ibadan (Oyo-State) and Ado-Ekiti (Ekiti State), used as samples. One instrument was used, namely Barkley Adult ADHD Rating Scale IV (BAARS-IV) to assess current ADHD symptoms, and domains of impairment, as well as recollections of childhood symptoms. Mean, Standard Deviation (S.D), Deviance Threshold (+1.5 S.D), and Percentage were employed in analysing the data collected. Four hypotheses were tested and results showed that there was prevalence of self-reported clinical significance of 9.1% Adults with the inattention symptoms of ADHD; 8.3% adults with the impulsitivity symptoms of ADHD, prevalence of self-reported symptoms of clinical significance of 7.5% Adults with the hyperactivity symptoms of ADHD; 12.2% adults with ADJID combined symptoms of inattention, hyperactivity, and impulsitivity; for the ADHD summation scores for current symptoms among the general population; that there were prevalence of self- report clinical significance of 3.8% Adults with the hyperactivity symptoms of ADHD; 2.3% adults with the impulsitivity symptoms of ADHD; 2.3% adults with the inattention symptoms of ADHD; 7.6% adults with the ADHD combined symptoms of inattention, hyperactivity, and impulsitivity for positive symptom counts for ADHD current symptoms among the general population; that there were prevalence of self-reported clinical significance of 0.1% difference of 5.4% females to 5.3% males for adult with the ADHD symptoms of inattention, prevalence of self-reported clinical significance of 0.7% difference of 4.5% females to 3.8% males for Adult with the ADHD symptoms of impülsitivity, prevalence of self-reported clinical significance of 0.1% difference of 3.8% males to 3.7% females for adult with the ADHD symptoms of hyperactivity, and prevalence of self-reported clinical significance of 0.1% difference of 6.2% males to 6.1% females for adult with the ADHD combined symptoms of inattention, hyperactivity, and impulsitivity for the ADHD summation scores for current symptoms among the general population; that there were prevalence of self-reported clinical significance of 1.4% difference of 3.0% females to 1.6% males for adult with the ADHD

symptoms of hyperactivity, prevalence of self-report clinical significance of 2.3% difference of 2.3% females to 0.0% males for Adult with the ADHD symptoms of impulsitivity, prevalence of self-report clinical significance of 0.1% difference of 1.6% males to 1.5% females for adult with the ADHD symptoms of inattention, and prevalence of self-report clinical significance of 1.5% difference of 4.5% females to 3.0% males for Adult with the ADHD combined symptoms of inattention, hyperactivity, and impulsitivity for positive symptom counts for ADHD current symptoms among the general population in Nigeria.

Keywords: ADHD, adult ADHD, Inattention, Hyperactivity, Impulsitivity, Self- reported symptoms of adult ADHD

Introduction

The notion of (ADHD) as a childhood condition was reinforced by the work of Still (1902). In describing the ADHD condition, Still (op.cit) suggests that some children have difficulty with moral control because of the inability to internalise rules, set limits and exhibit restless, inattentive, as well as over aroused behaviour. Still (op.cit) did not discuss the hypothesised outcome of ADHD children development into their adult years. He was quite pessimistic, believing that they could not successfully transit into adulthood. Notably in the late I 800s and early 1900s symptoms now considered diagnostic of ADHD were recognised to be multi-causal and brain injury induced. The world outbreak of encephalitis in 1917 and 1918 led to very different outcomes for affected children and adults. Many children who recovered from the encephalitis presented a pattern of restless, inattentive, impulsive, and hyperactive behaviours. The adults, who recovered, however, did not present these behavioural disorder. In extreme cases these adults became extremely catatonic and unresponsive to their environment. Though the occurrence, cause, and evaluation of ADHD have been controversial, the treatment has created more controversy. Psychosocial treatments such as cognitive training, once considered promising in directly reducing the symptoms of ADHD, are recognised to be the best in offering valuable interventions for adjunctive problems related to ADHD. Particularly in adults, problems involving self-esteem, motivation, and the development of dysfunctional mindset can be addressed and resolved through counseling. To understand and treat ADHD in adulthood it is important to view the disorder from a developmental perspective (Teeter, 1998). According to longitudinal studies, a number of adults with ADHD (70-85%) diagnosed earlier in life continue to meet the diagnostic criteria of ADHD into adolescence and adulthood (Barkley, Fischer, Edelbrock and Smallish, 1990; Biederman, Faraone, Milberger, Guite, Mich and Chek, 1996; Gittelman, Manuzza, Shenker and Bonagura, 1985; Ingram, Hechtman and Morgenstem, 1999; Weiss & Hechtman, 1993).

Attention deficit hyperactivity disorder (ADHD or AD/HD or ADD) is a developmental disorder (Zwi, Ramchandani and Joughin, 2000).It is primarily characterized by "the co-existence of attentional problems and hyperactivity, with each behaviour occurring infrequently alone' and symptoms starting before seven years of age (Biederman, 1998). ADHD is the most commonly studied and diagnosed psychiatric disorder in children, affecting about three to five percent of children globally (Nair, Ehimare, Beitman, Nair and Lavin, 2006) and diagnosed in about two to sixteen percent of school aged children (Rader, McCauley and Callen, 2009). It is a chronic disorder (Van and Leslie, 2008) with 30 to 50 percent of individuals diagnosed in childhood continuing to have symptoms into adulthood (Bálint, Czobor, Mószáros,

Simon and Bitter, 2008; Elia, Ambrosini and Rapoport, 1999). Adolescents and adults with ADHD tend to develop coping mechanisms to compensate with some or all of their impairments (Gentile, Atiq, Gillig, 2004). It is estimated that 4.7 percent of American adults live with ADHD (Barkley, 2007). Standardised rating scales such as WHO's Adult ADHD Self-Report Scale can be used for ADHD screening and assessment of the disorder's symptoms' severity (Kessler, Adler and Ames, 2005). ADHD is diagnosed two to four times more frequently in boys than in girls (Dulcan, 1997; Singh, 2008), though studies suggest this discrepancy may be partially due to subjective bias of referring teachers (Sciutto, Nolfi and Bluhm, 2004). ADHD management usually involves some combination of medications, behaviour modifications, lifestyle changes, and counselling. Its symptoms can be difficult to differentiate from other disorders, increasing the likelihood that the diagnosis of ADHD will be missed (Ramsay, 2007). Additionally, most clinicians have not received formal training in ADHD assessment and treatment, particularly in adult patients (Ramsay, 2007). ADHD, its diagnosis and treatment have been considered controversial since the 1970s (Parrillo, 2008). The controversies have involved clinicians, teachers, policymakers, parents and the media. Topics include the actuality of the disorder, its causes, and the use of stimulant medications in its treatment (Mayes, Bagwell and Erku 2008; Cohen and Cicchetti, 2006). Most healthcare providers accept that ADHD is a genuine disorder with debate in the scientific community centering mainly on how it is diagnosed and treated (Sim, Hulse and Khong, 2004; Silver, 2009; Schonwald and Lechner, 2006) The American Medical Association (1998) concludes that the diagnostic criteria for ADHD are based on extensive research and, if applied appropriately may lead to the diagnosis with high reliability (Goldman, Genel, Bezman and Slanetz, 1998). Adult attention deficit hyperactivity disorder (also referred to as adult ADHD, adult ADD) is the common term used to describe the neuropsychiatric condition ADHD when it is present in adults. Up to 60 percent of children diagnosed with ADHD in early childhood continue to demonstrate notable ADI-ID symptoms as adults (Valdizan and Izaguerri-Gracia, 2009).

Current convention refers to this condition as adult ADHD, according to the Diagnostic and Statistical Manual for Mental Disorders (DSM-IV-TR), 2000 revision. It has been estimated that 15 percent of the global population has ADHD, including eases not yet diagnosed (Polanczyk, de Lima, Horta, Biederman and Rohde, 2007). A variety of issues often arise in the assessment and diagnosis of ADHD in adults. First, the appropriate diagnosis of ADHD in adults relies on the accurate recall of childhood symptoms, a reliable account of current symptoms and their impact. Some clinicians have questioned the reliability of adults with ADHD to accurately report this information (Shaffer, 1994). Recently, Murphy and Schachar (2000) evaluated correlation of symptoms between adults with ADHD and other informants. Diagnostic information is obtained from the patient and, whenever possible, from significant others, such as partners, parents, siblings and close friends. If ancillary data are not available, information from an adult is acceptable for diagnostic and treatment purposes, because adults with ADHD, as with other disorders, are appropriate reporters of their own condition (Prince and Wilens, 2002). In general, boys are more likely to have ADHD than girls, according to DSM IV (American Psychiatric Association, 1994). The ratio of males to females with ADH vary depending on the study, where anywhere from 2:1 to 10:1 ratios have been reported, including about 6:1 in clinic-referred samples (Barkley, 1998). There may be a lot of reasons for these differences, some of which may result from referral biases whereby males are more likely to have aggression and anti-social disorders that prompt referrals compared to girls (Ellison and Goldstein, 2002). In a meta-analysis of gender differences in ADHD, Gaub and Carlson (1997) concluded that there were no gender differences on

levels of impulsivity, academic difficulties, social interaction problems, and fine motor functions. Family members did not differ on measures of psychopathology and parent educational levels did not differ. Intellectual deficits tended to be higher in girls, while hyperactivity levels were lower, and there were fewer signs of aggression, conduct problems and defiance (externalising disorders). This problem of self-reported diagnosis of adult with ADHD, therefore constitute a significant area that this study will explore by using self-reported diagnosis to diagnose ADHD among adults in the general population.

Notably, limited research has been carried out in this area compared to children with ADHD. Although there is a wealth of research available on childhood ADHD, less is known about its carryover into adulthood, particularly among those of college age (Norwalk, Norvilitis and Maclean, 2008). It is estimated that one half to two thirds of children who are diagnosed with ADHD continued to show symptoms into adolescence and adulthood (Resnick, 2005), although persistence rates vary by the definition of ADHD used (Norwalk, Norvilitis and Maclean, 2008). In their evaluation of 19-year-old boys diagnosed with ADHD in childhood, Biederman, Mick and Faraone (2000) report that although 60 percent no longer met full diagnostic criteria, 90 percent continued to struggle with significant but subthreshold levels of ADHD symptoms. Further, they noted that symptoms of inattention were less likely to decline than were symptoms of hyperactivity and impulsivity. The actual number of college students with ADITID is unknown, and much of the research on the prevalence of ADHD among college students relies on students' self-reports of symptoms (Norwalk, Norvilitis and Maclean, 2008). Part of what makes determining the prevalence of ADHD in college students difficult is that the DSM-IV criteria for ADHD were designed to describe childhood symptoms, and growing evidence suggests they may not adequately capture the disorder as it occurs in late adolescence and adulthood. For example, adolescents and adults may not meet the minimum criteria listed in the DSM-IV, yet their fhnctioning may still be impaired by their ADHD symptomatology (Ingram, Hechtman and Morgenstern, 1999).

In an effort to understand the meaning and course of symptoms of ADHD into adulthood, Murphy and Barkley (1996) collected symptom report data on 720 adults of at least 17 years of age. The respondents were solicited volunteers from among individuals entering one of two sites of the Department of Motor Vehicles in Massachusetts to apply for or renew their driver's license. These authors constructed two rating scales using the 18 DSM-IV symptom lists for ADHD. Each item was rated on a scale of 0 to 3 (rarely or never, sometimes, often, or very often, respectively). Inattention and hyperactive-impulsive symptoms were alternated in their numbered positions listed on the scale. One rating scale was completed based upon self-report over the past six months, while on the second rating scale; individuals were asked to report their behaviour when they were between 5 and 12 years of age. The authors correlated the data, collecting six scores. The first three were summations of the item scores calculated separately for the inattention, the hyperactive-impulsive, and the total ADHD item list. The second three were symptom counts of the number of positively endorsed items calculated separately within the inattention, hyperactive-impulsive, and total ADHD item list. Creating the symptom counts, the authors considered a symptom as present if the answer given to the item was often or very often (score of two or three was used in rating "often" or "very often" respectively, while for this study, the score of 3 or 4 was used in rating "often" or "very often" respectively). Using the means and standard deviations for the summary scores for current behaviour by age and the means and standard deviations for the number of symptoms endorsed with a two or greater (for the number of symptoms endorsed with a three or greater as used in this

study) for current behaviour at each age group. Both methods report the 93' percentile cutoff for clinical purposes (Goldstein and Ellison, 2002). However, it would seem prudent to establish a cut-off score on these scales of at least the 90 percentile, and preferably the 93" percentile, as the demarcation for clinical significance given that the 93"' percentile (+.1.5 Standard deviations above the mean) is a traditionally employed cut-off point for this purpose (Achenbach, 2001). Such a threshold is not to be intended as a religious dogma, but as a guideline for determining developmental deviance. As with mental retardation, cases falling near but not quite over the deviance threshold would be considered borderline or sub threshold cases, while those falling just across the threshold would be mild cases, with more pronounced cases being identified as moderate or severe (Barkley, 2006). Therefore, self-reported diagnosis of adult ADHD among the general population can be determined by calculating the number of participants that have the Deviance Threshold of +1.5SD which is the 93"' percentile cut off for making diagnosis in clinical settings to diagnose participants with ADHD summation scores for current symptoms for current behaviour and positive symptom counts for the ADHD current symptoms for current behaviour.

Nearly 75% of the sample reported they were currently experiencing six or more symptoms of ADHD at least sometimes (Murphy, Gordon and Barkley, 2000). Murphy *et al.* (2000) point out that these data powerfully demonstrate the commonality of some ADHD complaints in the general population that may occur independent of possessing the clinical condition. These data provide powerful testament to the universality of ADHD symptomatology (Murphy, Gordon and Barkley, 2000). Clinicians should be cautioned that if 10 to 20 percent of the normal population endorses the symptoms of ADHD, the ADHD diagnosis based largely on self-report in the absence of significant impairment can lead to substantial over diagnosis (Goldstein and Ellison, 2002). Further, the risk for misjudgment increases, given that according to these data, 25 percent of the population characterised themselves as have had at least six symptoms of ADHD during childhood (Goldstein and Ellison, 2002). These authors argue against clinicians' making diagnoses in the absence of corroborating data. They are undertaking a large epidemiologic study, beginning with a large symptom pool of DSM IV descriptors, complaints, and problem consequences of ADHD in an effort to arrive at a statistically sound set of symptom criteria and a threshold of symptoms as well as impairment in making the diagnosis of ADHD in adults (Goldstein and Ellison, 2002).

Recently a very similar pattern of data has been reported with a population of nearly 400 college students (Lewandowski *et al.* 2000). On the basis of their findings and previous research, these authors suggest that self-report alone of symptoms of ADHD may be an appropriate initial threshold for assessment but should not be used as confirming criterion (Lewandowski *et al.* 2000). Nevertheless, the diagnosis of ADHD in the adult years has been and likely will continue to be a source of controversy, despite the fact that current etiology theories of ADHD are consistent with lifetime prevalence for this condition, there is still a tendency to view this as a childhood problem (Goldstein and Ellison, 2002). Knouse *et al.* (2008) demonstrate predictive validity for adult self-report of ADHD symptoms in a general population sample. Research findings extend existing gender invariance data for the ADHD symptoms. Thus, there was good support for gender equivalence for the ADI-ID symptoms (Gomez, 2011). ADHD was once thought of as a predominantly male disorder. While this may be true for ADHD in childhood, extant research suggests that the number of women with ADHD may be nearly equal to that of men with the disorder (Faraone *et al.*, 2000). There is accumulating research which clearly indicates subtle but important sex differences exist in the symptom profile, neuropathology and clinical course of ADHD

(Nussbaum, 2012). Research findings show that college women with ADHD have higher rates of inattention, hyperactivity, and impairment than college women without ADHD and men with ADHD. Analyses reveal that women in college who have ADHD experience higher levels of impairment in the following domains: home life, social life, education, money management, and daily life activities (Fedele *et al.*, 2012). Heiligenstein *et. al.* (1998) report that the total hyperactivity score declined with increasing age and that no differences were found with respect to gender, ethnicity and educational level on the inattention score.

DuPaul *et al.* (2001), for example, explored the prevalence of self-reported ADHD symptoms in 1,209 college students from the following countries: the United States, Italy, and New Zealand. Using the young ARS, results indicate that Italian students reported significantly more inattention and hyperactivity-impulsitivity symptoms than those from the United States and New Zealand reported more inattention symptoms than students from the United States. Using DSM-1V criteria, participants were classified as having an ADHD inattentive sub-type if they endorsed six or more inattentive symptoms and fewer than six hyperactive-impulsive symptoms. Similarly, participants were classified as having the hyperactive-impulsive sub-type if six or more hyperactive-impulsive symptoms were reported and fewer than six inattention symptoms. Results indicate that 2.9 percent of male students from the United States were classified as having one of the three sub-types, whereas 7.4 percent of male Italian students and 8.1% of male students from New Zealand reported significant ADHD symptoms. In most cases, the males were identified as hyperactive-impulsive type. Female students from the United States, however, reported significant higher ADHD symptoms than female students from Italy and New Zealand (3.9%, 0%, and 1.7%, respectively). Similar to male students, most of the female participants who met DSM-IV criteria were categorised in the hyperactive-impulsive sub-type. Collectively, these studies suggest that approximately two percent to eight percent of college students self-reported clinically significant symptoms associated with ADHD, although these numbers do not reflect the actual percentage of college students with documented ADHD (Weyandt and DuPaul, 2006).

Hypotheses

1. Prevalence of self-reported diagnosis of adult ADHD for the ADFID summation scores for current symptoms collapsed across age among the general population in Nigeria.
2. Prevalence of self-reported diagnosis of adult ADHD for positive symptom counts for the ADHD current symptoms collapsed across age among the general population in Nigeria.
3. Prevalence of self-reported diagnosis of adult ADHD by gender for the ADHD summation scores for current symptoms collapsed across age among the general population in Nigeria.
4. Prevalence of self-reported diagnosis of adult ADHD by gender for positive symptom counts for the ADEID current symptoms collapsed across age among the general population in Nigeria.

Research Methods

Design

This research is an exploratory study which tries to find the prevalence of self-reported diagnosis of adult ADHD among general population in Nigeria. It is a survey design because it makes use of questionnaires to collect the needed data.

Participants

A total of 1,218 adults of male and female participants of l8years and above were randomly selected from Ibadan (Oyo State) and Ado-Ekiti (Ekiti State) metropolis. They were made up of 599 males and 619 females ranging from 18 to 52 years of age.

Instrument

The instrument used for this study is the Barkley Adult ADHD Rating Scale (BAARS IV). It was developed by Barkley (2011) to assess current ADHD symptoms, and domains of impairment, as well as recollections of childhood symptoms. It is ideal for clinical and forensic psychologists, neuropsychologists, social workers, psychiatrists, primary care physicians and psychopathology researchers. The BAARS-IV is based on more than 16 years of research, using prototypes of the BAARS-IV. Reliability is quite satisfactory, as evidenced by high internal consistence (Chronbach's alpha of .92 for current ADHD and .95 for childhood ADHD symptom scores); good inter observer agreement (.67 to .70 across scales); and high test-retest reliability over a two to three week interval (.75 for current ADHD and .79 for childhood ADHD symptoms scores). Validity of the scale scores was evident in numerous analyses, including factor analyses; correlations with other measures of ADHD symptoms; and correlations, regression analyses, and group comparison concerning disorder discrimination and concurrent validity with various measures of functional impairment in major life activities. Oluwafemi (2012) reported that the scale also achieved Cronbach's alpha ranging from .72 to .85 (.82 for Inattention, .76 for Hyperactivity, .72 for Impulsitivity sub-scales respectively, while .85 was for Sluggish Cognitive Tempo that was inbuilt as control measure for the validity of the scale).

Procedure

A total of 1,530 copies of the questionnaires were administered to students of University of Ibadan in Ibadan (Oyo State) and Ekiti State University in Ado-Ekiti (Ekiti State) respectively, age ranging from 18years and above) by establishing rapport with the participants thereby seeking their consent in filing questionnaires that will be administered to them, but only 1,218 were valued enough to be used. They were assured of the confidentiality of their responses.

Data analysis

The Mean, Standard Deviation (S.D), Deviance Threshold (+1.5 S.D), and Percentage used to analyze hypotheses 1,2,3, and 4 respectively.

Results

The results of the analysis are presented in Tables 1, 2, 3, and 4.

Table 1: Means, Standard Deviation (SD), Deviance Threshold (+1.5SD), and Percentage of Self-reported diagnosis of adult ADHD for the ADHD Summation Scores for Current Symptoms Collapsed across Age among the General Population in Nigeria

Scale	Ages	Mean	SD	+1.5 SD cut off	N	%
Inattention	18+	15.3	4.74	6.24	1218	9.1
Hyperactivity	18+	8.3	2.89	4.39	1218	7.5
Impulsitivity	18+	6.4	2.29	3.79	1218	8.3
Total ADHD Score	18+	29.9	8.64	10.14	1218	12.2

The results of the Mean, Standard Deviation (SD), Deviance Threshold (+1.5 SD), and Percentage shown in Table 1 indicates that inattention (Mean=5.3, SD=4.74, +1.5 SD =6.24) had the most prevalence of self-report diagnosis of Adult ADHD symptoms with 9.1% (111) of the participants recording significant deviance threshold (+1.5SD) for the ADHD summation scores for current symptoms compared to impulsitivity with the self-report

diagnosis of ADHD symptoms prevalence of 8.3% (101), and hyperactivity with the self-report diagnosis of ADHD symptoms prevalence of 7.5% (91) [SD2.29, +1.5 SD=3.79 and Mean=8.3, SD=2.89, +1.5SD =4.39] respectively in their clinical significant order of prevalence among the general population. However, total ADHD score (Mean=29.9, SD=8.64, +1.5 SD=10.14) which were the total score derived from the ADHD symptoms of inattention, hyperactivity, and impulsitivity indicate the self-report diagnosis of ADHD prevalence of 12.2% (149) participants that met the full criteria for making the self-report diagnosis of Adult ADHD prevalence with the significant deviance threshold (+1.5SD) for the ADHD summation scores for current symptoms among the general population in Nigeria.

Table 2: Means, Standard deviations (SD), Deviance Thresholds (+1.5SD), and Percentage of Self-reported Diagnosis of Adult ADHD for Positive Symptom Counts for the ADHD Current Symptoms Collapsed across Age among Population in Nigeria

Scale	Ages	Mean	SD	+1.5 SD cut off	N	%
Inattention	18+	8.2	5.38	6.88	588	2.3
Hyperactivity	18+	6.2	4.46	5.96	449	3.8
Impulsitivity	18+	5.6	3.14	4.64	370	2.3
Total ADHD Score	18+	13.7	11.41	12.91	709	7.6

The results of the Mean, Standard Deviation (SD), Deviance Threshold (+1.5 SD), and Percentage shown in Table 2 indicate that hyperactivity (Mean=6.2, SD4.64, +1.5SD5.96) had the most prevalence of self-reported diagnosis of adult ADHD symptoms with 3.8% (46) of the participants recording significant deviance threshold (+1.5SD) for positive symptom counts for the ADHD current symptoms compared to inattention with the self-reported diagnosis of ADHD symptoms prevalence of 2.3% (28), and impulsitivity with the self-reported diagnosis of ADHD symptoms prevalence of 2.3% (28) [Mean=8.2, SD=5.38, +1.5 SD=6.88 and Mean=5.6, SD=3.14, +1.SSD=4.64] respectively in their clinical significant order of prevalence among the general population. However, total ADHD score (Mean=3.7, SD=11.41, +l.5 SD=12.91), the total score derived from the ADHD symptoms of inattention, hyperactivity, and impulsitivity indicate the self-report diagnosis of ADHD prevalence of 7.6% (92) participants that met the full criteria for making the self-reported and diagnosis of adult ADHD with the significant deviance threshold (+1.5SD) for positive symptom counts for the ADHD current symptoms among the general population in Nigeria.

Table 3: Means, Standard Deviations (SD), Deviance Thresholds (+1.5SD), and Percentage of Self-reported Diagnosis of Adult ADHD by Gender for the ADHD Summation Scores for Current Symptoms Collapsed across age among the general population in Nigeria

	Males						Females				
Scale	Ages	Mean	SD	+1.5SD	N	%	Mean	SD	+1.5SD	N	%
Inattention	18+	15.7	4.99	6.50	599	5.3	14.9	4.45	5.95	619	5.4
Hyperactivity	18+	8.7	2.76	4.26	599	3.8	7.8	2.94	4.44	619	3.7
Impulsivity	18+	6.6	2.14	3.64	599	3.8	6.1	2.40	3.90	619	4.5
Total ADHD Score	18+	31.0	8.60	10.10	599	6.2	28.8	8.56	10.06	619	6.1

The results of the Mean, Standard Deviation (SD), Deviance Threshold (+1.5 SD), and Percentage shown in Table 3 indicate that inattention (Mean=14.9, SD4.45, +1.55D=5.95 for females, and Mean=15.7, SD=4.99, +1.5SD=6.50 for males) had the most prevalence of self- reported diagnosis of adult ADHD symptoms by gender with 5.4% (66) females recording higher but almost the same significant deviance threshold (+1.5SD) with that of 5.3% (65) males given the difference of 0.1% (1) for the ADHD summation scores for current symptoms among the general population compared to impulsitivity with the self-reported diagnosis of ADHD symptoms prevalence of 4.5% (55) females recording higher significant deviance threshold (+1 .5SD) than that of 3.8% (46) males given the difference of 0.7% (9), and hyperactivity with the self-report diagnosis of ADHD symptoms prevalence of 3.8% (46) males recording higher but almost the same significant deviance threshold (+1.5SD) with that of 3.7% (45) females given the difference of 0.1% (1) [SD=2.40, +1.5 SD=3.90 for females; Mean=6.6, SD=2.14, +1.5 SD=3.64 for males, and Mean=8.7, SD=2.76, +l.5 SD=4.26 for males; Mean=7.8, SD=2.94, +1.5 SD=4.44 for females] respectively in their clinical significant order of prevalence among the general population. However, total ADHD scores (Mean=31.0, SD=8.60, +1.5SD=10.1 for males and Mean=28.8, SD=8.56, +1. for females) which were the total score derived from the ADHD symptoms of inattention, hyperactivity, and impulsitivity indicates the self-reported diagnosis of ADHD prevalence of 6.2% (75) males recording higher but almost the same significant deviance threshold with that of 6.1% (74) females given the difference of 0.1% (1) that met the frill criteria for making the self-reported diagnosis of Adult ADHD by gender with the significant deviance threshold (+1.5SD) for the ADHD summation scores for current symptoms among the general population in Nigeria.

Table 4: Means, Standard Deviations (SD), Deviance Thresholds (+1.5SD), and Percentage of Self-reported Diagnosis of Adult ADHD by Gender for the ADHD Summation Scores for Current Symptoms Collapsed across age among the General Population in Nigeria

	Males					Females				
Scale	Ages	Mean	SD	+1.5SD	N	%	Mean	SD	+1.5SD	N	%
Inattention	18+	8.7	5.26	6.80	318	1.6	7.6	5.47	5.96	270	1.5
Hyperactivity	18+	6.0	3.81	5.31	268	1.6	6.6	5.30	6.80	268	3.0
Impulsivity	18+	5.7	2.41	3.91	231	0.0	6.5	3.96	5.50	139	2.3
Total ADHD Score	18+	14.7	9.91	11.41	379	3.0	12.6	12.85	14.35	330	4.5

The result of the Mean, Standard Deviation (SD), Deviance Threshold (+1.5 SD), and Percentage shown in Table 4 indicates that hyperactivity (Mean=6.6, SD=5.30, +1 .5SD=6.80 for females, and Mean=6.0, SD=3.81, +1.SSD=5.31 for males) had the most prevalence of self- report diagnosis of Adult ADHD symptoms by gender especially in females with 3.0% (36) females recording higher significant deviance threshold (+1.5SD) than that of 1.6% (19) males given the difference of 1.4% (17), while hyperactivity and inattention had the same prevalence of self-reported diagnosis of adult ADHD symptoms in males for positive symptom counts for the ADHD current symptoms among the general population compared to impulsitivity with the self-report diagnosis of ADHD symptoms prevalence of 2.3% (28) females recording higher significant deviance threshold (+1.5 SD) than that of 0.0% (0)

males given the difference of 2.3% (28), and inattention with the self-reported diagnosis of ADHD symptoms prevalence of 1.6% (19) males recording higher but almost the same significant deviance threshold (+1.5 SD) with that of 1.5% (18) females given the difference of 0.1% (1) [SD=3.96, +l.5SD=5.50 for females; Mean=5.7, SD=2.41, +1.5 SD=3.9l for males, and Mean=8.7, SD5.26, +1.5SD6.80 for males; Mean7.6, SD=5.47, +l.5SD=5.96 for females] respectively in their clinical significant order of prevalence among the general population. 1-lowever, total ADHD score (Mean=l2.6, SD=l2.85, +l.5SD=14.35 for females, & Mean=l4.7, SD=9.91, +1. for males) which were the total score derived from the ADHD symptoms of inattention, hyperactivity, and impulsitivity indicates the self-report diagnosis of ADHD prevalence of 4.5% (55) females recording higher but almost the same significant deviance threshold with that of 3.0% (37) males given the difference of 1.5°/9 (18) that met the full criteria for making the self-reported diagnosis of adult ADHD by gender with the significant deviance threshold (+1.5SD) for positive symptom counts for the ADHD current symptoms among the general population in Nigeria.

Discussion

The first hypothesis posits the prevalence of self-reported diagnosis of adult ADHD for the ADHD summation scores for current symptoms collapsed across age among the general population. The result reveals that 9.1% adults among the general population reported the prevalence of self-reported clinically significant inattention symptoms of ADI-ID for the ADHD summation scores for current symptoms, followed in their order self-reported clinical significance by the 8.3% Adults that reported impulsitivity symptoms of ADHD, and 7.5% Adults that reported hyperactivity symptoms of ADHD among the general population respectively, while 12.2% adults among the general population reported the prevalence of self-report clinical significance of ADHD which entails the total score of the symptoms of inattention, hyperactivity, and impulsitivity for the summation scores for current symptoms. This finding that reveals the prevalence of self-reported clinical significance of the 9.1% adults with inattention symptoms of ADHD, the prevalence of self-reported clinical significance of the 8.3% adults that reported impulsitivity symptoms of ADHD, the prevalence of self-report clinical significance of the 7.5% adults that reported hyperactivity symptoms of ADHD, and the prevalence of self-report clinical significance of the 12.2% adults ADHD combined symptoms of inattention, hyperactivity, and impulsitivity for the ADHD summation scores for current symptoms were not in full support of the collective study that suggested approximately 2% to 8% of college students self-reported clinically significant symptoms associated with ADHD, although these numbers do not reflect the actual percentage of college students with documented ADHD (Weyandt and DuPaul, 2006) because the 9.1% adults that reported the self-report clinically significant inattention symptoms of ADHD, and the 8.3% adults that reported the self-report clinically significant impulsitivity symptoms of ADHD were more than the approximately 2% to 8% estimated by the suggestion of the collective studies but the 7.5% of adults that reported the self-report clinical significance of hyperactivity symptoms of ADHD were therefore found to be within the range. Although, there is preliminary evidence that self-reported symptoms may vary across countries; however, this is based on the results of a single study (DuPaul et al., 2001).

However, the higher prevalence of 9.1% adults with the inattention symptoms of ADHD were consistent with the research finding that most adults with ADHD have the inattentive-type, but men exhibit a tendency towards the hyperactive/impulsive-type symptoms and have predominantly the combined-type (Anthshel, Faraone and Kunwar, 2008). The 12.2% Adults among the general population that reported the

prevalence of self-reported clinical significance of ADHD for the summation scores for current symptoms were consistent with the research finding that nearly. 75% of the sample reported they were currently experiencing six or more symptoms of ADHD at least sometimes (Murphy, Gordon and Barkley, 2000). This finding is also consistent with the finding that estimated 15% of the global population has ADHD including cases not yet diagnosed (Polanczyk, de Lima, Horta, Biederman and Rohde, 2007) which justify the 12.2% of the general population that reported the prevalence of self-reported clinical significance of ADHD combined symptoms of inattention, hyperactivity, and impulsitivity for the summation scores for current symptoms but inconsistent with the research finding that cautioned clinicians that if 10-20% of the normal population endorses symptoms of ADI the ADHD diagnosis based largely on self- report in the absence of significant impairment can lead to substantial over diagnosis (Goldstein and Ellison, 2002). However, the prevalence of self-reported clinical significance of ADHD for the summation scores for current symptoms can be considered under the group of adolescents and adults with ADHD that tend to develop coping mechanisms to compensate for some or all of their impairments (Gentile, Atiq and Gillig, 2004).

The second hypothesis posits the prevalence of self-reported diagnosis of Adult ADHD for positive symptom counts for the ADHD current symptoms collapsed across age among the general population. The result reveals that 3.8% adults among the general population reported the prevalence of self-reported clinically significant hyperactivity symptoms of ADHD for positive symptom counts for the ADHD current symptoms, followed in the order of self- reported clinical significance by the 2.3% adults that reported inattention symptoms of ADHD, and 2.3% adults that reported impulsitivity symptoms of ADHD among the general population respectively, while 7.6% adults among the general population reported the prevalence of self-reported clinical significance of ADHD combined symptoms of inattention, hyperactivity and impulsitivity positive symptom counts for the ADHD current symptoms. This finding reported the prevalence of self-report clinical significance of the 3.8% adults that reported hyperactivity symptoms of ADHD, the prevalence of self-reported clinical significance of the 2.3% adults that reported inattention symptoms of ADHD, the prevalence of self-reported clinical significance of the 2.3% adults that reported impulsitivity symptoms of ADHD, and the prevalence of self-report clinical significance of the 7.6% adults ADUD combined symptoms of inattention, hyperactivity, and impulsitivity for positive symptom counts for the ADHD current symptoms do support collective studies suggestion that approximately 2% to 8% of college students self-report clinically significant symptoms associated with ADHD, although these numbers do not reflect the actual percentage of college students with documented ADHD (Weyandt and DuPaul, 2006) because the 3.8%, 2.3%, and 2.3% adults among the general population that report self-reported clinical significance of hyperactive, inattention, and impulsitivity symptoms of ADHD for positive symptom counts for the ADHD current symptoms were within the estimation of approximately 2% to 8% respectively. Although, there is preliminary evidence that self-reported symptoms may vary across countries; however, this is based on the results of a single study (DuPaul et. al, 2001). However, the findings of the 3.8% adults among the general population that report the prevalence of self-reported clinically significant hyperactivity symptoms of ADHD for positive symptom counts for the ADHD current symptoms does not support the research finding that most adults with ADHD have the inattentive-type, but men exhibit a tendency towards the hyperactive/impulsive-type symptoms and have predominantly the combined- type (Anthshel, Faraone and Kunwar, 2008) because most adult with ADHD in this study reported having higher hyperactivity (3.8% adults) than inattention (2.3%

adults) or impulsitivity (2.3% adults). The 7.6% adults among the general population that report the prevalence of self-reported clinical significance of ADHD for the summation scores for current symptoms does support the research findings that nearly 75% of the sample reported they were currently experiencing six or more symptoms of ADHD at least sometimes (Murphy, Gordon and Barkley, 2000). Murphy et al. (2000) point out these data powerfully demonstrate the commonality of some ADHD complaints in the general population that may occur, independent of possessing the clinical condition. This data provides powerful testament to the universality of ADHD symptomatology (Murphy, Gordon and Barkley, 2000). Clinicians should be cautioned that if 10 to 20% of the normal population endorses symptoms of ADHD, the ADHD diagnosis based largely on self-report in the absence of significant impairment can lead to substantial over diagnosis (Goldstein and Ellison, 2002). Further, the risk for misjudgment increases, given that according to these data 25% of the population characterised themselves as having had at least six symptoms of ADHD during childhood (Goldstein and Ellison, 2002). These authors are undertaking a large epidemiologic study, beginning with a large symptom pool of DSM IV descriptors, complaints, and problem consequences of ADHD in an effort to arrive at a statistically sound set of symptom criteria and a threshold of symptoms as well as impairment in making the diagnosis of ADHD in adults (Goldstein and Ellison, 2002).Although, this result negate the notion of clinicians' making diagnoses in the absence of corroborating data (Goldstein and Ellison, 2002) but Knouse et al. (2008) findings demonstrate predictive validity for adult self-report of ADHD symptoms in a general population sample. This finding also supports the finding that up to 60% of children diagnosed with ADHD in early childhood continued to demonstrate notable ADHD symptoms as adults (Valdizán and Izaguerri-Gracia, 2009). Current convention refers to this condition as adult ADHD, according to the Diagnostic and Statistical Manual for Mental Disorders (DSM-IV TR), 2000 revision. It has been estimated that 15% of the global population has ADHD including cases not yet diagnosed (Polanczyk, de Lima, Horta, Biederman and Rohde, 2007). However, the 7.6% of Nigeria adults among the general population that reported the prevalence of self-reported clinical significance of ADHD for the summation scores for current symptoms were therefore more than the estimated 4.7 percent of American adults living with ADHD (Barkley, 2007).

The third hypothesis posits the prevalence of self-report diagnosis of adult ADHD by gender for the ADHD summation scores for current symptoms collapsed across age among the general population. The result reveals that inattention symptoms of ADHD had the most prevalence of self-reported clinical significance of adult ADHD symptoms by gender of 5.4% females reporting higher but almost the same self-reported clinical significance of adult ADHD symptoms of inattention by gender that reported 5.3% of males showing the difference of 0.1% for the ADHD summation scores for current symptoms among the general population compared to impulsitivity symptoms of adult ADHD with the prevalence of self- reported clinical significance of adult ADHD symptoms by gender that reported 4.5% females indicating higher prevalence of self-reported clinical significance of adult ADHD symptoms of impulsitivity than that of 3.8% males with the difference of 0.7%, and hyperactivity symptoms of Adult ADHD with the prevalence of self-reported clinical significance of Adult ADHD symptoms by gender that reported 3.8% males indicating higher but almost the same prevalence of self-report clinical significance of adult ADHD symptoms of hyperactivity with that of 3.7% females showing the difference of 0.1% among the general population. However, total ADHD scores, the total of the combined symptoms of inattention, hyperactivity, and impulsitivity indicates the prevalence of self-report clinical significance of adult ADHD by gender for the ADHD summation scores for

current symptoms reporting 6.2% males indicating higher but almost the same self-reported clinical significance with that of 6.1% females with the difference of 0.1% among the general population. This finding that reported the prevalence of self-reported clinical significance of 0.1% difference of 5.4% females to 5.3% males for adult ADHD by gender symptoms of inattention, the prevalence of self-reported clinical significance of 0.7% difference of 4.5% females to 3.8% males for Adult ADHD by gender symptoms of impulsitivity, the prevalence of self-report clinical significance of 0.1% difference of 3.8% males to 3.7% females for adult ADHD by gender symptoms of hyperactivity, and the prevalence of self-reported clinical significance of 0.1% difference of 6.2% males to 6.1% females for adult ADHD by gender for the combined symptoms of inattention, hyperactivity, and impulsitivity for the ADHD summation scores for current symptoms were consistent with collective studies suggestion that approximately 2% to 8% of college students self-reported clinically significant symptoms associated with ADHD, although these numbers do not reflect the actual percentage of college students with documented ADHD (Weyandt and DuPaul, 2006). Although, there is preliminary evidence that self-reported symptoms may vary across countries; this is based on the results of a single study (DuPaul ct. al, 2001). This finding were also consistent with the findings that estimated that 15% of the global population has ADHD including cases not yet diagnosed (Polanczyk, de Lima, Horta, Biederman and Rohde, 2007). However, the self-reported clinical significant differences of 0.1% females to males reported for the ADHD symptoms of inattention, 0.1% males to females reported for the ADHD symptoms of hyperactivity, and the 0.7% females to males reported for the ADIHD symptoms of impulsitivity were inconsistent with the findings that ADHD is diagnosed two to four times more frequently in boys than in girls (Dulcan, 1997; Singh, 2008) but supported studies that suggested this discrepancy may be partially due to subjective bias of referring teachers (Sciutto, Nolfi and Bluhm, 2004) even though this findings were among children with ADHD. This findings partially support the finding that most adults with ADHD have the inattentive-type, but disagree with the part that men exhibit a tendency towards the hyperactive/impulsive-type symptoms and have predominantly the combined- type (Anthshel, Faraone, Kunwar and 2008) because the result of this finding reports women exhibit the impulsitivity symptoms of ADHD more than men with the prevalence of self-reported significant difference of 0.7% while men exhibit a higher symptom but with a thin prevalence of self-reported significant difference of 0.1% from women when compared to the hyperactivity symptoms of ADHD and ADHD combined symptoms of inattention, hyperactivity, and impulsitivity. The result that reports the prevalence of self-report clinical significance of 0.1% difference from females to males for adult ADHD by gender symptoms of inattention, the prevalence of self-reported clinical significance of 0.7% difference from males to females for adult ADHD by gender symptoms of impulsitivity, the prevalence of self-report clinical significance of 0.1% difference from females to males for adult ADHD by gender symptoms of hyperactivity, and the prevalence of self-reported clinical significance of 0.1% difference from males to females for adult ADHD by gender for the combined symptoms of inattention, hyperactivity, and impulsitivity for the ADHD summation scores for current symptoms were however inconsistent with the findings of DuPaul et al. (2001) that for example, explored the prevalence of self-reported AD symptoms in 1,209 college students from the following countries: the United States, Italy, and New Zealand. Using the young ARS, results indicate that Italian students reported significantly more inattention and hyperactivity-impulsitivity symptoms than students from the United States and that students from New Zealand reported more inattention symptoms than students from the United States. Using DSM-IV criteria,

participants were classified as having an ADHD inattentive subtype if they endorsed six or more inattentive symptoms and fewer than six hyperactive-impulsive symptoms. Similarly, participants were classified as having the hyperactive-impulsive sub-type if six or more hyperactive-impulsive symptoms were reported and fewer than six inattention symptoms. Results indicated that 2.9% of male students from the United States were classified as having one of the three sub-types, whereas 7.4% of male Italian students and 8.1% of male students from New Zealand reported significant ADHD symptoms. In the number of these cases, the males were identified as hyperactive-impulsive type. Although this finding were consistent with the research results of female students from the United States who reported significant higher ADHD symptoms than female students from Italy or New Zealand (3.9%, 0%, and 1.7%, respectively). It is but inconsistent with the result similar to male students, most of the female participants who met DSM-IV criteria were categorised in the hyperactive-impulsive sub-type because most of the males and females participants that met the full criteria for clinical significance of self-reported diagnosis of ADHD for clinical purposes were diagnosed with inattention or categorized the inattentive sub-type.

The fourth hypothesis posits the prevalence of self-reported diagnosis of adult ADHD by gender for positive symptom counts for the ADHD current symptoms collapsed across age among the general population. The result reveals that hyperactivity symptoms of ADHD had the most prevalence of self-reported clinical significance of adult ADHD symptoms by gender of 3.0% females reporting higher prevalence of self-report clinical significance of hyperactivity symptoms of ADHD than 1.6% males given the difference of 1.4% for positive symptom counts for the ADHD current symptoms among the general population compared to impulsitivity symptoms of adult ADHD with the prevalence of self-reported clinical significance of adult ADHD symptoms by gender that reported 2.3% females indicating higher prevalence of self-reported clinical significance of adult ADHD symptoms of impulsitivity than 0.0% males with the difference of 2.3% which means males report no prevalence of self-reported clinical significance of adult ADHD symptoms of impulsitivity for positive symptom counts for the ADHD current symptoms among the general population, and inattention symptoms of adult ADHD with the prevalence of self-reported clinical significance of Adult ADHD symptoms by gender that reported 1.6% males indicating higher but almost the same prevalence of self-reported significance of adult ADHD symptoms of inattention with that of 1.5% females showing the difference of 0.1% among the general population. However, total ADHD scores the total score derived from the adult ADHD symptoms of inattention, hyperactivity, and impulsitivity showed the prevalence of self-reported clinical significance of adult ADHD by gender for positive symptom counts for the ADHD current symptoms of 4.5% females reporting higher self-reported clinical significance than 3.0% males given the difference of 1.5% among the general population. This finding that reported the prevalence of self-reported clinical significance of 1.4% difference from females to males for adult ADHD by gender symptoms of hyperactivity, the prevalence of self-report clinical significance of 2.3% difference from females to males for adult ADHD by gender symptoms of impulsitivity, the prevalence of self-reported clinical significance of 0.1% difference from males to females for Adult ADHD by gender symptoms of inattention, and the prevalence of self-report clinical significance of 1.5% difference from females to males for Adult ADHD by gender for the combined symptoms of inattention, hyperactivity, and impulsitivity for positive symptom counts for the ADHD current symptoms do not support the findings that boys are more likely to have ADHD than girls, according to DSM-IV (American Psychiatric Association, 1994) but support the fact that it is plausible among children with ADHD. This

finding that reports the prevalence of self-report clinical significance of 1.4% difference from females to males for adult ADHD by gender symptoms of hyperactivity, the prevalence of self-reported clinical significance of 2.3% difference from females to males for adult ADHD by gender symptoms of impulsitivity, the prevalence of self-report clinical significance of 0.1% difference from males to females for Adult ADHD by gender symptoms of inattention, and the prevalence of self-report clinical significance of 1.5% difference from females to males for Adult ADHD by gender for the combined symptoms of inattention, hyperactivity, and impulsitivity for positive symptom counts for the ADHD current symptoms were inconsistent with the finding that the ratio of males to females with ADHD vary depending on the study, where anywhere from 2:1 to 10:1 ratios have been reported, including about 6: 1 in clinic-referred samples (Barkley, 1998) but consistent with the research finding that there may be a lot of reasons for these differences, some of which may result from referral biases whereby males are more likely to have aggression and anti-social disorders that prompt referrals than are girls (Ellison and Goldstein, 2002). This finding reports the prevalence of self-report clinical significance of 2.3% difference from females to males for adult ADHD by gender symptoms of impulsitivity were inconsistent with the findings of Gaub and Carison (1997) in a meta-analysis of gender differences in ADHD concluding that no gender differences on levels of impulsivity, academic difficulties, social interaction problems and fine motor functions because no symptoms of impulsitivity were found among males compared to the 2.3% reported among females. This finding reports the prevalence of self-reported clinical significance of 1.4% difference between females and males for adult ADHD by gender symptoms of hyperactivity indicates that hyperactivity were higher in females were inconsistent with the research findings that intellectual deficits tended to be higher in girls, while hyperactivity levels were lower, and there were fewer signs of aggression, conduct problems, and defiance (extemalising disorders). Therefore, this finding that reported the prevalence of self-report clinical significance of 1.4% difference from females to males for Adult ADHD by gender symptoms of hyperactivity, the prevalence of self-report clinical significance of 2.3% difference from females to males for adult ADHD by gender symptoms of impulsitivity, the prevalence of self-report clinical significance of 0.1% difference from males to females for adult ADHD by gender symptoms of inattention, and the prevalence of self-report clinical significance of 1.5% difference from females to males for adult ADHD by gender for the combined symptoms of inattention, hyperactivity, and impulsitivity for positive symptom counts for the ADHD current symptoms do support the findings that extend existing gender invariance data for the ADHD symptoms. Thus, there was good support for gender equivalence for the ADHD symptoms (Gomcz, 2011). ADHD was once thought of as a predominantly male disorder. While this may be true for ADHD in childhood, extant research suggests that the number of women with ADHD may be nearly equal to that of men with the disorder (Faraone et al., 2000). The result reports the prevalence of self-report clinieal significance of 1.4% difference from females to males for Adult ADHD by gender symptoms of hyperactivity, the prevalence of self-report clinical significance of 2.3% difference from females to males for Adult ADHD by gender symptoms of impulsitivity, the prevalence of self-report clinical significance of 0.1% difference from males to females for Adult ADHD by gender symptoms of inattention, and the prevalence of self-report clinical significance of 1.5% difference between females and males for Adult ADHD by gender for the combined symptoms of inattention, hyperactivity, and impulsitivity for positive symptom counts of the ADHD current symptoms consistent with the accumulating research which clearly indicates subtle but important sex differences exist

in the symptom profile, neuropathology and clinical course of ADHD (Nussbaum, 2012).

Findings show that college women with ADHD have higher rates of inattention, hyperactivity, and impairment than college women without ADHD and men with ADHD. Analyses reveal that women in college who have ADHD experience higher levels of impairment in the following domains: home life, social life, education, money management, and daily life activities (Fedele *et al*,. 2012). This finding reports the prevalence of self-reported clinical significance of 1.4% difference between females and males for adult ADHD by gender symptoms of hyperactivity, the prevalence of self-reported clinical significance of 2.3% difference between females and males for adult ADHD by gender symptoms of impulsitivity, the prevalence of self-report clinical significance of 0.1% difference from males to females for Adult ADHD by gender symptoms of inattention, and the prevalence of self-report clinical significance of 1.5% difference from females to males for Adult ADI-ID by gender for the combined symptoms of inattention, hyperactivity, and impulsitivity for positive symptom counts for the ADHD current symptoms were inconsistent with Heiligenstein *et al*. (1998) who reported that the total hyperactivity score declined with increasing age and that no differences were found with respect to gender, ethnicity, and educational level on the inattention score but consistent with the findings of DuPaul *et al*. (2001) that explored the prevalence of self-reported ADHD symptoms in 1,209 college students from the countries: the United States, Italy, and New Zealand. Using the young ARS, results indicate that Italian students reported significantly more inattention and hyperactivity-impulsitivity symptoms than students from the United States and New Zealand reported more inattention symptoms than students from the United States. Using DSM-IV criteria, participants were classified as having an ADHD inattentive sub-type if they endorsed six *or* more inattentive symptoms and fewer than six hyperactive-impulsive symptoms. Similarly, participants were classified as having the hyperactive-impulsive sub-type if six or more hyperactive-impulsive symptoms were reported and fewer than six inattention symptoms. Results indicate that 2.9% of male students from the United States were classified as having one of the three subtypes, whereas 7.4% of male Italian students and 8.1% of male students from New Zealand reported significant ADHD symptoms. In the majority of these cases, the males were identified as hyperactive-impulsive type. Female students from the United States, however, reported significant higher ADHD symptoms than female students from Italy and New Zealand (3.9%, 0%, and 1.7%, respectively). Similar to male students, most of the female participants who met DSM-IV criteria were categorised in the hyperactive-impulsive sub-type. Further, there is preliminary evidence that self-reported symptoms may vary across countries; however, this is based on the results of a single study (DuPaul *et al*. 2001).

Conclusion

The study reveals the prevalence of self-reported clinical significance of 9.1% adults with the inattention symptoms of ADHD: 8.3% adults with the impulsitivity symptoms of ADHD: 7.5% adults with the hyperactivity symptoms of ADHD: 12.2% adults with ADHD combined symptoms of inattention, hyperactivity, and impulsitivity for the ADHD summation scores for current symptoms among the general population in Nigeria.

The study further reveals the prevalence of self-reported clinical significance of 3.8% adults with the hyperactivity symptoms of ADHD: 2.3% adults with the impulsitivity symptoms of ADHD: 2.3% adults with the inattention symptoms of ADHD: 7.6% adults with the ADHD combined symptoms of inattention, hyperactivity, and impulsitivity for positive symptom counts for ADHD current symptoms among the general population in Nigeria.

The study also reveals the prevalence of self-reported clinical significance of 0.1% difference of 5.4% females to 5.3% males for adult with the ADHD

symptoms of inattention: 0.7% difference of 4.5% females to 3.8% males for adult with the ADHD symptoms of impulsitivity: 0.1% difference of 3.8% males to 3.7% females for adult with the ADHD symptoms of hyperactivity: 0.1% difference of 6.2% males to 6.1% females for adult with the ADHD combined symptoms of inattention, hyperactivity:, and impulsitivity for the ADHD summation scores for current symptoms among the general population in Nigeria.

The study revealed that there were prevalence of self-report clinical significance of 1.4% difference of 3.0% females to 1.6% males for Adult with the ADHD symptoms of hyperactivity, prevalence of self-report clinical significance of 2.3% difference of 2.3% females to 0.0% males for Adult with the ADI-ID symptoms of impulsitivity, prevalence of self-report clinical significance of 0.1% difference of 1.6% males to 1.5% females for Adult with the ADHD symptoms of inattention, and prevalence of self-report clinical significance of 1.5% difference of 4.5% females to 3.0% males for Adult with the ADHD combined symptoms of inattention, hyperactivity, and impulsitivity for positive symptom counts for AN current symptoms among the general population in Nigeria.

Recommendations

Future researches should further explore the prevalence of adult ADHD among the general population using self-reported diagnosis of ADEID symptoms. Also, they should also use longitudinal method in the self-report diagnosis of adult ADHD among the general population. Finally, further analysis to detect if impairment contributes to the prevalence of self-reported diagnosis of adult ADHD among the general population.

References

Achenbach, T.M. (2001). What are norms and why do we need valid ones? *Clinical Psychology: Science and Practice*, 8, 446-450.

American Psychiatric Association. (1994). Diagnostic and statistical manual of mental disorders (4th ed., rev.). Washington, DC: Author.

Angier, N. (1991). "Kids Who Can't Sit Still". New York Times newspaper, Education Section.

Anthshel, K., Faraone, S. and Kunwar, A. (2008). "ADHD in Adults: *How to Recognize and Treat. Psychiatric Times* 48 (12).

Asherson, P., Akehurst, R., Sandra Kooij, J. J., Huss, M., Beusterien, K., Sasane, R., Gholizadeh, S. and Hodgkins, P. (2012). "Under Diagnosis of Adult ADHD: Cultural Influences and Societal Burden". *Journal of Attention Disorders.*

Bálint, S., Czobor, P., Mészáros, A., Simon, V. and Bitter, I. (2008). " impairments in adult attention deficit hyperactivity disorder: a literature review]" (in Hungarian). *Psychiatr Hung* 23 (5): 324—35.

Baren, M. (1995). "Rating Scale". University of California, Irvine. College of Medicine. Printed with permission, Patient Care.

Barkley, R.A. (1998). Attention-deficit hyperactivity disorder: A handbook for diagnosis and treatment. New York: Guildford Press.

Barkley, R.A. (2001). Attention-deficit Hyperactivity disorder: A handbook for diagnosis and treatment, Guildford Press, Vol.1.

Barkley, R.A. (2007). "AN-ID in Adults: History, Diagnosis, and Impairments". ContinuingEdCourses.net.

Barkley, R.A. (2011). Barkley Adult ADHD Rating Scale-IV (BAARS-IV) - A valid and reliable tool in the diagnostic and differential diagnostic process for ADHD. The Guilford Press.

Barkley, R.A., Murphy, K. and Kwasnik, D. (1996). "Psychological adjustment and adaptive

impairments in young adults with ADHD". Journal of Attention Disorders,!, 41-54.

Biederman, J., Faraone, S., Milberger, S., Guite, J., Mick, E., Chen, L.. (1996). "A prospective 4-year follow-up study of Attention-deficit hyperactivity and related disorders". *Archives of General Psychiatry*, 53, 437-446.

Biederman, J. (1998). "Attention-deficit/hyperactivity disorder: a life-span perspective". *The Journal of Clinical Psychiatry* 59 Supp 7: 4—16.

Biederman J, Faraone S. and Milberger S. (1996). "Predictors of persistence and remission of ADHD into adolescence: results from a four year prospective follow-up study". *J Am Acad Child Adolesc Psychiatry*. 35(3):343-35 1.

Biederman, J., Mick, E. and Faraone, S.V. (2000). "Age-dependent decline of symptoms of attention deficit hyperactivity disorder: Impact of remission definition and symptom type". *American Journal of Psychiatry*, 157, 816-818.

Cimera, Robert (2002). "Making ADHD a gift: teaching Superman how to fly". Lanham, Maryland: Scarecrow Press, Inc. (p.116) ISBN 978-0-8108-4318-9.

Cohen, Donald J. and Cicchetti, Dante (2006). "Developmental psychopathology". Chichester: John Wiley & Sons. ISBN 0-47l-23737-X.

Conners, C. K. (1990). "Overview of Electrophysiological Findings with ADHD Children". Programs and Abstracts of the 37th Annual Meeting of the American Academy of Child and Adolescent Psychiatry, Chicago

Courvoisie, H. (2003). "Imaging Children with ADHID: MRI Technology Reveals Differences in Neuro-signaling". Journal of Neuropsychiatry and Clinical Neurosciences.

Deragotis, L.R. (1992). The brief symptom inventory. Baltimore: Clinical Psychometric Research.

Deragotis, L.R. (1975). The SCL-90-R. Baltimore: Clinical Psychometric Research.

Dulcan, M. (1997). "Practice parameters for the assessment and treatment of children, adolescents, and adults with attention-deficit/hyperactivity disorder", *Journal of the American Academy of Child and Adolescent Psychiatry* 36 (10 Suppl): 855—1215.

DuPaul, G. J., Schaughency, B., Weyandt, L. L., Tripp, G., Kiesner, J. and Ota, K. (2001). "Self-report of Attention- Deficit/Hyperactivity Disorder symptoms in university students: Cross-national prevalence". *Journal of Learning Disabilities*, 34, 370-379.

Eden, G. F., & Vaidya, C. J. (2008). "ADHD and developmental dyslexia: two pathways leading to impaired learning.". *Annals of the New York Academy of Sciences* 1145: 3 16—27.

Elia, J., Ambrosini, P.J. and Rapoport, J.L. (1999). "Treatment of attention-deficit-hyperactivity disorder". *The New England Journal of Medicine* 340 (10): 780—8.

Ellison, A.T. and Goldstein, S. (2002). "Understanding the Complexities of Development into the Adult Years- Clinician's Guide to Adult ADHD Assessment and Intervention". Elsevier Science (USA). Pg. 9. ISBN: 0 -12 -287049-2.

Faigel, H.C., Sznajderman, S., Tishby, O., Turel, M. and Pinus, U. (1995). "Attention deficit disorder during adolescence: A review". *Journal of Adolescent Health*, 16, 174-184.

Fedele, D.A., Lefler, E.K., Hartung, C.M. and Canu, W.H. (2012). "Sex Differences in the Manifestation of ADHD in Emerging Adults". *Journal of Attention Disorders*, 16(2), 109-117.

Gardner, B.A. (1968). Development of a symptom checklist for the measurement of depression in a population. Unpublished manuscript.

Gaub, M. and Carlson, C.L. (1997). Gender differences in ADHD: A meta-analysis and critical review. *Journal of the American Academy of Child and Adolescent Psychiatry*, 36, 1036-1045.

Gentile, J., Atiq, R. and Gillig, P.M. (2004). "Adult ADHD: Diagnosis, Differential Diagnosis and Medication Management". *Psychiatry* 3 (8): 24—30.

Goldman L.S., Genel, M., Bezman, R.J. and Slanetz P.J. (1998). "Diagnosis and treatment of attention-deficit/hyperactivity disorder in children and adolescents". Council on Scientific Affairs, *American Medical Association JAMA* 279 (14): 1100—7.

Goldstein, S. and Ellison, A.T. (2002). "Continuity of ADI in Adulthood: Hypothesis and Theory Meet Reality - Clinician's Guide to Adult ADHD Assessment and Intervention". Elsevier Science (USA). Pg. 32-35. ISBN: 0 -12 -287049-2.

Gomez, R. (2011). "DSM-IV ADHD Symptoms Self-Ratings by Adolescents: Test of Invariance Across Gender. *Journal of Attention Disorders*, Sage Publication.

Greene, R.W., Biederman, J., Faraone, S.V., Ouellette, C.A., Penn, C. and Griffin, S.M. (1996). Toward a new definition of social disability in children with attention-deficit hyperactivity disorder. *Journal of the American Academy of Child and Adolescent Psychiatry*, 35, 571-578.

Hechtman, L. (2000). "Assessment and diagnosis of attention-deficit/hyperactivity Disorder". *Child Adolesc Psychiatr Clin N Am.* 9(3):481-498.

Hechtman, L., & Weiss, G. (1983). "Long-term outcome of hyperactive children". *American Journal of Orthopsychiatry*, 53, 532-541.

Heiligenstein, E., Conyers, L.M., Berns, A.R. and Smith, M.A. (1998). "Preliminary normative data on DSM-IV Attention Deficit Disorder in college students". *Journal of American College Health*, 46, 185

Heiligenstein, E., Guenther, G., Levy, A., Savino, F. and Fulwiler, J. (1999). Psychological and academic functioning in college students with Attention Deficit Hyperactivity disorder. *Journal of American College Health*, 47, 181-185.

Hoy, B., Weiss, O., Minde, K. and Cohen, N. (1978). "The hyperactive child at adolescence: Cognitive, emotional, and social functioning". *Journal of Abnormal Child Psychology*, 6,311-324.

Ingram, S., Hechtman, L. and Morgenstern, 0. (1999). "Outcome issues in ADHD: Adolescent and adult long-term outcome". *Mental Retardation and Developmental Disabilities Research Reviews*, 5, 243-250.

Katragadda, S. and Schubiner, H (2007). "ADHD in Children, Adolescents, and Adults". *Primary Care: Clinics in Office Practice* 34: 3 17—341.

Kessler, R. C., Adler, L. and Ames, M. (2005). "The World Health Organization Adult ADHD Self-Report Scale (ASRS): a short screening scale for use in the general population". *Psychological medicine* 35 (2): 245

Lewandowski, L., Codding, R., Gordon, M., Marcoe, M., Needham, L. and Rentas, J. (2000). Self-reported LD and ADHD symptoms in college students. *The ADHD Report*, 8, 1-4.

Mannuzza, S., Klein, R.O. and Bessler, A. (1993). "Adult outcome of hyperactive boys.

Educational achievement occupational rank and psychiatric status". *Arch Gen Psychiatry*; 50:565-76.

Mannuzza, S., Klein, R.O., Bonagura, N., Malloy, P., Giampino, T.L. and Addalli, K. (1991). Hyperactive boys almost grown up: V. Replication of psychiatric status. *Archives of General Psychiatry*, 48, 77-83.

Mao, A.R., Babcock, T. and Brams, M. (2011). "ADHD in Adults: Current Treatment Trends with Consideration of Abuse Potential of Medications". *Journal of Psychiatric Practice*, 17(4), 241-250.

Mayes, R., Bagwell, C. and Erkulwater, J. (2008). "ADHD and the rise in stimulant use among children". *Harv Rev Psychiatry* 16 (3): 15 1—66.

Meissner, W.W. (2005). The dynamic unconscious: psychic determinism, intrapsychic conflict, unconscious fantasy, dreams, and symptom formation. In E.S. Persons, A. M. Cooper, & Gabbard (Eds.), The American Psychiatric Publishing textbook of psychoanalysis (pp. 21-37). Washington, D.C: American Psychiatric Publishing.

Murphy, K., Gordon, M. and Barkley, R. (2000). To what extent are ADHD symptoms common? A reanalysis of standardization data from a DSM-]IV checklist. *The ADHD Report*, 8(3), 1-5.

Murphy, P. and Schachar, R. (2000). "Use of self-ratings in the assessment of symptoms of attention deficit hyperactivity disorder in adults". *American Journal of Psychiatry*, 157(7), 1156-1159.

Nair, J., Ehimare, U., Beitman, B.D., Nair, S.S. and Lavin, A. (2006). "Clinical review: evidence-based diagnosis and treatment of ADHD in children". Mo Med 103 (6): 617—21.

Naussbaum, N.L. (2012). "ADHD and Female Specific Concerns-A review of the Literature and Clinical Implications". *Journal of Attention Disorders*, 16(2), 87-100.

Nelson, J.M. (2011). "Self-Concept of College Students With ADHD: Discordance Between Self- and Parents-Reports". *Journal of Attention Disorders*, Sage Publication.

Norwalk, K., Norvilitis, J.M. and Maclean, M.O. (2008). "ADHD symptomatology and Its Relationship to Factors Associated with College Adjustment". Journal of Attention Disorders, Sage Publication.

Oluwafemi, A.A. (2012). "Self-report diagnosis of adult ADHD among the general population & influence of ADHD symptomatology on factors associated with life adjustment among adults". University of Ibadan: Unpublished Master's thesis.

Polanczyk O., de Lima, M.S., Horta, B.L., Biederman, J. and Rohde, L.A. (2007). "The worldwide prevalence of ADHD: a systematic review and meta-regression analysis'. *Am J Psychiatry* 164 (6): 942—8.

Prince J.B. and Wilens T.E. (2002). "Pharmacotherapy of Adult ADHD-Clinician's Guide to Adult ADHD: Assessment and Intervention". Pg. 168. ISBN: 0-12-287049-2.

Rader, R., McCauley, L., Callen, E.C. (2009). "Current strategies in the diagnosis and treatment of childhood attention-deficit/hyperactivity disorder". *Am Fam Pbysic* 79(8): 657—65.

Raskin, A., Schulterbrandt, J., Reatig, N. and McKeon, J. (1969). Replication of factors of psychopathology in interview, ward behavior, and self report ratings of hospitalized depressives. *Journal of Nervous and Mental Disease*, 148, 87-96.

Resnick, R. J. (2005). "Attention deficit hyperactivity disorder in teens and adults: They don't all outgrow it". *Journal of Clinical Psychology*, 61, 529-533.

Richards, T. L., Deffenbacher, J. L. and Rosen, L. A. (2002). Driving anger and other driving-related behaviours in high and low ADHD symptom college students. *Journal of Attention Disorders*, 6, 25-38.

Richards, T.L., Rosen, L.A. and Ramirez, C.A. (1999). Psychological functioning differences among college students with confirmed ADHD, ADHD by self-report only, and without ADHD. *Journal of College Student Development*, 40, 299-304.

Schonwald, A. and Lechner, B. (2006). "Attention deficit/hyperactivity disorder: complexities and controversies". *Curr. Opin. Pediatr.* 18(2): 189—95.

Sciutto, M.J., Nolfi, C.J. and Bluhin, C. (2004). "Effects of Child Gender and Symptom Type on Referrals for ADHD by Elementary School Teachers'. *Journal of Emotional and Behavioral Disorders* 12 (4): 247—253.

Shaffer, D. (1994). "Attention deficit hyperactivity disorder in adults". *American Journal of Psychiatry*, 151 (5). 633-638.

Silver, Larry B. (2009). "Attention-deficit/hyperactivity disorder". American Psychiatric Publishing, Inc.; 3 edition (September 2003) ISBN 1-58562-131-5.

Sirn, M. G., Hulse, G. and Khong, E. (2004). "When the child with ADHD grows up" (PDF). *Aust Fam Physician* 33 (8): 615

Singh, I. (2008). "Beyond polemics: science and ethics of ADHD". *Nature Reviews. Neuroscience* 9 (12): 957—64.

Slomkowski, C., Klein, R.U. and Mannuzza, S. (1995). Is self-esteem an important outcome in hyperactive children? *Journal of Abnormal Child Psychology*, 23, 303-315.

Still, G.F. (1902). Some abnormal physical conditions in children: "the Goulstonian lectures", *The Lancet*', 1:1008-1012

Swensonl, A., Bimbaum, H.U., Hamadi, R.B., Greenberg, P., Cremieux, P.Y. and Secnik, K. (2004). "Incidence and costs of accidents among attention-deficit/hyperactivity disorder patients". *Journal of Adolescent Health 35* (4): 346.

Valdizán, S.R. and Izaguerri-Gracia, A.C. (2009). "Attention deficit hyperactivity disorder in adults". *Revista de neurologia 48 Suppl* 2: S95—9.

Van, C.J. and Leslie, L.K. (2008). "Approaching ADHD as a chronic condition: implications for long-term adherence". *Journal of Psychosocial Nursing and Mental Health Services* 46 (8): 28

Wasserstein, J. (2005). "Diagnostic issues for adolescents and adults with ADHD". *Journal of Clinical Psychology*, 61, 535

Weiss, G. and Hechtman, L. (1993). "Hyperactive children grown up: ADHD in children, adolescents and adults". New York: Guildford.

Weiss U., Hechtman L., Milroy T. and Perlman T. (1985). "Psychiatric status of hyperactives as adults: a controlled prospective 15-year follow-up of 63 hyperactive children". *S Am Acad Child Psychiatry*. 24(2):21 1-220

Wender, P.H. (1987). The hyperactive child, adolescent, and adult: Attention deficit disorder through the lifespan. New York: Oxford University Press.

Weyandt, L.L. and DuPaul, G.J. (2006). "ADHD in college Students". Journals of Attention Disorders, 10, 9.

Weyandt, L.L., Iwaszuk, W., Fulton, K., Ollerton, M., Beatty, N. and Fouts, H. (2003). The Internal Restlessness Scale: Performance of college students with and without ADUD. Journal of Learning Disabilities, 36, 382-389.

Weyandt, L.L., Linterman, I., and Rice, J.A. (1995). Reported prevalence of attentional difficulties in a general sample of college students. *Journal of Psychopathology and Behavioral Assessment*, 17, 293-304.

Weyandt, L.L., Rice, J.A., Linterman, I., Mitzlaff, L. and Emert, E. (1998). Neuropsychological performance of a sample of adults with ADHD, developmental reading disorder, and controls. *Developmental neuropsychology*, 14, 643-656.

Young, S. and Bramham, J. (2007). "ADHD in Adults- A Psychological Guide To Practice". Published by John Wiley & Sons Ltd., England. Pg 129-130.

Zametkin, A. and Rapaport, J.L. (1987). "Neurobiology of Attention Deficit Disorder with Hyperactivity: Where Have We Come in 50 Years?". *J Am Acad Child Adol Psychiatry* 26:676-686.

Zwi, M., Rarnchandani, P. and Joughin, C. (2000). "Evidence and belief in ADHD". *BMJ* 321 (7267): 975—6.