

A STUDY ON MEASURING THE INTENSITY LEVEL OF ATTENTION DEFICIT HYPERACTIVITY DISORDER (ADHD) AMONG THE STUDENTS OF UNIVERSITY OF KARACHI, PAKISTAN

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ABSTRACT

The motif of this small-scale study is to measure the intensity level of Attention Deficit Hyperactivity Disorder (ADHD) among the graduate students in University of Karachi, Pakistan. ADHD is most commonly found psychiatric disorder among the learners across the globe. The symptoms of ADHD are not merely correlated with the childhood but continued in adolescence and adulthood as well. The survey of literature reveals the prevalence of ADHD in Pakistan is around 2.49% among children. Moreover, boys have higher rate of ADHD than girls due to various reasons. This research measures the intensity of ADHD quantitatively among adult students engaged in graduate studies and suggests the corrective measures in this regard. Lastly, this research suggests the liaison between University of Karachi and society to create awareness at large scale in order to overcome this disorder effectively.

KEY WORDS: Attention Deficit Hyperactivity Disorder (ADHD), Higher Education, Attention Deficit Disorder

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INTRODUCTION

Attention Deficit Hyperactivity Disorder (ADHD) is one of the most frequently diagnosed neurobiological disorder and affecting 3 to 5 percent children globally¹. It is merely diagnosed about 2 to 6 percent of school going children in the developing countries like Pakistan. The occurrence of ADHD in Pakistan is around 2.49% among children and boys with ADHD have significantly higher rate than the girls but ratio varies significantly from 2:1 to 9:1 or vice-versa². The symptoms of ADHD are generally continued into adolescence and in adulthood as well³. "ADHD is defined as developmentally inappropriate poor attention span or age inappropriate hyperactivity and impulsivity or both"⁴ This small-scale study measures the intensity of ADHD among the graduate students of University of Karachi (UoK) through survey. This research also offers recommendations for the betterment of graduate students of UoK in order to overcome ADHD for excellence in academics.

STATEMENT OF THE PROBLEM

In Pakistan, ADHD is most commonly found disorder among graduate students. ADHD may cause learning impairment, annoying, aggressive and offensive behaviors, inappropriate and poor attention, failure in task management or slow learning among the graduates students⁵. "The symptoms of adult ADHD resemble the symptoms of childhood ADHD, but symptoms intensity, especially hyperactivity, may decrease over the time. However, due to challenges and responsibilities of adulthood, a normal day is extremely complicated for ADHD adult"⁶ These behaviors may have intensity range between mild to severe and vary with the situation or be present all at the same time in a person. Students suffering in ADHD are neither able to achieved their learning goals nor significant learning experiences nor academic excellence to pursue competitive career. Some students with ADHD may able to concentrate if they are interested in

¹ Nair J, Ehimare U, Beitman BD, Nair SS, Lavin A. . "Clinical Review: Evidence-Based Diagnosis and Treatment of Adhd in Children." 103, no. 6 (2006). <http://www.ncbi.nlm.nih.gov/pubmed> [accessed 17 April 2012] p. 617.

² Nazish Imran,. "Attention Deficit Hyperactivity Syndrome: An Update on Assessment and Management . ." *Pakistan Journal of Medical Sciences* 23, no. 1 (2007): 9-15.

³ Qureshi, A., and D. Thaver. "Cross Sectional Review of Children with Adhd Presenting to an Outpatient Psychiatric Institute in Pakistan." *Journal of Pakistan Medical Association* 53, no. 9 (2003): 1-4.

⁴ Ibid, p. 1

⁵ Lenard, A. Adler and Hong C. Chua. "Management of Adhd in Adult." *Journal of Clinical Psychiatry* 63, no. 12 (2002): p.30.

⁶ Ibid, p. 29

or excited about what they are doing as learner or forthcoming professional ⁷. Otherwise, these graduating students may have difficulty in focusing under any circumstances of learning. “Some students look for stimulation, but mostly others avoid it. In addition, adults with ADHD can be withdrawn and antisocial, or they can be overly social and unable to be alone”⁸. So the prime purpose behind the selection of the topic is to measure the intensity of ADHD among the adult students in UoK and to propose the remedial techniques in this regard.

SIGNIFICANCE OF THE STUDY

This research explores ADHD and its correlated factors which prevent graduate students to achieve outshine in academics in the context of UoK. This research attempts to measure the intensity of ADHD among Pakistani youth for effective future teaching and learning practices in UoK. Since, there is no research so far been carried out about intensity of ADHD in local context of UoK; therefore, this research would provide an understanding and baseline data about ADHD as learning disability regarding UoK specially and in Pakistan generally. This study also provides guideline to faculty members for the better understanding of ADHD and how to support and cure the students suffering in ADHD efficiently with the available local resources of UoK. Moreover, this research attempts to analyze the impact of guidance and counseling available to students in existing system of higher education and how improvement can be introduced effectively and efficiently in this regard. In summary, this research may be useful for the UoK about how to organize and use accessible facilities and resources of guidance and counseling for maximizing the academic output and benefit to society by reducing the effect of ADHD.

GLOBAL PERCEPTION OF ADHD IN LITERATURE

“Attention Deficit Hyperactivity Disorder (ADHD) is characterized by inattentiveness, over activity and impulsiveness. Although ADHD was first identified in children in 19th century, adult ADHD was not described in the literature until 1976”⁹. Attention Deficit Disorder (ADD) received its present name and description in the late 1970’s. According to the WHO statistics,

⁷ Op. cit. Nazish Imran, p. 11

⁸ Chakraburty, A. "Attention Deficit Hyperactivity Disorder: Adhd in Adults." ((2010)).

<http://www.webmd.com/addadhd/guide/adhd-adults>. [accessed November 9, 2011]. P. 2

⁹ Op.cit., Lenard, A. Adler and Hong C. Chua. p.29

frequency of disabling mental illnesses among adolescence attending urban health care centers ranges between 20-30% and 13-18% in rural areas¹⁰.

“Affecting two million children in the USA, the condition persists into adulthood in a chronic form in over 50% of cases. Boys are affected at three times the rate of girls.”¹¹ In addition to this, the adult in developing countries are at more risk than the adults in developed countries.¹²

“ADHD is distinguished from other disorders by differences in intensity and persistence of particular groups of symptoms. ADHD develops from a combination of genetic inheritance and life experiences. In general, these qualities often result in a lack of fit between expectations and the individual's performance”¹³

“In adults, attention deficit disorder often looks quite different than it does in children—and its symptoms are unique for each individual”¹⁴ The common signs and symptoms of ADHD in Adults are following:

1. **“Trouble concentrating and staying focused--** Adults with ADHD often have difficulty staying focused and attending to daily mundane tasks”.¹⁵
2. **“Hyper-focus--** a tendency to become absorbed in tasks that are stimulating and rewarding. This paradoxical symptom is called hyper-focus”.¹⁶
3. **“Disorganization and forgetfulness--** poor organizational skills, tendency to procrastinate, frequently forgetting appointments, commitments, and deadlines”¹⁷

¹⁰ Add/Adhd Information." (1992). www.who.int/entity/mediacentre/multimedia/1992/who.../index.html [accessed 1 December 2011]. P.37

¹¹ Barkley, Russell A. *Adhd and the Nature of Self-Control*. . New York: Guilford Press 1997, p.17

¹² American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders 4th Edition Text Revision*. Washington DC, 2000, p7

¹³ Adhd in Adults." (2012). http://www.emedicinehealth.com/adhd_in_adults/article_em.htm [accessed 8 February, 2012]. P.2

¹⁴ Segal, Melinda Smith and Robert. "Adult Add / Adhd--Signs, Symptoms, Effects, and Treatment." (2012). http://www.helpguide.org/mental/adhd_add_adult_symptoms.htm [accessed 16 December 2012].. p.3

¹⁵ Ibid. p.3

¹⁶ Ibid. p.3

¹⁷ Ibid. p.3

4. **“Impulsivity--** frequently interrupt others or talk over them, have poor self-control , blurt out thoughts that are rude or inappropriate, act recklessly or spontaneously without regard for consequences”¹⁸
5. **Emotional difficulties--** Many adults with ADHD have a hard time to manage their feelings, especially when it comes to emotions like anger or frustration.¹⁹
6. **“Hyperactivity or restlessness--** feelings of inner restlessness, agitation, tendency to take risks, getting bored easily”²⁰
7. **“Learning difficulties--**It is thought that adults with ADHD also have learning difficulties, such as dyslexia (difficulty reading and spelling words). However, it is important to remember that ADHD has no effect on intelligence”²¹
8. **“Anxiety disorder--**Some ... [adults] with ADHD may have an anxiety disorder that causes them to worry and be nervous most of the time... [the] physical symptoms, such as a rapid heartbeat, sweating and dizziness”²²
9. **“Depression--**It is possible for ...[adults] with ADHD to become depressed as a result of their condition.”²³

Myths and Facts about ADD / ADHD in Adults

“MYTH: ADD/ADHD is just a lack of willpower. Persons with ADD/ADHD focus well on things that interest them; they could focus on any other tasks if they really wanted to.

¹⁸ Ibid. p.3

¹⁹ Ibid. p.4

²⁰ Ibid. p.4

²¹ "Attention Deficit Hyperactivity Disorder (Adhd) - Symptoms." (2010). <http://www.nhs.uk/Conditions/Attention-deficit-hyperactivity-disorder/Pages/Symptoms.aspx> [accessed 17 March, 2012]. P. 5

²² Ibid. p.4

²³ Ibid. p.4

FACT: ADD/ADHD looks very much like a willpower problem, but it isn't. It's essentially a chemical problem in the management systems of the brain.

MYTH: Everybody has the symptoms of ADD/ADHD, and anyone with adequate intelligence can overcome these difficulties.

FACT: ADD/ADHD affects persons of all levels of intelligence. And although everyone sometimes has symptoms of ADD/ADHD, only those with chronic impairments from these symptoms warrant an ADD/ADHD diagnosis.

MYTH: Someone can't have ADD/ADHD and also have depression, anxiety, or other psychiatric problems.

FACT: A person with ADD/ADHD is six times more likely to have another psychiatric or learning disorder than most other people. ADD/ADHD usually overlaps with other disorders.

MYTH: Unless you have been diagnosed with ADD/ADHD as a child, you can't have it as an adult.

FACT: Many adults struggle all their lives with unrecognized ADD/ADHD impairments. They haven't received help because they assumed that their chronic difficulties, like depression or anxiety, were caused by other impairments that did not respond to usual treatment."²⁴

TYPES OF ADHD

ADHD is a heterogeneous disorder and reflect behavioral syndrome²⁵. American Psychiatric Association (APA)²⁶ divides ADHD into three main types:

²⁴ Op. Cit. Segal, Melinda Smith and Robert., p. 4 adopted source: Dr. Thomas E. Brown, Attention Deficit Disorder: The Unfocused Mind in Children and Adults "

1. Predominantly In-attentive Type of ADHD
2. Predominantly Hyperactive-Impulsive Type of ADHD
3. Combined Type of ADHD

Predominantly In-attentive Type of ADHD

APA reports that majority of the symptoms of inattentive and fewer than six symptoms of hyperactivity-impulsivity fall in this type.²⁷ The symptom of this type of ADHD is individual may sit quiet, fail to pay attention on task, difficulty in staying focused and fail to perform mundane tasks.²⁸

Predominantly Hyperactive-Impulsive Type of ADHD

Adults in this type are very active, act without thinking consequences, agitation, tendency to take risk, blurt out with inappropriate comments, and emotionally disturbed.²⁹ “Persistent pattern of inattention and hyperactivity-impulsivity is more frequently displayed and more severe than typically observed in individuals at comparable level of development”³⁰

Combined Type of ADHD

This type of ADHD has six or more symptoms of Predominantly In-attentive and Hyperactive-Impulsive types. It is most difficult to treat and severe in nature.³¹ The common symptoms are in-attentiveness, hyperactivity and too much active. The person may have trouble social circle of life.³²

²⁵ S. R. Friedman et. al. "Aspect of Social and Emotional Competence in Adult Adhd." *Nueropsychology* 17, no. 17 (2003): 50-58.

²⁶ *American Psychiatric Association-Diagnostic and Statistical Manual of Mental Disorder 4th Edition text Revised*. Washington D.C., 2000.
Pp. 83-84

²⁷ Ibid. p.83

²⁸ Op. cit. Segal, Melinda Smith and Robert., p. 4

²⁹ Ibid. p.4

³⁰ *American Psychiatric Association-Diagnostic and Statistical Manual of Mental Disorder 4th Edition*. Washington D.C., 1994.
Pp. 67

³¹ Op. cit. *American Psychiatric Association-Diagnostic and Statistical Manual of Mental Disorder 4th Edition text Revised*, p.84

³² Op. cit. S. R. Friedman et. al. Pp- 50-58

THE PRESENT SITUATION OF ADHD IN PAKISTAN

Attention deficit hyperactivity disorder (ADHD) and learning disorder (LD) remain prevalent globally and are also speculated to have a high occurrence in Pakistan. An early diagnosis and intervention in these disabilities is imperative for achieving good clinical and functional outcomes. This can be ensured by an effective screening at the level of primary pediatric care in the developing countries³³.

However, “No figures are available for Pakistan”³⁴ as far as ADHD is concerned. Moreover, “Recent studies have shown that ADHD is associated with significant impairment in multiple domains of functioning including a high frequency of psychiatric co-morbidity with disruptive mood and anxiety disorders, poor educational attainment, lower IQ and low occupational performance.”³⁵ Available Statistics about ADHD in Pakistan reveals that

A RCT on ADHD population of children and adolescents showed that only 31% of participates had ADHD alone 40% of ADHD suffer from co morbidity of oppositional disorder, 38% for mood and anxiety disorder, 14% for conduct disorder, 11% for tic disorder. ADHD has been identified to have a significant impairment in functioning hence show increased risk for academic & social dysfunction this may further aggravate if a co morbid condition coexist³⁶.

In Pakistan, prevalence rates vary in different population from “2.2% to 16.1% in clinical versus community cohorts”³⁷. Its frequency has been reported as high as 34% in clinical settings in

³³ Jawaid A, Zafar AM, Naveed A, Sheikh S, Waheed S, Zafar MA, Syed EU, Fatmi Z. "Knowledge of Primary Paediatric Care Providers Regarding Attention Deficit Hyperactivity Disorder and Learning Disorder: A Study from Pakistan." *Singapore Medical Journal* 49, no. 12 (2008): p.985

³⁴ Op.Cit. Qureshi, A., and D. Thaver. p.1

³⁵ Dr. Sobia Haqqi, Dr. Ehsan-ullah Syed. "Attention Deficit Hyperactivity Disorder." *Commentary* 4, no. 1 (2006): p.31

³⁶ Ayesha Sarwat, Iqbal Memon, Rab Nawaz Bhatti, Samina Tariq, "Attention Deficit Hyper Activity Disorder Subtypes and Co Morbid Disorders among Children Attending Psychiatry Opd in Civil Hospital Karachi." *Medical Channel* 16, no. 3 (2010): p.349.

³⁷ Ibid , p.350

Pakistan³⁸. Early identification and intervention of ADHD are utmost important³⁹. It can be inferred from the survey of literature that in Pakistan, most adults with ADHD are undiagnosed, untreated, and unaware; there is no mechanism regarding awareness available to diagnose ADHD in adults. It can be inferred that least facts and figures available about adult ADHD in Pakistan. Most of the researches and their findings based on combined clinical practices of adults and children. "There is a dearth of index literature on the prevalence of ADHD in Pakistan"⁴⁰. Syed, Ehsan Ullah et al.⁴¹ reports that majority of the teachers are not aware how to provide effective support to the students suffering in ADHD. He stresses upon the rigorous training of the teachers in the local context of Karachi, Pakistan. However, all of these studies mainly focused on ADHD in children, there is no research has been carried out about Adult ADHD in the context of Pakistan. Finally, these youth are at risk for becoming delinquent, drugs addict⁴², suffering from mood swing, anxiety disorders and acceptance in social life.

TREATMENT FOR ATTENTION DEFICIT HYPERACTIVITY DISORDER IN ADULT

The survey of literature suggests that there is no complete cure for ADHD; symptoms and signs may be heal-up through many strategies. Especially in adults ADHD, the medication and interventional strategies are combined.⁴³ "Only three treatments have been proven to be effective for ADHD: behavior modification, medication, and the combination of the two. These treatments

³⁸ Op.Cit.. Dr. Sobia Haqqi, Dr. Ehsan-ullah Syed p.32

³⁹ Op. cit. Jawaid A, Zafar AM, Naveed A, Sheikh S, Waheed S, Zafar MA, Syed EU, Fatmi Z, p.987

⁴⁰ Naveed Anjum and Farah Malik. "Parenting Practices of Mother of Children with Adhd-Role of Stress and Behavioral Problem in Children." *Pakistan journal of Sociology and Clinical Psychology* 8, no. 1 (2010): p.20.

⁴¹ Syed, Ehsan Ullah; Hussein, Sajida Abdul. "Increase in Teachers' Knowledge About Adhd after a Week-Long Training Program: A Pilot Study." (2010).
http://www.eric.ed.gov/ERICWebPortal/search/recordDetails.jsp?ERICExtSearch_SearchValue_0=EJ866917&searchType=keyword&ERICExtSearch_SearchType_0=no&_pageLabel=RecordDetails&accno=EJ866917&_nfls=false&source=ae [accessed 9 May 2012] p.4

⁴² Op. cit. Ayesha Sarwat, Iqbal Memon, Rab Nawaz Bhatti, Samina Tariq, p. 351

⁴³ Shamsi, Zeeshan, "Attention Deficit Hyperactivity Disorder in Adults-Causes and Symptoms" <http://www.vustudent.net> [accessed 2 January 2012]. p. 1

have been demonstrated to have short-term effects. No treatment has been shown to influence outcomes in adolescents or adults with ADHD over the long term”⁴⁴

Treatment of ADHD through Medication

Literature suggests medications as vital sources for treatments of ADHD in adults. These medicines comprehensively studied and commonly prescribed for the treatment of ADHD.

“Stimulants are a common treatment for adult patients with ADHD, antidepressants may also be effective.”⁴⁵

*Stimulants are the best studied medicines for ADHD. There are basically two classes of stimulants: methylphenidate and amphetamine products. With over 150 controlled double-blind studies of stimulant use in children[adults] with ADHD, the findings are well documented that these medicines improve attention span, self-control, behavior, fine motor control and social functioning.*⁴⁶

However, these stimulants may have side-effects.

The stimulants have certain adverse effects. Among the common adverse effects are: headaches, stomachaches, insomnia, decreased appetite, weight loss and irritability. Some of the infrequent side effects that can be caused by stimulant use include rebound effects, difficulty falling asleep, irritable mood and tics. These side effects can be temporary and decrease with time or with change of medication or dosage.

⁴⁴ "Treatment for Adhd." (2002). <http://www.myadhd.com/treatmentsforadhd.html> [accessed 7 April 2012]. p.1

⁴⁵ H. Russell Searight, John M. Burke., and Fred Rottnek. "Adult Adhd: Evaluation and Treatment in Family Medicine." *American Family Physician* 62, no. 9 (2000):p. 2077

⁴⁶ Op. Cit. "Treatment for Adhd." (2002). p.3

*In cases where side effects interfere significantly with the person's health or quality of life, other treatment approaches may need to be considered.*⁴⁷

Self-Management Strategies

This intervention primarily focuses to facilitate ADHD victim to systematically rate his/her own behavior deficit and adopt strategies which might helpful to cope-up ADHD effectively. For instance,

Adults with ADHD benefit considerably from direct education about the disorder.

They can use information about their deficits to develop compensatory strategies.

*Planning and organization can be improved by encouraging patients to make lists and use computerized schedules. Placing a large calendar with important dates and deadlines in a central location in the home or workplace is a valuable memory aid.*⁴⁸

Behavioral Management Strategies

Behavioral Management strategies are the method of treating ADHD in Adults and it has most profound effects. Behavioral Management strategies focus on the increment in the task behavior, task completion, and compliance with team-members, impulse control and social skills⁴⁹. Moreover, these strategies may also useful in reduction in hyperactivity, off-task behavior, disruptive behavior and aggression.⁵⁰ In this approach, self-monitoring skills are emphasized in order to teach self-control⁵¹ in a society.

⁴⁷ Ibid. p.5

⁴⁸ Op. Cit. H. Russell Searight, John M. Burke., and Fred Rottnek. p.7.

⁴⁹ Landers, Roberta Weaver and Mary F. 1998. "The Educational Implications of Add/Adhd," <http://www.ldonline.org/article/6087/> [accessed 17 April 2012] p.3.

⁵⁰ Op. cit. S. R. Friedman et. al. p. 57

⁵¹ McLaughlin, Kelly Morisoli and T. F. "Medication and School Interventions for Elementary Students with Attention Deficit Hyperactivity Disorder." *International Journal of Special Education* 19, no. 1 (2004): 97-106.

RESEARCH METHADODOLOGY

This research is a survey on measuring the intensity level of ADHD among the students of UoK, Pakistan, in quantitative paradigm. The prime rationale for choosing quantitative approach is to interpret the reliable, accurate and unbiased results about intensity of ADHD among the graduate students in UoK. The scope of this research is limited to UoK. Mainly two largest faculties (Arts and Science) in UoK have been studied in this research. The research participants have been chosen on the basis of Simple Random Sampling process and both male and female students selected to participate in this research study. The total sample size was 47 in which 21 were males and 26 were female from both faculties. A questionnaire was synthesized from the different sources and pilot studied for ensuring validity and reliability and further refinement in the process. However, Observation and field-notes were also collected for in-depth detail information about the process. All ethical principles were followed in order to make whole research process fair and transparent for the participants. The data was analyzed through t-Test and interpreted accordingly.

FINDINGS AND ANALYSIS OF DATA

	GROUP OF BOYS	GROUP OF GIRLS	SCIENCE GROUP	ARTS GROUP
MEAN	94.70	83.85	79.84	63.174
VARIENCE	22.79	21.11	26.49	24.67
TOTAL NUMBER	21	26	28	19

Hypothesis # 1:

$$H_0: \mu_B = \mu_G \quad \alpha = 0.05$$

$$H_1: \mu_B \neq \mu_G \quad df = 1.671$$

Result : $t > t_{0.05} = 7.877$ (H_0 is rejected)

Hypothesis # 2:

$$H_0: \mu_{\text{Science Group}} = \mu_{\text{Arts Group}} \quad \alpha = 0.05$$

$$H_1: \mu_{\text{Science Group}} \neq \mu_{\text{Arts Group}} \quad df = 1.671$$

Result : $t > t_{0.05} = 11.12$ (H_0 is rejected)

1. It is found that the male participants have expressed more about the Symptoms of ADHD as compared to female participants. Therefore, intensity of ADHD among male is greater than female participants of the research. Hence it is proved with the data that intensity of ADHD among male and female is acting differently. It also endorses the finding of literature⁵².
2. While going through questionnaire, female participants have expressed a fear socially and hid actual information while responding to questionnaire. Therefore, the mean intensity among female might have greater value than the calculated value.

⁵² Op. cit. Ayesha Sarwat, Iqbal Memon, Rab Nawaz Bhatti, Samina Tariq, p. 349

3. It is also revealed quantitatively that students of different faculties (Science and Arts) in University of Karachi have the different intensity level of ADHD. Science graduate students have expressed more about intensity of ADHD as compared to graduate students of Arts.

4. It is explored by analyzing the data 89% participants were found suffering by ADHD. However, 7% participants were found normal or pretend to be normal and 3% were not experienced ADHD symptoms in their daily life (See illustration 1). Out of 89% participants 40% were having "Sometime", 27% were "Often" and 33% were "Severe" suffering by ADHD (See Illustration 2) .

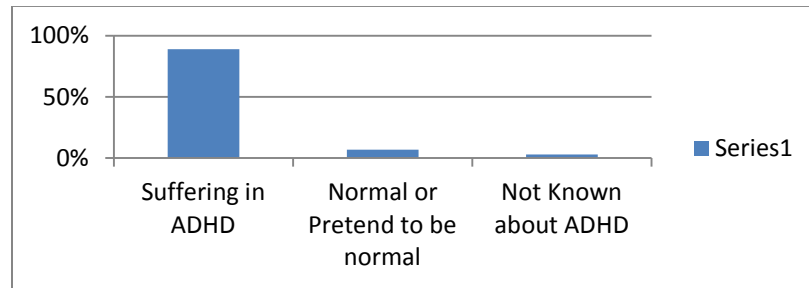


Illustration 1

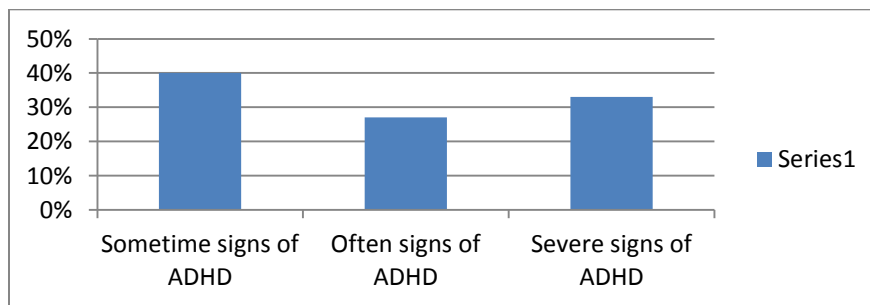


Illustration 2

5. It is also evident from the data that graduate students who were suffering in ADHD were also bearing the signs of other disorders. The co-efficient of correlation between ADHD

symptoms and the signs of other disorders is “+ 0.7”, which shows a “Substantial” relationship between ADHD symptoms and signs of other disorders.

RECOMMENDATIONS

On the basis review of literature about ADHD and the findings of this research, the following recommendations are being suggested:

- There is a strong need to create awareness about ADHD among faculty members of UoK on urgent grounds through workshops, seminars, and different discussion forums. This exercise may be helpful for faculty members to understand the intensity of concern. Moreover, faculty members should be given hand-on experiences of teaching and learning about how to help graduate students in UoK suffering in ADHD.
- This research further suggest that faculty members of UoK should create awareness and provide guidance about the symptoms, effects and treatment of ADHD to the students through new courses, workshops and seminars.
- University of Karachi should conduct seminars and Discussion forum for parents about ADHD in order to create awareness at large scale in a society. For instance, UoK should invite international and national psychiatrics and psychologists for the informative sessions about the new interventions and researches in adult ADHD. This research further suggests that parents should be further guided about medication and interventional techniques in order to provide supports effectively at home.
- This research emphasizes University of Karachi to introduce counseling services for those enrolled students who are suffering in ADHD. This guidance and counseling services should be provided during the studies to cope-up with ADHD effectively by the faculty members; to pursue excellence in academic career and to introduce Self Management Strategies to them in order to manage ADHD symptoms in a meaningful way.

- Teachers should use classroom based interventions and instructional techniques to minimize the occurrence of ADHD symptoms and to support those students who are suffering in this disorder effectively.

CONCLUSION

ADHD is one of the most frequently diagnosed neurobiological disorder among adults globally. In Pakistan, there is no proper indexing available regarding the frequency and intensity of ADHD among adult populations of male and female. Male population has shown high frequency of ADHD symptoms as compared to female population. However, females hide different symptoms of ADHD due to fear of being rejection in social circle of life. Graduates of UoK have shown high intensity of ADHD along-with signs of other disorders. Therefore, it is recommended to UoK to take different measures in order to facilitate students with ADHD effectively.