

## To study prevalence of adult ADHD among patients with intentional self harm

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### ABSTRACT

In Adult life, the symptoms like hyperactivity/impulsivity manifest less frequently, the hyperactivity symptoms tend to turn into "inner restlessness" on adulthood which are exhibited as symptoms including impulsivity, inattention, executive dys regulation such as high distractible, poor time management ,impulsive decision making, sudden burst of energy leading to excessive speed while driving, memory disturbances especially working memory, difficulty standing in a single posture or place. Among the 112 patients who attended psychiatric OPD,45 of them were recruited for the study with History of intentional self harm, Mean age group of the study was 28.27 and the study subjects were divided into two groups Intentional self Harm with ADHD and Intentional self harm without ADHD ,two groups were compared with each other , majority of them were between the Age group 21-30 yrs in both the groups(P=2.113), preponderance of female was seen in intentional self harm without ADHD groups (p=4.544), subjects in this study came from semi urban background, from both the groups (P=1.784), nuclear family (P=0.675) and middle socio economic status(6.585). The main method used by subjects in both group (P=2.742)was multiple tablets with medium suicidal intent (p=1.044). When comparing the both groups no statistical significance could be found between them.Very few patients were referred to psychiatric department as patients and their attenders were reluctant for referral due to the fear of stigma. This Study showed no statistical significant between Adult ADHD and Intentional Self Harm suggesting ADHD could be a co factor and not the probable cause for intentional self harm.

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### INTRODUCTION

In this section presents introduction of this research work. Classification of self harm according to ICD includes injuries resulting from self poisoning with Organophosphorus,benzene products or other harmful solvents ,hanging or strangulation, suffocation, drowning or submersion, injuring through sharp/blunt objects, jumping from height, subjecting themselves in front of a moving vehicle or other unspecified means given by Sudhir kumar et al 2000 [1].

Studies like Narand RL et al 2000 [2], Srivastava AS et al 2005 [3], Ponnudurai et al 1986 [4], Suresh

kumar PN et al 2004 [5], chowdry et al 2007 [6], venkoba Rao et al [7] have discussed about various socio demographic, psychological, psycho social, clinical factors in attempted suicide where they had found adolescent age group are more vulnerable to ISH, along with low socioeconomic status, rural background and substance use.

Jose Manoel Bertolote et al 2002 [8] who worked along with WHO, had reported that suicide attempters are more in developing nations, between age group of 15-34 years, highest among the women, low to lower middle economic status mental disorders like mood disorders being the first (38%), schizophrenia second (19.9%), personality disorders are third (15.2%) and substance use (9.8%) being fourth among the developing nations.

Most of the literatures from western shows suicide attempters being young age (15-24 years), low education, unemployed, single, female gender, low socioeconomic status or economically deprived.

In this paper presents section 2 of this paper explains the detail on the related works. In section 3 presents the materials and methods adopted and section 4 presents the details of the experiments and discussions. Finally section 5 concludes the paper by sharing our inferences and future plans.

## RELATED WORKS

In this section presents focuses the related works of this research work. In psychiatry ADHD had gained its importance recently for over an decade. ADHD is primarily diagnosed in childhood and was considered misnomer that they would outgrow eventually during adulthood as per Doyle R et al 2004 [9]. The main important features of ADHD in children and adults are their increased motor activity, decrease in attention span and inner restlessness leading to impulsive behaviour.

These symptoms had been described in many articles over last 200 years, the nomenclature of the symptoms given by DSM had changed only recently by Lange KW et al 2010 [10]. Studies done by Wender PH et al 1998 [11] suggested that 40% to 70% of the children who were diagnosed with ADHD continue to have symptoms even in Adulthood with social, global functioning impairment and socio economic disadvantage. Decrease attention to details, difficulties in maintaining priorities, self organisation, difficulty in starting a new task or sustaining the task, low tolerance of frustration, Chaotic life style, psychiatric co morbidities are present in ADHD associated with Adults. Meta Analysis done by Simon and Czobor at al 2009 [12] with MED-

LINE, PsycLIT, and EMBASE showed the prevalence to be 2.5% among the general population, 16.8% and 22% respectively in outpatients. In Adult life, the symptoms like hyperactivity/impulsivity manifest less frequently, the hyperactivity symptoms tend to turn into "inner restlessness" on adulthood which are exhibited as symptoms including impulsivity, inattention, executive dys regulation such as high distractible, poor time management, impulsive decision making, sudden burst of energy leading to excessive speed while driving, memory disturbances especially working memory, difficulty standing in a single posture or place etc given by Barkely RA et al 2008 [13]. Individuals with childhood ADHD can persist to have symptoms even in adulthood upto 15% to 76%. Studies done by Fayyad J et al 2007 [14], Kessler R et al 2007 [15] and Simon et al 2009 [16] showed prevalence of Adult ADHD in population upto 2.5% to 4.4%. Many psychiatric disorder co occurs along with Adult ADHD including anxiety, mood disorders, suicide, impulse control disorders and substance use disorder. Adults with ADHD seek medication for co morbid illness then the ADHD. Study done by Michielson et al 2012 [17] shows that ADHD not only present in young adults but also persists symptomatically in elderly also (aged 60-94).

## MATERIALS AND METHODS

In this section presents the materials and methods of this research work. This is a cross sectional study of Patients who are above the age of 18 years, with intentional self harm, who are willing to give consent for the study, without any co morbid medical conditions and who came in contact with outpatient department of psychiatry from other departments in a tertiary hospital between the time line of 1 year (ie between 1st May 2015-30th April 2016). The subjects were recruited for study, their socio demographic details were collected and SCID-I and SCID-II were applied along with Adult ADHD self reporting scale and was diagnosed according to DSM-5 by two qualified Psychiatrist.

## RESULTS AND DISCUSSIONS

In this section focuses the results and discussions of this research work. The subjects were recruited for study, their socio demographic details were collected and SCID-I and SCID-II were applied along with Adult ADHD self reporting scale and was diagnosed according to DSM-5 by two qualified Psychiatrist. Among the 112 patients who attended psychiatric OPD, 45 of them were recruited for the study with History of intentional self harm, Mean

age group of the study was 28.27 and the study subjects were divided into two groups Intentional self Harm with ADHD and Intentional self harm without ADHD ,two groups were compared with each other , majority of them were between the Age group 21-30 yrs in both the groups(P=2.113), preponderance of female was seen in intentional self harm without ADHD groups (p=4.544), subjects in this study came from semi urban background, from both the groups (P=1.784), nuclear family (P=0.675) and middle socio economic status(6.585). The main method used by subjects in both group (P=2.742)was multiple tablets with medium suicidal intent (p=1.044). When comparing the both groups no statistical significance could be found between them (Tables 1 and 2).

**Table 1: Environmental background among the study group (N=45)**

Environmental Back-ground	Frequency
Rural	11
Semi Urban	32
Urban	2
Total	45

Among the study subject most of them are from Semi urban and rural background (71.1% & 24.4 % respectively).

**Table 2: Co-morbid psychiatric illness among the study sample**

Psychiatric co mor-bidities	No of Patients
Depression	6
Substance	2
Others	2
Nil	35
Total	45

Most of the study subjects didn't have any psychiatric co-morbidity ie. 35%.

Of the 112 patients who were referred from other department and patients who had attended psychiatric department 22 (18%) of them were below 18 yrs, 16(14%) of them had physical illness, 13 (11%) were not willing to participate in study, 9(8%) of them withdrew from the study, 7 (6%) patients relatives were not willing to give consent for the study. Finally 45 patients were taken up for the study who satisfied the inclusion and exclusion criteria. The patients' family accompanied the patients

while interviewing the patient. Among them 14 (32%)of them were male and 31(68%)of them were female which was similar to the results of the previous studies (Lowenstein LF). The patients and family members were interviewed by atleast two qualified psychiatrists. Nearly two third (60%) of the study sample were between the age group 18-28;31% were between the age group 29-39;7% of them were between the age group 40-50;3% of them were above 50 yrs ,indicating that this study contains significant number of young patients. Majority (33%) of them had attended till high school .40% of them belonged to middle socioeconomic status and 28% of them belonged to low socioeconomic status. Majority (86%) of them belong to nuclear family and from semi urban background (71.1%). In this group 60% of them were married and 40 % of them were unmarried. Multiple tablet poisoning were the common method used for self harm in nearly 35.% followed by OPC poisoning and Rat killer poisoning 24.4% each which is similar to the studies done by Manor.I et al 2010 [18]. 24.4% of the patients had Borderline personality disorder. 68% of them had medium suicide intent.20 % of them had past history of suicide.16.6% of them had first attempt of suicide.13.3% of the Family members had history of suicide in past,48.8% of them had attempted suicide impulsively.22% of them had co-morbid psychiatric illness (8-17) 9% of them had Adult ADHD among the study subjects which is consistent with the study by Manor.I et al 2010 [18]. However other studies done on tertiary care hospitals argue the estimates to be high, due to variations in population studies and source of data collection.

Out of 45 subjects with intentional self harm, 4 of them were diagnosed with Adult ADHD which was not significant when compared to other literatures on this topic.

#### Age

Among the individuals of intentional self harm without Adult ADHD, 22 of them were between the age group 21- 30 years and 10 of them were between the age group 31-40 years. However, no significant association could be found between the two groups , indicating that age is not a confounding factor for diagnosis of ADHD in individuals with self harm. Where as other studies have found that Age factor being significant in individuals of self with Adult ADHD.(19-28).

#### Gender

More number of female (31%) are in Group 2. However no statistically significant association could be found between the two groups to determine gender being risk factor for intentional self harm with

ADHD which was contrary to many studies where they found ADHD being significant factor for intentional self harm.

### **Education**

When comparing the two groups, majority if them were graduates ie ( 75%)in patients with ADHD and 34% of them were had finished high school in intentional self harm patients without ADHD. However no significant findings could be found between the two groups which is contrary with other studies done in this title.

### **Marital status**

More than half of the study subjects in both the groups were married, all of the subjects were single in ADHD group and 65.9% in intentional self harm without ADHD respectively which is not statistically significant which contradictory to other studies done in this topic.

### **Socio economic status**

Most of the study subjects were from middle socio economic status in both the groups,ie 40% in Intentional self harm patients with ADHD and 34.1% in Intentional self harm patients without ADHD, which is not statistically significant.

### **Occupation**

75% of the patients in group with ADHD and 21% of the patients were from group of ISH without ADHD were unemployed , when both groups were compared no statistically significant finding could be found .

### **Environmental Back ground**

Majority of the study subjects were from semi urban background and no statistical significance could be found between the two groups when compared with each other.

### **Family type**

All of the study subjects in group of ADHD and 85% of the second group were from nuclear family and no statistical findings could be found between them.

## **METHODS USED**

25% each of the subjects had different mode of self harm in first group and 36.6% of the patients had used multiple tabs or multiple pills as the mode for the attempt of suicide in the second groups and are not statistically significant.

### **Personality disorder**

50% in first group had personality disorder , 26 % of subjects in second group had personality disorder

and were not statistically significant when compared with each other.

### **Past history**

Among two groups 20% and 17% of them had past history in both groups and are not statistically significant.

### **Family history**

50% of the subjects with ADHD had past history of Intentional self harm and 9.8% of individuals in second group had past history of self harm.

### **Becks suicide intent scale**

Among the two groups 50% of the first group had medium suicide and 70.7% of them had medium suicide intent in second group . No statistically significance could be found between two groups.

### **Nature of the attempt**

When ADHD patients were compared with subjects without ADHD ,majority of the subjects had Medium suicidal intent (50 % in 1st group and 70% in 2nd group).

### **Co morbid psychiatric illness**

50% of the ADHD group had co-morbid psychiatric illness one of them had substance abuse and another had alcohol dependence which is consistent with the previous studies done on the title. When compared with other group no statistical significance could be found between them. As mentioned earlier no significance could be found between the two groups, indicating ADHD may or may not act as the confounding factor for Intentional self harm.

## **CONCLUSION**

Finally this work concludes that this study mainly gives the nature of the patients with intentional self harm and the severity of the suicidal intention they had. What type of method, subjects used for self harm and severity of the methods. Need to make awareness among the subjects and their family members regarding the ADHD symptoms. Need for more accurate screening methods and reporting system for diagnosing ADHD in outpatient setup. Need for more studies in patients with ADHD and self harm in developing countries like India. Need for study about ADHD in general population setup. The study sample contained a very small no of subjects. Since this study was conducted in patients who were referred from other departments and was done on only outpatient setup. The sample size of the study and the setting prevents the generalisability of the results to other settings are limited. Due to the lack of scales to measure the symptoms are very

limited, Study was limited only to self reporting scale which was checked for its reliability and validity. The practical difficulties were the lack of awareness about the Adult ADHD among the doctors, patients and relatives of the patient. Very few patients were referred to psychiatric department as patients and their attenders were reluctant for referral due to the fear of stigma. This Study showed no statistical significant between Adult ADHD and Intentional Self Harm suggesting ADHD could be a co factor and not the probable cause for intentional self harm. This study has limitations of its own. Further study is needed to establish association between ADHD and Intentional self Harm in Young Adults and Adolescents.

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#### CONFLICT OF INTEREST

The authors declare that they have no conflict of interest for this study.

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