

“Understanding Adult ADHD with Intentional Self-harm”

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Introduction

ADHD is described as a persistent pattern of inattention, hyperactivity, or impulsivity that hinders functioning or development and manifests symptoms in two or more contexts, negatively affecting social, academic, or vocational functioning (DSM-5). According to the WHO definition, attention deficit-hyperactivity disorder (ADHD) is a neurobehavioral condition marked by substantial issues with either hyperactivity and impulsivity or inattention, or a combination of the two. When ADHD is not properly identified or treated, symptoms can persist into adulthood. ADHD was once thought to be a childhood illness. Less frequently in adulthood do symptoms of hyperactivity and impulsivity appear. These symptoms include impulsivity, inattention, executive dysregulation such as high distractibility, poor time management, impulsive decision-making, a sudden burst of energy that causes driving at excessive speeds, disturbances in memory, particularly working memory, and difficulty standing still for long periods of time given by **Barkely RA et al 2008**¹. The prevalence of symptoms in adults who have ADHD as children ranges from 15% to 76%. Adult ADHD was shown to be prevalent in the population up to 2.5% to 4.4%, according to studies by Fayyad J et al in 2007², Kessler R et al in 2007³, and Simon et al in 2009. Anxiety, mood disorders, substance use disorder, suicide, impulse control issues, and many other mental diseases co-occur with adult ADHD. Adults with ADHD first seek treatment for co-occurring conditions. According to a study by Michielson et al. from 2012⁵, ADHD symptoms can also remain symptomatically in older people in addition to young adults (aged 60-94)

The Latin word for suicide is "self murder." It is a behaviour that expresses a person's desire to pass away. ICD-10 defines self-harm (SH) as the deliberate, direct injury of body tissue that is not done with the intent to commit suicide. (X71–X83) Intentional self-harm. The term self-harm or parasuicide means the same as self- injury. Some persons act on their suicidal ideas after planning for particular duration, others attempt impulsively without any precaution. Emphasising the above, the need for differentiation between two which was addressed as Deliberate self- injury and later changed to Deliberate self-harm (Intentional self-harm) by **Morgan et al 1979**⁸. The most recent WHO figures state⁸ that there are about one million suicide deaths worldwide each year, with 10 to 20 times as many suicide attempts. By 2015, 1.31 lakh people died by suicide in India, according to data from the National Crime Records

of India. Tamil Nādu being the highest of about 12.5% among southern and eastern states of India which has higher rates than Northern states. The first article on suicide was published in 1965, and between 1958 and 2009, L. Vijaya Kumar contributed roughly 54 articles to the Indian Journal of Psychiatry. 2010⁹. Intentional self-harm is one of the top 5 causes of acute medical admissions by **Hawton et al 2003**¹⁰. Significant variations are seen in socio demographic details ,age, gender, marital status, suicidal ideations and intent among the patients with Intentional self harm. Many contributing factors like biological, genetic, psychological, social and psychiatric conditions had been found to be associated with suicide by **Hawton and Van Heeringen et al 2009**¹¹.

Societies view suicide in many different ways according to their belief, culture and religion. Suicide has been described in many ancient Indian literatures and epics like Mahabharata and Ramayana. Many western religious cultures like Islam, Christianity and Buddhism view self killing as wrongful act or sin .In India it is considered as offense and are punishable under Indian penal code 309 and a insult to religious beliefs and it condemns such act given by **Partha Partim Das et al 2008**¹². Suicide under some understandable circumstances like hunger strikes, killing oneself to preserve family honour are considered as honor. According to **Rajiv Radhakrishnan et al 2012**¹³ only 25 % of the suicide are investigated in rural areas in India, family members of suicide attempters avoid process due to stigma involved and to avoid police investigations.

Definition of intentional self harm:

Intentional Self harm is defined as a impulsive or compulsion to inflict physical injury with or without conscious intent leading to tissue damage due to bodily motivated need to cope with unbearable psychological trauma ,distress or regain a sense of emotional balance. 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**¹⁴.

Studies like **Narand RL et al 2000**¹⁵, **Srivastava AS et al 2005**¹⁶, **Ponnudurai et al 1986**¹⁷, **Suresh kumar PN et al 2004**¹⁸, **chowdry et al 2007**¹⁹, **venkoba Rao et al**²⁰ 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 2002²¹ 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 socio economic status or economically deprived.

AIM AND OBJECTIVES

Aim and objectives of the studies were:

- 1) To detect patients who intentionally injure themselves.
- 2) To research the sociodemographic and clinical traits of people who intentionally hurt themselves.
- 3) To investigate the frequency of adult ADHD in patients who intentionally hurt themselves.

REVIEW OF LITERATURE

Adult ADHD with Intentional self harm:

Adult ADHD is one of the disorder which is challenging to diagnose and which had recently gained attention of the practitioners and researchers. Diagnostic and statistical manual -5 by American psychiatric association had recently updated their criteria for ADHD by 2014, in which they had included the criteria for Adult ADHD who presents with minimum five to six symptoms persisting since before the age of twelve years for adults or adolescents to diagnose them to have Adult ADHD(DSM-5). Very few studies had been done in India on this topic. Mostly the patients and his relatives present with the symptoms of withdrawal from substance use, deliberate self harm / impulse control disorder or personality disorder, major depressive disorder and /or schizophrenia which makes psychiatrist overlook the Adult ADHD and it makes psychiatrist to diagnosis and management difficult. To make the diagnose Adult ADHD psychiatrist has to depend on self reporting scales like CADDRA Adult ADHD self reporting scale.

Definition of Adult ADHD

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**²² The main 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**²³

Studies done by **Wender PH et al 1998**²⁴ suggested that 40 % to 70% of the Adults with ADHD who were diagnosed as children still experience social, global functional 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 et al 2009**²⁵ with MEDLINE, PsycLIT, and EMBASE showed the prevalence to be 2.5% among the general population , 16.8 % and 22% respectively in outpatients.

Types of Adult ADHD

According to symptoms, adult attention deficit hyperactivity disorder can be classified into three categories: ADHD-HI (predominantly hyperactive/impulsive type), ADHD-I (predominantly inattention), and ADHD-C. (Combined type). ADHD- I is characterised primarily by symptoms such as difficulty following directions, avoiding difficult work, being easily distracted, and forgetfulness.

Commonest subtype among them is the combined type ADHD-C including poor work performance ,impulsive act including increased urgency and lack in understanding consequences, substance use, decrease in social competence leading them to harmful behaviours .They tend to have internalising factors like major depression and externalising factors like conduct disorders where as ADHD-HI ie hyperactive/impulsive subtype have the greater risk of Self harm behaviour or antisocial personality by **Swanson JM and ,Hinshaw SP et al 2001**²⁶.ADHD-I tend to have poor scholarly performance or poor in educational status by **Murphy KR et al 1996**²⁷ .**Grevet E.H et al 2006**²⁸ 's study on 219 patients showed 117 (53.5 %) were combined type ,88(40 %) were ADHD-I and 14(6.5 %) were hyperactives.

Major studies in Adult ADHD and Intentional self harm

Very few studies had been done on this topic so far. Difficulty in this study topic is because the study subjects of Adult ADHD with Intentional self harm present mostly with the primary symptoms for other disorders like Substance use, major depression and self harm itself or externalising /internalising factors rather than the symptoms for ADHD itself. The clinicians themselves tend to overlook upon the symptoms .Most of the studies were done on childhood ADHD than Adult ADHD, main age group taken for the study are between the Adolescent groups where the applied were self reporting Questionnaires which involves subjects than involving the relatives too.

Goodwin DW schulsinger et al 1975²⁹ & **Mannuzza S. et al 1993**³⁰ According to reports, hyperactive children who grow up to be adults tend to become alcoholics or addicts and are more likely to engage in antisocial behavior.

Barkley R.A et al 1996³¹ Researchers that looked at ADHD in young adults between the ages of 17 and 30 who were speeding in cars that caused collisions and injuries came to the

conclusion that symptoms interfere more with performance than knowledge.

Renaud J et al 1999³² study on the likelihood of suicidal thoughts is more in The majority of adolescents with ADHD have a familial history, a history of suicide, and co-morbid conditions. using drugs.

James A et al 2004³³ Finding the risk behaviours is crucial, and comorbid ADHD is clinically meaningful for lowering the risk of suicide and self- harm, according to a review study on the potential link between ADHD and suicide.

Prabhay Sitholey ,Vicek Agarwal et al 2009³⁴ An exploratory clinical research of ADHD illness was conducted in an outpatient environment in Northern India, and the results showed that adults with ADHD are more likely to have co- occurring psychiatric problems than they are to present with core ADHD symptoms. The main symptoms in adolescents were emotional dysregulation, a lack of emotional self-control or explosive angry outbursts, and inner restlessness. In adults, the main symptoms included alcohol or drug misuse, financial instability, marital problems, and accidents on the road or in traffic.

Clare S Allely's 2014³⁵ Girls had greater rates of suicidal attempts and more in the mixed kind of ADHD, according to the Prisma Review, Meta analysis study on the relationship between ADHD symptoms and self-harm behaviours, which was conducted using internet-based bibliographic data from Medline and CINAHL.

Demographic Variables associated with Adult ADHD and Self harm Age

Previous studies done on Adult ADHD by **Murphy K,Barkley RA et al 2010**³⁶

and **Biederman et al 2010**³⁷ shows mean age group in between 19.4 and

28.5 years. The One study by **Kooij JJ Buiteller et al 2005**³⁸ had mean age of 44.9 years.

Agosti et al 2011³⁹ study in United States diagnosed with ADHD and attempted suicide between the Age group 18-44. Another study done in Korean community showed positive statistical significance of ADHD with suicidal behaviour between age group of 18-59 years.

Gender

Studies on this book have produced a range of findings. According to a few study findings, both genders exhibit ADHD symptoms from childhood and even after adolescence. Since they display impulsive and hyperactivity signs even as adults, men are typically more easily diagnosed whereas the women tend to have symptoms of inattention which are overlooked upon or diagnosed along with symptoms of co- morbidities like Depression and suicidality itself by **Jensen PS and Hinshaw et al 2007**

⁴⁰. Studies like **Julia J Rucklidge et al 2001**⁴¹, **Barkley et al 2010**³⁶ and **Agosti et al 2011**³⁹ showed that women with ADHD had a higher rate of self harm or parasuicide than males with ADHD. One other study by **Grevet E.H et al 2007**⁴² found no evidence of a gender difference. There is a balanced prevalence of ADHD in both genders, with women often having more

internalizing variables than males, according to a meta regression analysis study. **Viktoria Simon et al 2009** ⁴³

Educational status :

Although those with ADHD are shown to have IQs ranging from average to high, their academic performance is reported to be poor, and many of them have not completed high school. People with ADHD tend to have poor concentration in their work and in school because they have poor attention, excessive forgetfulness since they are quickly distracted and preoccupied with other duties. by **Brown et al 2005**.studies like **Biederman et al 2006** ⁴⁵,**Murphy and Fisher et al 2008** ⁴⁶ had shown that individuals with ADHD also have poor executive and global functioning in individuals. They had concluded that Executive functioning impairment such as impulsiveness, lack of concentration and persistence, problems in working memory, and poor organisation skills are more effectively distinguished from individuals with other psychiatric disorders than from individuals with ADHD. Moreover, **Murphy and Barley et al 2010** ⁴⁷ proved that adults with both the subtypes- inattention and combined type have low educational status and most likely to receive a special education throughout secondary school and less likely to finish graduate degree.

Marital status

There have only been a few research on this subject to date. Studies on adults with adult ADHD who self-harm have revealed that these people struggle to maintain healthy marriages and have poor family functioning skills. Comparative study by **Eakin and Minde et al 2004** ⁴⁸ When 33 married people with ADHD and their spouses were compared to 26 married people without ADHD and their spouses (control), it became clear that those with adult ADHD had worse adjustment troubles, more unfavorable views of marriage, and interpersonal connection problems than their spouses.

Family studies

When co-morbid mental diseases including depressive disorder, substance use disorders, and bipolar disorders are present, families of children and adults with ADHD are more at risk of suicide. **Lily Hechtman et al's 1985** ⁴⁹ -A 15-year follow- up study of 65 families with ADHD patients and 43 families with matched controls revealed a substantial genetic tendency in families. Probands and/or first-degree relatives of ADHD have a higher risk of getting ADHD, and this risk can be attributed to both genetic and environmental factors by **Beiderman et al 1992** ⁵⁰

Twin studies

Study by **Sprich et al in 2000** ⁵¹ Twins in ADHD was first one on twin studies on ADHD, where he had compared 4 pairs of mono zygotic twins with 6 pairs of Dizygotic twin ,he had concluded that Monozygotic twins had more con concordance rate than dizygotic twins. Another research by **Goodman and Stevenson et al 1984** ⁵² on 29 pairs of Monozygotic twin and 45 pairs of dizygotic twin showed that 50% of probability in both the pairs. Research on low birth weight in a twin study had

concluded that MZ twins has strong discordance of hyperactivity symptoms.

Historical factors

According to a historical examination of the literature, authors have been describing youngsters with clinically significant symptoms like hyperactivity, inattention, and impulsivity for more than 200 years. Although the terminology and conceptions for certain symptoms may have changed, the symptoms remain the same.

The first description of the symptoms in study was similar to features described by **sir Alexander Crichton in 1798**⁵³, where he had described "*when an external sense or concept fills a person's attention to the point where they are unable to receive clear awareness from others*" he said to give special attention to it. He said to be inattentive is a possibility of distinguishing two possibilities of abnormal inattention. By **Palmer and Finger 2001**⁵⁴.

Hyperactivity in literature was first described by Heinrich Hoffman in 1844, He published a story book with vivid colourful pictures about a boy name Philip. In

his story book "Fidgety Phil" where he describes a very clumsy child who doesn't sit in a single place or could not stop squirming and could not sit in a single place which was considered later by psychiatrist as motor over activity or hyperactivity in DSM.

He has also described the child to be very naughty and who doesn't listen to his father

and does everything to opposite of what his father tells him to do, which was described as Oppositional behaviour by DSM. Another story by him named "Struwelpeter" he describes about a boy who has symptoms similar to Inattention by **Burd and Kerbeshian 1988**⁵⁵

Sir George Frederic Still's Glouulstonian lecture was considered as ADHD's

starting point in history by many authors. In his three lectures given to Royal college of physician of London on children with some Abnormal psychical conditions defective moral control in some children with normal intelligence which was later considered to be due to impulsivity by **Still et al 1902**⁵⁶ his lectures included description of the symptoms now taken as criteria for conduct disorders, oppositional disorders or antisocial personalities.

Franz Kramer and Hans Pollonow 1932⁵⁷, two German physicians in 1932 reports on a "Hyperkinetic disease of infancy" where they described about the postencephalitic bodily movements, but they found out that some children had hyperkinetic movements only during daytime which was different from their study

over described these symptoms as by movements done very urgently or driven by motor, children cannot stay idle in a single place, climbing up and own the furnitures or high place in inappropriate situations. They have also described the symptoms such as children doing things aimlessly, changing to different activities very quickly due distractibility by other intense or new stimuli, these were present before the age of 7 years of age which meets the hyperactivity and inattention criteria's of DSM. In conclusion Kramer and Pollnow described all the three major criteria's given in DSM.

CONCLUSION

In this study, from total number of 112 patients 45 patients were taken up for the study after satisfying the inclusion and exclusion criteria. Among the 45 patients with intentional self Harm, 4 of them was diagnosed with Adult ADHD with intentional self harm.

No statistically significant data could be found when patients of Intentional self-harm with adult ADHD was compared with patients intentional self harm without ADHD.

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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