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Clinical Correlates of Depression in Deliberate Self Harm of Adults

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Abstract: ***Background: Adult deliberate self harm is an important health problem. It is the 5th common cause of death. Suicidees show varieties of alterations in neurophysiology of brain. The study shows correlation between Depression and Deliberate self harm and also Psychosocial factors. Materials and methods: The study has a sample size of 50 and a cross sectional survey study. Patients with deliberate self harm attending Psychiatry OPD are screened for Depression as well as psychosocial factors like family H/O Suicide, Family H/O mental illness and other stressors are studied. Results: A stringent criterion for depression is made with ICD-10 criteria. Suicide intent is assessed with suicide rating scales and a negative view about the world is an important factor in adult suicide attempt. Conclusion: There is a strong correlation between depressive illness and deliberate self harm in adults while psychosocial factors contributing to both.***

Keywords: Depression-Social factors-adult suicide attempt

1. Background

Deliberate self harm in adults is the fifth common cause of death according to many national studies. The ratio of attempted: completed suicide is 25:1 according to NIMH, risk factors for adult suicide are depression, Impulsivity, Stressful life events, substance use and aggressive behaviour. The suicide rate in India is 10.3/Lakh population. Men had a high risk of 1.7 times more common than women in suicide attempts. WHO says that about 1, 70, 000 deaths occur due to suicide in India per annum. Nearly half of deaths occur due to poisoning due to organophosphorus compounds.

1.1 Aims

1) To study correlation between Depression and adult Deliberate self harm.
2) To study correlation between Psycho social factors contributing to Depression and suicide attempt.
3) To assess severity of Depression and suicide intent by using specific rating scales and correlate with self harm.

1.2 Tools used

1) Semi-structured proforma for collection of Socio-demographic profile, H/O alcohol use during self harm, Family H/O mental illness and suicide.
2) MINI Scale to assess Depressive illness
3) Depression severity assessed by HAM-D rating scale, Intention of suicide attempt by Suicide Intent Scale and Stress rating by Presumptive stressful life events scale{PSLES}

2. Review of Literature

Bhagvadgita is against self torture and self killing[1].Islam asks men and women to wait for their destiny. Deliberate self harm is a conscious act of self induced annihilation best defined as a multidimensional demise in a needful individual by Schneidmann[2].Suicide attempt is an unsuccessful but potential lethal action requiring medical care. Suicide cluster is individuals or groups shortly committing suicide after suicide of public figures. The annual rate of suicide attempt is 4 Lakh in the world.

A study by NAHIC[National adult health information centre)told suicide accounts for 11.2% and being third leading cause of death, next to accidents (31%)and Homicide (14.8%). Rates as high as 1/1000 population seen in Falkland islands, and 1/1500 seen in Hungary.Murthy[3] in a Suicidology seminar pointed that the population rise during 1978-88 is 25%, the suicide rate increased by 60%.Among the states suicide rate is highest in Kerala and lowest in Jammu and Kashmir and the causes are largely social with only 3.4% attributed to mental illness. Among men suicide peak after age 45 and women peak after age 55.Rates of 50/Lakh population is found in men aged 65 years and older. The first person who throws light in Psychological approach is Freud[4] who stated self hatred is seen in depression and he wrote about Thanatos (death) and eros (life) and constant battle between the two instincts is life. Durkiem didn't consider mental illness as a cause of suicide, who had given social motives of suicide.

2.1 Studies on Indian Suicide

A study by Nimhans in 2007 stated 1, 22, 637 people end their life by Suicide. Indian average is 10.8 / Lakh with Bangalore topping (42.7%). In suicide attempts house is the commonest place and poison is the commonest method and nearly 40% of suicide intent due to alcohol use disorder. Psychiatrists are considered to be greatest risk followed by ophthamologists. Psychiatric illness accounts for about 57% of causes of which depression stands 75% and substance use disorders and schizophrenia each account for 3%.[5]Garfinkel et al found that in his study of 505 adult suicide attempters when compared with controls had a family history of suicidal behaviour.

Neuroanatomy and Physiology of suicide

Dr. Trimble illustrated that in MDP, Suicide and mood swings are over represented among writers and artists.Arango[6] had summarized biological alterations in

brain stem of suicidees with 38% lower density of Locus cereleus neurons in suicidees than controls. Increased cortisol is found in suicide attempters of the depressed by Meltzer[7]etal using the probe 5HT. Decreased cortisol is found in suicide attempters by [8]Pitchot et al. Reduced prolactin is found for studies using Clomipramine or d-Fenfluramine[9].High cortisol and high 17-hydroxy steroids both indicative of high suicidal risk.

3. Materials and Methods

Study design: cross sectional study

The sampling method used is simple random sampling. The study is being conducted in the OP department of Psychiatry, Govt Tiruneleli Medical College between Oct2012-Feb2013, the study being approved by the Institutional Ethical Committee. A formal written informed consent in Tamil being got from all participants of the study.

1) A semi-structured proforma for collection of sociodemographic profile, family H/O mental illness and suicide, alcohol use, H/O Medical illness and previous h/o suicide attempt.
2) Depression severity is measured by HAM-D rating scale.
3) Mean stress scores of stressful life events being measured by Gurmeet Singh Presumptive stressful life events scale.
4) Intention of suicide attempt being measured by Suicide intent scale.

Statistical design

Non parametric tests like Chi-square test and one way Anova tests are employed in this study and SPSS Version 13 is used in the study.

4. Results

Table 1

S.No	Psychiatric Illness	N=20	%
1	Depression	9	45
2	Adjustment Disorder	4	20
3	ADS	4	20
4	Schizophrenia	3	15

Table 2: Sociodemographic profile

Variables		No	%
Age in yrs	20-50 50-70	32 18	64 36
Sex	Male Female	20 30	40 60
Education	Illiterate Educated	35 15	70 30
Occupation	Semiskilled Skilled	40 10	80 20
Marital status	Single Married	38 12	76 24
Socioeconomic status	Low Middle High	24 12 8	48 24 16
Domicile	Rural Urban	35 15	70 30

Table 3: Showing comparison of Depression rating scales-One way Anova test

S. No	Variables	Mean	SD	Statistics
1	HAM-D SIS	11.44 5.26	3.74 5.39	P<0.001**
2	HAM-D PSLES	11.44 86.4	3.74 38.61	P<0.05*
3	SIS PSLES	5.26 86.4	5.39 38.61	P 0.812

** Statistically Highly significant
*Significant

Table 4: Showing comparison of Variables used in the study and rating scales among Depressive individuals

S.No	Variable	Depressive Yes	Illness No	Statistics
1.PSLES	<100 >100	9 11	26 3	X2=10..573*
2.Family H/O mental illness	Present Absent	12 8	5 24	X2=12.15*
3Associated with alcohol use	Present Absent	8 12	4 25	X2=2.708
4.Family H/O Suicide attempt	Present Absent	4 16	6 24	X2=1.67
5.Previous H/O Suicide attempt	Present Absent	5 15	3 26	X2=1.64

5. Discussion

Deliberate self harm are 3 times more common in females than males, who are successful suicide completers. In our study there are more female (30) suicide attempters than males (20) which is in agreement with suicide study by NIMHANS. Deliberate self harm is more common in Illiterates and semiskilled workers in our study.

Upon comparing the correlation of stressful life events and Depressives there is statistical significance with P<0.05.when Family H/O mental illness is compared with suicide attempts in adults which also shows statistical significance with chi value of 12.15.There is no statistical significance with alcohol use during attempt, Family history of Suicide attempt and previous H/O attempted suicide.

When comparing depression rating and suicide severity rating scales by one way Anova test there is high significance between HAM-D and Suicide Intent Scale with P-value <0.001. The comparison of HAM-D &PSLES Scales show significance with p<0.05.

6. Conclusion

Depression is the most common Psychiatric illness in Deliberate self harm of adults. Alcohol dependence and Adjustment disorders come next to it. Stress and alcohol use are the Psycho social factors contributing to it.

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