



PREVALENCE AND SOCIODEMOGRAPHIC PROFILE OF THE SUICIDES IN RAIGARH DISTRICT OF CHHATTISGARH, INDIA

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ABSTRACT **Objective-** To estimate the suicide prevalence rate on the basis of Indoor Patients of Late Shree Lakhiram Agrawal Memorial Govt. Medical College, Raigarh Chhattisgarh. **Method-** The present study sample were selected among admitted patient of department of Internal medicine at late Shree Lakhiram Agrawal Memorial Government Medical College and associated Kirodimal Government Hospital, Raigarh, Chhattisgarh, India. Patient committed suicide which were admitted in ICU and medical ward (female and male ward) selected in present study. Total number of patient admitted during January 2020 to June 2020 were ICU 194, male medical ward 1864 and female medical ward 1697 respectively. The total number of admitted patients in this duration was 3755. **Result-** findings of study had shown age mean of those person committed in suicide had 28.32 (sd= 11.08) years old and range of the age 14 to 60 years in both genders. Gender wise discrimination are different in age of suicide attempts person in both sex, the female patients mean of age are 27-year-old (sd=10.60), and the range of the age was 14 to 60 years, while the male patient mean of age are 29.60 (sd=11.46) years old, and range of age are 15 to 60 years. The prevalence rate of suicide in Raigarh district of Chhattisgarh, India is 3.40. **Conclusion-** Suicide continues to be a major significant problem of India and worldwide. This prevalence rate can be useful in improving prevention and planning of management programme for suicide.

KEYWORDS : Suicide, Prevalence Rate, Socio-demographical Profile

INTRODUCTION-

Poison is any substance which if introduced in the living body by any route could cause ill health or death. Poisoning both accidental and intestinal, a significant contributor to morbidity and mortality though out the world (Panda et al, 2015)

Each suicide is a personal tragedy that prematurely takes the life of an individual and has a continuing ripple effect, dramatically affecting the lives of families, friends and communities. Every year, more than 1,00,000 people commit suicide in our country. There are various causes of suicides like professional/career problems, discrimination, sense of isolation, abuse, violence, family problems, mental disorders, addiction to alcohol, financial loss, chronic pain etc. (NCRB,2015).

The increase in number of suicides was reported each year till 2011 thereafter a declining trend has been noticed till 2014 and it again increased by 1.5% in 2015 over 2014 (from 1,31,666 suicides in 2014 to 1,33,623 suicides in 2015) (NCRB, 2015).

The commonest agents of poisoning in India appear to be pesticides, sedatives, chemicals, alcohol, plant toxins, household poison and snake bite etc. Of late, Aluminium Phosphide has begun to emerge as a major player in the toxicological field, particularly in some northern Indian states (Panda et al, 2015).

Suicide rates increase with age and underscore the significance of the midlife crisis. Among men, suicide peak after age of 45years; among women. The suicide rate, however, is rising most rapidly among young person, particularly males 15to 24 years of age. The suicide rate for females in the same age group is increasing more slowly than that for males (Sadock & Sadock, 2011).

National Crime Records Bureau (NCRB), Government of India reported that the Suicide rate in India is a national social issue. In the year 2015, India recorded 133,623 suicides, an increase of 1.4% from 2014's 131,666 suicides. This is a list of States and Union Territories of India ranked according to suicide rate as on 2015(NCRB, 2015).

The purpose of the study was to estimate the prevalence rate of the suicide based on the tertiary care health center, in Raigarh medical college a district of Chhattisgarh.

Aims & Objective-

To estimate the suicide prevalence rate on the basis of Indoor Patients of Late Shree Lakhiram Agrawal Memorial Govt. Medical College, Raigarh Chhattisgarh.

Research Design-

The present study was a hospital based retrospective and observational research design.

Methods-

Sample Selection-

The present study sample were selected among admitted patient of department of Internal medicine at late Shree Lakhiram Agrawal Memorial Government Medical College and associated Kirodimal Government Hospital, Raigarh, Chhattisgarh, India. Patient committed suicide which were admitted in ICU and medical ward (female and male ward) selected in present study. Total number of patient admitted during January 2020 to June 2020 were ICU 194, male medical ward 1864 and female medical ward 1697 respectively. The total number of admitted patients in this duration was 3755.

Sample Inclusion Criteria-

The suicide committed patient's total numbers were 128 out of 3755,
 1. Age greater than 10 years
 2. Both male and female sex,
 3. All poisoning cases and any type of suicidal attempts.

Sample Exclusion Criteria-

1. animal bites
 2. other critical or comorbid conditions.

Statistical Analysis-

The collected data was first cleaned, searched for any duplicacy and if

present it was taken care of. Descriptive statistical analysis was carried out for variables in the study and prevalence rate of suicide case.

RESULT-

Out of the 3755 patients who attended the emergency services during the study period, 128 patients were found to have attempted suicide, the patients were attempted suicide among those reporting emergency room of a tertiary care center, at late Shree Lakhiram Agrawal memorial Government Medical College and Associated Kirodimal Govt. Hospital Under the department of General Medicine.

The result of study was shown in below tables-

Table Showing The Mean And Standard Deviation On Age Wise Distribution Of Suicide Attempt Patients

total no. of patient	mean	standard deviation
128	28.32	11.08

It was evident from the table, that 128 persons were committed suicide, out of 3755 during the six-month period (January 2020 to June 2020). The overall age mean of those person was committed in suicide had 28.32 (sd= 11.08) years and range of the age 14 to 60 years in both genders.

Table Showing Distribution Of Gender Wise Age, Mean And Standard Deviation

	Mean	Sd	Range
Female	27.00	10.60	14 to 60 years
Male	29.60	11.46	15 to 60 years

Above table revealed that female patients committed suicide had mean of age are 27-year-old (sd=10.60), and the range of the age was 14 to 60 years, while the corresponding value for male patient was mean of 29.60 (sd=11.46) years, and range of age are 15 to 60 years.

Table showing distribution of patients committed suicide in age-group wise

Age group	number of patients	percent (%)
Below 20 years	35	27.3%
21-30 year	47	36.7%
31-40 year	30	23.4%
41-50 year	9	7.0%
Above 60 years	1	0.8%

Above table describes the age group where maximum number of patients had committed suicide during the six month of study period. Age group of 21-30 (36.7%) years and below 20 years of age group (27.3%), contributed to maximum number of suicide cases during the study, then the other age group of persons who had committed suicide.

Table Showing Distribution Of Patients In Marital Status Wise Age (Mean, Sd And T- Test)

	mean	sd	t-test	level of significant
Male Married	35.79	10.75	7.103	0.000
Male Unmarried	20.30	3.34		
Female married	31.86	10.43	5.42	0.000
Female Unmarried	19.60	5.26		

From the above table it was interpreted that married male and married female persons had maximum number of suicide cases than the unmarried male and unmarried female persons. The mean age of male married patients was 37.79 (sd= 10.75) years old and female married person was 31.86 (sd=10.43) years old respectively. Whereas male and female unmarried persons had mean age of 20.30 (sd=10.43) years old and 19.60 years (sd= 5.26) old.

The Prevalence Rate of Suicide-

$$\frac{\text{total number of cases of suicide in 6 month period}}{\text{total number of patients visited during 6 months}} \times 100$$

$$= \frac{128}{3755} \times 100$$

$$= 3.40$$

There are 3.40, it is prevalence rate of suicide in Raigarh district of Chhattisgarh, India. This prevalence rate is average below in national suicide rate.

Top three States with highest suicide rates are Puducherry, Sikkim and Andaman and Nicobar Islands respectively, while Bihar recorded lowest suicide rates (Bihar records Lowest Suicide Rate among all

States of India", 2017 (Phansalkar, 2017).

DISCUSSION-

To the best of our knowledge this is the first study of suicide attempted cases, it is presenting in prevalence rate and socio-demographical profile in tertiary care center, at Shree Lakhiram Agrawal Memorial Government Medical College Raigarh, Chhattisgarh, India. Suicide is a leading cause of death across all age group, suicide thoughts and behaviour among youth warrant particular for several reasons (Nugent, 2019).

Finding the present study prevalence rate is 3.40 in Raigarh district of Chhattisgarh, this prevalence rate is below the average rate of national prevalence rate and worldwide prevalence rate. In 2018 Hedegaard mention the report of Central for the Disease Control (CDC) that the suicide rate in the United States had risen 30% between 2000 and 2016, reaching a rate of 13.5 per 1,00,000. Suicide prevalence in higher in worldwide, Seigal (2017) noted, if these current trends an estimated that 54,000 individuals per years will die by suicide in the United states, 2025.

Another variable/causes which is represent by many research. The sociodemographic variables such as age, sex, locality, marital status, occupation, level of socio-economic status and factor e.g. psychological well-being crises and illness and physical health issues were find significant association with suicide. The present study finding shows the most variables of suicidal cause is age, age group of below 20 years were second leading group, while the higher leading group of age is 21-30 years old. Some studies were supported in present study such as, WHO (2019), reported that worldwide suicide is the second leading cause of death for 15-29. Nugent et al, (2019), suggested that particularly males in the 15-24 years old group American Indian/Alaskan Natives suicide occurred at a rate of 58.7 per 1,00,000. It compared the all race United states suicide rate for males of the same age group is 16.0 per 1,00,000.

Another study by Nugant (2019) find the mark differences in suicide rate also exist across different countries. It should be noted that attitudes towards suicide continue to vary across cultural, religious and geographical region.

WHO (Oct. 2019), noted the global average of suicide rate was 10.07 per 1,00,000 in year 2015. The eastern Mediterranean region, encompassing the middle east and Northern Africa, had the lowest, suicide rate at 3.8 per 1,00,000 while Europe had the highest rate 14.1 per 1,00,000. Fisher (2002), investigate the suicide deaths in the context of research should not be considered unthinkable or even unexpected, after all close to 8,00,000 people die by suicide every year of outside. Nock, Borges, Bromet, Alonso et al, (2008); WHO (2017), suggested that sharpest increase in the number of suicide deaths throughout the life span occurs between early adolescence and young adulthood. CDC (2017) reported that suicide rate is higher as a cause of death during the youth compared with other age groups.

Another similar studies had find the same result, such as Kessler, Borges & Waltes (1999), reported that many people had considered or attempted suicide in their life first did so during their youth, as the lifetime age of onset for suicidal ideation and suicide attempt typically occur before the mid- 20s. Nock, Borges, Bromet, Cha et al, (2008), noted that prevalence rate for suicidal ideation range between 19.8% and 24.0% among youth. Suicide attempt is less wide-spread with life time prevalence rate between 3.1% and 8.8%. Aleida, Johnson, Carliss, Molnar & Azreal (2009); Cha, Franz, Guzman, Glenn, Kliemann, Nock, et al. (2018), reveal that suicide deaths rates are strikingly elevated in Post-Soviet countries (e.g. Lithuania, Latvia, Uzbekistan), with rates were range from 14.5 to 24.3 per 1lacks for adolescence and young children.

Nock, Borges & Ono (2012); Nock et al (2013), reported that suicide ideation is rare before the age of 10 years and its prevalence rate were increasing between 12 years and 17 year of the age. Glenn et al (2015), noted that suicide attempt is rare before the age of 12 and its prevalence rate is increased in during the early to mid/late adolescence. Kalves & de Leo (2017), reported that suicide death becomes increasing common by age of 15 to 19 years.

CONCLUSION-

Suicide continues to be a major significant problem of India and worldwide. This prevalence rate can be useful in improving prevention

and planning the management programme for suicide.

Limitation Of The Study:

Further community based research are needed to calculate the actual suicide prevalence rate in India, the current study was conducted in a hospital setting and only those cases who came to hospital were included to calculate the prevalence. It might not reflect the real prevalence of suicide.

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