Comparison of Suicide Related Factors between Adolescents and Adults

Ramjan Ali¹, Natasha²

ABSTRACT

Introduction: Suicide attempts are common among adolescents than other age group. This study explores the characteristics of suicide attempts in adolescents in comparison with adults.

Material and methods: The present study was conducted at a tertiary care teaching institute. We investigated a total of 100 consented cases of suicidal attempt through serial sampling between August 2018 and July 2019. Data was collected and diagnosis was made using MINI-PLUS and International Personality Disorder Examination (IPDE-ICD-10 module). The SPSS version 16.0.2 statistical package (SPSS Inc., Chicago, IL., 2008) was used for the entire analysis. We examined the differences between adolescents and adults, using Pearson’s chi-square test. We used a significance level of p<0.05 and two-sided probability. Descriptive statistics and chi-square tests were used to identify the factors associated with suicidal behaviours.

Results: N=24 adolescent and N=76 adults were included. The commonest diagnosis was MDD in adults (24%) and adjustment disorder (16.6%) in adolescents. 91.6% adolescent used non-violent Methods Compared to (69.7%) in adults. Common precipitating factor among adolescent was relational difficulties (66.7%) whereas among adults physical problem & psychotic symptoms (27.6%) were more common.

Conclusions: Suicidal behaviour among Adolescents has different psychosocial factor when compared to Adults and underlying psychiatric illness are also different. The suicide prevention strategies in this population have to be tailored to these factors.

Keywords: Suicide Attempt, Adolescent, Adult.

INTRODUCTION

The term ‘attempted suicide’ grids a variety of self-destructive behaviour which ranges from nonfatal, minor gestures which is mainly aimed just to attract attention to serious life threatening attempts.¹ The World Health Organization (WHO) estimates, in the year 2000, that nearly one million people commit suicide worldwide every year, which represents a global mortality rate of 16 people per 100,000. Suicide attempts are up to 20 times more frequent than completed suicides. 30% of all suicides worldwide occur in India and China, according to WHO data.² Among these, India accounts for about one-tenth of suicides in the world. The incidence of suicide attempts reaches a peak during the mid-adolescent years.³ As per the union health ministry of India it has been estimated that over 4 lakh people attempt suicide every year and among them 1.2 lakh are completed.⁴

Youth are at a higher risk for attempted suicide. According to the Centers for Disease Control and Preventions (CDC) 2007 Youth Risk Behaviour Survey (YRBS), 14.5 percent of adolescents have seriously considered attempted suicide. On comparison, 18.7 percent of girls acknowledged that they had seriously thought about making a suicide attempt in comparison to 10.3 percent of boys.⁵ Regarding methods of attempting suicide in adolescents, availability of the means to attempt suicide e.g., poison, sharp object, hanging, firearms seems important.⁶ Suicide risk has been reported to be associated with psychiatric disorders.⁷ Suicidal behaviour among adolescents occurs in different contexts from older individuals.⁸ Adolescent suicidal behaviour often occurs in the context of psychosocial factors such as family conflict, strivings for autonomy, academic and disciplinary difficulties, consequence of disruptions in peer relationships etc.

Although many studies have assessed the characteristics of suicide attempts in adults and adolescents, and some epidemiological studies have recorded data on age at attempted suicide and method used, very few studies have directly compared the two age groups using the same methodology. This study was designed to compare the socio-demographic variables, psychiatric diagnosis, precipitating factor and mode of suicide attempters between adolescents and adults.

MATERIAL AND METHODS

The present study was conducted at a tertiary care teaching institution after taking ethical clearance from the institute. Subjects admitted in the departments of Medicine, Surgery, ENT, and Surgery with history of attempted suicide were approached.⁹ The patients who gave an informed consent were included in the study. A total of 100 subjects were included through serial sampling. Exclusion criteria were Mental retardation, Chronic and debilitating medical illness, serious illness, and age outside 13-65 years range.

¹Assistant Professor, ²Junior Resident 3rd Year, Department of Psychiatry, Rohilkhand Medical College and Hospital, Bareilly (U.P.), India

Corresponding author: Dr Ramjan Ali, Assistant Professor, Department of Psychiatry, Rohilkhand Medical College and Hospital, Bareilly (U.P.) India


DOI: http://dx.doi.org/10.21276/ijcmr.2019.6.8.27
Tools used for the Study
Semi-structured Performa specially designed for the study was used to collect information on various demographic and psychosocial variables, information on suicide attempt and circumstances related to the attempts.
Mini Plus (Mini International Neuropsychiatric Interview, English version 5.0.0): This brief structured diagnostic interview, aimed at the identification of a set of DSM-IV and ICD-10 mental disorders. It includes modules for 23 disorders.

International Personality Disorder Examination (IPDE - ICD-10 Module)
IPDE ICD-10 module designed by Loranger et al in 1994, has a screening questionnaire consisting of 59 true / false items. If 3 or more items from a disorder are circled the patient has failed the screen for that disorder and has to be subsequently interviewed. The diagnosis of personality disorder was arrived at by consensus.

Methods of Suicide
Suicide methods were classified according to the international self-harm section (X60-X84) of the ICD-10 codes self-poisoning (X60-X69), hanging (X70), drowning (X71), firearms (X72-X74), burning (X75-X77), self-harm by sharp object (X78), self-harm by blunt objects (X79), jumping from a height (X80), and others (X81-X84). If the Patient is using two (or more) methods of suicide, both methods were counted separately.

Precipitating Factor of Suicide
The precipitating factors for suicide attempt determined according to the International Classification of External Causes of Injury (ICECI) system. As per, the definition of ‘proximal risk factor’ of the ICECI, various factors that is precipitating suicide attempt, the most recent crisis that have led to the self-harm, was the precipitating factor considered in this study.

Interview Procedure
Suicide attempters were assessed once their medical condition became stable. Written informed consent was taken from all the subjects prior to the detailed assessment. The complete assessment was done in sessions. The demographic data, details of suicide attempt in all cases was recorded. MINI-Plus was used for assessment of axis-I disorders. IPDE-ICD-10 module was administered to all cases to evaluate for the presence of any personality disorder.

STATISTICAL ANALYSIS
The SPSS version 16.0.2 statistical package (SPSS Inc., Chicago, IL., 2008) was used for the entire analysis. We examined the differences between adolescents and adults, using Pearson’s chi-square test. We used a significance level of p<0.05 and two-sided probability.

RESULTS
A total of 116 patients were approached of which 16 declined consent and were excluded. The 100 patients who consented were included in the study and were further divided into Adolescent and Adult groups as represented in Table-1 and Table-2.

Total number of subjects in the adolescent group was 24 and adult group was 76. Female were overrepresented in the adolescent group (75%) with mean age of 17.5 ± 1.5 years range 13-19 years. On the other hand, men predominated (59%) in the adult group, with mean age of 32 ± 11 years range 20-65 years.

DISCUSSION
In the present study, Socio-demographic characteristics of the subjects, a significant difference between the genders ratios of adolescents and adults was seen. Female preponderance

<table>
<thead>
<tr>
<th>Personality Disorder</th>
<th>Adolescent (N=24)</th>
<th>Adult (N=76)</th>
<th>Chi-square with Yates correction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cluster A (Paranoid, Schizoid, Schizotypal)</td>
<td>0</td>
<td>5(6.6)</td>
<td>Chi-squared = 0.57, P value = 0.45</td>
</tr>
<tr>
<td>Cluster B (Antisocial, Narcissistic, Borderline, Histrionic)</td>
<td>9(37.5)</td>
<td>17(22.4)</td>
<td>Chi-squared = 1.45, P value = 0.23</td>
</tr>
<tr>
<td>Cluster C (Avoidant, Dependent, Anakastic)</td>
<td>1(4.2)</td>
<td>2(2.6)</td>
<td>Chi-squared = 0.01, P value = 0.91</td>
</tr>
<tr>
<td>No Disorder</td>
<td>12(50)</td>
<td>42(55.3)</td>
<td>Chi-squared = 0.05, P value = 0.83</td>
</tr>
<tr>
<td>Psychiatric Diagnosis</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Major Depressive Disorder</td>
<td>1(4.2)</td>
<td>18(24)</td>
<td>Chi-squared = 3.34, P value = 0.06</td>
</tr>
<tr>
<td>Adjustment Disorder</td>
<td>4(16.6)</td>
<td>3(3.9)</td>
<td>Chi-squared = 2.79, P value = 0.09</td>
</tr>
<tr>
<td>Psychotic Disorder</td>
<td>1(4.2)</td>
<td>16(21)</td>
<td>Chi-squared = 2.58, P value = 0.10</td>
</tr>
<tr>
<td>Substance related disorder</td>
<td>3(12.5)</td>
<td>5(6.6)</td>
<td>Chi-squared = 0.25, P value = 0.61</td>
</tr>
<tr>
<td>No Axis I Diagnosis</td>
<td>15(62.5)</td>
<td>26(34.2)</td>
<td>Chi-squared = 4.92, P value = 0.026</td>
</tr>
</tbody>
</table>

Table-1: Comparison of diagnosis between adolescent and adult.
among adolescent attempters was noted which is similar to previous studies in adolescents. In adults suicidal attempt was almost equally distributed in both the sexes.

Methods of suicide were classified into violent and non-violent methods. Non-violent methods include consumption of prescribed drug, pesticide, phenyl, and other house-hold locally available poisons. Whereas violent methods include hanging, drowning, fire & flame, sharp object. Non-violent methods are the most commonly used methods for suicidal attempts in both adolescent and adult. In comparison to adult, adolescent predominantly female uses non-violent methods. The reason may be the easy availability of poisonous compounds and due to impulsivity in adolescent. This is in accordance with the observations made in prior studies.

Contrary to present finding, firearms have traditionally been the leading suicide method among U.S. youth, followed by hanging/suffocation, and self-poisoning. This may be due to ease of availability of firearms in U.S. as compared to India. However in adult, violent method of suicidal attempt was more commonly used. The difference found between these two groups could be explained by gender distribution in this group. Adolescent population comprises of more female compared to adults. This is supported by the previous study wherein men use violent methods more for completed suicide, among violent methods, hanging is the most commonly used mode in our setting followed by sharp object, and drowning. Various factors come to play to predict the choice of violent methods like, Diagnosis (such as schizophrenia, Male gender, poor mental health within the last 3 months etc).

Very few studies have focused on the presence of personality disorders among adolescents who engage in attempted suicide. In our study 50% of the adolescents had personality disorder compared to 45% of adults. Adolescents were predominantly having cluster B personality disorder (Antisocial 4.2%, Narcissistic 0%, Borderline 4.2%, Histrionic 12.5%), as compared to adult in whom cluster A (Paranoid 1.3%, Schizoid 5.3%, Schizotypal 0%) is more common. A large proportion of people those who attempted suicide suffered from some kind of personality disorder.

In the present study our observation on adolescents with attempted suicide having psychiatric diagnosis is 79% as compare to adult in which it is 83%. This is similar to the prior observation. When looking at individual co morbid Axis I disorders our study had a higher proportion of adults with a diagnosis of Depressive disorders, as compare to adolescents who have predominantly had adjustment disorders. In the present study, Psychotic Disorder was also more common among adult in comparison to adolescent which is supported by previous study.

In precipitating factor, interpersonal difficulties had higher incidence in adolescents then adult. The findings are similar to previous studies. In Adults, suicidal attempt due to physical problem and Psychotic symptoms are more common then adolescent. Chronic illness can affect the ability to participate in work or leisure activities leading to social isolation, and is associated with increased rates of anxiety and depression. Some female adolescents may attempt suicide without any psychiatric symptoms and prior indications of emotional or behavioural problems. It has been pointed out that adolescents may be more impulsive than adults, and they may tend to focus on proximal consequences of behaviour. Therefore, we have to pay attention to impulses among female adolescents.

The present study also has some limitations. First, because the study was conducted in a single university hospital, the findings may not be representative of whole region. Second, Adolescent sample size is small. During our study, we did not divide the subjects into subgroups according to age, such as younger adolescents or elderly adults, as the sample size was small and this made it difficult to compare the different age generations in detail.

Despite these limitations, the present observations highlight the role of specific psychosocial factor (e.g., relational problems) and psychiatric disorders in the suicide attempts of both adolescents and adult. In terms of clinical implications, our results indicate that preventive work should be directed toward solving relational issues, both at home and at school, and active treatment of psychiatric disorders. Future studies on a larger population size to compare the suicidal behaviour in different age groups may be necessary for this.

<table>
<thead>
<tr>
<th>Mode of Suicidal Attempt</th>
<th>Adolescent (N=24)</th>
<th>Adult(N=76)</th>
<th>Chi-square with Yates correction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Violent Method(Poisoning)</td>
<td>22(91.6)</td>
<td>53(69.7)</td>
<td>Chi squared = 3.58 , P value = 0.058</td>
</tr>
<tr>
<td>Violent Method (Hanging, Drowning, Fire &amp; Flame, Sharp Object)</td>
<td>2(8.3)</td>
<td>23(30.3)</td>
<td></td>
</tr>
</tbody>
</table>

**Table-2:** Methods and Precipitating cause of Suicide Attempts among Adolescent and Adult.
REFERENCES

11. Goldberg DP. The detection of psychiatric illness by questionnaire: A technique for the identification and assessment of non-psychotic psychiatric illness.

Source of Support: Nil; Conflict of Interest: None

Submitted: 15-07-2019; Accepted: 29-07-2019; Published: 14-08-2019