



# ATTEMPT TO END LIFE: A PROSPECTIVE STUDY ON THE RISK FACTORS OF ADOLESCENT SUICIDE

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## ABSTRACT

Globally, suicide is the second largest cause of death among 15-29 year olds (WHO, 2016). For every suicide, there are many more people who attempt suicide. Despite the exponential rise in risk taking behavior among the teens of India, adolescent mental health is a neglected issue (Kanikar & Bansal, 2015). Suicides can be prevented if we identify the risk factors associated with it. With this objective, a prospective observational study design was followed to understand the risk factors leading to suicidal behavior among adolescents who were reportedly admitted to the Pediatric Ward of Ispat General Hospital of Rourkela city of India. Out of a total 88 attempted adolescent (10-19 years old) suicide cases during November 2015 to April 2017, 46.59% (n= 41) gave consent (parental and self) to participate in the study. The ages of the adolescents were 15.56±1.3 (Mean±SD) years. The number of males and females were 9 and 32 respectively. To identify the underlying psychological risk factors, participants were administered Barrat Impulsiveness Scale, KADS6, and Hamilton Anxiety Scale. Further, to identify environmental risk factors, questions related to pressures from parents, academics, romantic relationship break-up and peers were asked.

A chi-square test of goodness-of-fit was performed to determine whether risk factors of adolescent suicide were equally contributing to the phenomenon. Socio-demographic factors like age,  $\chi^2$  (1, N = 41) = 17.78, p <.01; sex,  $\chi^2$  (1, N = 41) = 12.90, p <.01; socio-economic status,  $\chi^2$  (3, N = 41) = 19.19, p <.01; and method of suicide,  $\chi^2$  (1, N = 41) = 26.56, p <.01; psychological risk factors like impulsivity,  $\chi^2$  (1, N = 41) = 26.56, p <.01; anxiety,  $\chi^2$  (3, N = 41) = 44.36, p <.01; and environmental risk factors as a whole  $\chi^2$  (1, N = 41) = 20.51, p <.01; and the components like parental pressure,  $\chi^2$  (1, N = 41) = 5.48, p <.01; romantic relationship break-up pressure,  $\chi^2$  (1, N = 41) = 20.51, p <.01; peer pressure,  $\chi^2$  (1, N = 41) = 29.87, p <.01 were found to be significant risk factors of adolescent suicidal attempts. Contrary to the common beliefs, severity of depression and academic pressure were found to be non-significant risk factors. Adolescents in the age group of 15-19 years, more girls than boys and adolescents from low socio-economic status families have more suicidal attempts. The prevalent method of suicide was ingestion of poison. Impulsivity and anxiety but not depression as well as failure in romantic relationship and peer pressure pose higher risk for adolescents' decision to end life.

**Key Words:** Adolescent Suicide, Risk Factors, Impulsivity, Anxiety, Environmental Pressure

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## INTRODUCTION

**Suicide**-Death caused by self-directed injurious behavior with intent to die as a result of the behavior

**Suicide Attempt**- a non-fatal, self-directed, potentially injurious behavior with intent to die as a result of the behavior. A suicide attempt might not result in injury

**Suicidal Ideation**-Thinking about, considering, or planning suicide  
<https://www.nlm.nih.gov/health/>

### Fact Sheet:

- Close to 800 000 people die due to suicide every year
- One in 5 persons in the world is an adolescent, i.e., 1.2 billion people are between the ages of 10-19 years
- For every suicide there are many more people who attempt suicide every year
- Adolescents comprise 1/6<sup>th</sup> of the world's population
- Adolescence and Risky Behavior go hand-in-hand
- Suicide is the second leading cause of death among 15-29-year-olds after road accident related deaths
- The recent declines in mortality among infants and young children have not been mirrored among adolescents
- 78% of global suicides occur in low- and middle-income countries
- Ingestion of pesticide, hanging and firearms are among the most common methods of suicide globally.

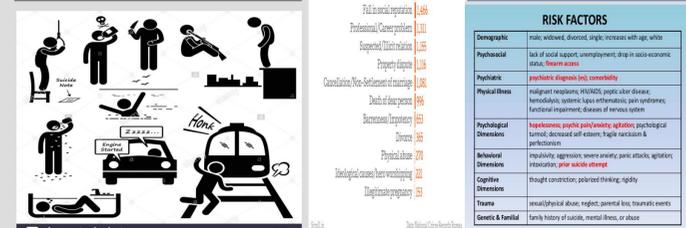
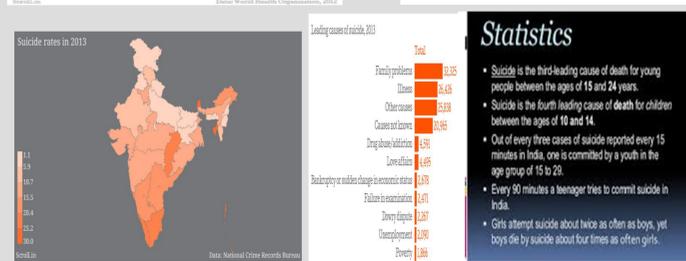
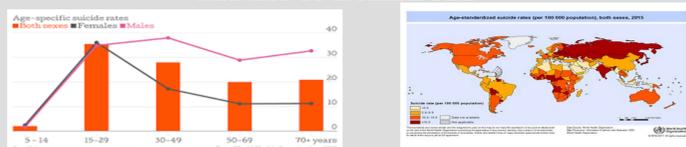
<http://www.who.int/news-room/fact-sheets/detail/suicide>

**The Mental Health Care Act, 2017, Government of India:**  
115. (1) Notwithstanding anything contained in section 309 of the Indian Penal Code any person who attempts to commit suicide shall be presumed, unless proved otherwise, to have severe stress and shall not be tried and punished under the said Code.

(2) The appropriate Government shall have a duty to provide care, treatment and rehabilitation to a person, having severe stress and who attempted to commit suicide, to reduce the risk of recurrence of attempt to commit suicide.

<http://www.prsindia.org/uploads/media/Mental%20Health/Mental%20Healthcare%20Act,%202017.pdf>

## REVIEW OF LITERATURE



## OBJECTIVES

- To examine the risk factors leading to suicidal behavior among adolescents
- To understand the age and gender differences in suicidal attempts by the adolescents

## METHODS AND MATERIALS

**Design:** Prospective Observational Study Design

**Sample Site:** Department of Pediatrics, Ispat General Hospital, Rourkela, India  
Duration of Observation: November 2015- April 2017

### Participants:

Total Number of Cases Observed : 88  
Total Number of Consents Obtained : 41 (n=41)  
Age range of the subjects: 10-19 Years ((15.56±1.3 (Mean ± SD) )  
Total Number of males : females- 9 (21.95%) : 32 (78.04)

### Measures:

- The Barrat Impulsiveness Scale (BIS-11; Patton et al., 1995)
- The Kutcher Adolescent Depression Scale (KADS) (LeBlanc et al., 2002)
- The Hamilton Anxiety Rating Scale (HAM-A, sometimes termed HARS) (Hamilton, M., 1959)
- Environmental Pressure (questions related to pressures from parents, academics, romantic relationship break-up and peers )

### Procedure:

After obtaining due ethical approval from the IEC of IGH, Rourkela, parental and self consents were obtained from the adolescents (n=41) . The researchers interviewed each participant individually at their convenient times (as they were hospitalized during the period of study) with the above set of measures.

## RESULTS

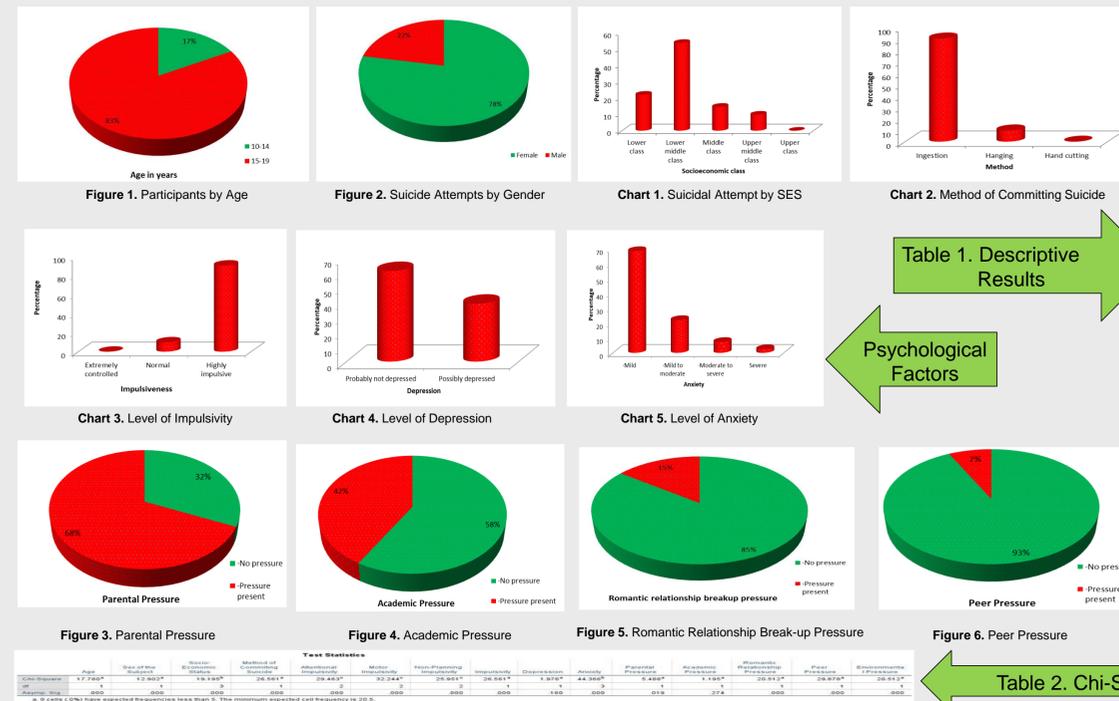
Group	Age	N	Mean	Std. Deviation	Std. Error	t	Sig. (2-tailed)
Socio-Economic Status	10-14	7	1.5714	.53452	.20203	-2.622	.020
	15-19	34	2.2353	.88963	.15257		
Method of Committing Suicide	10-14	7	1.2857	.48795	.18443	1.201	.271
	15-19	34	1.0588	.23883	.04096		
Suicide	10-14	7	3.4286	.53452	.20203	1.021	.337
	15-19	34	3.2059	.47860	.08208		
Attentional Impulsivity	10-14	7	3.0000	.00000	.00000	3.020	.005
	15-19	34	2.7353	.51102	.08764		
Motor Impulsivity	10-14	7	2.8571	.37796	.14286	-1.335	.206
	15-19	34	3.0882	.57036	.09782		
Non-Planning Impulsivity	10-14	7	3.0000	.00000	.00000	2.098	.044
	15-19	34	2.8824	.32703	.05609		
Impulsivity	10-14	7	2.8571	.37796	.14286	-1.620	.551
	15-19	34	4.1118	.49955	.08567		
Depression	10-14	7	1.2857	.48795	.18443	-.809	.433
	15-19	34	1.4706	.78780	.13507		
Anxiety	10-14	7	.8571	.37796	.14286	1.271	.231
	15-19	34	.6471	.48507	.08319		
Parental Pressure	10-14	7	.4286	.53452	.20203	.077	.941
	15-19	34	4.1118	.49955	.08567		
Academic Pressure	10-14	7	.0000	.00000	.00000	-2.859	.012
	15-19	34	1.765	.38695	.06636		
Romantic Relationship Pressure	10-14	7	.0000	.00000	.00000	-1.787	.083
	15-19	34	.0882	.28790	.04937		
Peer Pressure	10-14	7	2.4286	.53452	.20203	1.636	.147
	15-19	34	2.0882	.28790	.04937		
Environmental Pressure	10-14	7	2.4286	.53452	.20203	1.636	.147
	15-19	34	2.0882	.28790	.04937		

Group	Sex of the Subject	N	Mean	Std. Deviation	Std. Error	t	Sig. (2-tailed)
Socio-Economic Status	Male	9	1.8889	.60093	.20031	-1.152	.263
	Female	32	2.1875	.93109	.16460		
Method of Committing Suicide	Male	9	1.3333	.50000	.16667	1.781	.110
	Female	32	1.0133	.17878	.03125		
Attentional Impulsivity	Male	9	3.4444	.52705	.17568	1.322	.211
	Female	32	3.1875	.47093	.08235		
Motor Impulsivity	Male	9	2.8889	.60093	.20031	.646	.532
	Female	32	2.7500	.43984	.07777		
Non-Planning Impulsivity	Male	9	2.5556	.52705	.17568	-3.251	.007
	Female	32	3.1875	.47093	.08235		
Impulsivity	Male	9	2.7778	.44096	.14699	-1.042	.323
	Female	32	3.8375	.24593	.04348		
Depression	Male	9	.4444	.52705	.17568	.354	.729
	Female	32	2.7500	.43984	.07777		
Anxiety	Male	9	1.6667	.86603	.28868	.927	.373
	Female	32	3.1875	.47093	.08235		
Parental Pressure	Male	9	.6667	.50000	.16667	-.112	.913
	Female	32	.6875	.47093	.08235		
Academic Pressure	Male	9	.5556	.52705	.17568	.921	.375
	Female	32	3.7500	.49187	.08695		
Romantic Relationship Pressure	Male	9	1.1111	.33333	.11111	-.350	.731
	Female	32	1.563	.36890	.06521		
Peer Pressure	Male	9	.0000	.00000	.00000	-1.791	.083
	Female	32	.0938	.29614	.05235		
Environmental Pressure	Male	9	2.3333	.50000	.16667	1.371	.201
	Female	32	2.0938	.29614	.05235		

Table 3. Age Differences by Risk Factors

Table 4. Gender Differences by Risk Factors

## RESULTS



Socio-Demographic Factors

Table 1. Descriptive Results

Psychological Factors

Environmental Factors

Table 2. Chi-Square Results

Summary Result: RISK FACTORS OF SUICIDAL ATTEMPTS  
AGE-Older Adolescents (15-19)  
SEX-Adolescents Girls  
SES- Lower Middle and Lower Class  
METHOD- Ingestion  
PSYCHOLOGICAL- Impulsivity and Anxiety  
ENVIRONMENTAL- Parental, Romantic Relationship Break-up and Peer Pressure

## DISCUSSION

- Adolescents in the age group of 15-19 years' experience or engage in academic competition, transition from school to colleges, a strong desire to establish an independent identity, beginning of romantic relationship, risky behaviour to impress others and less tolerance to frustration etc. Teaching life-skills and counselling from time to time may help reducing suicidal attempts.
- The gender paradox in suicide: Females attempt more (non-fatal) while males have more completed suicide (fatal). Earlier studies found that females have more suicidal thoughts than males under the age of 25 and countries with higher level of power distance have higher rates of female suicide and stabilizing cultural factors have a stronger effect on suicide rates for women than men. Suicide prevention strategies must focus more on women specific issues.
- Economic deprivation or relative deprivation lead to higher suicidal attempts. Social comparison and maintaining a false self-esteem among the low-income groups need to be understood.
- Easy availability of poisonous substances(pesticides)/ drugs have increased the chance of using ingestion method by adolescents.
- The diminished ability to think through the consequences of one's actions, lack of control over the actions lead to more suicidal attempts.
- Underlying Psychic and Somatic Anxiety triggers suicidal attempts among adolescents
- Parents, romantic partners and peers influence in adolescent suicidal attempts cannot be undermined.

## CONCLUSIONS

- Conclusion and Recommendations**
- The unique characteristic of the current sample of participants is that getting them in the general population is extremely difficult due to the stigma attached with attempted suicide
  - "Prevent Suicide Attempts Help Desk" may be opened in hospitals
  - Controlling the easy availability of poisonous substances would reduce the attempts
  - Training youths to be disciplined through play and other social activities and not through harsh disciplinary actions may help
  - Preventive counselling in families, schools and communities would help reducing the suicidal attempts

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