

A Statistical Analysis Of Perception Of The People Towards Suicidal Tendency

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Abstract-

Suicidal tendency is a major cause of injury and death. Knowing the information about this epidemiology of such behavior is important for policy-making and prevention. Generally, this tendency is more prevalent among men whereas women, young, married and psychological disorder people exhibits more nonfatal suicidal behaviors. So many researchers proved that suicidal behavior has focused on patterns and correlates of prevalence. The researchers should focus on synergistic effects of modifiable risk and protective factors. The researchers must use the results in ongoing efforts to decrease the significant loss of life caused by suicidal behavior.

Keywords: *Self-injurious behavior, Statistical analysis, Cross tabulation, Chi square test.*

Introduction:

Suicide is not only a serious health problem, it is a psychological disorder. However, suicides are preventable with timely, evidence-based and often low-cost interventions. For national responses to be effective, a comprehensive multisectoral suicide prevention strategy is needed. The most common methods of suicide are hanging, pesticide self-poisoning, and firearms. Key interventions that have shown success in reducing suicides are restricting access to means; educating the media on responsible reporting of suicide; implementing programs among young people to build life skills that enable them to cope with life stresses; and early identification, management and follow-up of people at risk of suicide. There are a number of measures that can be taken at population, sub-population and individual levels to prevent suicide and suicide attempts. Suicide is a complex issue and therefore suicide prevention efforts require coordination and collaboration among multiple sectors of society, including the health sector and other sectors such as education, labour, agriculture, business, justice, law, defense, politics, and the media. These efforts must be comprehensive and integrated as no single approach alone can make an impact on an issue as complex as suicide. Till date, only a few countries have included suicide prevention among their health priorities and only 38 countries report having a national suicide prevention strategy. In addition, the suicide mortality rate is an indicator of target 3.4 of the Sustainable Development Goals: by 2030, to reduce by one third premature mortality from non-communicable diseases through prevention and treatment, and promote mental health and well-being. Several authors have laid foundation to study the tendency of suicidal ideation. Anderson and Smith (2005) identified that suicide is the third leading cause of death among 15-to-24-year-old and the second leading cause of death among college students by Schwartz 2006. Ahammad et al. (2019) applied statistical techniques to the clinical data. New initiatives have directed much-needed resources toward the development of campus suicide prevention programs Substance Abuse and Mental Health Services Administration, 2006. Conflict in parent-child relationships and a number of other family-level constructs are associated with suicide ideation. Although it is clear that many aspects of parent-child relations—including conflict—play a role in suicide risk, the possible interaction of conflict with parents and depression in college

students is poorly understood. Several authors adopted different statistical techniques to analyse the statistical data. In this paper we use different statistical techniques to draw inferences by following the works of [Ref. 8-10].

Objective of study:

The goal of the present study was to estimate the predictive ability of several suspected risk factors and their interactions on suicidal ideation among the residents in Andhra Pradesh.

- Estimate the proportion of respondents with suicide ideation
- Determine the human suicide ideation, including an evaluation of such factors as depressive symptoms, affective dysregulation, parent-child conflict, perceived social support, alcohol use disorders.
- Examine suicide ideation among those respondents without depression in order to address the question that a distinct set of factors might predict suicide ideation in non-depressed students

Methodology:

Data were collected from a small sample of residents belonging to different regions of Andhra Pradesh. Thus, convincing sampling was conducted using 150 valid cases to check both measurement and the research model. We have collected data through primary sources. For collecting data, survey questionnaires were prepared and referred sources from internet. We made a list of questions, which were narrowed down, to a few. Then we gave out the questionnaires collection of quantitative data. Questionnaire was structured in the form of scale in which respondents evaluate only one object at a time in the four points ranging according to the question. To make the filling and analysis of questionnaires easy and accurate, we used both the forms of collecting data through questionnaires. Data obtained through primary sources namely interview and mailed questionnaire method using Google forms. Our response rate was 100% with the sample subject answering all the questions. There were 27 questions in the survey to obtain data. To carry out the analysis of data various statistical methods adopted and presented in the results and discussion part.

Results and Discussion:

Table: 1 Cross tabulation between the Gender and the opinion for the depressed, hesitating to consult psychiatrist

Gender	Depressed victims hesitate to consult psychiatrist or get professional help for			Total
	not considering mental illness a big problem	feeling guilty to consult or feeling shameful	mindful of what others think	
Female	24	38	34	96
Male	8	27	19	54
Total	32	65	53	150

Table 2: Cross tabulation between the gender and opinion about personalities with more risk for suicide.

Gender	Who has the more risk for suicide					Total
	over thinker	aggressive	extrovert	introvert	others (specify if any)	
Female	51	14	7	15	9	96
Male	22	14	4	5	9	54
Total	73	28	11	20	18	150

From the results of Tables 1 and 2, we can observe the opinions on the reasons for depressed victims hesitating to consult psychiatrist also observed that there is no effect of occupation on the variables-Alcohol and drug abuse increases the risk for suicide, Reasons for suicides in teens, at 5% level of significance.

Table: 3CHI SQUARE TABLE FOR GENDER WITH VARIABLE

Null Hypothesis (H₀): There is no gender effect on the variables that we have considered in the following table

S.NO	Variables(X*Y)	X ² Value	Significant value	Accept/Reject
1	Depressed victims hesitate to consult psychiatrist or get professional help for	2.546	0.280	Accept
2	Suicide can be predicted	1.517	0.678	Accept
3	Signs of depression might be	5.108	0.276	Accept
4	Who has the more risk of suicide?	6.053	0.195	Accept
5	Reasons for suicides in teens might be	2.187	0.701	Accept
6	Reasons for suicides in adolescents might be	2.341	0.673	Accept
7	Reasons for suicides in elders might be	2.939	0.568	Accept
8	Do you know how to deal with depressed?	4.573	0.03	Reject
9	Can family and friends help in preventing suicide of their loved ones?	2.233	0.525	Accept
10	Games such as 'Blue whale' are provoking gamers to suicide. How can we avoid them?	3.507	0.173	Accept

From the above table we observe that the variable “dealing with the depressed” has an effect of gender upon it, at 5% level of significance. Also, the variables-hesitation of the depressed to consult psychiatrist, suicidal prediction, signs of depression, personalities with more risk for suicide, reasons for suicides in teens, , reasons for suicides in adolescents, , reasons for suicides in elders, family and friends preventing suicide of their loved ones, avoiding suicidal games are not affected by their gender.

CONCLUSION:

In this study we got to know people’s opinions on suicides and their ideologies on suicidal games and many. We analyzed the opinions about suicidal thoughts of people belonging to different regions and of different categories. This study gives a complete idea about the opinions of them about suicides, their knowledge of dealing with the depressed and also avoiding suicidal thoughts. A social and public health response to suicide is very crucial, and should complement a mental health response. Mental illness is a risk factor for suicide, as it is in developed countries. These tend to relate to societal structures and specific stressors also acknowledges that suicide is

preventable. A key step in such an approach involves modifying attitudes toward suicide via educational efforts and legal levers (e.g. decriminalizing suicide)

Limitations of the study:

No matter how efficiently the study is conducted and developed, every study has certain limitations. The limitations are the matters and occurrences which are out of investigator's control. Similarly, this study also suffers with certain limitations which are enlisted below:

- We collected it on our availability and the major part of our sample consists of females.
- The questionnaire is filled by respondents and they may feel shy and sensitive in providing the accurate and honest answers.
- This analysis is limited because it relies on statistical tools of the respondents about suicidal thoughts and might not be accurate.
- No broad or specific risk factors stood out as particularly strong risk factors have been evaluated within narrow methodological limits.
- We were unable to accommodate the inclusion of studies that employed advanced statistical techniques, some of which included time-varying risk factors
- Many of the reported estimates may overestimate risk factor effects because we mostly concentrated about studying teenagers.

REFERENCES:

1. Ahammad S H., Rajesh V., Saikumar K., Jalakam S., Kumar G N S (2019). Statistical analysis of spinal cord injury severity detection on high dimensional MRI data, *International Journal of Electrical and Computer Engineering*, 9 (5), 3457-3464.
2. Anderson RN, Smith BL. (2005) Deaths: Leading causes for 2002. *National Vital Statistics Reports: From the Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System.* ;53(17):1-89.
3. Babu B.K., Narasimha Rao M.V.A.L. (2017). A study on engineering students' awareness and myths about chickenpox in Guntur, Andhra Pradesh. *International Journal of Mechanical Engineering and Technology*, 8(12), 478-490.
4. Charankumar G and Shobhalatha G (2020). Analysis of Water Quality by Using Spatial Graph Theory and Metamodelling, *Thailand Statistician*, 18(4), 429-438.
5. Kumar D.P., Rajyalakshmi K., Asadi S.S. (2017). A model analysis for the promotional techniques of cell phone subscriber identity module (SIM) cards, *International Journal of Civil Engineering and Technology*, 8(9), 889-897.
5. Kumar D.P., Rajyalakshmi K., Asadi S.S. (2017). Analysis of mobile technology switching behavior of consumer using chi-square technique: A model study from Hyderabad. *International Journal of Civil Engineering and Technology*, 8(9), 99-109.
6. Naga Malleswari D., Subrahmanyam K. (2019). Design of data acquisition process and its validation through statistical approaches, *International Journal of Recent Technology and Engineering*, 8(1), 3242-3245.
7. Phani Bhaskar P and Prasanna Kumar D (2017). A study on factors influence towards e-commerce, *International Journal of Mechanical Engineering and Technology*, 8, 9, 478-494.

8. Sai Pavan N. N. G., Raja K. H., Rajul B. G., Asadi S S (2018). A statistical evaluation on road safety audit: A model study from hanuman junction to kanaka durga vaaradhi Vijayawada, *International Journal of Mechanical Engineering and Technology*, 9, 2, 721-733.
9. Satish Babu J., Dhulipalla V.K., Girish Kumari B., Bhargavi K., SriChaitanya G (2017). The statistical approach for slot machine, *Journal of Advanced Research in Dynamical and Control Systems*, 9(6), 1042-1053.
10. Schwartz AJ (2006) College student suicide in the United States: 1990–1991through 2003–2004. *Journal of American College Health*. ;54(6):341–352.
11. Rajyalakshmi K and Victorbabu B Re (2018). A note on second order rotatable designs under tri-diagonal correlated structure of errors using balanced incomplete block designs, *International journal of agricultural and statistical sciences*, 14(1), 1-4.
12. Rajyalakshmi K and Victorbabu B Re (2018). Construction of second order slope rotatable designs under tri-diagonal correlated structure of errors using symmetrical unequal block arrangements with two unequal block sizes, *Journal of statistics and management systems*, 1-14.
13. Rajyalakshmi K and Victorbabu B Re (2019). Construction of Second Order Slope Rotatable Designs under Tri-Diagonal Correlated Structure of Errors Using Balanced Incomplete Block Designs, *Thailand Statistician*, 17(1), 104-117.
14. Varalakshmi M and Rajyalakshmi K (2020). Optimization of responses using balanced ternary designs, *International Journal of Advanced Science and Technology*, 29(5), 4771-4775.
15. Prasanthi V, Rajyalakshmi K and Victorbabu B Re (2020). New class of Second order rotatable designs using balanced ternary designs. *J. Math. Comput.Sci*, 10 (6), 2532-2543.