



SUICIDAL IDEATION SCALE (SIS): DEVELOPMENT AND STANDARDIZATION

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Abstract:

Suicidal ideation is predominantly a thought or a concept that may potentially lead to indulge in suicidal behaviour. It is a predictor of suicidal behaviour clinically and early identification of suicidal ideation could save the lives of many. Suicidal Ideation Scale (SIS) aims at identifying the prevalence of suicidal tendency among the higher secondary students due to psychological reasons, study reasons, physical reasons, social reasons and economic reasons. The investigators drafted Suicidal Ideation Scale with 70 items in the form of statements, after a diligent review and an in-depth search on literature related to suicide and suicidal ideation. It is a 4 point scale with the options never, rarely, sometimes and often. The scale has some items in the scale were modified, reworded, restructured, regrouped and rearranged, and the given suggestions of the experts in Education and Psychology were carried out and thereby validated the contents of the tool. A pilot study was conducted on a random sample of 150 higher secondary school students studying in Cuddalore, Villupuram and Thiruvannamalai districts in Tamil Nadu and the results were scored. After item analysis, 6 items were statistically deleted and the remaining 64 items were selected. The reliability 0.82 was established by split-half method and the norms of interpretation were fixed.

Introduction:

New research has revealed that humans are natural born killers - With our instinct to kill" (Waghorn, 2016) reports Mirror. The day-to-day use of the term 'Killer instinct' refers to do anything wild suggests that the urge to kill is an instinctive behaviour. It's a surprise that there are nine words referring to killing the members of one's family itself: patricide, matricide, parenticide, fratricide, sorricide, matricide, uxoricide, filicide, parricide: killing of one's own father, mother, parents, brother, sister, husband, wife, son or daughter, a close relative (http://www.fun-with-words.com/cide_words.html). The term 'suicide' that refers to 'the action of killing oneself intentionally' (<https://en.oxforddictionaries.com/definition/suicide>) remains mysterious and pathetic. The term is derived from Latin meaning "one's own" and "to kill" is a conscious act of self-induced annihilation. Suicide is the preferred term for self-inflicted death (Barraclough & Shepherd 1994). Ideation refers to the process/act of forming ideas in the mind on something (<https://dictionary.cambridge.org/dictionary/english/ideation>). Suicidal ideation is a term used in the field of medical science to refer to the unusual preoccupation with suicidal thoughts.

Significance of Suicidal Ideation Scale:

The rate of suicide is alarmingly increasing owing to varying affecting factors in the present times. According to World Health Organization, close to 800 000 people die due to suicide every year, which is one person every 40 seconds (https://www.who.int/mental_health/). Suicide is the second leading cause of death among 15-29-year-olds globally and the rate of suicide is 8 lakh every year (India Today, 2018). Suicide is the leading cause of death in the 15-39-year age group (Economic Times, 2018). Statistics of Suicide in India reports, every year, more than 1,00,000 people commit suicide in India. There are various causes of suicides like professional/career problems, discrimination, sense of isolation, abuse, violence, family problems, mental disorders, alcoholism, financial loss, chronic pain and more (Ngilneii, 2017). The range of suicidal ideation varies from self-harm and unsuccessful attempts, which may be deliberately constructed to fail or be discovered, or may be fully intended to result in death.

Suicidal ideation is "a form of mild suicidal behaviour, a predictor of suicidal behaviour, a clinical phenomenon in its own right" (Linden, Zaska & Ahrens 2003). Although most people who undergo suicidal ideation do not go on to make suicide attempts, a significant proportion do. Suicidal ideation is generally associated with depression; however, it seems to have associations with many other psychiatric disorders, life events, and family events, all of which may increase the risk of suicidal ideation. Currently, there are many different treatment options available for those experiencing suicidal ideation. (Gliatto & Rai, 1999). The increasing suicidal rate and that too among the youth and the availability of so many suicide prevention organizations makes the formulation of the tool significant with human concern and social responsibility.

Operational Definition of the Terms:

Suicidal Ideation: It refers to unusual preoccupation with suicidal thoughts in mind of the individuals.

Suicidal Ideation Scale: It is a tool to measure the level of suicidal thoughts in mind of the individuals. In this study it refers to the 4 point scale prepared by the investigators.

Higher Secondary Students: It refers to students studying in the 11th and 12th standards in the Higher Secondary Course as per the pattern of the Government of Tamil Nadu.

Objectives of the Study:

- To construct Suicidal Ideation Scale for the higher secondary students
- To standardize Suicidal Ideation Scale for the higher secondary students
- To establish norms for Suicidal Ideation Scale scores

Pilot Study:

Pilot study, prior to main study, was carried out by the investigators to rectify the shortcomings and the administration process of tool construction. It helped the investigators to minimize non-sampling errors, instilled confidence and equipped the investigators with the validation process of the constructed tool,

Construction and Standardization of Suicidal Ideation Scale:

The investigator developed a scale to measure the suicidal ideation among higher secondary students in the present situation. So the researchers constructed and standardized a tool to measure the suicidal ideation among higher secondary students using the principles followed by Osman *et al.*, (2001). To construct the suicidal ideation scale the investigators coined the statements, gathered through reports, web resources, journals, related studies and textbooks. On the basis of the above sources, 70 statements were prepared. Those statements were given to the experts for their judgment. After scrutinizing, 64 statements were selected. Each statement has been set against a 4 point scale with responses, never, rarely, sometimes and often. A pilot study was conducted on a random sample of 150 higher secondary school students studying in Cuddalore, Villupuram and Thiruvannamalai districts in Tamil Nadu. The copies of the tool were given and the tool was administered on the chosen sample and they were requested to give their responses to all 70 statements. The respondents were asked to put a (√) mark in the appropriate box, which they felt very near to their attitudes.

Table 1: Scoring of Responses in Suicidal Ideation Scale

Suicide Ideation Scale	Response Options			
	Never	Rarely	Sometimes	Often
Score Value Given	0	1	2	3

The responses given by them were scored according to the weightages given to the responses and arranged in ascending order of their total score. Then the top 27% (high group) and bottom 27% (low group) of the total score were taken and ‘t’ value for each statement was given by using the formula.

$$t = \frac{M_1 - M_2}{\sqrt{\frac{SD_1^2}{n_1} + \frac{SD_2^2}{n_2}}}$$

Table 2: Item Analysis: Rank of the Items in the Suicidal Ideation among Higher Secondary Students Scale based on ‘t’ value

S.No	Statement No	‘t’ value	Remarks	S.No	Statement No	‘t’ value	Remarks
1.	32	9.06	Selected	36.	53	4.32	Selected
2.	61	7.45	Selected	37.	24	4.29	Selected
3.	44	7.09	Selected	38.	57	4.23	Selected
4.	63	7.08	Selected	39.	38	4.19	Selected
5.	72	7.07	Selected	40.	26	4.16	Selected
6.	70	6.99	Selected	41.	06	4.05	Selected
7.	39	6.92	Selected	42.	05	3.99	Selected
8.	27	6.91	Selected	43.	02	3.92	Selected
9.	71	6.28	Selected	44.	17	3.88	Selected
10.	69	6.16	Selected	45.	07	3.85	Selected
11.	55	6.03	Selected	46.	19	3.84	Selected
12.	04	6.02	Selected	47.	15	3.80	Selected
13.	16	5.98	Selected	48.	30	3.72	Selected
14.	37	5.83	Selected	49.	14	3.71	Selected
15.	31	5.80	Selected	50.	33	3.57	Selected
16.	45	5.73	Selected	51.	12	3.44	Selected
17.	23	5.67	Selected	52.	47	3.43	Selected
18.	66	5.65	Selected	53.	35	3.36	Selected
19.	46	5.61	Selected	54.	62	3.27	Selected
20.	43	5.41	Selected	55.	25	3.04	Selected
21.	40	5.39	Selected	56.	52	3.97	Selected

22.	67	5.35	Selected
23.	54	5.23	Selected
24.	21	5.16	Selected
25.	29	5.06	Selected
26.	60	5.03	Selected
27.	41	5.01	Selected
28.	28	4.97	Selected
29.	56	4.95	Selected
30.	58	4.70	Selected
31.	13	4.58	Selected
32.	03	4.49	Selected
33.	49	4.46	Selected
34.	42	4.43	Selected
35.	20	4.42	Selected

57.	68	2.71	Selected
58.	59	2.66	Selected
59.	08	2.63	Selected
60.	50	2.51	Selected
61.	22	2.35	Selected
62.	09	2.34	Selected
63.	48	2.21	Selected
64.	34	2.12	Selected
*65.	10	1.62	Not selected
*66.	64	1.52	Not selected
*67.	11	1.27	Not selected
*68.	18	1.23	Not selected
*79.	36	1.15	Not selected
*70	51	0.25	Not selected

According to Edwards (1957), the value of 't' is a measure of the extent to which a given statement differentiates between the high and low groups. The statement for which the 't' value is greater than 1.98 was selected. Thus 6 statements were deleted and 64 statements were selected for the final study and were arranged from highest 't' values to the lowest 't' values in descending order (see Table 3). The tool for the final study with the selected statements is given in *Annexure 1*.

Table 3: Item analysis: The 64 Statements Selected for the Final Study of Suicidal Ideation Scale among Higher Secondary Students based on the 't' Value

S.No	Statement No	't' value	Remarks
1.	32	9.06	Selected
2.	61	7.45	Selected
3.	44	7.09	Selected
4.	63	7.08	Selected
5.	71	7.07	Selected
6.	69	6.99	Selected
7.	39	6.92	Selected
8.	26	6.91	Selected
9.	70	6.28	Selected
10.	68	6.16	Selected
11.	54	6.03	Selected
12.	03	6.02	Selected
13.	16	5.98	Selected
14.	37	5.83	Selected
15.	31	5.80	Selected
16.	44	5.73	Selected
17.	22	5.67	Selected
18.	65	5.65	Selected
19.	45	5.61	Selected
20.	42	5.41	Selected
21.	39	5.39	Selected
22.	66	5.35	Selected
23.	53	5.23	Selected
24.	20	5.16	Selected
25.	28	5.06	Selected
26.	59	5.03	Selected
27.	40	5.01	Selected
28.	27	4.97	Selected
29.	55	4.95	Selected
30.	57	4.70	Selected
31.	12	4.58	Selected
32.	02	4.49	Selected

S.No	Statement No	't' value	Remarks
33.	48	4.46	Selected
34.	41	4.43	Selected
35.	19	4.42	Selected
36.	52	4.32	Selected
37.	23	4.29	Selected
38.	56	4.23	Selected
39.	37	4.19	Selected
40.	25	4.16	Selected
41.	05	4.05	Selected
42.	04	3.99	Selected
43.	01	3.92	Selected
44.	16	3.88	Selected
45.	06	3.85	Selected
46.	18	3.84	Selected
47.	14	3.80	Selected
48.	29	3.72	Selected
49.	13	3.71	Selected
50.	32	3.57	Selected
51.	11	3.44	Selected
52.	46	3.43	Selected
53.	34	3.36	Selected
54.	61	3.27	Selected
55.	24	3.04	Selected
56.	51	3.97	Selected
57.	67	2.71	Selected
58.	58	2.66	Selected
59.	07	2.63	Selected
60.	59	2.51	Selected
61.	21	2.35	Selected
62.	08	2.34	Selected
63.	47	2.21	Selected
64.	33	2.12	Selected

Reliability of the Suicidal Ideation Scale:

Reliability is the degree of consistency that the instrument or procedure demonstrates; whatever it is measuring, if does so consistently. A test score is called reliable when we have reasons for believing the score to

be stable and trust worthy. Stability and trustworthiness depend upon the degree to which the score is an index of “true ability” is free from chance error (Garrett, 2005). Reliability can be defined as the degree of consistency between two measures of the same thing. Using split half technique (odd/even scores), obtained reliability for the suicidal ideation scale was 0.82.

Validity of the Suicidal Ideation Scale:

The validity of any measuring instruments depends upon the fidelity with which it measures what it purports to measure (Garrett, 2005). Validity reveals the merits of our measurement. Validity refers to truthfulness. The validity of a test or scale refers to its accuracy that is how closely the test measures, what it intends to measure. The square root of the ‘r’ value was the intrinsic validity and it was found to be 0.80. Thus the suicidal ideation scale has been constructed by the investigators has high reliability and validity. The tool used for final study consists of 64 statements to measure the student’s suicidal ideation. Scoring was done based on the response of the samples for each item. The respondents were request to put a tick mark (✓) against any one of the responses. The responses never, rarely, sometimes and often were given 0,1,2 and 3 respectively. There are 64 statements in the tool therefore one can able to get maximum score of 192 from the tool.

Norms:

Roughly around sixty minutes may be given for the higher secondary students to read and mark their responses in in Suicidal Ideation Scale. The norms for interpretation of the scale based on the obtained score are as follows.

Table 4: Norms for Suicidal Ideation Scale

S.No	Scores Obtained in SIS	Interpretations of SIS
1.	1-64	Mild
2.	65-128	Moderate
3.	129 and above	Severe

Conclusion:

The scale was constructed for measuring suicidal ideation of higher secondary school students. Planned and systematic efforts were made to validate the tool using appropriate statistical techniques and so the scale can be used to measure the suicidal ideation of the students belonging to the age group 17 to 22. The findings of the tool will be helpful to identity whether there exists suicidal ideation among this age group and if so to what extent. Proper administration of the tool can provide valid cues to identify the affected students and take appropriate preventive measures by counselling the students, with the moral and emotional support of parents, teachers and friends.

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Annexure 1:

Suicidal Ideation Scale (SIS) - Final Tool:

Instruction:

Please read the 64 statements given below. Each statement has four responses: Never, Rarely, Sometimes and Often. Mark your response, that you feel appropriate, against the choice of yours, by putting a tick mark (✓) on it. The results will be kept confidential and be used only for the research purpose.

S.No	Cues	Never	Rarely	Sometimes	Often
I Psychological Reasons					
1.	Have you ever thought of your future aims and felt depressed?				
2.	Have you ever thought of self-harm when you failed in exams because of bad friendship?				
3.	Have you ever got depressed when you feel that you have poor administration skills?				
4.	Have you ever thought of self-injury because of the death of your loved ones?				
5.	Have you ever thought of committing suicide because of not having good relationship with friends?				
6.	Have you ever thought of committing suicide about getting punishment before others for a small mistake committed earlier?				
7.	Have you ever thought of committing suicide whenever you lose your self-respect among friends?				
8.	Have you ever got depressed when you are ignored based on your complexion?				
9.	Have you ever thought of committing suicide when the teacher came to know your mistakes?				
10.	Have you ever thought of committing suicide because of love failure?				
11.	Have you ever got depressed when you felt alone losing parents and relations?				
II Study Reasons					
12.	Have you ever felt depressed and thought of committing suicide when you scored low marks?				
13.	Have you ever thought of committing suicide when you did not get your favorite subject?				
14.	Have you ever thought of committing suicide when you are not able to write your exam properly even though there was enough time?				
15.	Have you ever thought of committing suicide when you are not able to expose your personal talents at school level?				
16.	Have you ever thought of self-injury when you are not able to score high marks because of selecting subject that you disliked?				
17.	Have you ever got depressed when your parents advised for scoring low marks in exams?				
18.	Have you ever got depressed when the teacher teaches without interval in class?				
19.	Have you ever thought of committing suicide about your problems in learning?				
20.	Have you ever got depressed about your disability in understanding subjects?				
21.	Have you ever got depressed about the hindrances arise because of spelling mistakes in writing?				
22.	Have you ever thought of committing suicide whenever you lost valuable things in classroom and parents being strict?				
23.	Have you ever thought of committing suicide because of the syllabus being difficult?				
24.	Have you ever got depressed as you cannot score mark because of mathematical error mistakes?				
25.	Have you ever thought of committing suicide when you advised for your mistakes?				
26.	Have you ever got depressed when a teacher disliked by you takes classes?				
27.	Have you ever thought of committing suicide when you got depressed after comparing your marks with friends?				

28.	Have you ever got depressed for not getting favourable environment during examinations?				
29.	Have you ever thought of committing suicide when you could not continue your studies because of family circumstances?				
30.	Have you ever thought of committing suicide due to the strictness forced in schools?				
31.	Have you ever got depressed when the prize you deserved was awarded to another in the school?				
32.	Have you ever thought of committing suicide of the unexpected incidents happened during school days?				
33.	Have you ever thought of committing suicide when you were not able to pay your school fees?				
34.	Have you ever got depressed of the differences shown among the students of private and government schools?				
35.	Have you ever thought of committing suicide when you could not continue your studies because of family circumstances?				
36.	Have you ever got depressed because of the distractions in education caused by others?				
III	Physical Reasons				
37.	Have you ever thought of committing suicide when you could not write your examinations because of illness?				
38.	Have you ever thought of committing suicide because you are a differently abled person?				
39.	Have you ever thought of committing suicide because your health is affected due to drug addiction?				
40.	Have you ever thought of committing suicide when you lost in sports?				
41.	Have you ever thought of committing suicide when your health is affected because of long time smoking habits?				
IV	Social Reasons				
42.	Have you ever got depressed because of not getting your favourite course due to family circumstances?				
43.	Have you ever thought of committing suicide when you have to complete with your relations?				
44.	Have you ever thought of committing suicide when the society strongly condemned for the fault you haven't committed?				
45.	Have you ever thought of committing suicide when you got depressed of the fight between your parents?				
46.	Have you ever thought of committing suicide when losing your rights due to birth order?				
47.	Have you ever got depressed when you are affected by sexual harassment?				
48.	Have you ever thought of committing suicide when you got depressed when the society strongly condemns your fault?				
49.	Have you ever thought of committing suicide because of religious discrimination?				
50.	Have you ever thought of committing suicide because of the effects of change in environment?				
51.	Have you ever got depressed as you don't have anyone to guide in the society?				
52.	Have you ever thought of committing suicide when you got depressed due to fight between your parents?				
53.	Have you ever got depressed when you were denied opportunities by the society?				
54.	Have you ever thought of committing suicide of your parent's remarriage?				
55.	Have you ever thought of committing suicide because of your parents' divorce?				
56.	Have you ever thought of committing suicide due to caste discrimination?				
57.	Have you ever got depressed as there were no elderly people in your family to offer advice?				

V	Economic Reasons				
58.	Have you ever thought of committing suicide when you were not able to fulfill your desire due to economic status?				
59.	Have you ever got depressed because of the economic status of your parents?				
60.	Have you ever got depressed because you don't have basic facility in your house for studying?				
61.	Have you ever thought of committing suicide because you were not able to reach your goal due to economic status?				
62.	Have you ever thought of committing suicide when you could not fulfill your necessities because of a large family?				
63.	Have you ever thought of committing suicide when you felt that your parents did not occupy a high socio economic status?				
64.	Have you ever thought of committing suicide because you are unable to continue your higher education due to economic status?				