Adaptation of Positive and Negative Suicide Ideation (PANSI) Inventory in the Perspective of Bangladesh

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Abstract

The present study was to adapt the items of the Positive and Negative Suicide Ideation (PANSI) Inventory by Osman *et al.* (1998) as a suitable measure in our culture. The study consisted of the following steps: translation of the scale, language consistency, item analysis, measurement of reliability, and measurement of validity. In the first phase, the scale was translated into Bangla and was checked by 6 judges. According to their suggestions, some modifications were made and the questionnaire was given to two judges for back translation. After assessing their English translation the final form of the scale was prepared. For language consistency, Bangla and English both version was administered to 20 respondents (10 males, and 10 females). After two weeks same participants were given to reverse version. The result shows that a high significant correlation value of 0.849 represents an index of alternate form reliability affirming the Bangla version as the equivalent of the original English version. For item analysis, the scale was administered to a total of 120 respondents. The internal consistency was measured by computing Cronbach's coefficient alpha and was found to be 0.846 for Negative Suicide Ideation (NSI) which contains 8 items, and 0.701 for Positive Ideation (PSI) which contains 6 items. Chonbach's coefficient alpha was for a total scale of 0.739 of the total 14 items. In the case of the test-retest method, the scale was administered twice on a sample of 30 respondents at an interval of two weeks, and the values of two tests were correlated using Pearson's Product Moment Correlation techniques. The coefficient for PANSI was 0.739. The test-retest correlation coefficient was significant at a .01 level. In the next phase, the validity of the scale was determined by face and content validity. 95% inter-judge agreement of the scale items affirms the face validity of the scale as measuring what it appears to measure. Expert opinions (inter-judgment agreement) verify the content of the scale as relevant to the broad and significant area of PANSI. Items-total correlation is another indicator of the appropriateness of items as reflective of the content and state of PANSI. These results indicate that the scale is both reliable and valid. However, further studies for determining other forms of validity and establishment of norms are recommended.

Keywords: Adaptation PANSI.

Introduction

Global high-tech capitalism has spawned a technological and scientific production miracle. However, with the miracle came complications. The global perspective on social problems focuses on several of these issues, including family decline, divorce, and single parenting; the gender war, in which men and women are distrustful of and threatened by one another in the workplace, the home, and the bedroom; and the moral malaise created by science and religion, the media, and morality[1]. During the years of globalization, extended families were divided into nuclear families. Each member of a nuclear family is too inextricably linked to the others. It becomes critical whenever any relationship deteriorates, even for a few hours. The nuclear family is defined by the isolation and emotional dependency of the husband-wife and parent-child relationships, which creates tensions and may result in the breakup of the marriage in the former case and in juvenile delinquency and other juvenile problems in the latter case. Adolescence is the developmental stage at which children transition from childhood to adulthood-intellectually, physically,

hormonally, and socially. Adolescence is a turbulent period marked by numerous changes and transformations. Both gonadal and behavioral maturation occur during the pubertal transition to adulthood. Puberty's hormonal changes contribute to adolescent physical, emotional, intellectual, and social changes. These changes not only result in reproductive function maturation and the emergence of secondary sex characteristics but also in the emergence of sex differences in non-reproductive behaviors. During adolescence, physical changes such as accelerated body growth, sexual maturation, and the development of secondary sexual characteristics occur concurrently with social, emotional, and cognitive development. Additionally, the adolescent brain develops the ability to organize, control impulses, and weigh risks and rewards; however, these changes can leave adolescents extremely vulnerable to risk-taking behavior.

Thus, brain maturation is a critical component of overall adolescent development, and a basic understanding of the process may aid in adolescent sexual behavior, pregnancy, and intellectual performance issues[2]. Suicidal ideation, alternatively referred to as suicidal thoughts, refers to suicidal thoughts or an unusual preoccupation with suicide. It is considering, contemplating, or planning suicide. Suicidal ideation or suicidal thoughts are much more prevalent than most people admit-in fact, the majority of people have considered suicide at some point in their lives. These thoughts are quite distressing, all the more so because they are frequently associated with a mental illness such as depression or bipolar disorder[3]. Suicide has become a major issue throughout the world, with over 800,000 people dying each year[4]. Bangladeshis account for 2.06 percent of all suicide deaths worldwide each year. In 2011, the World Health Organization reported that 19,697 people committed suicide in Bangladesh. According to a 2010 report published by Shaheed Suhrawardy Medical College Hospital in Dhaka, approximately 6,500,000 people in Bangladesh

are suicidal. Each year, 128.08 people per 100,000 people commit suicide in Bangladesh. More seriously, there were numerous suicide attempts for every suicide death, while those with suicidal thoughts were in the thousands. Suicide is the leading cause of death on a global scale. Adolescent suicidal behavior, on the other hand, is a neglected public health issue, particularly in low-income countries like Bangladesh. Suicidal ideation was present in 5% of adolescents over their lifetime. The majority of adolescents (aged 14–19 years) with suicidal ideation (52.8 percent) were females, 82.4 percent were unmarried, and 73 percent were students. Suicidal ideation was statistically significantly associated with age, education, occupation, parental or other caregiver status, and home ownership[5]. According to Van Orden *et al.*,[6] suicide attempts are influenced by two major factors.

The first significant factor is an innate desire for death, while the second is an acquired capability. Desire for death occurs as a result of thwarted belongingness, which is defined as feeling emotionally alienated from others, and perceived burdensomeness, which is defined as feeling incompetent and thus a burden on others[7]. In this context, the acquired capability is used because people are naturally fearful of death and painful experiences. The capability to commit suicide is typically formed by emotional and physical pain and a disrupted cognitive state. It is acquired through prior suicide attempts (self-directed violence), rehearsing suicide through behavior or imagery, and other methods of acclimating to painful or dangerous experiences. Bhuiyan[8], adapted and validated a "Attitudes Towards Suicide" (ATTS) questionnaire about suicidal behavior among Bangladeshi adolescents, as well as examined its viability in this cultural setting. The cultural adaptation of ATTS to the setting in Bangladesh was done through focus group talks in four groups. In a second step, ATTS was given to 96 teenagers between the ages of 15 and 24. A suicide attempt was reported by 5.5 percent of girls and 4.8 percent of boys in the previous year.

Suicide attempts, expression, and ideation among family members, relatives, and friends were 11.62 percent, 27.81 percent, and 39.58 percent, respectively, among those who were exposed to suicidal behavior among important people.
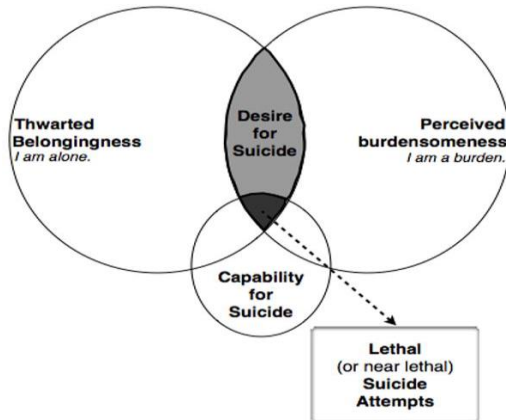

Figure-1: Interpersonal model of suicide

Kirchner *et al.*,[9] .High school kids were studied for self-harming and suicidal ideation. There are no gender differences in risk behaviors, however both types of risk behaviors rise with age. Deliberate self-harm and suicidal ideation have a strong relationship. Khan *et al.*,[10]. studied on academic stress, depression, negative affects, hopelessness and suicide ideation among 204 Malaysian and 200 Indian adolescents. The mean age of the participants' was 18. The results showed significant differences between Malaysian and Indian adolescents on Hopelessness, Negative Affects, Suicide Ideation, Depression and Academic Stress. Nowadays, people are becoming more conscious of the importance of preventing suicidal behavior. Different scales are required to evaluate suicidal ideation and behavior, as was previously examined. Suicidal behavior and suicidal ideation require assessment instruments or scales that take into account our sociocultural context. Osman *et al.*,[11] Positive and Negative Suicide Ideation (PANSI) Inventory is one of the best suicidal ideation scales because it has only 14 items. However, there is no Bangla version. The scale should be adapted to Bangladeshi culture in order to increase our understanding of the issue. However, because to a lack of scientific tools and adequate investigation, Bangladesh's validation of the PANSI scale continues to lag behind. With the aforementioned rationale in mind, the current study was conducted to adapt the scale to Bangladeshi cultural norms. Thus, future research with this tool will help us better understand suicidal ideation in teenagers and aid in the development of successful treatments for them.

Procedure

The adaption of PANSI Bangla version involved multistage procedures involving translation, reliability, validity as present with sample size in Figure 2. The study consisted of the following steps: Translation of the scale; Language Consistency; Item Analysis; Measurement of reliability; Measurement of validity.
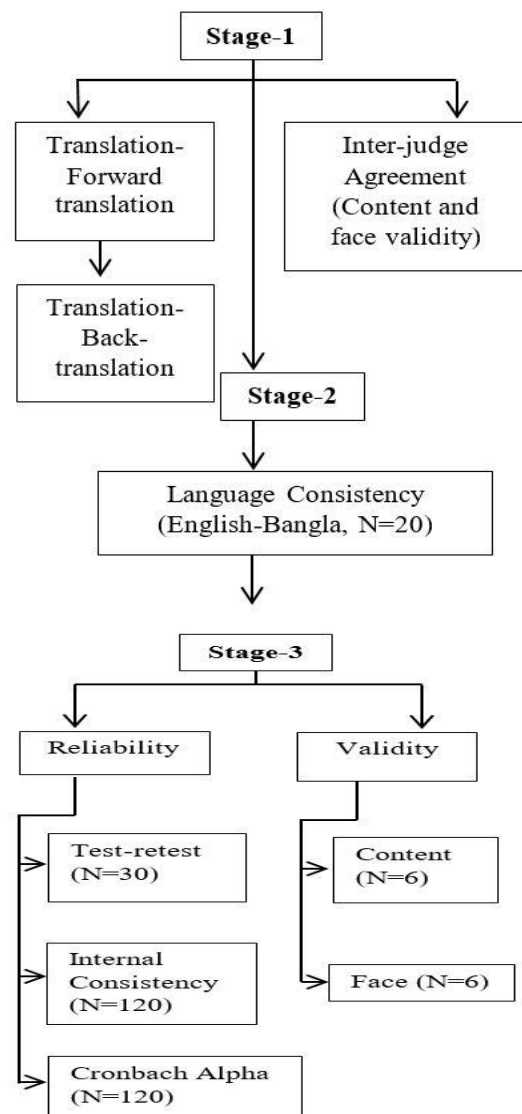
Translation of the scale

To begin, the present researcher translated all questionnaire items into Bangla. Following the completion of the translation, six judges were chosen, all of whom were teachers at the University of Chittagong, to assess the translated items' appropriateness. Three were faculty members in the Psychology Department, two were faculty members in the English Department, and one was a faculty member in the Clinical Psychology Department at Dhaka University. The judge was given a questionnaire that included the item in both English and Bangla. They were instructed to carefully review each statement to ensure that the intended meaning was conveyed and, if necessary, to modify the Bangla statements. Additionally, they were asked to rate each statement using a three-point rating scale.

The average rating for all items was greater than 2, indicating the translated items' reliability. However, based on their suggestions and the author's and supervisor's judgment, some modifications were made and the final form of the questionnaire was prepared. Prior to printing, the translated Bangla version of the questionnaire was given to two experts fluent in both languages for back translation. They completed the translation and it was determined that the questionnaire's Bangla translation was adequate and acceptable.

Language Consistency

After the final form of questionnaire was prepared, it was administered on a sample to determine the language consistency of all items.

Procedure

To begin, the supervisor of the study signed an application referring the researcher for data collection. The letter was sent to the respective school's chairman/principal requesting permission to collect data. After obtaining permission, questionnaires were distributed to twenty participants (10 male students, 10 female students). To begin, ten male students were given the Bangla version of the PANSI scale, while ten female students were given the English version. After two weeks, the same participants were given the PANSI scale in reverse. The researcher collected the questionnaires on the same day. It should be noted that all participants were assured that the information they provided would be used solely for research purposes and that their responses would remain private.

Item Analysis

After the final form of the questionnaire was prepared, it was administered on a sample to determine the consistency of all items.

Test-Retest Reliability

Another method of finding reliability applied in this study was test-retest method. In this case the test required to be administered twice on the same group with an interval of time. For the purpose of testing test-retest reliability a sample of 30 respondents were obtained from two different schools in Chittagong .The scale was administered on the grade nine students whose age range was 13-16 years. The procedure of administering the scale was more or less the same as in the case of collecting data for determining internal consistency reliability. The only difference was that the same questionnaire was administered twice upon the same respondents at an interval of two weeks. At first the questionnaire was administered to 120 students but after two weeks same questionnaire administered to 30 students. The test-retest reliability was determined by converting the raw scores into standard scores and suicide ideation and correlating the value of two sets of score obtained from the test-retest. The product moment correlation coefficient formula was applied to measure this reliability.

Table 1: Original (English) - adapted (Bangla) version correlation

Reliability	Condition	N	Mean	SD	r-value
Alternate Form	Original (English)	20	58.50	6.54	0.849
	Adapted (Bangla)	20	58.90	7.01	

Significant at 0.01 level.

Measurement of validity

Face and content validity were used to determine validity. The validity of both versions was determined by the inter-judge agreement on the items in English and Bangla. Six judges were tasked with forward translation, while two judges were tasked with reverse translation.

Results and Discussion

Original (English) - Adapted (Bangla) version correlation

20 respondents were recruited for this purpose. Pearson Product Moment method was used to determined Original (English) - Adapted (Bangla) version correlation. The correlation value of 0.849 is significant which is representing an index of alternate form reliability affirming the Bangla version as the equivalent of original English version of the scale. Such reliability coefficient is a measure of both temporal stability and consistency of response to different item samples.

Item Analysis

Table 2: Corrected item-total correlation negative suicide ideation (NSI)

Item No.	r value	Level of Significance
Item_1	0.65*	0.01
Item_3	0.65*	0.01
Item_4	0.41*	0.01
Item_5	0.64*	0.01
Item_7	0.55*	0.01
Item_9	0.53*	0.01
Item_10	0.59*	0.01
Item_11	0.67*	0.01

(*All the significant items are star marked). After applying Product Moment method, all of the items are significant at .01 level.)

Reliability

Reliability of scale was measure by applying internal consistency technique and test-retest method.

Internal consistency

To see the internal consistency, item to total correlation was measured and Cronbach's coefficient alphas were computed. The resulting coefficients are presented in Table 4.

Table 3: Corrected item-total correlation positive ideation (PSI)

Item No.	r value	Level of Significance
Item_2	0.43*	0.01
Item_6	0.24*	0.01
Item_8	0.45*	0.01
Item_12	0.46*	0.01
Item_13	0.47*	0.01
Item_14	0.53*	0.01

(*All the significant items are star marked)

After applying Product Moment method, all of the items are significant at .01 level.

Table 4: Internal consistency reliability coefficient for PANSI

Abbreviated Items	Cronbach's Alpha
Negative Suicide Ideation (NSI)	0.846
Positive Ideation (PSI)	0.701
PANSI	0.739

The main purpose of the study was to adapt and find the reliability of the Bangla version of the Positive and Negative Suicide Ideation (PANSI) Inventory to make it suitable for the administration of Bangla-speaking people. For this purpose, the inventory was translated into Bangla and then Examined by six judges. Each item of the Bangla version was selected on the basis of the agreement of all six judges. After this, the final form

was prepared, and then the parallel form and test-retest reliability of the Bangla version were tested. The parallel form reliability coefficient for the scale was 0.849. On the other hand, the test- retest reliability coefficient for the scale was 0.781. Both the parallel and test retest reliability coefficient were highly significant. Results demonstrated that all items of the present study also had suitable factorial load on their related factor and the reliability of the scale have been satisfactory. Cronbach's Alpha coefficients were also high. Thus, the high reliability of the Bangla version of the PANSI shows that the adapted Bangla version of the PANSI, is definitely a dependable tool for identifying the suicidal ideation problems of Bangla speaking people.

As seen in table - 4, the Correlation Alpha for the total test of PANSI (all 14 items) was very high which indicates strong internal consistency among the items.

Test-retest reliability

The reliability coefficients obtained by test-retest method on 30 respondents. Pearson Product Moment method was used for test-retest.

Table 5: Test- retest reliability of full scale.

Reliability	Condition	N	Mean	SD	r-value
Test – Retest	First test	30	60.98	5.76	0.781
	Re-test	30	61.83	4.88	

Significant at 0.01 level. The test-retest correlation of 0.781 at an interval of two weeks indicates significantly high temporal stability of score of the scale over different occasions.

Validity

Content validity

To determine the validity of PANSI, Content validity was examined. The objective of the present study was adaptation of Positive and Negative Suicide Ideation (PANSI) Inventory (Osman *et al.* 1998) for use in Bangladesh. The Study has gone through different phases as translation, item analysis, measurement of

reliability, and measurement of validity of the scale.

Table 6: Item no. And their item total correlation r value

Item No.	r- value	Level of Significance
1	.48	0.01
2	.56	0.01
3	.52	0.01
4	.33	0.01
5	.50	0.01
6	.40	0.01
7	.54	0.01
8	.48	0.01
9	.40	0.01
10	.541	0.01
11	.573	0.01
12	.482	0.01
13	.568	0.01
14	.580	0.01

Limitation

The sample size of the present study was not large enough and it was selected only form schools in Chittagong. The validity of the scale has been judged by face and content validity only. It would be desirable to establish other types of validity such as criterion validity.

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