

The Reliability and Validity of the Turkish Version of the Beck Scale for Suicide Ideation (Turkish BSSI)

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ABSTRACT:

The reliability and validity of the Turkish Version of the Beck Scale for Suicide Ideation (Turkish BSSI)

Objective: Although several self-report tools measuring suicidal ideation are used in Turkey, the validity and reliability of the Beck Scale for Suicide Ideation (BSSI), an important tool administered clinically, has not yet been examined. We hope that establishing the validity and reliability of the BSSI can improve the detection of suicidal ideation.

Methods: The sample for this study consisted of 120 individuals who participated voluntarily. One hundred of the 120 participants were administered related relevant instruments, the Beck Depression Inventory [BDI], Beck Anxiety Inventory [BAI], Beck Hopelessness Scale [BHS], and Suicidal Ideation Scale [SIS], to determine concurrent validity. Separately, two clinicians interviewed twenty different participants to assess inter-rater reliability. To assess internal consistency, Cronbach's alpha coefficients were computed. In addition, a principal component analysis with a Varimax rotation was performed to examine the test's factor structure.

Results: Cronbach's alpha value was 0.84 and every item was positively correlated to the total scores on the BSSI. Inter-rater correlation was very strong and significant ($r=0.94$, $p<0.01$). Correlation coefficients for similar measures showed significant results [i.e., SIS ($r=0.40$) and BHS ($r=0.58$)]. There was a mild correlation between the BSSI and BDI ($r=0.40$) but no correlations were found with the BAI.

Conclusion: The BSSI is a valid and reliable measure that has good potential to detect suicidal ideation and behavior in clinical settings when compared to other self-rating measures. These results suggest that measuring suicidal ideation and behaviors using the BSSI across different diagnoses may provide valuable information for clinical research.

Keywords: suicide, inventory, validity, reliability

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INTRODUCTION

Suicidal behavior, including thoughts of suicide, suicide attempts and completed suicides, has biological, psychological and social correlates. It can be a consequence of various inter-related factors, occurring in seemingly healthy individuals

having to cope with extremely stressful life events as well as in people diagnosed with severe psychiatric disorders with or without overt antecedents¹.

Epidemiological data relevant to suicidal ideation are limited. However, ideation is more prevalent in the general population than attempts

and completed suicides. Incidence rates of ideation, attempted and completed suicides are reported at between 13.5 and 35%². One out of six adults reports suicidal ideation at least once in their lives, but only 5.5% report suicide attempts³. According to the Turkish Statistical Institute, the crude suicide rate in Turkey is 4.29 per hundred thousand⁴.

Some variable factors related to suicidal behavior have been reported worldwide. Rates of suicide and suicide attempts increase significantly after adolescence. Most suicide events occur between the ages of 15 and 44. However, completed suicides increase over the age of 45 for men and 55 for women⁵. In other words, the rate of suicide attempts decreases with age but the rate of death due to suicide increases⁵. The male gender shows a similar pattern with higher age; in other words, completed suicide rates are higher in men compared to women, but rates of suicide attempts are higher among women⁶. This is also true for Turkish women and men, despite of some inconsistencies across the regions in Turkey⁷. The ratio for attempts is 2 to 1 whereas the ratio for completed suicides is 1 to 24. Suicide rates are two times higher for single people, and four to five times higher for divorced or separated individuals compared to their married counterparts⁹.

Beyond these risk factors, the most important precipitating factor for suicidality is a psychiatric disorder, which increases an individual's risk between 3 and 12 times¹⁰. Among individuals who die from completed suicide, at least one psychiatric disorder has been recorded in 90-95% of cases¹¹. Major depressive disorder (MDD) is the most common psychiatric disorder among suicidal individuals. The most risky times for individuals with MDD are in the early, less severe phases of the disorder and when some improvement has been reported¹¹. After MDD, prevalence of suicidal behaviors is highest for individuals diagnosed with schizophrenia, alcohol and substance misuse, mood disorders, anxiety disorders, and adjustment disorders⁵. In addition, suicidal individuals have been reported

in the literature as being immature, self-centered, dependent, and having poor impulse control¹².

Overall, the following risk factors have been reported to be related to suicidal ideation: alcohol use disorders, hopelessness, low levels of socio-occupational functioning, poor perceived social support, previous suicide attempts, severity of depression, family history of suicide and psychiatric disorders, chronic physical illness, and fatal illnesses¹³⁻¹⁶.

Early detection and treatment are the best ways to prevent suicide attempts. If signs, symptoms, or risk factors are detected early, individuals are more likely to receive treatment and assistance before attempting to take their own lives. We believe that the detection of suicidal ideation and the assessment of its severity represent an essential step toward prevention.

Many assessment tools aim to evaluate suicidal behavior. The validity and reliability of the following measures have been established for their Turkish versions: The Suicide Probability Scale (SPS), the Suicide Intention Scale (SIS), the Suicidal Behavior Scale (SBS), the Suicidal Ideation Scale, the Reasons for Living Inventory (RLI), and the P-KUAM Suicidal Ideation Scale¹⁷. All of these tools are self-report inventories. The scales most similar to the Beck Scale for Suicide Ideation (BSSI) are the Suicide Intention Scale and the Suicide Ideation Scale, which measure the severity of a person's desire to die and the level of risk for suicide attempts, respectively¹⁷.

The Beck Suicidal Ideation Scale measures a variety of suicidal thoughts including active suicidal ideation, passive suicidal ideation, and preparations for suicide. Its psychometric properties have not been investigated in Turkey. Another distinguishing feature is that the BSSI is a clinician-administered measure and may thus have some advantages for detecting more subtle suicidal ideation. The aim of the current study is to investigate the validity and reliability of the Turkish version of the BSSI in a clinical sample.

METHOD

Translation of the BSSI

When creating the Turkish version of the BSSI, guidelines widely used in cross-cultural research were followed. Accordingly, three psychiatrists separately translated the BSSI into Turkish. A consensus version was translated back into English and reviewed a second time. The final version was then approved by the same three clinicians in addition to the authors of this paper.

Study Sample

A total of 120 individuals were involved in the study. The subjects were outpatients who were admitted subsequently to the Diskapi Yildirim Beyazit Teaching and Research Hospital's Department of Psychiatry, outpatient unit with the primary complaint of suicidal ideation. Patients were recruited based on their suicidal ideations. Participants who could not fill out self-report measures, were mentally retarded, illiterate, had problems with consciousness, were disoriented, psychotic, manic, or catatonic, along with those who did not choose to volunteer, were excluded from the study. The study was approved by the Diskapi YB Teaching and Research Hospital Ethics Committee, and written informed consent was received from each participant and/or the subject's parents where appropriate. Clinical information of the study group is presented in the results section.

Tools

All of the participants were diagnosed and screened for co-morbidity using the Structured Clinical Interview for DSM-IV Axis I Disorders (SCID). After a clinical interview and the administration of the BSSI, a socio-demographic form, the Beck Depression Inventory, the Beck Hopelessness Scale, and the Suicidal Ideation Scale were given to 100 participants. A separate group of 20 participants was assessed by two

different clinicians to determine the inter-rater reliability of the BSSI.

Assessment of Socio-demographic Information

All participants completed a demographic and clinical information form recording age, marital status, education, income, and employment status as well as clinical information about substance use, suicide attempt history, physical illness, and family history of psychiatric disorders.

Beck Scale for Suicide Ideation (BSSI): The BSSI is a clinically administered 19-item scale preceded by five screening items. The BSSI and its screening items are intended to assess a patient's thoughts, plans and intent to commit suicide. All 24 items are rated on a three-point scale (0 to 2). Total scores can range from 0 to 48. No specific cut-off scores exist to classify severity or guide patient management. Higher scores reflect greater suicide risk, and any positive response merits investigation. This scale was developed by Beck and Kovacs in 1979¹⁸.

Beck Hopelessness Scale (BHS): The BHS was developed by Beck et al. to assess the degree of a subject's hopelessness about the future¹⁹. It consists of 20 true-false statements that measure a person's degree of pessimism and negativity about the future. Keyed responses are summed up to give a score of 0 to 20. Scores provide a measure of the severity of self-reported hopelessness: 0–3 minimal, 4–8 mild, 9–14 moderate, and 15–20 severe. There is no cut-off score for the scale. The reliability and validity of the Turkish version was established by Durak²⁰.

Beck Depression Inventory (BDI): The BDI was developed by Beck et al. It is a self-report 21-item scale used to assess the current severity of depression symptoms²¹. Each item is rated on a four-point scale (0 to 3) with possible total scores ranging from 0 to 63. Scores provide a measure of the severity of self-reported depression: 0–9

minimal, 10–16 mild, 17–29 moderate, and 30–63 severe. It was shown by Hisli to be valid and reliable in a Turkish sample²².

Suicidal Ideation Scale (SIS): The SIS is a 17-item self-report measure developed by Levine et al. to assess the risk of suicide²³. This scale aims to evaluate the severity of suicidal ideation using a scoring system where “0” represents the absence of the ideation and “1” represents the presence of the ideation. Accordingly, total scores vary from 0 to 17 with higher total scores representing greater suicidal risk. The validity and reliability of the Turkish scale was established by Dilbaz et al.²⁴.

Statistical Analyses

All analyses were conducted using SPSS for Windows. Spearman correlation coefficients were calculated for convergent validity comparing BSSI scores with BDI, BHS, and SIS scores. Internal consistency was evaluated using Cronbach's α and item/total correlations (and also “if item deleted” coefficient) using the Spearman correlation coefficient. Frequencies were analyzed using a Chi-Square test. To evaluate the adequacy of the samples for constructing validity analyses, Kaiser-Meyer-Olkin and Barlett tests were used. Principal component analysis with relevant rotation technique was used to evaluate the factor structure of the BSSI. The following criteria were

used to determine the components of the scale: 1) eigen values should be greater than 1 according to the Kaiser Criterion, 2) a Scree plot test was taken and 3) all interpretations were derived from the theoretical background of the tests. A Wilcoxon signed-rank test and Spearman correlation analysis were used to test inter-rater reliability.

RESULTS

All analyses except inter-rater reliability were conducted with 100 participants. Inter-rater reliability was assessed separately with 20 additional participants.

Seventy-one (71.0%) of the participants were women. The mean age in the study group was 32.7 (minimum=15 and maximum=79). More comprehensive information is shown in Table 1.

The most prevalent psychiatric disorder in the study group was Major Depressive Disorder (MDD) at 60.0%. Other psychiatric diagnoses occurred as follows: Anxiety Disorders (28.0%), Adjustment Disorder (18%), Schizophrenia (Sch) (9%), Panic Disorder (7%), Conduct Disorder (6.0%), Obsessive Compulsive Disorder (5.0%), Somatoform Disorder (3.0%), Kleptomania (2.0%), Conversion Disorder (2.0%), Bipolar Depression (2.0%), Schizoaffective Disorder Depressive Episode (1.0%), Post-traumatic Stress Disorder (1.0%), Substance Dependency (SD) (1.0%) and Social Phobia (1.0%).

Table 1: Sociodemographic variables

	Female (n=71)	Male (n=29)	Total (n=100)
Age (mean±standard deviation)	33.16±11.85	31.86±12.56	32.79±12.01
Educational years (mean±standard deviation)	8.66±3.99	9.17±3.11	8.81±3.75
Civil Status			
Married	53.5% (n=38)	34.5% (n=10)	48.0% (n=48)
Single	31.0% (n=22)	48.3% (n=14)	36.0% (n=36)
Widowed	2.8% (n=2)	0.0% (n=0)	2.0% (n=2)
Divorced	7.1% (n=5)	6.9% (n=2)	7.0% (n=7)
Separated	5.6% (n=4)	10.3% (n=3)	7.0% (n=7)
Occupational status			
Unemployment	11.3% (n=8)	13.8% (n=4)	12.0% (n=12)
Employed (with social security)	19.7% (n=14)	55.2% (n=16)	30.0% (n=30)
Day-work	4.2% (n=3)	10.3% (n=3)	6.0% (n=6)
Housewife	50.7% (n=36)	0.0% (n=0)	36.0% (n=36)
Student	14.1% (n=10)	13.8% (n=4)	14.0% (n=14)
Retired	0.0% (n=0)	6.9% (n=2)	2.0% (n=2)

Clinical Features

Only individuals reporting suicidal thoughts were included in the current study. In addition to these suicidal thoughts, 68.0% of the participants reported one or more previous attempts of suicide. Thirty-two (32.0%) of the participants reported a suicide attempt during the past two weeks. Mean±Standard Deviations for the scale scores in the study group were as follows: BSSI=12.04±5.74, BHS=13.51±5.40, SIS=11.16±3.69, BDI=36.38±11.25, BAS=30.84±14.69.

Reliability Analyses

Item total correlations and Cronbach's Alpha values (if an individual item deleted) were calculated to assess internal consistency. All items were positively correlated to total scores of the scale and all correlations were statistically significant (Table 2), p values for 18 out of the 19 items were $p<0.01$. For the study sample Cronbach's α was 0.84. When item deleted Cronbach's α values were calculated for each item, α values varied from 0.82 to 0.85.

To evaluate inter-rater reliability, 20 patients

were independently interviewed by two different clinicians. A Wilcoxon signed-rank test used to evaluated inter-rater agreement revealed no difference between the two raters ($p=0.18$). Correlations were also very powerful between the two raters ($r=0.94$, $p<0.01$).

Validity Analyses

To evaluate concurrent validity, correlations between participants' BSSI scores and the scores of several relevant test or test items were calculated. BSSI total scores were positively correlated at a moderate level to BDI total scores ($r=0.40$, $p<0.01$). In addition, items 2 and 8 of the BDI, related to hopelessness and ideation about death respectively, were compared to BSSI items. The second item of the BDI was positively correlated to items 1, 2, 3, 4, 6, 8 ($p<0.01$) and 11 ($p<0.01$) of the BSSI. The eighth item of the BDI was positively correlated to items 1, 2, 3, 4, 8, 10, 17 ($p<0.01$) and items 12 and 14 of the BSSI ($p<0.05$). BSSI total scores were moderately correlated ($r=0.58$) to the total score on the BHS ($p<0.01$). BSSI total scores were also positively correlated to SIS total scores ($r=0.36$, $p<0.01$).

Table 2: Item total score correlations

Item and Rating	Item-Total Score Correlation
1. Wish to live	0.47**
2. Wish to die	0.55**
3. Reasons for living/dying	0.51**
4. Desire to make active suicide attempt	0.65**
5. Passive suicidal desire	0.41**
6. Time dimension: Duration of suicide ideation/wish	0.39**
7. Time dimension: Frequency of suicide	0.55**
8. Attitude toward ideation/wish	0.56**
9. Control over suicidal action/acting-out wish	0.35**
10. Deterrents to active attempt(e.g., family, religion, irreversibility)	0.27**
11. Reason for contemplated attempt	0.25**
12. Method: Specificity/planning of contemplated attempt	0.62**
13. Method: Availability/opportunity for contemplated attempt	0.59**
14. Sense of "capability" to carry out attempt	0.33**
15. Expectancy/anticipation of actual attempt	0.50**
16. Actual preparation for contemplated attempt	0.52**
17. Suicide note	0.27**
18. Final acts in anticipation of death (e.g., insurance ,will)	0.16*
19. Deception/concealment of contemplated suicide	0.41**

Note: n=100, * $p<0.05$, ** $p<0.01$

Table 3: Factor Analysis of Beck's Scale for Suicidal Ideation

	Components					
	1	2	3	4	5	6
BSSI13	0.86					
BSSI16	0.82					
BSSI12	0.76					
BSSI15	0.74					
BSSI4	0.66					
BSSI3		0.77				
BSSI2		0.77				
BSSI1		0.69				
BSSI5		0.61				
BSSI6			0.75			
BSSI7			0.67			
BSSI8			0.63			
BSSI17			0.48			
BSSI10				0.80		
BSSI9				0.67		
BSSI14				0.58		
BSSI11					0.83	
BSSI19					0.66	
BSSI18						0.89

Extraction Method: Principal Component Analysis, Rotation Method: Varimax with Kaiser Normalization, a Rotation converged in 7 iterations

Construct Validity

KMO and Barlett tests used to evaluate the adequacy of the samples to construct validity analyses revealed that the current sample is adequate for the relevant analyses (KMO=0.63 and Barlett sphericity, $p<0.01$). A principal component analysis with Varimax rotation was performed for all 19 items of the BSSI.

Principal component analysis with Varimax rotation revealed that the eigenvalues for 6 factors were greater than 1 (Table 3). These 6 factors accounted for 65.7% of the variance. The first factor consisted of items 4, 12, 13, 15, and 16, accounting for 29.1% of the variance. The second factor consisted of items 1, 2, 3, and 5, accounting for 10.2% of the total variance. The third factor consisted of items 6, 7, and 8, accounting for 8.4% of the total variance. The fourth factor consisted of items 9, 10, and 14, accounting for 6.3% of the total variance. The fifth factor consisted of items 11 and 19, accounting for 5.9% of the total variance. The sixth factor consisted of items 17 and 18 accounting for 5.9% of the total variance. Although item 17 was loaded for both item 3 and 6, it was placed in factor 6 because of its content.

DISCUSSION

The aim of the current study was to establish the reliability and validity of a Turkish version of the BSSI in a sample consisting of individuals who were admitted to a psychiatric outpatient unit in Ankara, Turkey. In this group of people, the mean score on the BHS was 13.51 ± 5.40 . This score was higher than the results of Dilbaz et al.'s study, which reported a mean score of 9.07 for the BHS²⁵. However, another study from Turkey reported a similar mean score on the BHS (i.e., $\text{mean}\pm\text{standard deviation}=11.9\pm4.5$)²⁵. Although there is no cut-off point for hopelessness on the BHS, higher scores represent higher levels of hopelessness¹⁷, suggesting that our sample consisted of individuals with high levels of hopelessness. Similarly, as measured by the SIS, suicidal ideation was very prevalent in the study group ($\text{mean}\pm\text{SD}=11.16\pm3.69$). The other two studies, one conducted with depressed individuals²⁷ ($\text{mean}\pm\text{SD}=10.09\pm3.66$), and the other conducted with suicidal individuals²⁵ ($\text{mean}\pm\text{SD}=8.53\pm2.88$), reported similar scores. Higher scores on the SIS reflect higher risks for suicidality²⁴. In addition, this study group showed

very high scores for depression, as indicated by the BDI (i.e., $\text{mean} \pm \text{SD} = 36.38 \pm 11.15$), again, similar to results from other studies²⁶. This study's mean score for depression falls into the severe depression interval. This finding is in accord with the high prevalence of depression (60.0%) in the study sample.

Internal consistency of a measure is a kind of reliability that shows how every component of the tool has the ability to measure a desired variance. Item-total correlations were computed in the

current study to show internal consistency. All 19 items were statistically significantly correlated to the total score (p value for the 18 items ≤ 0.01 and 1 item ≤ 0.05). In the original study, 16 out of the 19 items were correlated with the total score (p values for 15 items ≤ 0.01 and 1 item ≤ 0.05). This suggests that our results are consistent with the original study.

Another common method, also used in the current study, is to establish internal consistency to compute Cronbach's alpha coefficient. In the

Table 4: Subscale Names According to the Factor Analytic Results

Factor 1- Active Suicidal Desire	
4. Desire to make active suicide attempt	1. Longer periods
0.None	2. Continuous (chronic) or almost continuous
1.Weak	7. Time dimension: Frequency of suicide
2. Moderate to strong	0. Rare, occasional
12. Method: Specificity/planning of contemplated attempt	1. Intermittent
0. Not considered	2. Persistent or continuous
1. Considered, but details not worked out	8. Attitude toward ideation/wish
2. Details worked out/well formulated	0. Rejecting
13. Method: Availability/opportunity for contemplated attempt	1. Ambivalent; indifferent
0. Method not available; no opportunity	2. Accepting
1. Method would take time/effort; opportunity not readily available	
2.a. Method and opportunity available	Factor 4- Protective Factors of Suicidal Behavior
2.b. Future opportunity or availability of method anticipated	9. Control over suicidal action/acting-out wish
15. Expectancy/anticipation of actual attempt	0. Has sense of control
0.No	1. Unsure of control
1. Uncertain, not sure	2. Has no sense of control
2.Yes	10. Deterrents to active attempt (e.g., family, religion, irreversibility)
16. Actual preparation for contemplated attempt	0. Would not attempt because of a deterrent
0.None	1. Some concern about deterrents
1. Partial (e.g., starting to collect pills)	2. Minimal or no concern about deterrents
2. Complete (e.g., had pills, loaded gun)	14. Sense of "capability" to carry out attempt
	0. No courage, too weak, afraid, incompetent
	1. Unsure of courage, competence
	2. Sure of competence, courage
Factor 2- Passive Suicidal Desire	Factor 5- Suicidal Ideation Certainty
1. Wish to live	11. Reason for contemplated attempt
0. Moderate to strong	0. To manipulate the environment ;get attention, revenge
1.Weak	1. Combination of 0 and 2
2.None	2. Escape, surcease, solve problems
2. Wish to die	19. Deception/concealment of contemplated suicide
0.None	0. Revealed ideas openly
1. Weak	1. Held back on revealing
2. Moderate to strong	2. Attempted to deceive, conceal, lie
3. Reasons for living/dying	
0. For living outweigh for dying	Factor 6- Preparation
1. About equal	17. Suicide note
2. For dying outweigh for living	0. None
5. Passive suicidal desire	1. Started but not completed; only thought about
0. Would take precautions to save life	2. Completed
1. Would leave life/death to chance	18. Final acts in anticipation of death (e.g., insurance ,will)
2. Would avoid steps necessary to save or maintain life	0. None
Factor 3- Suicidal Desire	1. Thought about or made some arrangements
6. Time dimension: Duration of suicide ideation/wish	2. Made definite plans or completed arrangements
0. Brief, fleeting periods	

literature, Cronbach's alpha values of 0.60-0.80 endorse the reliability of a scale²⁸. In the current study, Cronbach's α was 0.84, while in the original study, Cronbach's α value was 0.89. Furthermore, Cronbach's α values generated when each item was deleted varied from 0.82-0.85, suggesting that none of the scale items needs to be deleted to improve the α value of the BSSI.

Since the BSSI is a semi-structured interview tool, inter-rater reliability was addressed. The correlation between the two independent interviewers was very powerful ($r=0.94$ $p<0.01$) as was the case in the original study ($r=0.83$, $p<0.01$). This result suggests very high objectivity for the items on the scale, which is an important point since consistency plays a key role in semi-structured interview assessment tools.

Correlations from the concurrent validity determination showed the expected results. BDI items 2 and 8, which pertain to hopelessness and suicidal thoughts respectively, showed moderate and significant correlations with relevant BSSI items. However, the items of the BSSI that are related to passive ideation, control, suicidal measures, capacity, and preparations were not correlated with relevant BDI items. Considering the moderate correlation of the BSSI and BHS ($r=0.58$), we expected that hopelessness would overlap with suicidality to an important extent. This is similar to findings by Beck et al.²⁹ Hopelessness plays an important role in the psychopathology of depression as well as in suicidality³⁰. Other studies, like the current one, have found high prevalence of depression among suicidal individuals³¹. However, a less powerful correlation ($r=0.36$) between the BSSI and the SIS, also a self-report measure assessing suicidal ideation, is interesting. A clinician-administered tool may be more likely to detect subtle suicidal ideation; this finding suggests that we need to use this kind of measurement tool in addition to self-report scales.

Considering the factor structure of the BSSI, components elicited for the current study were very similar in content to those in the original study. The original study found that 3 factors

accounted for 54.0% of the total variance (these factors were "active suicidal thoughts", "preparation", and "passive suicidal thoughts"). Based on the theory behind this test, the 6 factors examined in the current study were: 1) active suicidal thoughts, 2) passive suicidal thoughts, 3) characteristics of suicidal ideation, 4) protective factors for suicidal behavior, 5) explicitness of suicidal ideation, and 6) preparation for suicidal behaviors (Table 4). Findings from factor analytic work revealed some interesting results, considering that the statistical procedures used in the factor analysis were similar to Beck et al.'s study¹⁸. The latter analysis yielded five factors. Since three out of the five were psychologically meaningful and the contents of the other two factors were difficult to interpret, the authors performed another analysis, forcing the data into three components. However, in our analysis this was not the case. When we forced the data into three components, results were more confusing with multiple cross-loadings. Additionally, factors yielded in our analysis were meaningful in terms of their content and loading profiles (see Table 4). This difference might have arisen from using different samples in the studies as indicated in one previous study²⁹. Nevertheless, to establish clinical implications and consistency of the components further studies are needed.

An obvious limitation of this study is that most of the participants filled out the questionnaires when they were depressed. The possible confounding effect of depressive mood cannot be determined. However, depression and suicide are most often concurrent and depression is one of the important etiological factors in suicide. In addition, due to the small sample size, these results should only be generalized with great care to all clinical and non-clinical populations. In addition, volunteering for a study reflects some special attitudes that have been linked to socially desirable reports.

In conclusion, based upon these results, the Turkish BSSI is a valid and reliable measure of suicidal ideation. In particular, it has the potential

to detect subtle suicidal ideation more effectively than other tools in use in Turkish because it is a clinician-scored assessment tool. An assessment

tool that can detect suicidal ideation across varied diagnoses has important advantages for clinical research.

References:

1. Eskin M. Suicide: Description, Assessment, Treatment and Prevention. Ankara: Hyb Yayincilik, 2003:3-28. (Turkish)
2. Kessler RC, Borges G, Walters EE. Prevalence of and risk factors for lifetime suicide attempts in the National Comorbidity Survey. Arch Gen Psychiatry 1999;56(7):617-26. [\[CrossRef\]](#)
3. Doshi A, Boudreaux ED, Wang N, Pelletier AJ, Camargo CA Jr. National study of US emergency department visits for attempted suicide and self-inflicted injury, 1997-2001. Ann Emerg Med 2005;46(4):369-75. [\[CrossRef\]](#)
4. Suicide Statistics 2012 [Internet]. Ankara: Türkiye İstatistik Kurumu; 2012. Available from: www.tuik.gov.tr
5. Sudak HS, Suicide. In: Sadock BJ, Sadock VA, (editors). Kaplan-Sadock's Comprehensive Textbook of Psychiatry. New York: Lippincott Williams-Wilkins, 2005. p. 2442-53.
6. Ozguven H. The Epidemiology of Suicidal Behavior. Türkiye Klinikleri J Psychiatry-Special Topics 2008;1(3):1-7. (Turkish)
7. Uluduz UD, Ugur M. A review of suicide based on a case. Yeni Symposium 2001;39(1):19-25. (Turkish)
8. Sayil I, Devrimci Ozguven H. Suicide and Suicide Attempts in Ankara in 1998: Results of the Who/Euro Multicentre Study on Suicidal Behavior. Crisis 2002;23(1):11-6. [\[CrossRef\]](#)
9. Roy A. Psychiatric Emergencies. In: Sadock BJ, Sadock VA, (editors). Kaplan-Sadock's Comprehensive Textbook of Psychiatry. Philadelphia: Lippincott Williams-Wilkins, 2000. p. 2031-40.
10. Demirel OS, Esel E. Suicide. Anadolu Psikiyatri Dergisi 2003;4(3):175-85. (Turkish)
11. Litman RE. Suicides: What do they have in mind? In: Jacobs D, Brown HN, (editors). Suicide: Understanding and Responding. Madison: CT: International Universities Press, 1989. p. 143-54.
12. Atesci FC, Kuloglu M, Tezcan E, Yildiz M. Axis I and Axis II diagnoses in suicide attempters. Klinik Psikiyatri Dergisi 2002;5(1):22-7. (Turkish)
13. Sokero TP1, Melartin TK, Rytsälä HJ, Leskelä US, Lestelä-Mielonen PS, Isometsä ET. Suicidal ideation and attempts among psychiatric patients with major depressive disorder. J Clin Psychiatry 2003;64(9):1094-100. [\[CrossRef\]](#)
14. Ekici G, Savas HA, Citak S. Two important risk factors in committed suicides: existence of physical illness and inadequacy of psychiatric treatment. Klinik Psikofarmakoloji Bulteni - Bulletin of Clinical Psychopharmacology 2001;11(3):168-73. (Turkish)
15. Hawton K, van Heeringen K. Suicide. Lancet 2009;373(9672):1372-81. [\[CrossRef\]](#)
16. Doruk A, Ozsahin A. Suicide. In: Koroglu E, Gulec C, (editors). Textbook of Psychiatry, Ankara: Hekimler Yayin Birliği; 2007. p. 556-61. (Turkish)
17. Palabiyikoglu R, Sendag MA. Psychological assessment devices used in suicidal behaviors. Türkiye Klinikleri J Psychiatry-Special Topics 2008;1(3):58-66. (Turkish)
18. Beck AT, Kovacs M, Weissman. Assessment of suicidal intention: the Scale for Suicide Ideation. J Consult Clin Psychol 1979;47(2):343-52. [\[CrossRef\]](#)
19. Beck AT, Weissman A, Lester D, Trexler L. The measurement of pessimism: the hopelessness scale. J Consult Clin Psychol 1974;42(6):861-5. [\[CrossRef\]](#)
20. Durak A. Beck Hopelessness Scale: reliability and validity. Turk Psikoloji Dergisi 1994;9(31):1-11. (Turkish)
21. Beck AT, Ward CH, Mendelson M, Mock J, Erbaugh J. An inventory for measuring depression. Arch Gen Psychiatry 1961;4(6):561-71. [\[CrossRef\]](#)
22. Hisli N. Reliability and validity of Beck Depression Inventory among university students. Turk Psikoloji Dergisi 1989;7(23):3-13. (Turkish)
23. Levine S, Ancill RJ, Roberts AP. Assessment of suicide risk by computer-delivered self-rating questionnaire: preliminary findings. Acta Psychiatr Scand 1989;80(3):216-20. [\[CrossRef\]](#)
24. Dilbaz N, Holat H, Bayam G, Berksun O, Holat H, Tuzer T, et al. Validity and reliability of suicide ideation scale. Scientific Studies Book of 31st Turkish National Congress of Psychiatry. Istanbul: TPD Press; 1995:40-1. (Turkish)
25. Dilbaz N, Aytekin Y. Suicide ideation, behavior and suicide intent of alcohol dependent patients. Bagimlilik Dergisi 2003;4(1):1-9. (Turkish)
26. Durak A, Palabiyikoglu R. Validity of the beck hopelessness scale. Kriz Dergisi 1994;2(2):311-9. (Turkish)
27. Pazvantoglu O, Okay T, Dilbaz N, Sengul C, Bayam G. The effects of somatic symptoms on suicidal ideation, behaviour and intent in the patients with major depression. Klinik Psikiyatri Dergisi 2004;7(3):153-60. (Turkish)
28. Ercan I, Kan I. Reliability and validity in the scales. Uludağ Üniversitesi Tıp Fakültesi Dergisi 2004;30(3):211-6. (Turkish)
29. Beck AT, Brown GK, Steer RA. Psychometric characteristics of the Scale for Suicide Ideation with psychiatric outpatients. Behav Res Ther 1997;35(11):1039-46. [\[CrossRef\]](#)
30. Dilbaz N, Seber G. Hopelessness concept: importance in depression and suicide. Kriz Dergisi 1993;1(3):134-8. (Turkish)
31. Sayil I, Berksun OE. Depression and suicide. Psikiyatri Dünyası 1998;2(2):52-6. (Turkish)

İNTİHAR DÜŞÜNCESİ ÖLÇEĞİ (BECK)		
İsim:	Cevap	Puan
1. Yaşama arzusu	Orta veya şiddetli Zayıf Yok	0 1 2
2. Ölme arzusu	Yok Zayıf Orta veya şiddetli	0 1 2
3. Yaşam / ölüm için nedenler	Yaşam ölümden ağır basıyor Yaşam ve ölüm için nedenler eşit Ölmek yaşamaktan ağır basıyor	0 1 2
4. Aktif intihar girişiminde bulunma arzusu	Yok Zayıf Orta veya şiddetli	0 1 2
5. Pasif intihar girişi	Yaşamını kurtarmak için gerekli önlemleri alıyor Yaşamayı ölmeyi şansa bırakıyor Hayatını korumaktan ve sürdürmekten kaçıyor	0 1 2
6.İntihar düşüncesinin/isteğinin Süresi	Kısa ve geçici dönemler Uzun dönemler Kesintisiz veya neredeyse sürekli	0 1 2
7.İntihar düşüncesinin sıklığı	Nadiren Aralıklı Kalıcı ya da sürekli	0 1 2
8. Düşünce ve isteğe karşı tutum	Kabul etmeyen Kararsız ilgisiz Kabul eden	0 1 2
9. İntihar eylemi ve eylem isteği üzerinde kontrol	Kontrol duygusu var Kontrolde emin değil Kontrol duygusu yok	0 1 2
10. Aktif girişimden caydırıcılar (örnek; aile, din, geri dönüşlülük)	Caydırıcı nedeniyle girişimde bulunmama Caydırıcılar hakkında biraz endişe Caydırıcılar hakkında hiç yada çok az endişe	0 1 2
11. Düşünülen girişim için neden	Çevreyi etkilemek, dikkat çekmek ve ya intikam Kaçma ve etkileme isteğinin birleşimi Problem çözmeyi bitirmek için kaçma	0 1 2
12. Yöntem: Düşünülen girişimin özgüllük ve planlaması	Üzerinde düşünülmemiş Düşünülmüş ama detaylar çalışılmamış Detaylar çalışılmış ve çok iyi planlanmış	0 1 2
13. Yöntem: Düşünülen girişim için uygunluk ve fırsat	Yönteme ulaşılamıyor ve ya fırsat yok Yöntem zaman ve çaba istiyor, fırsat hazır değil Yöntem ve fırsat erişilebilir Yöntem ve fırsat gelecekte erişilebilir	0 1 2a 2b
14. Girişimi gerçekleştirmek için 'kapasite' hissi	Cesaret yok, çok zayıf, yetersiz Cesaret ve yeterlilikten emin değil Cesaret ve yeterlilikten emin	0 1 2
15. Güncel girişim beklentisi/ öngörüsü	Yok Emin değil, belirsiz Evet	0 1 2
16. Düşünülen girişim için güncel hazırlık	Yok Kısmen Tam	0 1 2
17. İntihar Notu	Yok Başlamış ama tamamlamamış, sadece düşünce Tamamlamış	0 1 2
18. Ölüm beklentisi içinde yapılan son eylemler	Yok Düşünmüş ve bazı düzenlemeler yapmış Kesin planlar yada düzenlemeler yapmış	0 1 2
19. Tasarlanan girişimin gizlenmesi yada aldatıcı bir tavır sergilenmesi	Tasarımları açıkça belli Açıklamayı erteliyor Yalan söylemeye,aldatmaya, gizli tutmaya çalışma	0 1 2