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Research Article

Psychometric Properties of the Bangla Brief Suicide Cognitions Scale among University Level Students

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Objectives. Assessment of suicide cognition would help to measure the enduring suicide risk and to predict the risk of a suicide attempt. However, no previous attempt was identified to validate the suicide cognition scale in Bangla. We aimed to assess the psychometric properties of the Brief Suicide Cognitions Scale (BSCS) in Bangla. *Methods*. We conducted this validation study among 529 medical and university students. We collected the responses by Google Forms with the translated version of BSCS from 20 August to 20 October 2022. We assessed internal consistency form of reliability, face validity, content validity, construct validity, concurrent validity, and discriminant validity. *Results*. The mean age of the respondents was 23.32 ± 1.73 years; 52.5% were males, 92% were single, 75% were undergraduate students, 40.24% were studying in medical schools, 18.53% had a chronic illness, 9.45% had a mental illness, 4.16% had a family history of suicide, and 11.15% had previous nonfatal attempts. Cronbach's alpha was 0.84, and factor analysis revealed unidimensional construct with six items with a good model fit. The BSCS showed acceptable convergent and discriminant validity. *Conclusion*. This study assessed the psychometric properties of Bangla BSCS among students which found acceptable reliability and validity. Further studies could test the validation especially among clinical samples to assess the predictive validity of the instrument.

1. Introduction

Suicide is one of the major causes of death in early adulthood [1]. In 2019, the World Health Organization (WHO) reported that more than 700,000 people per annum die by suicide, and the situation is much more threatening for low and middle income countries [1]. Several prominent factors have been identified in explaining suicide such as biological, psychological, social, cultural, and religious [2]. Hence, the identification of risk factors becomes important in the prevention of suicide [2].

Theories explaining suicide have emphasized cognitive processes [3], like individual beliefs [4], attitudes [5], expectations [6], and perceptions [7]. Joiner's interpersonal theory of suicide (IPTS) [8], O'Connor's integrated-volitional model of suicide [7], and Shneidman's psychache discussed in Namlı et al.'s [9] accentuated cognitive states like hopelessness, helplessness, shame, guilt, burdensomeness, and thwarted belongingness resulting in entrapment in which an individual perceives a sense of urgently escaping from an unbearable situation [7–9]. However, treatment and preventative approaches to suicide such as dialectical behavior

therapy [10], cognitive behavior therapy for suicide [11], and attempted suicide protocol [12] consider suicidogenic thoughts and cognitions. Suicidogenic cognitions are not only essential for treatment and prevention but also serve as predictors or risk factors for suicide attempts.

Assessment of suicidal thinking remains challenging because of the variable nature of suicide risk over time [13]. Usually, assessment procedure focuses on measuring an immediate episode, the intensity of suicidal thought, intent, and urges [8]. The fluid vulnerability theory (FVT) explains suicidal beliefs as the main aspect of a suicide attempt. These beliefs encompass hopelessness, entrapment, burdensome, etc. [13]. The original suicide cognition scale measures suicide-specific and identity-based hopelessness. Scale's items are related to the two dimensions of the cognitive process: the self and others. Self-domain items address the cause of despair that is well-documented in recent evidence [14, 15]. The suicide cognition scale has been used with divergent populations as well as settings and findings suggested that potential factors (unlovability, unbearability, and unsolvability) are aligned with the original concept of suicidal belief system and FVT [16]. Initially, Rudd [13] identified multidimensionality of suicidal beliefs, but subsequent research has explained that multidimensionality has been influenced by a general latent factor [17, 18] and leads to the development of Brief Suicide Cognition Scale (BSCS).

BSCS was published in September 14, 2021, assessing the suicidogenic cognitions (unlovability, unbearability, and unsolvability) with six items [19]. It was applied in three distinct types of samples, i.e., students, admitted psychiatric patients, and emergency room samples, presented after a suicide crisis. It measures the chronic suicide risk in clinical settings easily due its easy applicability and reduced number of items. It revealed an acceptable predictive validity in the clinical samples [19]. It values the suicide risk associated with self-belief as unlovable experiences, intolerable emotions, and unresolvable life problems (i.e., suicide belief system), leading to an increased risk of suicide or suicidal tendencies. According to FVT, it is irreversible, intolerable, and intractable, leading to persistent vulnerability to develop acute episodes of suicidality [19]. Moreover, it provides a quick assessment of suicidality as a unidimensional scale that is not only easy to use with the clinical sample but is also an effective measure to assess suicide risk and behavior over time. Moreover, it will be helpful in identifying specific beliefs that can be targeted in the treatment of suicidality.

Bangladesh is densely populated country located in South Asia with about 170 million population. Bangla is the mother tongue of this huge population. Additionally, it is also used by people living in West Bengal, India. Suicide and its prevention yet get the adequate attention in Bangladesh as a public health problem. Albeit a recent surge of research on suicide has been noted in the country, there is a dearth of studies assessing the chronic risk factors for suicide. Assessment of suicide cognition helps to measure the enduring suicide risk and to predict the risk of suicide attempt. No previous attempt was identified to validate the suicide cognition scale in Bangla. We aimed to assess the psychometric properties of the BSCS in Bangla. This study would help assess the prior mental events before suicide in Bangla speaking populations which in turn will help to prevent suicide. It will also open a novel avenue of further research assessing the suicidogenic cognitions in Bangladesh.

2. Methods

2.1. Study Place and Procedure. Data were collected by Google Forms to conduct this validation study between 20 August and 20 October 2022 from conveniently selected medical colleges and universities from Dhaka, Gazipur, Noakhali, and Chattogram. We distributed the survey link with the help of the class representatives. We included the Bangladeshi university students, currently living in Bangladesh, who speak Bangla as their mother tongue. We excluded foreign students enrolled in Bangladeshi universities and Bangladeshi students enrolled in overseas universities. Informed electronic consent was secured before starting the survey.

2.2. Instruments

2.2.1. Semistructured Demographic Questionnaire. We collected the responses on the sociodemographic variables by using our previously used questionnaire among medical and university students [20]. We collected responses on current age in completed years, sex, marital status, currently enrolled university or medical college, academic, religion, family structure (nuclear/joint), an average estimated income of the family (BDT), presence of any long-term illness, history of preexisting mental illness, medication use, and exposure to suicidality in family members.

2.2.2. Questionnaire to Assess Suicidal Behavior. We assessed the suicidality among the respondents by four items that were used in our previous studies [21]. We assessed lifetime suicidal ideation, suicidal ideation in the past year, suicidal plan, and suicidal attempts.

2.2.3. Bangla Brief Suicide Cognitions Scale (B-BSCS). We adopted B-BSCS from the English version developed by Rudd and Bryan [19]. The instrument consists of six items in a single domain. A five-point scale was used to collect the responses indicating 1 for strongly disagree and 5 for strongly agree with 3 as a neutral value. It assessed cognitions of unlovable, unbearable, and unsolvable.

2.2.4. Bangla Interpersonal Needs Questionnaire (INQ-B). We utilized INQ-B to assess the concurrent validity. INQ-B was validated by Arafat et al. [21]. It consists of twelve items in two domains. The first six items comprise the perceived burdensomeness, and the last six items (reverse coded) comprise the thwarted belongingness. The Cronbach's alpha value of perceived burdensomeness domain of INQ-B was 0.92 in the validation study [21].

2.3. Adaptation of B-BSCS into Bangla. We followed the standard methods of translations while adapting the B-BSCS into Bangla [22]. Two forward translations (one disguised and one undisguised) were performed and compared to create a translated version which was back translated into

English by another two persons (one disguised and one undisguised). All versions of forward-backward translations were compared and presented to the expert committee formulated for this study. Subsequently, pretesting was done in 16 general populations to get the final B-BSCS. No significant change was done during the adaptation except the forward-backward translation.

2.4. Data Analysis. Data were analyzed by IBM SPSS version 28.0 software and Stata version 16. We performed confirmatory factor analysis by IBM SPSS AMOS version 25.0. We presented the frequency and percentages of sociodemographic variables and suicidal behavior. We assessed the internal consistency form of reliability measured by Cronbach's alpha coefficient. We considered a value of ≥0.70 acceptable [23]. We assessed the construct validity of B-BSCS by exploratory and confirmatory factor analysis (CFA). Initially, we conducted principal component analysis with varimax rotation and assessed the scree plot. The model fitting approach was used to conduct confirmatory factor analysis through AMOS. The concurrent validity was assessed by assessing the correlation with the perceived burdensomeness domain of INQ-B. The normality of the BSCS score was checked using the Shapiro-Wilk test, histogram with Gaussian curve, and Q-Q plot. We found that the data were following a right-skewed distribution. Therefore, we used the Mann-Whitney *U* test to compare the scores of the variables with binary categories. We presented the data as median (interquartile range).

2.5. Ethical Aspects. We obtained a formal permission from Professor M. David Rudd on August 14, 2022, before initiating the project. We collected ethical approval from the ethical review committee of Enam Medical College on August 23, 2022 (EMC/ERC/2022/08-1). We confirmed an electronic informed consent from the respondents before starting the survey. We maintained a strict anonymity during the data collection.

3. Results

3.1. Demographic Characteristics. We collected 531 responses. Among them, two students did not provide consents. Therefore, we analyzed 529 responses for this study. The mean age of the respondents was 23.32 ± 1.73 years (range: 18-30 years); 52.5% were males, 92% were single, 75% were undergraduate students, 80.35% were living in nuclear families, 40.24% were studying in medical schools, 18.53% had chronic illness, 9.45% had mental illness, and 4.16% had family history of suicide (Table 1). Among the students, 88.47% were Muslims, 10.21% ($n = 54$) were Hindus, and the rest 1.31% ($n = 7$) were Buddhists. Among the 529 students, 63.33% ($n = 335$) were reading at Noakhali Science and Technology University, Noakhali, 16.64% ($n = 88$) at Tairunnessa Memorial Medical College, Gazipur, 11.53% ($n = 61$) at Enam Medical College, Dhaka, 5.29% ($n = 28$) at Chattogram International Medical College, Chattogram, and the rest 3.3% ($n = 17$) were reading at other institutes. The B-BSCS score was significantly higher among females ($p = 0.022$), students living in nuclear families ($p = 0.033$), and among students with mental illness, chronic illness, lifetime suicidal ideation, past year suicidal ideation, having suicidal plan, family history of suicidal attempt, and previous nonfatal attempt ($p = <0.001$) (Table 1).

3.2. Reliability Assessment. We measured internal consistency form of reliability measured by Cronbach's alpha. The Cronbach's alpha of B-BSCS was 0.84. A value of ≥0.70 is considered as acceptable based on previous recommendations [23].

3.3. Exploratory Factor Analysis. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy of INQ-B was 0.84, and it revealed a statistically significant value ($p = 0.0001$). The item-wise distribution of responses is mentioned in Table 2. The mean of BSCS items ranges from 1.43 (±0.89) to 2.35 (±1.2). The highest mean was noted in item 3, while the lowest mean was found in item 6. The corrected item-total correlation among the items ranged from 0.43 to 0.75. The majority of the respondents (30.06-75.8%) endorsed 1 (strongly disagree) in the range from 1 to 5 as the survey was conducted among apparently healthy university level students.

3.4. Validity Assessment

3.4.1. Face and Content Validity. We measured the face and content validity while performing the translations and back translations and expert committee meeting. Only cultural adaptations were performed and no changes in the items were done.

3.4.2. Construct Validity. The principal component analysis with varimax rotation extracted only one component with six items covering the 56.24% of the variance. The scree plot indicated a unidimensional construct. The CFA revealed a unidimensional construct with good model fit.

3.4.3. Convergent Validity. We assessed convergent validity of B-BSCS by assessing the correlation with perceived burdensomeness domain of INQ-B which revealed a correlation value of 0.61 indicating a moderate correlation.

3.4.4. Discriminant Validity. We assessed the discriminant validity of B-BSCS by comparing the values in different distinct groups. The B-BSCS clearly demarcated the variations between students with previous suicide attempt and not. It also revealed different values between respondents with and without mental illness and with and without suicidal behavior.

3.4.5. Confirmatory Factor Analysis. We present outcome of the CFA of the B-BSCS in Table 3 and Figure 1. The revealed unifactor model with an acceptable fit of data and a statistically significant value ($p < 0.01$): the NFI, CFI, and TLI values were above 0.9, and the PCFI and RMSEA values were 0.519 and 0.089.

Table 1: Participant characteristics and BSCS score ($n = 529$).

Variable	n (%)	BSCS score	
		Median (IQR)	p value
Total	529 (100)	11 (8–15)	
Sex			
Male	278 (52.55)	10 (8–14)	**0.022**
Female	251 (47.45)	12 (8–16)	
Education			
Undergraduate	399 (75.43)	11 (8–15)	0.824
Graduate	130 (24.57)	10 (8–15)	
Marital status			
Single	487 (92.06)	11 (8–14)	0.338
Married	42 (7.94)	12 (7–17)	
Religion			
Islam	468 (88.47)	11 (8–14)	0.327
Others	61 (11.53)	12 (8–16)	
Faculty			
Medical	213 (40.26)	11 (8–15)	0.801
2003Others	316 (59.74)	11 (8–15)	
Family type			
Nuclear	426 (80.53)	12 (8–15)	**0.033**
Joint	103 (19.47)	10 (8–13)	
History of mental illness			
Yes	50 (9.45)	13.5 (11–17)	**<0.001**
No	479 (90.55)	11 (7–14)	
History of chronic disease			
Yes	98 (18.53)	13 (10–17)	**<0.001**
No	431 (81.47)	10 (7–14)	
Lifetime suicidal ideation			
Yes	270 (51.04)	13.5 (10–17)	**<0.001**
No	259 (48.96)	9 (6–12)	
Past year suicidal ideation			
Yes	151 (28.54)	15 (12–18)	**<0.001**
No	378 (71.46)	10 (7–13)	
Suicidal plan			
Yes	135 (25.52)	14 (11–18)	**<0.001**
No	394 (74.48)	10 (7–13)	
Family history of suicide			
Yes	22 (4.16)	12 (9–15)	0.494
No	507 (95.84)	11 (8–15)	
Family history of suicide attempt			
Yes	70 (13.23)	14 (10–17)	**<0.001**
No	459 (86.77)	11 (7–14)	
Suicidal attempt			
Yes	59 (11.15)	15 (12–20)	**<0.001**
No	470 (88.85)	10 (7–14)	

p value was determined by Mann-Whitney U test. Significant p values are shown in boldface.

4. Discussion

4.1. Main Findings of the Study. We found that the B-BSCS fits a unidimensional component structure with approximately 56% of the common variance accounted for the six items in the measure. Additionally, the tool demonstrated good reliability (internal consistency) estimates, displayed moderate positive correlations between B-BSCS and

Table 2: Item characteristics of BSCS.

Item	Mean	Std. deviation	Item-total correlation	% endorsing each response option				
				1	2	3	4	5
BSCS 1	2.02	1.10	0.43	42.34	27.79	19.09	7.56	3.21
BSCS 2	1.98	1.11	0.64	43.67	30.43	13.61	8.89	3.40
BSCS 3	2.35	1.20	0.68	30.06	30.43	18.53	16.07	4.91
BSCS 4	2.14	1.18	0.66	38.75	27.79	18.90	9.64	4.91
BSCS 5	1.82	1.04	0.75	50.28	28.35	14.36	3.40	3.59
BSCS 6	1.43	0.89	0.55	75.80	12.09	7.37	2.84	1.89

Table 3: Summary of CFA ($N = 529$).

Scale	$\chi 2$	df	p	NFI	CFI	TLI	PCFI	RMSEA
BSCS	41.205	8	.000	.944	.951	.918	.519	.089

Note: NFI: normed fit index; CFI: comparative fit index; TLI: Tucker Lewis index; PCFI: parsimony comparative fit index; RMSEA: root mean square error of approximation.

perceived burdensomeness subscale of INQ-B, and revealed good discriminant validity by its ability to distinguish between respondents with and without prior history of suicidal behavior.

4.2. Implications of Study Findings. Our findings have three main implications of theoretical and clinical significance. First, our findings provide preliminary support for assessment of the suicide cognition construct in the Bangladesh setting. Next, it also supports the use of BSCS to assess suicide cognitions among Bangladeshi adults. Finally, the unidimensional component structure of BSCS supports the use of BSCS as a continuous measure to assess suicide belief system in our setting.

From a theoretical standpoint, the suicide cognitions scale (SCS) intends to capture enduring vulnerability to suicide by assessing the source of suicide-related hopelessness within two subthemes: self and others [24]. The within-self theme addresses reasons for hopelessness such as inability to do anything to solve one's life problems (unsolvability) [25, 26], beliefs about self as unlovable (unlovability) [24, 27], and one's emotional circumstances as unbearable (unbearability) [10]. The within-other theme assesses the construct of perceived burdensomeness [28] which, together with acquired capability for suicide [29], are central to understanding chronic and enduring vulnerability to suicide as per the IPTS [8]. The moderate correlation we observed between B-BSCS scores and perceived burdensomeness subscale of INQ-B supports this understanding and implies that the SCS items may tap into residual suicide risk by indicating underlying vulnerability for suicide.

Clinically, this also implies that the SCS may be useful to identify a subset of individuals with enduring suicide risk. In such individuals, the suicide belief system, characterized as described earlier by thoughts of unsolvability, unlovability, and unbearability, results in heightened vulnerability for reemergence of acute suicidal crisis following the resolution of an acute suicidal episode; in other words, there is a residual risk state that confers a greater likelihood of experiencing repeated suicidal crisis over time.

Prior researches across settings [14, 15, 30]) have supported the role of these constituent components (unsolvability, unlovability, and unbearability) in making up the suicide belief system and its clinical utility in assessing chronic enduring suicide risk [18]. This is also consistent with contemporary models of risk conceptualization in suicide, such as the FVT of suicide [13], that conceive suicide risk along two planes: chronic and acute risk. By virtue of its good discrimination between respondents with and without prior suicidal behavior, the B-BSCS may be used in our setting to direct targeted suicide prevention activities by identify a subset of suicide attempters at greater risk for future suicidal crisis.

The BSCS has shown robust psychometric properties for the BSCS across clinical and nonclinical samples [18]. Our results from a different cultural setting further strengthen and support the use of BSCS among adolescents and young adults in Bangladesh as a screening measure to identify those with enduring vulnerability to suicide. This is particularly relevant because of the paucity of assessment instruments for chronic suicide risk which has historically received less clinical and research attention compared to acute risk. The brevity, reliability, and validity of BSCS in our setting mean that it can be employed in busy outpatient settings to identify chronic risk of suicide and supplement conventional approaches to suicide risk assessment and triaging. As an aside, documenting the chronic risk can be helpful to both the client's family, by flagging the enduring vulnerability, and also to the treating physician, for whom, in the absence of such documentation, a future suicide episode may be seen as a legal liability [31].

4.3. Strengths and Limitations. We assessed the psychometric properties of BSCS in Bangla which is the first attempt in the country. Nevertheless, there are several limitations of the study that should be considered while considering the study findings. We only determined a single form of reliability (internal consistency). Assessment of other forms of reliability like test-retest and interrater reliability would assess the construct more vigorously. We recommend further studies to assess those. We validated the instrument in a specific group of populations (nonclinical sample and medical and university students) which may challenge the generalization of the findings. We included the institutions purposively which could be source of selection biases. However, our

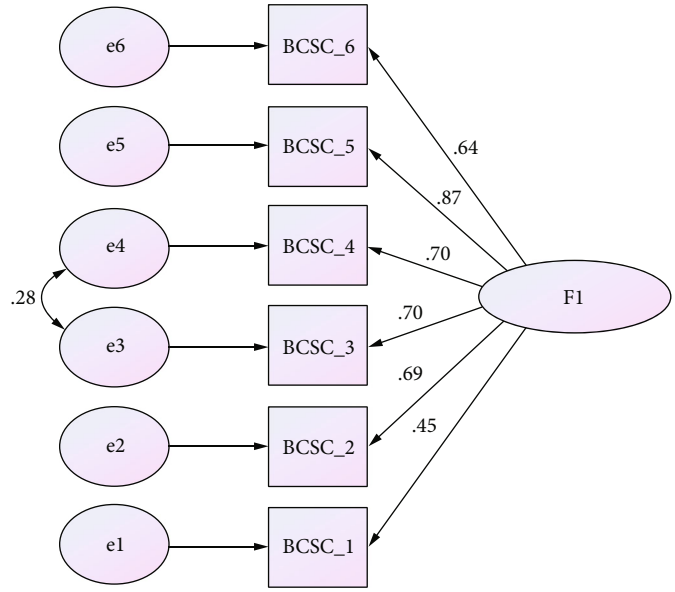

Figure 1: CFA model of B-BSCS.

institutions covered both public and private organization that may reflect the all sphere of society. The study was conducted based on the responses collected by Google Forms which may be a potential source of biases while face-to-face interview is more reliable and rigorous in assessing the psychological disorders.

5. Conclusion

This study assessed the psychometric properties of BSCS in Bangla among students which found acceptable reliability and validity. However, cautious interpretation is necessary while generalizing the study results. Further studies could test the validation especially among clinical samples to assess the predictive validity of the instrument. Regular utilization of the instrument in clinical and research would foster the better services for suicide prevention in the country.

Data Availability

The data that support the findings of this study are available on request from the corresponding author.

Conflicts of Interest

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Authors' Contributions

SMY Arafat was responsible for conception and design, methods, and instrument development; SMY Arafat, F Hussain, MK Islam, and ASM Redwan were responsible for data collection; SMY Arafat, R Amin, and MAS Khan were responsible for data analysis; SMY Arafat, R Amin, and V Menon were responsible for drafting the manuscript. All authors were responsible for the revision and approval of the manuscript.

References

[1] World Health Organization, "Suicide worldwide in 2019: Global Health Estimates," 2021, https://www.who.int/publications/i/item/9789240026643.

[2] G. Zalsman, K. Hawton, D. Wasserman et al., "Suicide prevention strategies revisited: 10-year systematic review," *The Lancet Psychiatry*, vol. 3, no. 7, pp. 646–659, 2016.

[3] C. J. Bryan and J. A. Harris, "The structure of suicidal beliefs: a bifactor analysis of the suicide cognitions scale," *Cognitive Therapy and Research*, vol. 43, no. 2, pp. 335–344, 2019.

[4] A. T. Beck and R. A. Steer, *Beck Hopelessness Scale Manual*, Psych Corp, San Antonio, TX, 1988.

[5] M. A. Olson, J. K. McNulty, D. S. March, T. E. Joiner, M. L. Rogers, and L. L. Hicks, "Automatic and controlled antecedents of suicidal ideation and action: a dual-process conceptualization of suicidality," *Psychological Review*, vol. 129, no. 2, pp. 388–414, 2022.

[6] S. Abrutyn and A. S. Mueller, "Toward a cultural-structural theory of suicide: examining excessive regulation and its discontents," *Sociological Theory*, vol. 36, no. 1, pp. 48–66, 2018.

[7] R. C. O'Connor, "The integrated motivational-volitional model of suicidal behavior," *Crisis*, vol. 32, no. 6, pp. 295–298, 2011.

[8] T. E. Joiner, *Why People Die by Suicide*, Harvard University Press, Boston, MA, 2005.

[9] Z. Namlı, M. E. Demirkol, L. Tamam, M. O. Karaytuğ, and C. Yeşiloğlu, "Validity and reliability study of the Turkish version of the unbearable Psychache scale," *Alpha Psychiatry*, vol. 23, no. 4, pp. 166–172, 2022.

[10] M. Linehan, *Cognitive-Behavioral Treatment for Borderline Personality Disorder*, Guilford, New York, NY, 1993.

[11] C. J. Bryan and M. D. Rudd, *Brief Cognitive Behavior Therapy for Suicide Prevention*, Guilford, New York, NY, 2018.

[12] K. Michel and A. Gysin-Maillart, *ASSIP — attempted suicide short intervention program: a manual for clinicians*, Hogrefe Publishing, 2015.

[13] M. D. Rudd, "Fluid vulnerability theory: a cognitive approach to understanding the process of acute and chronic risk," in *Cognition and Suicide:Theory, Research, and Therapy*, T. E. Ellis, Ed., pp. 355–368, American Psychological Association, Washington, DC, 2006.

[14] C. J. Bryan, M. D. Rudd, E. Wertenberger et al., "Improving the detection and prediction of suicidal behavior among military personnel by measuring suicidal beliefs: an evaluation of the suicide cognitions scale," *Journal of Affective Disorders*, vol. 159, pp. 15–22, 2014.

[15] C. J. Bryan, K. E. Kanzler, E. Grieser, A. Martinez, S. Allison, and D. McGeary, "A shortened version of the suicide cognitions scale for identifying chronic pain patients at risk for suicide," *Pain Practice*, vol. 17, no. 3, pp. 371–381, 2017.

[16] M. D. Rudd, "The suicidal mode: a cognitive-behavioral model of suicidality," *Suicide & Life-Threatening Behavior*, vol. 30, no. 1, pp. 18–33, 2000.

[17] C. J. Bryan, D. C. Rozek, and L. R. Khazem, "Prospective validity of the suicide cognitions scale among acutely suicidal military personnel seeking unscheduled psychiatric intervention," *Crisis: The Journal of Crisis Intervention and Suicide Prevention*, vol. 41, no. 5, pp. 407–411, 2020.

[18] T. E. Ellis and K. A. Ruffino, "A psychometric study of the suicide cognitions scale with psychiatric inpatients," *Psychological Assessment*, vol. 27, no. 1, pp. 82–89, 2015.

[19] M. D. Rudd and C. J. Bryan, "The brief suicide cognitions scale: development and clinical application," *Frontiers in Psychiatry*, vol. 12, article 737393, 2021.

[20] S. Arafat, F. Hussain, M. F. Hossain, M. A. Islam, and V. Menon, "Literacy and stigma of suicide in Bangladesh: scales validation and status assessment among university students," *Brain and Behavior*, vol. 12, no. 1, article e2432, 2022.

[21] S. M. Y. Arafat, F. Hussain, M. S. Zaman et al., "Thwarted belongingness, perceived burdensomeness, and acquired capability for suicide among university students of Bangladesh: scales validation and status assessment," *Frontiers in Psychiatry*, vol. 13, article 1025976, 2022.

[22] D. E. Beaton, C. Bombardier, F. Guillemin, and M. B. Ferraz, "Guidelines for the process of cross-cultural adaptation of self-report measures," *Spine*, vol. 25, no. 24, pp. 3186–3191, 2000.

[23] S. M. Y. Arafat, H. R. Chowdhury, M. S. Qusar, and M. Hafez, "Cross cultural adaptation & psychometric validation of research instruments: a methodological review," *Journal of Behavioral Health*, vol. 5, no. 3, pp. 129–136, 2016.

[24] A. T. Beck, *Depression: Clinical, Experimental, and Theoretical Aspects*, Hoeber, New York, NY, 1967.

[25] D. E. Schotte and G. A. Clum, "Suicide ideation in a college population: a test of a model," *Journal of Consulting and Clinical Psychology*, vol. 50, no. 5, pp. 690–696, 1982.

[26] D. E. Schotte and G. A. Clum, "Problem-solving skills in suicidal psychiatric patients," *Journal of Consulting and Clinical Psychology*, vol. 55, no. 1, pp. 49–54, 1987.

[27] J. S. Beck, *Cognitive Therapy: Basics and Beyond*, Guilford, New York, NY, 1995.

[28] N. J. Peak, J. C. Overholser, J. Ridley et al., "Too much to bear: psychometric evidence supporting the perceived burdensomeness scale," *Crisis*, vol. 37, no. 1, pp. 59–67, 2016.

[29] P. N. Smith and K. C. Cukrowicz, "Capable of suicide: a functional model of the acquired capability component of the interpersonal-psychological theory of suicide," *Suicide & Life-Threatening Behavior*, vol. 40, no. 3, pp. 266–275, 2010.

[30] D. Gibbs, "Assessing suicidal cognitions in adolescents: establishing the reliability and validity of the suicide cognitions scale," *Dissertation Abstracts International*, vol. 71, p. 6438, 2011.

[31] V. Menon, "Suicide risk assessment and formulation: an update," *Asian Journal of Psychiatry*, vol. 6, no. 5, pp. 430–435, 2013.