



ISSN: 0976-3376

Available Online at <http://www.journalajst.com>

ASIAN JOURNAL OF  
SCIENCE AND TECHNOLOGY

Asian Journal of Science and Technology  
Vol. 14, Issue, 08, pp. 12650-12656, August, 2023

## RESEARCH ARTICLE

# RELIABILITY AND VALIDITY OF THE ADAPTED BENGALI VERSION OF THE MULTIDIMENSIONAL STUDENT LIFE SATISFACTION SCALE

Shyamal Mistry\*<sup>1</sup>, Moumita Karmakar<sup>2</sup>, Samirranjan Adhikari<sup>3</sup>

<sup>1</sup>Research Scholar, Department of Education, Swami Vivekananda University, Barrackpore, West Bengal, India

<sup>2</sup>Assistant Professor, Debnarayan Shiksha Sansthan (B.Ed & D.El.Ed College), Sonarpur, South 24-Parganas & Research Scholar, Department of Education, Swami Vivekananda University, Barrackpore, West Bengal, India

<sup>3</sup>Professor, Department of Education, Sidho-Kanho-Birsha University, Purulia, West Bengal, India

### ARTICLE INFO

#### Article History:

Received 11<sup>th</sup> May, 2023  
Received in revised form  
26<sup>th</sup> June, 2023  
Accepted 04<sup>th</sup> July, 2023  
Published online 30<sup>th</sup> August, 2023

#### Keywords:

Life satisfaction, Multidimensional Students' Life Satisfaction Scale (MSLSS), Adolescents, Psychometric properties and Bengali adaptation.

### ABSTRACT

The study was conducted to evaluate the psychometric properties of the Bengali version of the Multidimensional Students' Life Satisfaction Scale (MSLSS: Huebner, 1994) within a sample of 576 Bengali school-going adolescents in grades 9 to 10. The first objective was to determine the construct validity of the MSLSS with school-going adolescents using exploratory factor analysis (EFA). Eight items were eliminated during the factor analysis. The results clearly support the five-factor structure as a replication of Huebner's five-factor model. The second objective was to calculate the internal consistency reliability of the MSLSS total score as well as each domain score. The internal consistency estimate of the total score was 0.914, indicating overall high consistency of the MSLSS items. The coefficient alpha for each MSLSS dimension ranged from 0.81 (Family) to 0.73 (Self). The results reported here provide preliminary evidence of the reliability and validity of the 32-item Bengali version of the MSLSS as a suitable measure for use with Bengali children and adolescents.

**Citation:** Shyamal Mistry, Moumita Karmakar, Samirranjan Adhikari. 2023. "Reliability and validity of the adapted bengali version of the multidimensional student life satisfaction scale", *Asian Journal of Science and Technology*, 14, (08), 12650-12656.

Copyright©2023, Shyamal Mistry et al. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

## INTRODUCTION

Life satisfaction can be defined as a person's cognitive, affective and judgmental process which includes his or her evaluations and feelings about the quality of life (Diener, Emmons, Larsen, & Griffin, 1985). Life satisfaction has been defined as a person's subjective, global evaluation of the positivity of his/her life as a whole or with specific aspects of life, such as family, friends, school, and community (Diener, 1994). Life satisfaction judgments indicate either global statements or refer to a person's satisfaction with specific domains containing interpersonal relationships with family, friends, school experiences, observation of self as well as in a living environment (Huebner, 1994; Seligson, Huebner & Valois, 2003). Examples of global unidimensional measures include the *Students' Life Satisfaction Scale* (Huebner 1991a) and the *Satisfaction with Life Scale* (Diener, Emmons, Larsen, & Griffin, 1985). Examples of general unidimensional measures include the *Brief Multidimensional Students' Life Satisfaction Scale 'BMSLSS'* (Seligson, Huebner, & Valois, 2003). Examples of multidimensional measures include the *Extended Satisfaction with Life Scale* (Alfonso, Allison, Rader, & Gorman, 1996) and the *Multidimensional Students' Life Satisfaction Scale 'MSLSS'* (Huebner, 1994). Multidimensional (domain-specific) life satisfaction measure (Huebner, 1994) provides a better viewpoint of adolescents' life satisfaction judgments than unidimensional (global or general) measurement (Huebner, Laughlin, Ash, & Gilman, 1998; Gilman, Huebner & Laughlin, 2000).

The first research conducted by Huebner (1994) focused on the development and preliminary validation of a multidimensional measure of children's life satisfaction called the Multidimensional Students' Life Satisfaction Scale (MSLSS). The research consisted of two separate studies. In the first study, the initial version of the MSLSS was administered to a sample of 312 elementary school students. The purpose of this phase was to refine the scale and assess its psychometric properties. The researchers conducted exploratory factor analyses to determine the underlying factor structure of the scale. As a result, a 5-factor solution emerged, indicating that the MSLSS measured life satisfaction across multiple dimensions. The internal consistency of both the total scale and its subscales was found (Table 1) to be acceptable, suggesting that the items within each factor were consistently measuring the same construct. The second study aimed to cross-validate the factor structure found in the first study using an independent sample of 413 elementary school students. The researchers wanted to confirm that the factor structure of the MSLSS (40 items) was reliable and consistent across preadolescent students (Grades 3-5). Similar to the first study, the internal consistency estimates for both the total scale and subscales were found (Table 1) to be acceptable, indicating the scale's reliability. Additionally, the researchers examined the relationships between the MSLSS subscales and other criterion measures. The aim of the study conducted by Greenspoon and Saklofske (1997) was to further assess the psychometric properties of the recently developed Multidimensional Students' Life Satisfaction Scale (MSLSS; Huebner, 1994).

The researchers administered the MSLSS and a global rating of life satisfaction (GLS) to 314 Canadian children in grades 3 through 8. The findings of the study revealed a five-factor structure for the MSLSS (37 items), which was supported by exploratory factor analysis. The internal consistency estimates for both the total scale and subscales were found to be acceptable (Table 1). The results also demonstrated that the MSLSS had strong convergent validity, as indicated by the relationships observed between the MSLSS and GLS. These findings provided further evidence for the reliability and validity of the MSLSS in assessing the life satisfaction of children.

The validation research of the MSLSS in the collectivist Turkish environment was presented in the work of Irmak and Kuruüzüm (2008). A total of 959 primary school and high school students participated in the study. The *Turkish version* of MSLSS, with a few notable exceptions, demonstrated acceptable levels of reliability (Table 1), convergent validity, discriminant validity and concurrent validity in the setting of the collectivistic Turkish society. Eight items were eliminated during the factor analysis. As a consequence, the 32 items and five-components model can be used to investigate the life satisfaction levels of Turkish students.

**Table 1. Cronbach's  $\alpha$ -Coefficient of MSLSS**

MSLSS (items no.)	Family	Friends	School	Living Environment	Self	MSLSS in Totality	Study conducted by
English (40 items)	0.82 0.79	0.85 0.81	0.85 0.83	0.83 0.82	0.82 0.78	0.92 0.92	Huebner, E. S. (1994) Study 1 Study 2
English (40 items)	0.84 0.81	0.85 0.81	0.85 0.88	0.78 0.86	0.77 0.78	0.91 0.93	Huebner, E. S., Laughlin, J. E., Ash, C., & Gilman, R. (1998) Study 1 Study 2
English (40 items)	0.86	0.82	0.84	0.79	0.84	0.91	Gilman, R., Huebner, E. S., & Laughlin, J. E. (2000)
Canadian Children (37 items)	0.84	0.84	0.83	0.83	0.72	0.90	Greenspoon, P. J., & Saklofske, D. H. (1997)
Turkish Version (32 items)	0.83	0.82	0.78	0.76	0.77	0.88	Irmak, S., & Kuruüzüm, A. (2008)
Persian Adaptation (35 items)	0.84	0.81	0.82	0.70	0.78	0.83	Hatami, G., Motamed, N., & Ashrafzadeh, M. (2009)
Serbian Version (25 items)	0.86	0.87	0.83	0.77	0.75	0.90	Jovanovic, V., & Zuljevic, D. (2011).
Spanish Version, (30 items)	0.75	0.84	0.79 (University)	0.75	0.72	0.86	Schnettler, B., Orellana, L., Sepúlveda, J., Miranda, H., Grunert, K., Lobos, G., & Hueche, C. (2017)

Another study conducted by Huebner, Laughlin, Ash, and Gilman in 1998 aimed to assess the psychometric properties of MSLSS developed by Huebner in 1994. The researchers administered the MSLSS to a sample of 291 middle school students in grades 5 through 8. Confirmatory factor analyses were conducted to examine the factor structure of the MSLSS. The five satisfaction domains (family, friends, school, living environment, and self) found in earlier research with elementary school students, as well as one higher-order general life satisfaction factor, were supported by the findings of confirmatory factor analyses. The researchers reported test-retest coefficients for different domains of life satisfaction over a 4-week interval. The total score of the MSLSS had a test-retest coefficient of .81, indicating a high level of stability over time. The specific domains of family items, friends items, school items, living environment items, and self items had test-retest coefficients of .75, .70, .70, .81, and .53, respectively. The study found preliminary evidence of reliability (Table 1) and validity for the MSLSS, similar to previous findings with elementary school students. The study conducted by Gilman, Huebner, and Laughlin in 2000 aimed to assess the psychometric properties of the Multidimensional Students' Life Satisfaction Scale (MSLSS: Huebner, 1994) among a sample of 515 adolescents in grades 9-12. The underlying hypothesised factor structure of the MSLSS, which had been previously established with younger children (Huebner, 1994; Huebner *et al.*, 1998), was cross-validated using a number of confirmatory factor analytic analyses (CFAs). Confirmatory factor analyses provided evidence in favour of the proposed factor structure in adolescents. The total score's internal consistency estimate was 0.91, which indicates that the MSLSS items have a good level of overall consistency. Each MSLSS scale's coefficient alpha ranged from 0.79 to 0.86 (Table 1). The correlations between the MSLSS and the Behavioural Assessment Scale for Children (BASC) were more evidence for the instrument's convergent and discriminant validity. These psychometric characteristics were consistent with the MSLSS's findings for younger children.

The study conducted by Hatami, Motamed, and Ashrafzadeh in 2009 aimed to test the validity and reliability of the *Persian adaptation* of the MSLSS on 430 middle and high school students in grades 6-12 in Bushehr port, Iran. In the Persian adaption of the MSLSS (35 items), confirmatory factor analysis verified the 5-factor model and the construct validity of the original English version. They reported that all estimated reliabilities were deemed acceptable (table 1). Based on the findings, it concluded that the Persian adaptation of the MSLSS provides a reliable and valid tool for assessing the life satisfaction of Iranian middle and high school students. Another study conducted by Jovanovic and Zuljevic in 2011 aimed to assess the psychometric properties of the *Serbian version* of the MSLSS. The research involved a sample of 408 high school students, consisting of 250 females and 158 males. The MSLSS domain and overall score's internal consistency coefficients were adequate (Table 1). The study suggested that shortening the scale from its original 40 items to 25 items could lead to a more accurate measure of Serbian adolescents' life satisfaction. Overall, the Serbian version of the MSLSS demonstrated good psychometric properties in this study, indicating its usefulness for cross-cultural assessments of life satisfaction among children and adolescents in Serbia. The study of Schnettler *et al.* (2017) aimed to evaluate the psychometric properties of the *Spanish Version* of the MSLSS in a sample of 369 university students from five state universities in Chile. The researchers administered both the full version (40 items) and the abbreviated version (30 items) of the MSLSS, as well as the Satisfaction with Life Scale (SWLS), to the participants. The results of the study indicated that the 30-item version of the MSLSS, with its five-factor structure, provided a better fit to the data compared to the 40-item version. This study also demonstrated the reliability (Table 1) and convergent, discriminant and concurrent validity of the 30-item version of the MSLSS. In summary, the study provides evidence for the psychometric properties and utility of the 30-item version of the MSLSS in measuring life satisfaction in different domains among university students in Chile.

Before being used as measuring tools, life satisfaction scales should be verified in various cultural contexts because life satisfaction and its dimensions may vary depending on cultural traits. In order to undertake a preliminary evaluation of the psychometric characteristics of the Bengali version of the MSLSS with a sample of 576 Bengali school-going adolescents in grades 9–10, was the aim of the current study.

### Objective of the Study:

- I. To determine the construct validity of the MSLSS within Bengali school-going adolescents using exploratory factor analysis (EFA).
- II. To calculate the internal consistency reliability of the MSLSS total score as well as each domain score.

## MATERIALS AND METHODS

**Participants:** The study was done with subjects drawn through a multiphasic stratified random sampling technique. At first, the South 24 Parganas district, West Bengal was subdivided into 30 blocks. From all blocks, the 10 rural or remote blocks were selected. From the list of all Government-sponsored Secondary and Higher Secondary Schools in those 10 blocks, a total of 10 schools were selected randomly from each block. Finally, five hundred seventy-six only Bengali adolescents aged 14–16 yrs. studying in grades 9 to 10 from those ten schools were taken through a simple random sampling method as participants.

**Tool used:** The Multidimensional Student's Life Satisfaction Scale (MSLSS) was designed to provide a holistic assessment of the well-being of adolescents. It consists of 40 items and 5 subscales:

Table 2. MSLSS

Dimension	No. of Items
Family	7
Friends	9
School	8
Living Environment	9
Self	7
<b>Total</b>	<b>40</b>

Adolescents are instructed to respond to the 40 items using a 5-point Likert-type scale to rate viz Strongly Disagree, Disagree, Neutral, Agree, and Strongly Agree. The Family domain items refer to the respondents' satisfaction with their relationship with family members as well as the family members' relationships with each other. The school domain items look at the respondents' satisfaction related to school life in terms of interest, learning, and educational activities. The Friends domain items aim to explore adolescents' satisfaction with their peers. The self-domain entails the respondent's level of satisfaction with himself or herself and other people's opinions in that regard. Lastly, the Living environment domain items explore the satisfaction with the immediate community and people in the respondents' neighbourhood.

**Adaptation of Translated Multidimensional Student's Life Satisfaction Scale (MSLSS) (Huebner, Laughlin, Ash & Gilman, 1998):** Before applying the translated version of MSLSS, adaptation to the new conditions is necessary; otherwise, it may lead to inaccuracy of the measurement instrument. In the present study, the adaptation process of the Bengali version of MSLSS was carried out meticulously.

**Translation of the Test Items and the Instructions in the Bengali Language:** This stage focuses on the adjustment of the MSLSS test vocabulary and grammar to the age and socio-cultural characteristics of the population contingent on which it will be applied. One of the important criteria during translation is not the literal meanings, but its

notional contents. It is essential to attain linguistic and psychological equivalence with the original rather than semantic equivalence. These requirements of translation were done by a group of professionals including researchers, psychologists, as well as linguists. Translation from English to Bengali was carried out through the translation-retranslation method. For these following steps were adopted.

- a) A group of experts was invited to translate the original version of the research tools from English to Bengali.
- b) Another group of experts was invited to translate from the new Bengali version to English.
- c) Again, another group of experts was invited to find out the differences between the original English form and the re-translated English form. The experts examined the two versions and suggested some changes in the Bengali version. Finally, Bengali versions of the tests were reconstructed to give the final shape.

**Standardization of the Bengali Versions of the Tests:** The Bengali versions of the MSLSS were administered on a representative try-out sample comprising 576 School-going adolescents. Then standardizations of the test were carried out and Reliability and Validity were estimated with the help of SPSS software.

## RESULTS

**Bengali version of Multidimensional Student's Life Satisfaction Scale (MSLSS):** There were 5 dimensions and 40 items in the original English form of the test. After doing the *factors analysis* of the Bengali version of the test, 32 items were found valid and the distribution of the total 32 items in the 5 dimensions was as per with the original English version of the test.

Table 3. Bengali version of MSLSS

Dimension	No. of Items
Family	6
Friends	7
School	8
Living Environment	7
Self	4
<b>Total</b>	<b>32</b>

**Validity of the Bengali Version of the MSLSS:** Construct validity of the present scale was found with the help of factor analysis.

**Exploratory Factor Analysis (EFA):** Exploratory factor analysis (EFA) was used to examine the factor structure of the MSLSS. The extraction method (Principal components), eigenvalues greater than 1, and oblique rotation (Promax, kappa=4) were performed on the school-going adolescent's raw scores on all 40 items of the MSLSS. A cutoff of .35 was used for factor loadings. Oblique rotation of the factor space was utilized, because the five MSLSS factors are not considered to be theoretically independent (i.e., orthogonal).

**Principal Component Analysis (PCA):** The results of the principal component analysis (PCA) of the entire item pool did not exactly follow the expected latent structure of the scale. Kaiser–Meyer–Olkin measure of sampling adequacy (KMO = 0.913) and significant Bartlett's test of sphericity (Chi-square = 9085.022,  $p < 0.001$ ) indicated that the correlation matrix was adequate for performing the PCA. By using a promax rotation with Kaiser normalization and Guttman-Kaiser criterion for predicting the number of components, we found the 9-component solution explaining 59.413% of the total variance. The structure of components suggested that we succeeded in fully replicating the school dimensions, while other dimensions did not seem to follow the original model (Table-5). At this point of the analyses, we decided to repeat the PCA, excluding 8 items that confound (item no. 10,25,26,30,32,36,38,40) the originally expected latent structure of the 5-factors scale. The exclusion criteria were higher loading on the principal component other than theoretically expected (they were indicated with bold characters in Table 3).

Table 4. 40 items MSLSS

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.913
Bartlett's Test of Sphericity	Approx. Chi-Square	9085.022
	df	780
	Sig.	.000

Table 5. Principal component analysis of the MSLSS—the pattern matrix

	Pattern Matrix <sup>a</sup>								
	1	2	3	4	5	6	7	8	9
18. I wish I didn't have to go to school.	.908								
8. I like being in school.	.810								
3. I look forward to going to school.	.747								
13. School is interesting.	.744								
23. There are many things about school I don't like.	.681								
28. I enjoy school activities.	.621								
37. I feel bad at school.	.586								
25. There are lots of things I can do well.	.399								
30. I like to try new things.	.392								
33. I learn a lot at school.	.382								
19. I wish I lived some where else.		.854							
14. I wish I lived in a different house.		.774							
24. I like my neighborhood.		.725							
9. I wish there were different people in my neighborhood.		.711							
34. This town is filled with mean people.		.699							
29. I like my neighbors.		.664				.360			
4. I like where I live.		.502							
11. I like spending time with my parents.			.887						
1. I enjoy being at home with my family.			.824						
6. My family gets along well together.			.745						
21. My family is better than most.			.688						
16. My parents and I do fun things together.			.595						
31. My parents treat me fairly.			.550			.407			
17. My friends are mean to me.				.867					
2. My friends treat me well.				.765					
7. My friends are nice to me.				.673					
12. I wish I had different friends.				.656					
22. My friends are great.				.595					
39. My friends will help me if I need it.				.576					
27. I have a bad time with my friends.				.523					
5. I think I am good looking.					.829				
15. I am a nice person.					.762				
35. I like myself.					.644				
20. Most people like me.					.428				
26. Members of my family talk nicely to one another.						0.818			
38. My family's house is nice.						0.636			
36. I have enough friends.							.854		
10. I am fun to be around.					.386			.725	
32. I have a lot of fun with my friends.								.461	
40. There are lots of fun things to do where I live.									.926
Extraction Method: Principal Component Analysis.									
Rotation Method: Promax with Kaiser Normalization.									
a. Rotation converged in 7 iterations.									
Only absolute values over 0.35 are displayed									

Note. - Negatively worded items have been reverse scored in order to remove negative factor loadings.

Table 6. 32 items MSLSS

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.898
Bartlett's Test of Sphericity	Approx. Chi-Square	6937.179
	df	496
	Sig.	.000

Item no 10,29,31 which loaded in more than one factor was assigned to the factor in which it loaded more strongly if the difference between the two loadings was greater than 0.10. After reducing the scale to a 32-item solution, we repeated the PCA by subjecting the correlation matrix to a Promax rotation with Kaiser normalization. A cutoff of .35 was used for factor loadings. Again, the Kaiser-Meyer-Olkin measure of sampling adequacy (KMO = 0.898) and significant Bartlett's test of sphericity (Chi-square = 6937.179,  $p < 0.001$ ) indicated that the correlation matrix was adequate for performing the analysis. Based on the Guttman-Kaiser criterion as well as the examination of the scree test, this time the 5-factor

solution appeared to fit the data best by explaining 56.043% of the total variance. As shown in Table 7, the originally expected factor structure was replicated perfectly. The result of the EFA revealed five eigen-values greater than one. The 5 factors accounted for 56.043% of the total variance. The results showed that family explained 7.036% of the total variance (2.252 eigen value) with the items factor loading ranging from .846-.649, and friend explained 6.035% of the total variance (1.931 eigen value) with the items factor loading ranging from .829-.485, and school explained 11.135% of the total variance (3.563 eigen value) with the items factor loading ranging from .863-.433, and living environment explained 27.858% of the

total variance (8.915 eigen value) with the items factor loading ranging from .824-.536, and self explained 3.979% of the total variance (1.273 eigen value) with the items factor loading ranging from .800-.502.

the five domains (Discriminant Validity). Several of these inter factor correlations are somewhat larger than those obtained in previous studies using CFA (Greenspoon and Saklofske 1998, range = 0.19–0.57) and conventional factor analytic methods

**Table 7. Principal component analysis of 32-item version of the MSLSS—the pattern matrix**

Pattern Matrix <sup>a</sup>					
	Component				
	1 Family	2 Friend	3 School	4 Living Environment	5 Self
1. I enjoy being at home with my family.	0.846				
11. I like spending time with my parents.	0.822				
6. My family gets along well together.	0.762				
21. My family is better than most.	0.692				
31. My parents treat me fairly.	0.654				
16. My parents and I do fun things together.	0.649				
17. My friends are mean to me.		0.829			
2. My friends treat me well.		0.819			
7. My friends are nice to me.		0.788			
22. My friends are great.		0.680			
39. My friends will help me if I need it.		0.644			
12. I wish I had different friends.		0.624			
27. I have a bad time with my friends.		0.485			
18. I wish I didn't have to go to school.			0.863		
8. I like being in school.			0.748		
23. There are many things about school I don't like.			0.722		
3. I look forward to going to school.			0.701		
13. School is interesting.			0.691		
37. I feel bad at school.			0.677		
28. I enjoy school activities.			0.578		
33. I learn a lot at school.			0.433		
19. I wish I lived somewhere else.				0.824	
14. I wish I lived in a different house.				0.786	
34. This town is filled with mean people.				0.776	
9. I wish there were different people in my neighborhood.				0.755	
24. I like my neighborhood.				0.711	
29. I like my neighbors.				0.647	
4. I like where I live.				0.536	
5. I think I am good-looking.					0.800
15. I am a nice person.					0.671
35. I like myself.					0.660
20. Most people like me.					0.502
Extraction Method: Principal Component Analysis.					
Rotation Method: Promax with Kaiser Normalization.					
a. Rotation converged in 5 iterations.					
Only absolute values over 0.35 are displayed					

**Table 8. Correlation Matrix Result for the 32-item MSLSS Factors**

	Family	Friend	School	Living Environment	Self
Family	1				
Friend	.52**	1			
School	.66**	.50**	1		
Living Environment	.44**	.45**	.28**	1	
Self	.70**	.42**	.55**	.33**	1
Total	.71**	.78**	.78**	.68**	.74**

\*\* . Correlation is significant at the 0.01 level (2-tailed). N=576

**Table 9. Reliability coefficient**

Dimension	$\alpha$ -Coefficient
Family	0.810
Friends	0.788
School	0.804
Living Environment	0.808
Self	0.733
Total	0.914

These results clearly support the five-factor structure as a replication of Huebner's five-factor model. The Convergent construct validity of the tool was worked out by calculating the correlations of different dimensions of the MSLSS with total scale score and the coefficients were found very high (0.68 to 0.78) as shown in Table 8. Interfactor correlations are also reported in Table 8. The correlations range from 0.28 to 0.70, supporting the hypothesis that, although LS domains are logically expected to be related, school-going adolescents are able to differentiate between

(Huebner 1994, range = 0.12–0.34; Greenspoon and Saklofske 1997, range = 0.04–0.35). Figure 1 (SEM) shows the factor loadings, estimated error variances and correlations between dimensions of the 32-item Bengali version of the MSLSS. Either an item reliability of at least 0.50, or a significant t value, or both, observed for each item, is considered to be evidence of convergent validity (Chau 1997). As seen in Fig. 1, all t-values of this model were significant and all item reliabilities were greater than 0.50, except for two items.

**Reliability of the Bengali Version of the MSLSS:** Internal consistency (alpha) coefficients were calculated. The reliability coefficient for the whole scale was found to be 0.914. To find out the reliability of the five dimensions of the tool,  $\alpha$ -Coefficients were also calculated. The value of the reliability coefficients is shown Table 7.

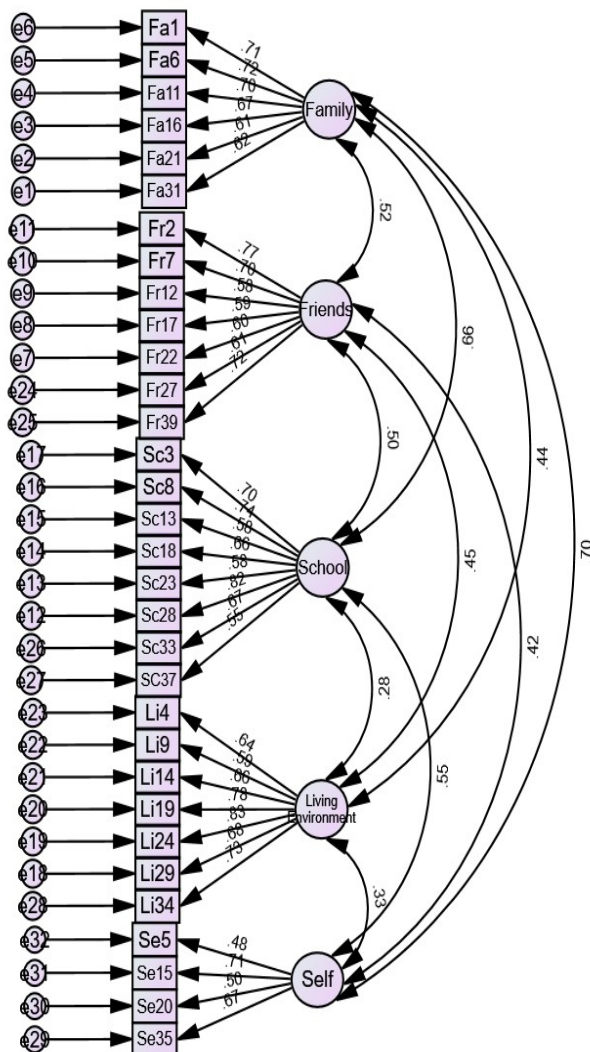


Fig. 1. Structural equation modeling of the MSLSS

## DISCUSSION

The present study clearly supports the five-factor structure of the MSLSS as a replication of Huebner's five-factor model. This finding is consistent with previous research, exploratory factor analyses have supported the dimensionality of the MSLSS (Huebner, 1994; Greenspoon and Saklofske, 1997). Confirmatory factor analyses have provided further support to the multidimensional, hierarchical model consisting of a global life satisfaction higher-order factor at the apex of the hierarchy along with five specific domains below (Gilman et al., 2000; Huebner et al., 1998; Greenspoon and Saklofske, 1998). In this Bengali version of MSLSS, 32 items were found valid and the distribution of the total 32 items in the 5 dimensions was as per with the original English version of the test. This finding is paralleled with the Turkish Version (32 items) MSLSS (Irmak, S., & Kuruüzüm, A., 2008); Persian Adaptation (35 items) MSLSS (Hatami, G., Motamed, N., & Ashrafzadeh, M., 2009); Serbian Version (25 items) MSLSS (Jovanovic, V., & Zuljevic, D., 2011); Spanish Version (30 items) MSLSS (Schnettler, B., Orellana, L., Sepúlveda, J., Miranda, H., Grunert, K., Lobos, G., & Hueche, C., 2017). The internal consistency estimate of the total score was 0.914, indicating overall high consistency of the MSLSS items. This coefficient is paralleled that was found among American elementary students (Huebner,

1994), American middle school students (Huebner et al., 1998), American 9–12 graded adolescents (Gilman, R., Huebner, E. S., & Laughlin, J. E., 2000), Canadian 3-8 graded students (Greenspoon and Saklofske, 1997), Turkish primary and high school students (Irmak, S., & Kuruüzüm, A., 2008), Persian middle and high school students (Hatami, G., Motamed, N., & Ashrafzadeh, M., 2009), Serbian secondary school students (Jovanovic, V., & Zuljevic, D., 2011) and Chilean university students (Schnettler, B., Orellana, L., Sepúlveda, J., Miranda, H., Grunert, K., Lobos, G., & Hueche, C., 2017). The coefficient alpha for each MSLSS dimension ranged from 0.81 (Family) to 0.73 (Self) and it is also found paralleled with previous studies.

## CONCLUSION

The results reported here provide preliminary evidence of the reliability and validity of the Bengali version of MSLSS as a suitable measure for use with Bengali children and adolescents.

## REFERENCES

- Alfonso, V. C., Allison, D. B., Rader, D. E. & Gorman, B. S. (1996). The extended satisfaction with life scale: Development and psychometric properties. *Social Indicators Research*, 38, 275–301.
- Chau, P. Y. K. (1997). Reexamining a model for evaluating information center success using a structural equation modeling approach. *Decision Sciences*, 28, 309–334. <http://dx.doi.org/10.1111/j.1540-5915.1997.tb01313.x>
- Diener, E. (1994). Assessing subjective well-being: progress and opportunities. *Social Indicators Research*, 31, 103–57. <http://dx.doi.org/10.1007/bf01207052>
- Diener, E., Emmons, R., Larsen, J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment*, 49(1), 71–75. [http://dx.doi.org/10.1207/s15327752jpa4901\\_13](http://dx.doi.org/10.1207/s15327752jpa4901_13)
- Gilman, R., Huebner, E. S., & Laughlin, J. E. (2000). A first study of the Multidimensional Students' Life Scale with adolescents. *Social Indicators Research*, 52(2), 135–160. <http://dx.doi.org/10.1023/a:1007059227507>
- Greenspoon, P. J., & Saklofske, D. H. (1997). Validity and Reliability of the Multidimensional Students' Life Satisfaction Scale with Canadian Children. *Journal of Psychoeducational Assessment*, 15(2), 138–155. <https://doi.org/10.1177/073428299701500204>
- Greenspoon, P. J., & Saklofske, D. H. (1998). Confirmatory factor analysis of the multidimensional students' life satisfaction scale. *Personality and Individual Differences*, 25(5), 965–971.
- Hatami, G., Motamed, N., & Ashrafzadeh, M. (2009). Confirmatory Factor Analysis of Persian Adaptation of Multidimensional Students' Life Satisfaction Scale (MSLSS). *Social Indicators Research*, 98(2), 265–271. <https://doi.org/10.1007/s11205-009-9538-2>
- Huebner, E. S. (1991a). Initial development of the students' life satisfaction scale. *School Psychology International*, 12(3), 231–240. <http://dx.doi.org/10.1177/0143034391123010>
- Huebner, E. S. (1994). Preliminary development and validation of a multidimensional life satisfaction scale for children. *Psychological Assessment*, 6, 149–158. <http://dx.doi.org/10.1037/1040-3590.6.2.149>
- Huebner, E. S., Laughlin, J. E., Ash, C., & Gilman, R. (1998). Further validation of the multidimensional students' life satisfaction scale. *Journal of Psychoeducational Assessment*, 16(2), 118–134. <http://dx.doi.org/10.1177/073428299801600202>
- Irmak, S., & Kuruüzüm, A. (2008). Turkish Validity Examination of the Multidimensional Students' Life Satisfaction Scale. *Social Indicators Research*, 92(1), 13–23. <https://doi.org/10.1007/s11205-008-9284-x>
- Jovanovic, V., & Zuljevic, D. (2011). Psychometric Evaluation of the Serbian Version of the Multidimensional Students' Life

- Satisfaction Scale. *Social Indicators Research*, 110(1), 55–69. <https://doi.org/10.1007/s11205-011-9916-4>
- Schnettler, B., Orellana, L., Sepúlveda, J., Miranda, H., Grunert, K., Lobos, G., & Hueche, C. (2017). Psychometric properties of the Multidimensional Students' Life Satisfaction Scale in a sample of Chilean university students. *Suma Psicológica*, 24(2), 97–106. <https://doi.org/10.1016/j.sumpsi.2017.06.001>
- Seligson J.L., Huebner E. S., Valois R. F. (2003). Preliminary validation of the brief multidimensional students' life satisfaction scale (BMSLSS). *Social Indicators Research*. 61, 121–145. <http://dx.doi.org/10.1023/A:1021326822957>

\*\*\*\*\*