Translation, Cultural Adaptation, and CFA of Nepali Version of Somatic Symptoms Scale (N-SSS-8)

Yubaraj Adhikari & **Birgit Senft**

ABSTRACT

Background: The Somatic Symptoms Scale (SSS) was developed as a brief assessment and screening tool for evaluating the somatic burden of individuals. Nepal lacks a culturally adapted Nepali version of a brief measure of somatic symptoms scale (SSS) for clinical and research use. This research covers translation, cultural adaptation, testing, and applicability of the tool through psychometric analysis. Confirmatory factor analysis (CFA) was applied to test the reliability and validity of the tool.

Aim: To examine the validity and reliability of translated and culturally adapted versions of SSS-8 through the use of CFA.

Methods: A non-experimental survey design was used to examine the distress of Nepali doctors (n = 547) using online and paper-and-pencil methods with the use of SSS-8. Translation, cultural adaptation, pilot testing, confirmatory factor analysis (CFA), and other applicable psychometric tests were carried out.

Results: The reliability score of Cronbach alpha (α) of the construct was 0.804. All items, except one for stomach or bowel problems to represent gastrointestinal symptoms, were retained with adequate factor loadings. Construct validity was established, as the fitness level of indices of the model met the acceptance criteria. Convergent validity could not be established, as the average variance extracted was below 0.5 for each subscale. The discriminant validity of the scale was confirmed. Post-hoc CFA verified the Nepali version of N-SSS-7, confirming a tri-factor model – pain, cardiopulmonary, and fatigue – with model fit indices (SMRs, RMR, and RMSEA) all below 0.08. The model fit scores of NFI, TLI, AGFI, and CFI were above 0.94.

Conclusions: CFA confirmed the Nepali version of the Somatic Symptoms Scale (N-SSS-7) is a valid and reliable tool to quickly assess the somatic burden in the Nepali population.

Keywords: Somatic Symptoms Scale, Nepali Version, Cultural Adaptation, Confirmatory Factor Analysis

> *... multiple methods are used when translating and adapting psychological tools from one language to another, with no consensus among scholars on a single approach.*

The Somatic Symptoms Scale (SSS-8) is a self-administered somatic symptoms tool derived from the Patient Health Questionnaire (PHQ-15), which was originally developed by Kroenke et al. (1997) and later validated by Gierk et al. (2014). The SSS-8 captures an individual's perceived somatic burden, and is widely used in both clinical and non-clinical settings and validated in many languages. In Nepal, a brief tool to assess the somatic burden in the general population was not available. In the past, the Bradford Somatic Inventory (BSI) with 46 items was used with torture survivors (Emmelkamp et al., 2002). The PHQ-15 was tested to measure the somatic burden of medical students (Adhikari et al., 2017). Tol et al. (2009) selected seven somatic symptoms from the Symptom Checklist-90-R (SCL-90-R) to measure the somatic experiences of Nepali-speaking torture survivors in Bhutanese refugee camps. The SSS-8 is included in the new control trial of van't Hof et al. (2020), but researchers failed to explain whether they used an English version or if any translation/cultural adaptations were made. Nepali mental health and psychosocial practitioners (MHPSS) needed a brief somatic symptom tool for use in clinical practice and research. The adaptation and validation process of the Nepali version of the Somatic Symptoms Scale (N-SSS) was both applicable and necessary in the Nepali context. This study presents the detailed process of translation, adaptation, and validation of the N-SSS with a confirmatory factor analysis process.

Method

Study Design

A cross-sectional design was applied to measure the somatic symptoms of Nepali doctors. Online data was collected through a Google doc and paper-pencil methods. Doctors registered with the Nepal Medical Council were included, whereas doctors who discontinued their practice due to mental health or other reasons were excluded.

Tools

The SSS-8 has eight self-reported items ranked on a 5-point Likert scale (0 = Not at all, 1 = A little bit, 2 = Somewhat, 3 = Quite a bit, and 4 = Very much).

The SSS-8 had good reliability as measured with Cronbach alpha (α = 0.81) and good internal consistency (Gierk et al., 2014). Tests of the confirmatory factor analysis (CFA) confirmed that somatic symptoms lie in four clusters: gastrointestinal, pain, cardiopulmonary, and fatigue-related factors (Gierk et al., 2014; Gierk et al., 2017). The content validity of the SSS-8 was good. The SSS-8 is culturally adapted, and used in the English, Japanese, Korean, German, Portuguese, and Greek languages (Gierk et al., 2014; Matsudaira et al., 2017; Yang et al., 2020, Toussaint et al., 2020; Pollo, 2020; Petrelis & Domeyar, 2020).

Translation and cultural adaptation process

The SSS-8 was culturally adapted and translated into Nepali by using forward-backward translations, consultations with experts in receiving feedback, and pilot testing before the final data collection. The first translation from English to Nepali was done by two Nepali bilingual psychologists. Both translated versions were checked by the researcher, and a single list was prepared. That list was given to an expatriate bilingual psychologist to carry out a lexical back-translation, which was then reviewed by an expatriate bilingual psychologist before a final draft was prepared. Then both the English and Nepali versions were shared with 23 Nepali psychologists and consultant psychiatrists, who had both clinical and research experience in the mental health and psychosocial fields for their feedback.

Fifteen experts out of 23 responded to the request. In response to SSS-1, they advised to add "wa" in between two optional words, rather than using brackets. In SSS-2, there was a suggestion to use "dhad" instead of "pittyu." In SSS-6, the word "samasya" was found missing and was adjusted. In SSS-8, they advised to phrase "trouble sleeping" as "nidauna garho hune wa nidrama biujhine." They advised framing the sentence as "bhayo" and "diyo" instead of "bhaeko chha" and "dieko chha." Last, the reviewers recommended that the researchers conduct psychometric testing through a pilot study, rather than use the translated version directly with the study population. The researcher had already planned such a step. The translated and culturally-adapted Nepali version of the SSS-8 was then reviewed by a Nepali language expert for

grammatical errors before the pilot test. The final Nepali version of the SSS-8 was piloted with 55 medical doctors. The test results and statistical properties of the SSS-8 Nepali pilot version were calculated before the final study.

Ethical aspects of the study

Two institutions, the Austrian Academy of Psychology (AAP) and the Nepal Health Research Council (NHRC), provided ethical approval before the data collection process. The participants received announcements with a detailed explanation of the research, which included voluntary participation, informed consent, the possibility of withdrawal at any stage without any explanation, potential harms (psychological and mental health-related) due to their participation in the research, and a debriefing note with contact details of institutions providing free counseling and therapeutic support in case of need. No personal data, such as names, addresses, emails, and phone number, were collected. Therefore, the anonymity, privacy, and confidentiality of the respondents were well respected in all steps of the research.

Data analysis

After the data collection process, the data were coded, cleaned, and analyzed using the SPSS-25 and SPSS AMOS-25 versions. Normality, homogeneity of the variances, linearity, multicollinearity, and co-variances were tested before detailed analysis. Apart from the correlations among the variables, Levene's test for the homogeneity of variances was also conducted. Descriptive statistical analysis was applied to measure the means and standard deviations of continuous variables. Significance testing for normality followed the distribution checks via scatterplots, box plots, kurtosis, and skewness. A Pearson's product-moment correlation was analyzed after testing the relevant assumptions for the correlation.

Results

Pilot study on Nepali version of the Somatic Symptoms Scale

The final draft of the Nepali version of the scale was piloted with the intended population and the first 55 online responses collected via a Google form were considered. The responses were coded, and data cleaned. No missing data were found. The Cronbach alpha for the Nepali version of the SSS-8 was 0.864, which showed good internal consistency among the eight items. The internal consistency, with any item deleted, was over 0.833 for all items. When bivariate correlations of each item were tested, all items, except the N-SSS-2 and N-SSS-5, were found to be significantly correlated (p <.001). Additionally, the dimensionality of the scale was examined by investigating the factor structure using the pilot data. After conducting the principal CFA, the commonalities were calculated, and the results indicated that all items, except the N-SSS-2 and N-SSS-8, had commonalities above 0.4. The extraction of loadings through total variance explained why the eigenvalues of two components were more than 1. The two components with eigenvalues over 1 comprised only 65.26% of the cumulative variance. The outcome of KMO and Bartlett's Test for adequacy of sampling was 0.838, and the variance of each item was significantly correlated (p <0.001).

The analysis suggested conducting a confirmatory factor analysis (CFA) to test the model of the SSS-8. When Gierk et al. (2014) tested a higher-order general factor analysis of the English version of the SSS-8, the results suggested using four factors. The suggested frame includes a) the SSS-1 for gastrointestinal symptoms, b) the SSS-2, 3, and 4 for pain, c) the SSS-5 and 6 for cardiopulmonary symptoms, and d) the SSS-7 and 8 for fatigue. A CFA was applied with the four-dimensional model of the SSS-8 (see Figure 1). The CFA of the Nepali version of the SSS-8 showed a maximum reasonably good fit. All items had strong and significant correlations (< 0.56). The fit indices are presented in Table 1.

The results of the fit indices of the CFA for the pilot test of SSS-8 were reasonably in line with a good fit. For convergent validity, composite reliability (CR) was found to be > 0.7, and the average variance extracted (AVE) > 0.5 was measured. For other measures, CR = 0.84 and AVE = 0.78 for pain; CR = 0.73 and AVE = 0.57 for cardiopulmonary, and CR = 0.61 and AVE = 0.44 for fatigue were measured. Each score of AVE was greater than MSV and ASV. The test further confirmed that it would be fruitful to carry out full-scale administration of the Nepali version of the SSS-8 to the chosen population for study in Nepal.
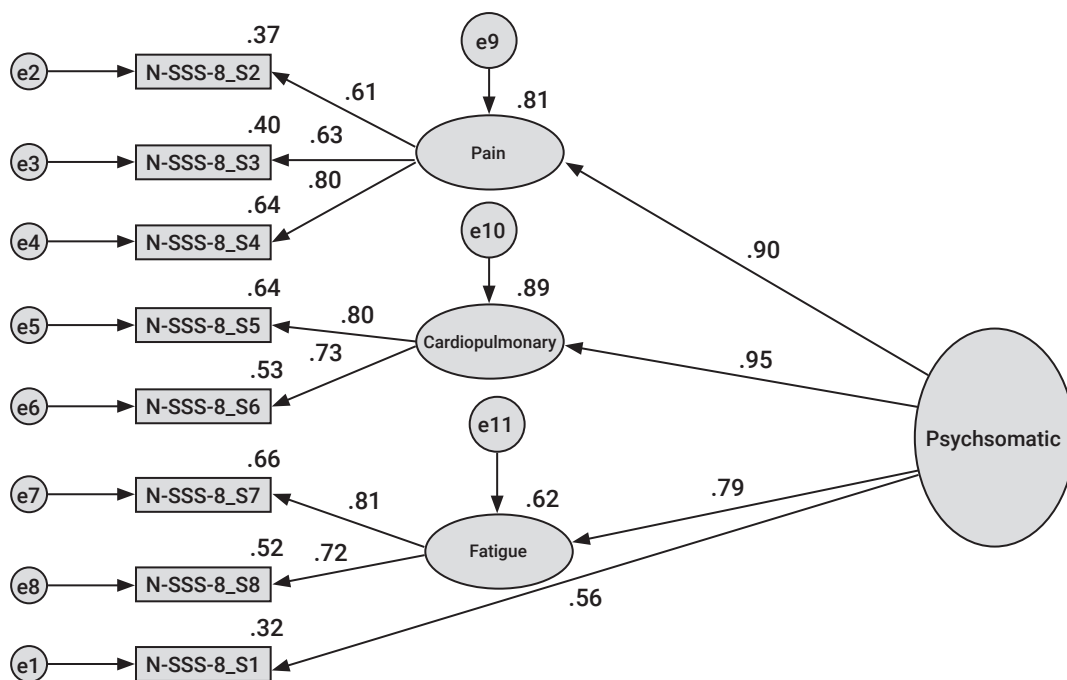
Figure 1. *Results of Confirmatory Factor Analysis of Pilot Test for SSS-8-N*

Main Study Findings and Prevalence of Somatic Symptoms

A total of 557 doctors responded to the survey, with 415 males (75.90%) and 129 females (23.60%), yielding a response rate of 62.80%. Of these, 400 responses were received online, while the remaining were collected via paper forms. The somatic symptoms were calculated based on five severity categories: none to minimal (0–3), low (4–7), medium (8–11), high (12–15), and very high (16–32). The prevalence of psychosomatic measures among respondents was as follows: medium = 20.80%, high = 13.70% and very high = 6.80% (Adhikari &

Senft, 2022). A cut-off score of 11 was applied, as suggested by Gierk et al. (2014). The somatic burden as per socio-demographic variables of the studied population is presented in Table 3.

Confirmatory factor analysis of the Nepali version of the SSS-8

CFA process and outcomes

Descriptive statistics of the N-SSS-8 showed very good reliability, with a Cronbach's alpha of 0.802. The mean score of SSS-8 for the overall data was $M = 11.90$ ($SD = 6.42$). The static values of skewness

Table 1. *Fit Indices from CFA with Four-Factor Model of SSS-8-N* ($N = 55$, $p = 0.002$)

Model	CMIN/df	NFI	TLI	GFI	CFI	RMR	SMRs	RMSEA	P-Close	Hölter Kriterium
SSS-8	2.077	0.770	0.823	0.849	0.861	0.118	0.053	0.141	0.010	48

Note: NFI = Normed-Fit Index, TLI = Tucker-Lewis Index, GFI = Goodness-of-Fit Index, CFI = Comparative-Fit Index, RMSR = Root mean square residuals, SMRs = Standardized root mean Square Residuals, RMSEA = Root mean square error of approximation, Hölter Kriterium for numbers of samples in $p = 0.01$
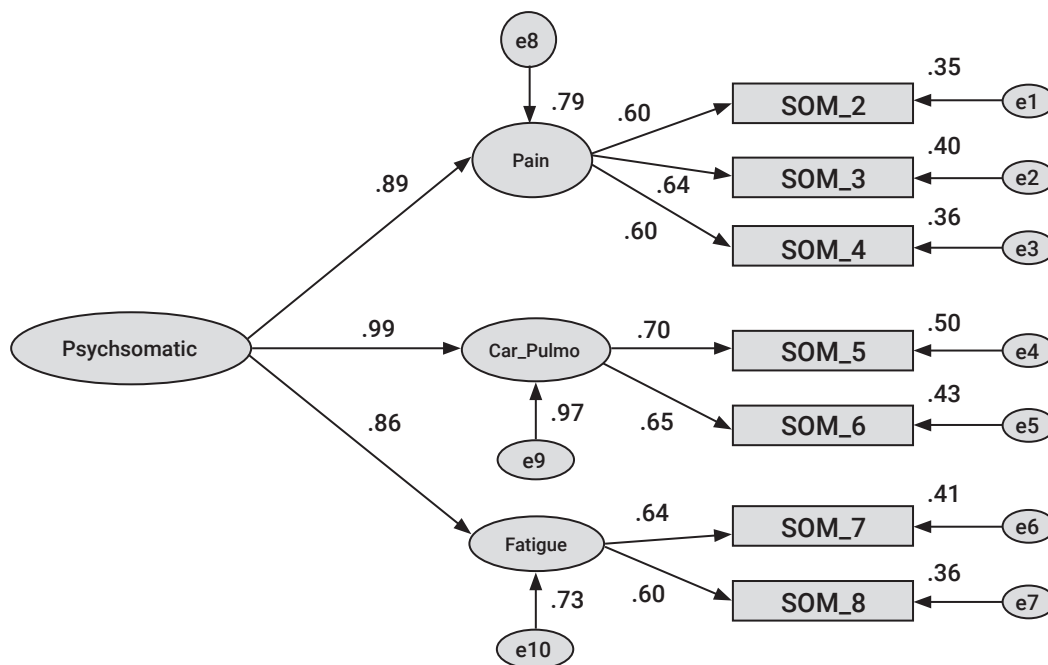
Figure 2. *Confirmatory Factor Analysis of N-SSS-8 with Three-Factor Model*

and kurtosis were 0.603 and 0.440 with standard errors of 0.104 and 0.209 respectively. Histograms, normal Q-Q plots, box plots, scatter plots, Mahalanobis' distances for the DVs, and residuals further demonstrated that the data were normally distributed. Shapiro-Wilk and Kolmogorov Smirnov tests were conducted for all items of the SSS-8, and no significant deviations from normality were found.

CFA was conducted on the N-SSS-8 to evaluate a four-factor model. The four-factor model of the SSS-8 includes three items to represent pain – SOM-2 (back pain), SOM-3 (pain in arms, legs, or joints), and SOM-4 (headaches); two items to represent cardiopulmonary symptoms – SOM-5 (chest pain or shortness of breath) and SOM-6 (dizziness); two items to represent fatigue – SOM-7 (feeling tired or having low energy) and SOM-8 (trouble sleeping); and a single item – SOM-1 – to represent gastrointestinal symptoms (stomach or bowel problems). The CFA results showed that SOM-1 had a factor loading of only 0.55, with an error variance of 0.28. This factor loading was below the required threshold, so SOM-1 could not be retained. Consequently, the CFA was conducted for a three-factor model without SOM-1. The measurement model is presented in Figure 2.

Table 2. *CFA Fit Indices for Three-Factor Structural Model of N-SSS-8* (N = 547, p <.001)

Model	CMIN/df	NFI	TLI	GFI	CFI	RMR	SMRs	RMSEA	P-Close	Hölter Kriterium
SSS-8	4.461	0.922	0.918	0.965	0.938	0.072	0.0529	0.080	0.005	245

Note: NFI = Normed-Fit Index, TLI = Tucker-Lewis Index, GFI = Goodness-of-Fit Index, CFI = Comparative-Fit Index, RMSR = Root mean square residuals, SMRs = Standardized root mean square residuals, RMSEA = Root mean square error of approximation, Hölter Kriterium for number of required sample, with p = 0.01

CFA fit indices of structural model of the N-SSS-8

The overall model fit for the structural model of the N-SSS-8 was examined using the same set of fit indices applied to the measurement model of the SSS-8. The model fit indices are presented in Table 2.

Factor loading and summary of construct of measurement model of the N-SSS-8

A recursive model was tested, with 28 distinct sample moments and 12 distinct parameters to be estimated. The chi-square value of the default model was 71.379 with 16 degrees of freedom with a significant level of probability (p <.001). The measurement model of the current study shows an adequate model fit for the empirical data. The normed chi-square (CMIN/df) was measured as 3.699, which is

an acceptable value. The values of NFI, TLI, GFI, and CFI were all above 0.90, the required level. The values of RMSR, RMSR, and RMSEA were 0.071, 0.53, and 0.070 respectively; all were at the acceptable threshold of 0.08. In conclusion, the CFA analysis of the N-SSS-8 was fit and supported by the data. The construct related to gastrointestinal symptoms had only a single item by which to measure the construct. This item, for gastrointestinal symptoms, was not used in the measurement model. A summary for all constructs is presented in Figure 3.

The factor loading for all items of each construct was above 0.62, except for one item: the SOM-4. Positive and strong correlations (> 0.82) among the three measures were found. A summary of the fitness indices of the measurement model is presented in Table 4. All the fitness indices for the

Table 3. *Distribution of Distress Measures across Socio-Demographic Variables*

Characteristic	Sub-Heading	*N*	%	SSS-8	
				M	*SD*
Overall	Medical/Dental Doctors	547	100	11.9	6.42
Gender	Male	415	75.9	11.92	6.35
	Female	129	23.6	11.91	6.73
	Unknown	3	0.5	9.67	1.15
Position	General Physician/Dental Doctor	291	53.2	11.37	6.8
	Consultant	153	28	12.03	6.26
	Senior Consultant	39	7.1	11.64	4.79
	Director	9	1.6	13.78	6.08
	Resident Doctor	55	10.1	14.29	5.35
Qualification	MBBS	288	52.7	11.9	6.6
	Master's in Medicine	199	36.3	12.95	6.12
	Doctorate in Medicine	60	11	8.47	5.33
Experience	0-2 Years	188	34.4	12.54	7.09
	2-5 Years	183	33.46	11.23	5.75
	5-10 Years	109	19.93	11.62	7.08
	10+ Years	67	11.88	12.4	4.78

| Characteristic	Sub-Heading	N	%	M	SD
Type of Institution	Government Hospital	242	44.24	11.71	6.03
	Private Hospital	175	31.99	10.29	6.96
	Teaching Hospital	97	17.73	14.44	5.58
	Private Practice	20	3.66	13.95	4.94
	NGO/Public	13	2.38	15.31	6.92
Location of Job	Home-Based	303	55.39	11.95	6.35
	Out of Home	244	44.61	11.85	6.52
Rural/ Urban/ Aboard	Out of Kathmandu Valley	224	40.95	13.71	6.02
	Kathmandu Valley	289	52.83	10.56	6.48
	Working Abroad	34	6.22	11.44	5.78
Age Group	18-25 Years	67	12.25	12.87	7.88
	26-45 Years	451	82.45	11.82	6.21
Age Group	46-60 Years	26	4.75	11.31	5.97
	60+ Years	3	0.55	8.67	7.02
Type of Service	Emergency Service	97	17.73	13.31	6.6
	Outpatient	36	6.58	5.25	4.56
	Surgery/Post-Op.	225	41.13	12.74	5.78
	Private Clinic	89	16.27	8.7	6.5
	Other	74	13.53	13.74	5.87
	All of the Above	26	4.8	14.42	5.01
Caseload per Week	Below 25	124	22.67	8.44	5.98
	26-49	153	27.97	10.48	6.89
	50-75	120	21.94	14.68	5.4
	76 or above	150	27.42	14	5.23
Clinical Supervision	Not Heard of	62	11.33	15.08	6.41
	Yes	169	30.9	13.25	5.75
	No	316	57.77	10.56	6.42
Self-Care Training	Not Heard of	50	9.14	13.86	6.07
	Yes	30	5.48	9.37	6.39
	No	467	85.37	11.86	6.41
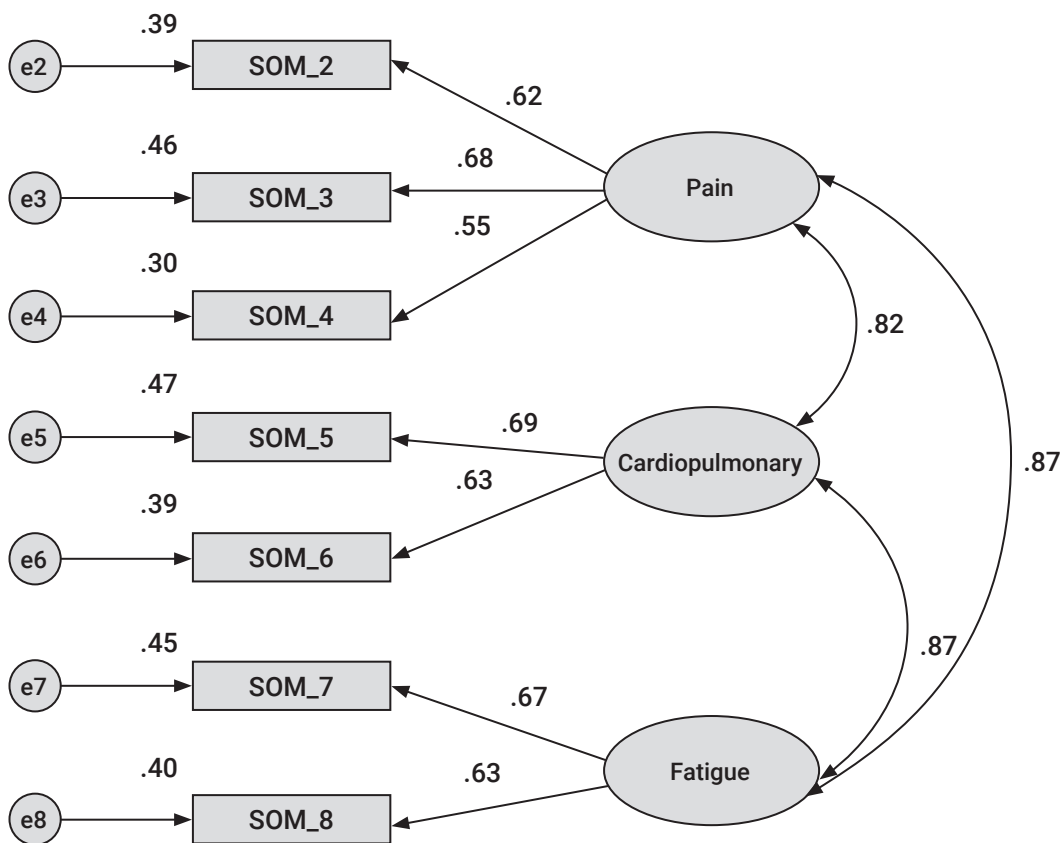
Figure 3. *Measurement Model of N-SSS-8*

measurement model of the N-SSS-8 achieved the required level.

Unimodality, reliability, and validity of N- SSS-8

Unimodality: To achieve unimodality, there should be acceptable factor loadings for all measuring items, and acceptable loadings of items for respec-

tive latent variables. Each item with a low factor loading must be deleted. Unimodality has to be analyzed before calculating and presenting the reliability and validity of any construct. Positive factor loadings of 0.50 or above are an acceptable level to demonstrate the unidimensionality of a scale. Positive factor loadings above 0.60 for each measured item of the N-SSS-8 were measured (refer

Table 4. *CFA Fit Indices for Three-factor Measurement Model of SSS-8 (N = 547)*

Model	CMIN/df	NFI	TLI	GFI	CFI	RMR	SMRs	RMSEA	P-Close	Hölter Kriterium
SSS-8	3.456	0.947	0.942	0.976	0.961	0.048	0.0396	0.067	0.078	329

Notes: NFI = Normed Fit Index, TLI = Tucker–Lewis–Index, GFI = Goodness–of–Fit–Index, CFI = Comparative Fit Index, RMSR = Root mean square residuals, SMRs = Standardized Root mean Square Residuals, RMSEA = Root mean square error of approximation, Hölter Kriterium for the number of required samples, with *p* = 0.01

Table 5. *Factor Loadings and Reliability Scores of SSS-8* (*N* = 547)

Construct	Item	Factor loading	Cronbach α	CR	AVE
Pain	SOM_2	0.60	0.64	0.64	0.38
	SOM_3	0.64			
	SOM_4	0.60			
Cardio	SOM_5	0.70	0.60	0.63	0.45
	SOM_6	0.65			
Fatigue	SOM_7	0.64	0.60	0.55	0.38
	SOM_8	0.60			

Note: AVE = average variance extracted, CR = composite reliability

to Figure 3). Therefore, it is acceptable to proceed with calculating the reliability and validity of the scale.

Reliability: A summary of each construct and item with its factor loading, CR, and AVE is presented in Table 5 above.

Validity: The validity of any instrument or measure is its ability, to a certain extent, to measure whatever it is supposed to measure. In any measurement model, three types of validity (convergent, construct, and discriminant) are measured through CFA. Table 6 presents the internal reliability and validity indices of the N-SSS-8.

Discussion

The present study evaluates the reliability and validity of the translated version of the SSS-8 into the Nepali language within a sample of Nepali doctors. Since the author was unaware of any similar stud-

ies conducted in Nepal, a rigorous process of translation and cultural adaptation process was therefore followed. Maneesriwongul and Dixon (2004) outlined that multiple methods are used when translating and adapting psychological tools from one language to another, with no consensus among scholars on a single approach. The recommended steps include drafting a direct translation, writing a lexical back-translation, collecting feedback from practitioners and experts, finalizing a draft version, and piloting the tool with the target population before its final use (Davis et al., 2013; Sousa & Rojjanasrirat, 2011; Van Ommeren et al., 1999). This study followed the exact process recommended by the scholars.

Gierk et al. (2014) carried out a confirmatory factor analysis of the SSS-8 in which the three-factor model was superior to the one-factor model, and recommended its use. The Korean version of the SSS-8 is equally suggested for the three-fac-

Table 6. *Internal Reliability and Validity Indices of N-SSS-8* (*N* = 557)

Construct	AVE	CR	MSV	ASV
Pain	0.38	0.64	0.76	0.71
Cardio	0.46	0.63	0.76	0.71
Fatigue	0.38	0.55	0.76	0.76

Note: AVE = average variance extracted, CR = composite reliability, MSV = maximum shared variance,
ASV = average shared variance, N/A = not applicable

tor model, instead of one. In the CFA process, each item of the SSS-8, except SSS-1, had a factor loading above 0.60 at the 0.05 significance level.

For construct reliability, composite reliability (CR) values should be greater than 0.6 and average variance extracted (AVE) values should be above 0.5. In addition, the Cronbach alpha (α) for each construct should be above 0.7. Therefore, the N-SSS-8 did not achieve scores demonstrating reliability for each sub-scale. However, the overall reliability (α) of the construct was 0.804. The reliability (α) score is higher than that of the English and German versions (Gierk et al., 2014; Toussaint et al., 2017), but lower than the Korean version of the SSS-8 (Yang et al., 2020).

Convergent validity can be verified if the AVE value for each item is 0.5 or above (Fornell & Larcker, 1981). The AVE scores for all factors of the N-SSS-7 are below 0.5 (see Table 6), so convergent validity of the tool was not achieved. That said, AVE scores probably did not reach acceptable levels because there were fewer than three items for each factor.

Construct validity is established when the fitness level of indices meets the acceptance criteria. Ping (2009) suggested that AVE scores below 0.50 be considered if a study is being conducted for the first time. Hair et al. (2005) claimed that convergent validity can be explained and verified through computing and analyzing the CR and AVE values of each measure, and that convergent validity is achieved if the CR values of each construct are above 0.7, and the AVE scores of each construct are above 0.5. The CR score for each measure should be greater than the AVE score (Hair et al., 2013). All measures of the N-SSS-7 met the acceptable level of fit criteria (Awang, 2014).

Discriminant validity is confirmed when both maximum shared variance (MSV) and average shared variance (ASV) are greater than AVE (Hair et al., 2005; Hair et al., 2013). The scores of AVE, ASV, and MSV measured in this study prove that MSV < AVE and that ASV < AVE; therefore, the discriminant validity of the scale is confirmed. Discriminant validity can also be achieved in situations where the measurement model and all items of the model are free from redundancy (Ahmad, Zulkurnain, and Khairushalimi, 2016). There was no redundant item in the model, confirming its discriminant validity.

Conclusions

The study concludes that the translation, cultural adaptation, and confirmatory factor analysis of the SSS-8 have been successfully completed. The reliability and validity indicators for the three-factor model of the N-SSS-8, excluding SSS-1 for Gastro, have been justified. The analysis of the psychometric properties of the N-SSS-7, presented below in Preeti font, suggests that it should be used for further clinical and research purposes.

Conflict of interest

None

Authors' contribution

This research provides researchers and clinicians with a validated and reliable Somatic Symptoms Scale for use in the Nepali context.

Acknowledgments

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Yubaraj Adhikari *is a mental health and psychosocial support (MHPSS) practitioner and researcher with over 20 years of experience. As an MHPSS expert for the International Committee of the Red Cross (ICRC), he has effectively managed projects focusing on trauma-affected individuals in low and middle-income countries. Yubaraj holds a doctoral degree in Psychology and an MSc in Mental Health Psychology. He possesses exceptional expertise in training counselors/psychologists, designing and implementing mental health and counseling services, and providing supervision. He has a solid background in ensuring evidence-based care through implementation research in diverse cultural settings. Yubaraj is an active contributor to academic literature, publishing research papers and serving as a peer reviewer and academic editor.*

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Nepali Somatic Symptom Scale (N-SSS-7)

म तपाईलाई विगत एक हप्ता भित्रमा तपाईले महसुस गर्नु भएका कठिनाईहरू बारे प्रश्न गर्दैछु । प्रत्येक प्रश्नको लागि तपाईलाई विगत एक हप्तामा कति धेरै कठिनाइ भयो भन्ने बारेमा म प्रश्न गर्दैछु ।

	कठिनाईहरू (N-SSS-7)	(हुदै भएन) ०	(कहिले काँही भयो) १	(अकसर भयो) २	(धेरै भयो) ३	(एकदमै धेरै भयो) ४
S2	तपाईलाई कम्मर दुख्ने समस्याले कत्तिको दुःख दियो?					
S3	तपाईलाई हात-पाखुरा, खुट्टा दुख्ने वा जोर्नी दुख्ने समस्याले कत्तिको दुःख दियो?					
S4	तपाईलाई टाउको दुख्ने समस्याले कत्तिको दुःख दियो?					
S5	तपाईलाई मुटु (छ्याति) दुख्नेवा श्वास फेर्न गाह्रो हुने समस्याले कत्तिको दुःख दियो?					
S6	तपाईलाई टाउको भ्रन्न हुने, रिंगटा वा चक्कर लाग्ने समस्याले कत्तिको दुःख दियो?					
S7	तपाईलाई शरीरमा कमजोरी वा थकित हुने समस्याले कत्तिको दुःख दियो?					
S8	तपाईलाई निदाउन गाह्रो हुने वा निन्द्रामा बिउँभिरहने भयो कि भएन? यस्तो कत्तिको भयो?					