Validating the Nepalese Short Attitudes Toward Mental Health Problems Scale (N-SATMHPS): A Culturally Sensitive Tool for Assessing Mental Health Stigma

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Article

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Abstract

(1) Background: Negative attitudes toward mental health problems (ATMHP) remain a barrier to help-seeking, especially in collectivist, lower-middle-income countries like Nepal. While the Attitudes Towards Mental Health Problems Scale (ATMHPS) has been used globally, it has not been formally validated for Nepalese populations; (2) Methods: We conducted a cross-sectional study and recruited participants through an opportunity sampling method. We developed the Nepalese Short Version of the ATMHPS (N-SATMHPS) using Dataset 1 (n = 384), and validated it with Dataset 2 (n = 803). Fourteen items with the strongest internal consistency were selected across the original seven subscales. Confirmatory factor analysis (CFA) and internal consistency testing were used to assess psychometric properties; (3) Results: The N-SATMHPS showed strong internal consistency (α = 0.74–0.92) and excellent model fit (χ^2/df = 1.92, CFI = 0.982, TLI = 0.970, RMSEA = 0.049, SRMR = 0.026). Correlations with the full version ranged from r = 0.79 to 0.96. Discriminant validity with Mental health Literacy Questionnaire – young Adults (MHLQ-YA) showed weak but significant correlations, confirming construct distinction; (4) Conclusion: The scale captured key Nepalese cultural constructs—such as shame and family honor—and aligned with collectivist cultural expectations. The N-SATMHPS demonstrates strong psychometric performance and cultural relevance, making it suitable for research and intervention work aimed at reducing stigma and improving mental health in Nepal.

Keywords: attitudes toward mental illness; collectivist culture; discriminant validity; cultural validation; mental health literacy; mental health shame; mental health stigma; Nepal

1. Introduction

Negative attitudes towards mental health problems (ATMHP), often termed mental health stigma, continue to pose a major barrier to seeking psychological support, especially in low- and middle-income countries [1–9]. Negative attitudes are common even among caregivers and emerging medical professionals [10–15]. Despite growing awareness, mental illness continues to be perceived

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through a lens of shame, fear, and social exclusion, often rooted in cultural beliefs [16,17]. Such negative attitude is compounded by societal norms that associate mental health issues with personal weakness or spiritual failings, leading to discrimination and marginalization of affected individuals [18–21]. Therefore, measuring ATMHP is crucial, as it significantly contributes to stigma reduction and ensures better mental health care—especially in the context of Nepal, a lower-middle-income country where such mental health shame remains pervasive [2,5–8,22–24].

1.1. Measuring ATMHP

There are well developed measurement scales to measure attitudes of community people towards mental health issues. "Attitudes Towards Mental Health Problems (ATMHP)" developed by Gilbert et al. (2007) offers a comprehensive framework for assessing such attitudes, encompassing dimensions like internal and external shame, and reflected shame [16]. In the Portuguese validation study of the ATMHP, the original model showed poor fit in confirmatory factor analysis (CFA), but an alternative model with an added factor demonstrated good model fit. Further analysis confirmed that the revised version had good psychometric properties, supporting its suitability for assessing attitudes toward mental illness in Portuguese-speaking populations [25].

Later, studies have developed and validated a shorter 14-item shorter version of the ATMHPS (i.e., SATMHPS) that demonstrated good internal consistency and replicated the original seven-factor structure, providing a reliable and user-friendly tool to assess attitudes and shame toward mental health problems among UK university students [26]. Similarly, a cross-cultural validation of the Japanese Short version of Attitudes Towards Mental Health Problems Scale (J-SATMHPS) demonstrated its reliable seven-factor structure and applicability in Japanese populations, highlighting cultural differences between the UK and Japan in external and internal shame related to mental health [27]. The scale has already been used in measuring attitudes of college students in Nepal; however, the applicability of this scale in the Nepalese context has not been thoroughly examined [6].

1.2. Conceptual Framework of ATMHP Scale

The development of the ATMHP scale was grounded in a rich body of cross-cultural and psychosocial research examining how cultural norms shape perceptions of mental health, shame, and stigma. Culture acts as a framework through which individuals interpret their experiences, including attitudes toward mental illness [24,28,29]. Studies have emphasized obvious differences between Eastern and Western societies regarding the conceptualization of mental health, expectations of coping behaviors, and engagement with mental health services [30–32]. Research with British South Asian women underscored the role of shame—particularly tied to cultural values such as izzat (family honor)—in deterring help-seeking and promoting silence around psychological distress [33–35]. These findings informed the scale's theoretical basis, incorporating dimensions of external shame (fear of social judgment), internal shame (self-criticism), and reflected shame (concern over bringing dishonor to one's family) [36–38]. These constructs provide a culturally sensitive framework for assessing attitudes toward mental health.

1.3. Study Gap

While studies have utilized the ATMHP scale in various cultural settings without formal validation [6,39–41], formal validation has been performed in Portugal [25] and Japan [27]. Additionally, it has been used in cross-cultural studies, comparing Arabs, South Asians, and others living in the United Arab Emirates [42], British Caucasians and Arabians [43], and British Asians and non-Asians [16]. The Japanese shorter version of ATMHPS (J-SATMHPS) has been developed and validated in a collectivistic culture [27]; however, there are no such validation studies in South Asian sub-continent, including Nepal. Although Poudel et al. (2024) reported high internal consistency (α = 0.94) and strong convergent validity (with Pearson correlation ranging from .66 to .86 between

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subscales and the global scale), a significant gap remains in the formal validation of the ATMHP scale within Nepal's unique socio-cultural context [6]. Without such validation, the applicability and accuracy of the scale in capturing culturally embedded attitudes – such as those influenced by shame, family honor, and spiritual beliefs – remain uncertain. Though Nepal is a culturally collectivistic society similar to Japan, it also differs from the Japanese cultural context due to a complex interplay of cultural factors. Therefore, it is essential to develop and validate a Nepalese Shorter version of ATMHPS (N-SATMHPS).

1.4. Study Aim

This study aims to validate the ATMHP scale in the cross-cultural context of Nepal, ensuring its reliability and relevance for assessing attitudes toward mental health problems among Nepali populations. By doing so, it seeks to provide a culturally sensitive tool that can inform interventions aimed at reducing stigma and promoting mental well-being in Nepal.

This study can contribute to the Nepalese mental health field by validating the ATMHP scale for use in Nepal. It ensures the tool's cultural relevance and reliability in assessing negative attitudes rooted in societal shame, stigma, and family honor, which are prominent in Nepalese culture. By offering a validated, context-sensitive instrument, the study lays the groundwork for more effective stigma-reduction interventions and evidence-based mental health strategies tailored to the Nepalese population.

2. Materials and Methods

2.1. Research Design

Two different cross-sectional survey designs were utilized simultaneously to develop the Nepalese Short version of Attitudes Towards Mental Health Problems Scale (N-SATMHPS); evaluate the structural validity of the N-SATMHPS; and to assess the discriminant validity between the N-SATMHPS and Mental Health Literacy Young Adult (MHLQ–YA; Dias et al.,2018) [44], including their respective dimensions. Dataset 1, from previous study by Poudel et al. (2024) [6], was utilized to develop the scale, while Dataset 2 was used to evaluate the structure in a Confirmatory Factory Analysis (CFA).

2.2. Participants and Procedures

For Dataset 1, the required sample size was determined using Cochran's formula for a population with an unknown proportion: n0 = (Z2pq)/e2, where n0 is the sample size, Z is the z-score for the desired confidence level, p is the estimated proportion of the population, q is 1 − p, and e is the desired level of precision (i.e., marginal error) [45]. Assuming a 95% confidence level (Z = 1.96), a proportion estimate of 0.5 (p = 0.5, q = 0.5), and a 5% margin of error (e = 0.05), the minimum required sample size was calculated as ((1.96)2 (0.5) (0.5))/(0.05)2 = 385 [45]. Based on this, a total of 384 participants aged 18 to 24 years were included (one was excluded due to sensitivity), from Chitwan and Kathmandu districts (i.e., Dataset 1), which was used for developing the tool, also previously used in a study [6]. For Dataset 2, we included 803 participants from across Nepal, encompassing both students and individuals from the general population from very remote areas such as Karnali in the west and Jhapa in the east including Kathmandu and Chitwan, which was used for CFA. The sample comprised diverse demographic characteristics, including various demographic components such as genders, religious and ethnic groups within the country.

Opportunity sampling was used to recruit all the participants mostly college students, a population considered crucial for understanding and shaping societal attitudes toward mental health [46,47], and general individuals for broader representation.

2.3. Instruments

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Two standardized self-report instruments were employed: the ATMHP scale [16] and MHLQ-YA [44] in online google forms and paper-based questionnaires. The tools used in the study were translated into Nepali following rigorous cross-cultural adaptation procedures to reduce language-related biases. The forward translation was conducted by a professional language teacher, a native Nepali speaker with bilingual competence, who was also working in the field of translation. The back translation was carried out by another professional language teacher, also a native Nepali speaker with bilingual competence and experience in translation. Again, the translated version underwent evaluation by five other English language teachers to identify any linguistic ambiguities. Finally, a psychology lecturer with expertise in mental health in Nepal reviewed the translation for accuracy and cultural relevance. The final version was then reviewed by a Nepali language expert for spelling, punctuation, and grammar. These steps helped ensure linguistic and conceptual equivalence in the adapted tools.

Google forms were distributed via platforms such as Facebook, LinkedIn and Instagram. For the paper-based method, participants were approached directly on campuses. The online survey was administered between 26 June and 24 October 2021, while the paper-pencil survey was conducted from 27 September to 4 October 2021.

2.4. Ethical Consideration

Ethical approval for the first study (Dataset 1, n = 384) was obtained from the Nepal Health Research Council under Ethics Review Board protocol registration no. 309/2021 (ref. no. 3543, approval date: 15 June 2021) [6] and for the second study (Dataset 2, n = 803), we obtained approval from college authorities according to their rules and regulations; college–1 (reference no. 151/2077/78; date: 20th June 2021), College–2 (reference no. 105/077/078; date: 22nd June, 2021); college–3 (reference no. 423; date: 1st Oct. 2021); college–4 (reference no. 433; 4th Oct, 2021) college–5 (Dispatch no. 544; 4th Oct. 2021). Informed consent was obtained after participants were briefed on confidentiality, data security, and their right to withdraw at any time. The study adhered to the ethical principles of the Declaration of Helsinki, ensuring participant rights and autonomy throughout [48]. Licensed and free software tools (MS Office - 16, Stata version 18, semdiag and Google Forms/Sheets) were used for data collection, analysis, the path diagram creation and manuscript preparation [49].

2.5. Data Analysis

Data were analyzed using Stata 18.0, following the methods of a similar UK study [26], and the path diagram was created using semdiag [49]. Dataset 1 (n = 384) was used for item reduction and Dataset 2 (n = 803) for validation. Outliers in Dataset 1 were removed by visually inspecting total scores; perfect scores (105) were excluded to improve sensitivity. Descriptive statistics summarized demographic data. Pearson correlations identified two items with the highest inter-item correlations within each of the seven ATMHPS subscales, producing a 14-item N-SATMHPS. Internal consistency was assessed using Cronbach's alpha, and item-total correlations evaluated item performance. Convergent validity was tested by correlating subscale totals between the original and shortened scales. Confirmatory factor analysis (CFA) was conducted to assess model fit using χ^2/df, CFI, TLI, RMSEA, and SRMR as fit indices. Dataset 2 was used to replicate the procedures and confirm the reliability and structural validity of the N-SATMHPS. The threshold for The comparative fit index (CFI) and the Tucker–Lewis index (TLI) was assumed over 0.90, while for the root mean square error of approximation (RMSEA) and standardized root mean square residual (SRMR) [50].

3. Results

3.1. Dataset Overview

We developed the N-SATMHPS using Dataset 1 (n = 384) and validated it with Dataset 2 (n = 805). Each dataset contained the full ATMHPS items, labelled atmhp1 to atmhp35. One response in

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Dataset 1 with a perfect total score (105 points) was excluded, as it may reflect an extreme response style such as acquiescence bias or social desirability rather than genuine attitudes [51]. This exclusion followed best practices in psychometric research to improve the sensitivity and interpretability of scale performance. The analytical methods were based on prior work by Kotera et al. (2023b) [26], and analyses were conducted using Stata 18.0. A path diagram was generated using the semdiag package [49].

3.2. Confirmation of Background Factors

Next, we examined the background factors of the participants in each dataset. Demographic characteristics differed between the two datasets. Participants in Dataset 1 were younger, predominantly female, and mostly students. In contrast, Dataset 2 included a broader age range with more occupational diversity (Tables 1 and 2).

Table 1. Background Characteristics of Participants (Dataset 1, n=384).

Variables	**n (%)**
Age (Mean, SD)	20.7 (1.7)
Gender (Female)	236 (61.6)
Caste/Ethnicity (Brahmin/Kshetri)	269 (70.6)
Religion (Hindu)	344 (89.6)
Districts (Chitwan)	348 (90.4)
Marital status (Unmarried)	369 (95.8)
Academic qualification (Bachelor's degree)	325 (84.4)

Table 2. Background Characteristics of Participants (Dataset 2, n=803).

Variables	**n (%)**	**Missing (n)**
Age (Mean, SD)	27.9 (8.7)	21
Gender (Female)	351 (44.4)	12
Caste/Ethnicity (Brahmin/Kshetri)	524 (66.0)	9
Religion (Hindu)	660 (84.0)	17
Districts (Chitwan)	247 (32.1)	34
Marital status (Unmarried)	489 (61.6)	9
Academic qualification (Bachelor's degree)	352 (44.7)	15
Working status (Student)	287 (36.0)	6
Caste/Ethnicity (Brahmin/Kshetri)	524 (66.0)	9
Religion (Hindu)	660 (84.0)	17

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3.3. Extraction of Two Questions for Correlation Analysis for N-SATMHPS

A correlation analysis was conducted on the group in Dataset 1 (Table 3). We evaluated the correlations between the questions within each subscale and selected the two items with the highest correlation.

Table 3. Correlation Between Items in Each Factor of the ATMHPS for Dataset 1.

Community Attitudes					
	Item01	Item02	Item03	Item04	
Item01	—				
Item02	0.52	—			
Item03	0.47	0.55	—		
Item04	0.45	0.37	0.54	—	
Family Attitudes					
	Item05	Item06	Item07	Item08	
Item05	—				
Item06	0.57	—			
Item07	0.51	0.57	—		
Item08	0.48	0.55	0.71	—	
Community External Shame					
	Item09	Item10	Item11	Item12	Item13
Item09	—				
Item10	0.71	—			
Item11	0.65	0.75	—		
Item12	0.61	0.70	0.80	—	
Item13	0.58	0.65	0.67	0.74	—
Family External Shame					
	Item14	Item15	Item16	Item17	Item18
Item14	—				
Item15	0.73	—			
Item16	0.69	0.80	—		
Item17	0.55	0.59	0.64	—	
Item18	0.63	0.66	0.71	0.70	—
Internal Shame					
	Item19	Item20	Item21	Item22	Item23
Item19	—				
Item20	0.77	—			

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Item21	0.46	0.45	—				
Item22	0.60	0.65	0.45	—			
Item23	0.54	0.56	0.39	0.65	—		
Family-reflected Shame							
	Item24	Item25	Item26	Item27	Item28	Item29	Item30
Item24	—						
Item25	0.71	—					
Item26	0.58	0.57	—				
Item27	0.59	0.60	0.57	—			
Item28	0.33	0.33	0.40	0.42	—		
Item29	0.37	0.39	0.38	0.46	0.70	—	
Item30	0.36	0.37	0.40	0.51	0.54	0.69	—
Self-reflected Shame							
	Item31	Item32	Item33	Item34	Item35		
Item31	—						
Item32	0.66	—					
Item33	0.67	0.70	—				
Item34	0.68	0.67	0.72	—			
Item35	0.61	0.58	0.59	0.67	—		

3.4. Performance Evaluation of the Developed N-SATMHPS

Next, we evaluated the correlation (item-total correlations), p-values of the selected questions and each subscale. The results are presented in Table 4.

Table 4. Correlation Coefficients and P-values of the N-SATMHPS.

	N-SATMHPS items	Subscale	Correlation coefficients	*p*
2		Community Attitudes	0.59	<0.001
3		Community Attitudes	0.65	<0.001
7		Family Attitudes	0.71	<0.001
8		Family Attitudes	0.69	<0.001
11		Community External Shame	0.83	<0.001
12		Community External Shame	0.82	<0.001
15		Family External Shame	0.80	<0.001
16		Family External Shame	0.82	<0.001
19		Internal Shame	0.73	<0.001

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20		Internal Shame	0.76	<0.001
24		Family Reflected Shame	0.63	<0.001
25		Family Reflected Shame	0.64	<0.001
33		Self-reflected Shame	0.78	<0.001
34		Self-reflected Shame	0.80	<0.001

Unlike the benchmark validation study [26], the correlation coefficients ranged from 0.59 to 0.83, showing low values for some items. Next, we calculated the average, standard deviation, and α for each item (scored 0-3) for each subscale (Table 5). Next, we calculated the average, standard deviation, and $\alpha$for each item (scored 0-3) for each subscale (Table 5).

Table 5. Comparision of Mean, SD and Correlation between Full ATMHP & N-SATMHPS.

	Mean		SD		α	
	ATMHPS	N-SATMHPS	ATMHPS	N-SATMHPS	ATMHPS	N-SATMHPS
Community Attitudes	1.60	1.64	.81	.88	.79	.71
Family Attitudes	.65	.54	.73	.79	.84	.83
Community External Shame	1.21	1.26	.92	1.03	.92	.89
Family External Shame	.45	.39	.67	.70	.91	.89
Internal Shame	.73	.60	.74	.83	.86	.87
Family Reflected Shame	1.11	.71	.76	.82	.87	.83
Self-Reflected Shame	1.11	1.11	.92	1.00	.90	.84

Alpha (α) had a reliability of 0.79-0.92 in ATMHPS and 0.71-0.89 in SATMHPS, which was not as reliable as the reference paper. The table below shows the correlation of the sums of the subscales for ATMHPS and N-SATMHPS.

Table 6. Correaltion between Full ATMHP & N-SATMHPS.

	r
Community Attitudes	.90
Family Attitudes	.90
Community External Shame	.94
Family External Shame	.93
Internal Shame	.89
Family Reflected Shame	.79
Self-Reflected Shame	.94

Except for the Family Reflected Shame, a strong correlation was obtained.

Finally, a path diagram was created and the goodness of fit of the model was evaluated (Figure 1).

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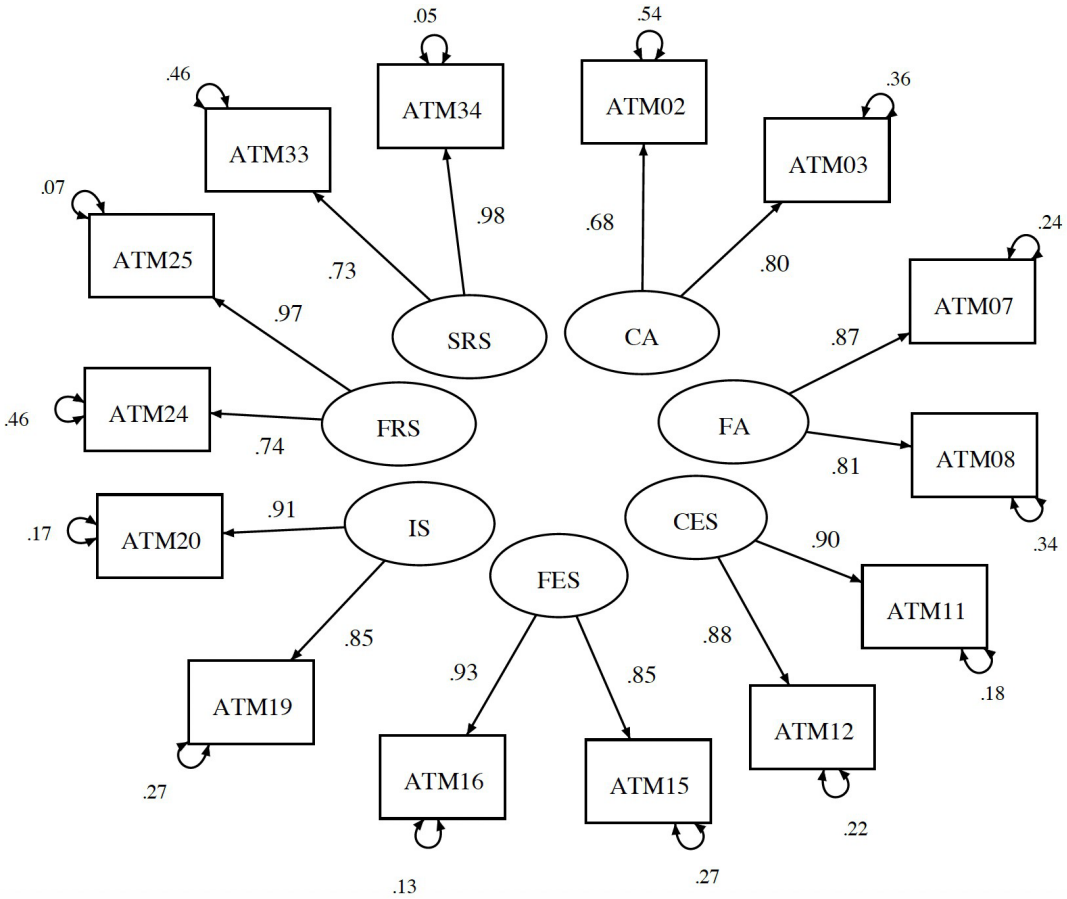

Figure 1: N-SATMHPS Items and their Relation to Factors.

The confirmatory factor analysis (CFA) indicated a good model fit, with all fit indices falling within acceptable ranges. The chi-square to degrees of freedom ratio (χ^2/df) was 107.32/56 = 1.92, suggesting an adequate fit. The comparative fit index (CFI) was 0.98, and the Tucker–Lewis index (TLI) was 0.97, both exceeding the recommended threshold of 0.90. Additionally, the root mean square error of approximation (RMSEA) was 0.049, and the standardized root mean square residual (SRMR) was 0.026, both indicating a good fit according to conventional guidelines.

3.5. Validation

We developed and validated the N-SATMHPS using dataset–1 and dataset–2 respectively. First, we confirmed the internal consistency. The results are presented in Table 7.

Table 7. Comparision of Reliability Scores (α) between Full ATMHP & N-SATMHPS.

Factors	α	
	ATMHPS	N-SATMHPS
Community Attitudes	.84	.74
Family Attitudes	.87	.84
Community External Shame	.94	.91
Family External Shame	.94	.92
Internal Shame	.89	.89
Family External Shame	.91	.91
Family Reflected Shame	.93	.89

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The results showed that the alpha for ATMHPS was 0.84-0.94, and for N-SATMHPS it was 0.74-0.92, indicating that the coefficients for the shortened versions were generally lower than those of the current versions. However, the alpha values themselves were within an acceptable range.

Finally, as in development, the following table confirms the correlation of the sums of each subscale of N-SATMHPS (Table 8).

Table 8. Correaltions of Each Factors in N-SATMHPS.

	r
Community Attitudes	.94
Family Attitudes	.91
Community External Shame	.96
Family External Shame	.96
Internal Shame	.90
Family Reflected Shame	.85
Self-Reflected Shame	.95

The results showed that the correlation coefficients were generally higher than those from development.

3.6. Discriminant Validity

Several significant but weak correlations were observed between MHLQ-YA factors and N-SATMHPS subscales, supporting discriminant validity. Notably, MHLQ-YA Factor 1 was positively correlated with N-SATMHPS Community Attitudes and Total Score. Factor 2 showed negative correlations with Family Attitudes, Family External Shame, Self-Reflected Shame, and the Total Score. Factor 3 was negatively associated with Family Attitudes, Family External Shame, Internal Shame, and the Total Score. No significant associations emerged for Factor 4 or the MHLQ-YA Total Score. The details are presented in the Table 9.

Table 9. Discriminant Validity between N-SATMHPS & MHLQ-YA.

	MHLQ-YA Factor 1 Knowledge of Mental Health Problems	**MHLQ-YA Factor 2 Erroneous Beliefs/Stereotypes**	**MHLQ-YA Factor 3 First Aid Skills and Help Seeking Behavior**	**MHLQ-YA Factor 4 Self-Help Strategies**	**MHLQ-YA Total Score**
	Correlation coefficients	Correlation coefficients	Correlation coefficients	Correlation coefficients	Correlation coefficients
N-SATMHPS Community Attitudes	.19**	-.07	-.03	-.06	.04
N-SATMHPS Family Attitudes	.07	-.13*	-.14**	-.05	-.08
N-SATMHPS Community External Shame	.12*	.01	-.06	.01	.04
N-SATMHPS Family External Shame	.03	-.11*	-.12*	.00	-.07
N-SATMHPS Internal Shame	.05	-.04	-.13**	.03	-.03

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N-SATMHPS Family Reflected Shame	.06	-.04	-.03	-.01	0.01
N-SATMHPS Self Reflected Shame	-.03	-.13*	-.09	.04	-0.09
N-SATMPHS Total Score	.11*	-.10*	-.13*	-.00	-0.04

*p <0.05, **p <0.01, ***p < 0.001.

The validated N-SATMHPS and manual are available in the Appendixes.

4. Discussion

The development and validation of N-SATMHPS represent a significant advancement in culturally sensitive mental health assessment tools. We aimed to create a concise yet reliable instrument to measure attitudes towards mental health problems within the Nepali context, ensuring both psychometric robustness and practical applicability.

4.1. Model Fit

The N-SATMHPS demonstrated satisfactory internal consistency across subscales. While slightly lower than the reliability scores of the full ATMHPS and the short form J-SATMHPS, the values remain within acceptable thresholds for psychological tools, supporting the scale's reliability [16,27]. CFA supported the seven-factor structure of the N-SATMHPS, with fit indices indicating a good model fit. These findings are consistent with the CFA results of the SATMHPS and J-SATMHPS, both of which demonstrated strong model fit [26,27].

4.2. Correlation Analyses

The N-SATMHPS subscales exhibited strong correlations with their corresponding subscales in the full ATMHPS, ranging from 0.79 to 0.96. This consistency underscores the N-SATMHPS's capability to effectively capture the constructs measured by the full scale [26].

Discriminant validity of The N-SATMHPS was assessed through correlations with the MHLQ-YA [44]. Significant but weak correlations were observed between certain N-SATMHPS subscales and MHLQ-YA factors, suggesting that while related, the constructs measured by the two instruments are distinct. For instance, MHLQ-YA Factor 1 (Knowledge of Mental Health Problems) showed a positive correlation with the Community Attitudes subscale of the N-SATMHPS, suggesting higher knowledge of mental health increases negative community attitudes whereas Factor 2 (Erroneous Beliefs/Stereotypes) exhibited negative correlations with several N-SATMHPS subscales, indicating higher awareness against erroneous beliefs/stereotypes promotes positive attitudes. Studies have found that mental health literacy reduces mental health shame [52–54]. However, Poudel et al. (2024) have found no relation between mental health knowledge and mental health shame [6].

4.3. Cultural Considerations and Implications

The adaptation of the ATMHPS into the Nepali context required careful consideration of cultural nuances related to mental health stigma and shame. The strong internal consistency and model fit indices suggest that the N-SATMHPS effectively captures culturally relevant attitudes towards mental health problems in Nepal.

The successful cultural adaptation of the ATMHPS into the Nepalese context underscores the scale's utility in collectivist societies where community and family perceptions deeply influence individual behavior [55]. Unlike Western cultures, which generally prioritize individual autonomy [56], Nepalese society often views mental health through a communal lens, where family honor (izzat) and societal expectations play a critical role [33,57]. Concepts such as reflected shame (i.e., feeling disgrace on behalf of the family) and external shame (i.e., fear of judgment by the community)

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are embedded in everyday attitudes. In our study, these constructs remained relevant and strongly endorsed, validating the theoretical structure of the N-SATMHPS. This aligns with prior cross-cultural work in Japan [58]. Moreover, despite some subcultural diversity in Nepal, our results showed consistency across gender, caste, and religious affiliations, suggesting the scale captures common cultural attitudes rather than group-specific perspectives. The validation of the N-SATMHPS contributes not only to Nepalese mental health research but also offers a model for culturally contextualizing global tools in diverse settings.

Assessing mental health shame is particularly valuable because it can directly in-form interventions that encourage help-seeking and self-compassion [59]. High levels of shame often prevent individuals from accessing mental health services due to fear of judgment or loss of social standing [60]. By identifying these attitudes, targeted psychoeducation and compassion-focused approaches can be developed to reduce shame, normalize help-seeking, and promote a more accepting self-view. Evidence suggests that lower shame and higher self-compassion are linked to greater willingness to seek professional support and improved mental health outcomes [61]. Therefore, the N-SATMHPS not only measures attitudes but also offers practical insights for designing culturally appropriate mental health interventions in Nepal.

4.4. Limitation

This study has several limitations. First, while the sample was large and geographically diverse, it was limited to young adults and used opportunity sampling, which may restrict generalizability [62]. Second, the study did not assess test-retest reliability, limiting insights into the scale's stability over time [63]. Third, reliance on self-report measures introduces potential response biases, especially given the sensitive nature of mental health stigma [27]. Fourth, no qualitative methods were used, which could have deepened understanding of how shame and stigma are experienced in context. Finally, the clinical and applied utility of the N-SATMHPS was not evaluated; future work should explore its usability in real-world mental health practice.

5. Conclusions

The N-SATMHPS emerges as a reliable and valid instrument for assessing attitudes towards mental health problems in Nepal. Its brevity and cultural relevance make it a practical tool for both research and clinical settings. By facilitating the assessment of mental health attitudes, the N-SATMHPS can contribute to the development of targeted interventions aimed at reducing stigma and promoting mental well-being within the Nepali context.

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Institutional Review Board Statement: The study was conducted in accordance with the Declaration of Helsinki, and approved by the Nepal Health Research Council (NHRC) (ERB protocol no. 309/2021, ref. no. 3543, approval date: 15 June 2021) for dataset 1 [6]; and dataset 2 was approved by internal board of different colleges: college–1 (reference no. 151/2077/78; date: 20th June 2021), College–2 (reference no. 105/077/078; date: 22nd June, 2021); college–3 (reference no. 423; date: 1st Oct. 2021); college–4 (reference no. 433; 4th Oct, 2021) college–5 (Dispatch no. 544; 4th Oct. 2021). It followed the ethical guidelines of the Declaration of Helsinki, ensuring participants' rights were protected throughout the research.

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: Certain data is available upon reasonable request from the corresponding author.

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Abbreviations

The following abbreviations are used in this manuscript:

ATMHP	Attitudes Towards Mental Health Problems
CFA	Confirmatory Factor Analysis
CFI	Comparative Fit Index
df	Degrees of Freedom
J-SATMHPS	Japanese Shorter Version of Attitudes Towards Mental Health Problems Scale
MHLQ–YA	Mental Health Literacy Questionnaire – Young Adult
N-SATMHPS	Nepalese Shorter Version of Attitudes towards Mental Health Problems Scale
RMSEA	Root Mean Square Error of Approximation
SATMHPS	Shorter Version of the Attitudes Towards Mental Health Problems
SD	Standard Deviation
SRMR	Standardized Root Mean Square Residual
TLI	Tucker–Lewis Index

Appendix A

The following Appendix A1 and Appendix A2 contains the validated scale and it's scoring procedure in Nepali language. The instruction to the participants have also been given same language to capture cultural values more appropriately.

Appendix A.1

नेपाली छोटो मानसिक स्वास्थ्य समस्याप्रतिको मनोभाव प्रश्नावली

हामी मानसिक स्वास्थ्य समस्याका बारेमा मानिसहरूले के सोच्छन र कसरी लिन्छन, मानसिक स्वास्थ्य समस्यालाई कसरी हेर्छन भन्ने कुरामा जान्न चाहन्छौं । तपाईंलाई थाहै होला, केही मानिसहरू डिप्रेसन (निराशा) र एन्जाइटी (चिन्ता) जस्ता मानसिक स्वास्थ्य समस्याबाट पीडित रहेका हुन्छन । यी समस्याहरूले उनीहरूको लागि दैनिक जीवनमा सहजरुपमा अघि बढ्न वा दैनिक जीवनको सामना गर्न कठिनाइ उत्पन्न गराउन सक्छन । डिप्रेसन भएका मानिसहरू थकित महसुस गर्न सक्छन, जीवनमा रमाउन सक्दैनन, आफूलाई एकान्तमा राख्न चाहन्छन र पारिवारिक जीवनदेखि पर बस्ने हुन सक्छन । तल केही भनाइरकथनहरू छन जुन तपाईले, तपाईको समुदायले वा तपाईको परिवारले मानसिक स्वास्थ्यसँग सम्बन्धित समस्यालाई कसरी हेर्ने गरेको छ भन्ने देखाउँछ । हरेक कथन ध्यानपूर्वक पढी ती कथनहरूसँग तपाईं कत्तिको समहत हुनुहुन्छ भन्ने देखाउन उपयुक्त कुनै एउटा अंकमा गोलो घेरा लगाउनुहोस।

कृपया तलको मापनस्तर प्रयोग गर्नुहोस

० . पटक्कै सहमत छैन १ . अलिअलि सहमत २ . धेरै हदसम्म सहमत ३ . पूर्ण सहमत

यहाँ कोष्ठमा भएको अंकले मूल प्रश्नावलीको प्रश्न नम्बरलाई जनाउँछ।

मानसिक स्वास्थ्यप्रतिको मनोभाव

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प्रश्नहरूको यस पहिलो समूहको लागि, दैनिक जीवनको सामना गर्न कठिन बनाउने डिप्रेसन र एन्जाइटी जस्ता मानसिक स्वास्थ्य समस्यालाई तपाईंको समुदाय र परिवारले कसरी हेर्छन भन्नेबारे केहीबेर सोचविचार गरी तलको कुनै उपयुक्त अंकमा गोलो घेरा लगाउनुहोस ।

समुदायको मनोवृत्ति

१. (२) मेरो समुदायले मानसिक स्वास्थ्य समस्यालाई व्यक्तिगत कमजोरीको रुपमा हेर्छ । ० १ २ ३

२. (३) मेरो समुदायमा मानसिक स्वास्थ्य समस्या भएको मानिसलाई तिरस्कारको नजरले हेरिन्छ । ० १ २ ३

पारिवारिक मनोवृत्ति

३. (७) मेरो परिवारमा मानसिक स्वास्थ्य समस्या भएको मानिसलाई तिरस्कारको नजरले हेरिन्छ । ० १ २ ३

४. (८) मेरो परिवार मानसिक स्वास्थ्य समस्या भएका मानिसहरूबाट पर बस्न चाहन्छ । ० १ २ ३

बाहिरी लाज

अब अर्को प्रश्नहरूको समूहको लागि, दैनिक जीवनको सामना गर्न कठिन बनाउने डिप्रेसन र एन्जाइटी जस्ता मानसिक स्वास्थ्य समस्याबाट यदि तपाईं पिडित हुनुभएमा तपाईंलाई तपाईंको समुदाय वा परिवारले कसरी हेर्छ होला, केहीबेर सोचविचार गरी तलका कुनै उपयुक्त अंकमा गोलो घेरा लगाउनुहोस ।

सामुदायिक बाहिरी लाज

५. (११) मलाई लाग्छ मेरो समुदायले मलाई काम नलाग्ने मानिसको रुपमा हेर्नेछ । ० १ २ ३

६. (१२) मलाई लाग्छ मेरो समुदायले मलाई कमजोर मानिसको रुपमा हेर्नेछ । ० १ २ ३

पारिवारिक बाहिरी लाज

७. (१५) मलाई लाग्छ मेरो परिवारले मलाई निकृष्ट) तल्लो (व्यक्तिको रुपमा हेर्नेछ । ० १ २ ३

८. (१६) मलाई लाग्छ मेरो परिवारले मलाई काम नलाग्ने मानिसको रुपमा हेर्नेछ । ० १ २ ३

आन्तरिक लाज

अब अर्को प्रश्नहरूको समूहको लागि, दैनिक जीवनको सामना गर्न कठिन बनाउने डिप्रेसन र एन्जाइटी जस्ता मानसिक स्वास्थ्य समस्याबाट तपाईं पिडित हुनुभएको अवस्थामा तपाईं आफूलाई कस्तो महसुस हुन्छ होला, केहीबेर सोचविचार गरी तलका कुनै उपयुक्त अंकमा गोलो घेरा लगाउनुहोस ।

९. (१९) म आफूलाई तल्लो व्यक्तिको रुपमा हेर्नेछु । ० १ २ ३

१०. (२०) म आफूलाई काम नलाग्ने व्यक्तिको रुपमा हेर्नेछु । ० १ २ ३

परिवार प्रतिबिम्बित लाज

अब अर्को प्रश्नहरूको समूहको लागि, दैनिक जीवनको सामना गर्न कठिन बनाउने डिप्रेसन र एन्जाइटी जस्ता मानसिक स्वास्थ्य समस्याबाट तपाईं पिडित हुनुभएको अवस्थामा तपाईं कस्तो महसुस हुन्छ होला । यसपटक ती समस्याका कारण

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तपाईंको परिवारमा पर्ने प्रभावबारे तपाईं कत्तिको चिन्तित हुनुहुनेछ, केहीबेर सोचविचार गरी तलका कुनै उपयुक्त अंकमा गोलो घेरा लगाउनुहोस ।

११. (२४) मेरो परिवारलाई तल्लो रुपमा हेरिनेछ । ० १ २ ३

१२. (२५) मेरो परिवारलाई काम नलाग्ने रुपमा हेरिनेछ । ० १ २ ३

आत्म प्रतिबिम्बित लाज

अब अर्को प्रश्नहरूको समूहको लागि, दैनिक जीवनको सामना गर्न कठिन बनाउने डिप्रेसन र एन्जाइटी जस्ता मानसिक स्वास्थ्य समस्याबाट तपाईंको कुनै नजिकको नातेदार पिडित हुनुभएको अवस्थामा तपाईं कस्तो महसुस हुन्छ होला । यसपटक ती समस्याका कारण तपाईंमा पर्ने प्रभावबारे तपाईं कत्तिको चिन्तित हुनुहुनेछ, केहीबेर सोचविचार गरी तलका कुनै उपयुक्त अंकमा गोलो घेरा लगाउनुहोस ।

१३. (३३) मेरो आफ्नै मानसम्मानमा हानि पुग्ला कि भनेर म चिन्तित हुनेछु । ० १ २ ३

१४. (३४) यदि यो कुरा थाहा भयो भने मेरो समुदायमा मेरो प्रतिष्ठा घट्नेछ भनेर मलाई चिन्ता लाग्नेछ । ० १ २ ३

Appendix A.2

मूल्याङ्कन (SCORING)

प्रत्येक आयामका प्रश्नहरूको जोड गरेर जम्मा स्कोर निकाल्नुहोस्।

विवरण (DESCRIPTION)

अघिल्लो अनुसन्धान Gilbert et al. (२००४) [33] ले एसियाली महिलाहरूमा लाजसँग सम्बन्धित धेरै चिन्ताहरू उजागर गरेको थियो — जुन समुदाय, परिवार र व्यक्तिगत आत्म-मूल्यांकनसँग जोडिएका छन्। यीमध्ये केही बाहिरी लाज (external shame) को रूपमा हुन्छन्, जहाँ व्यक्तिले अरूले आफूलाई कसरी हेर्छन् भन्नेमा ध्यान केन्द्रित गर्छन् । यसका साथै, प्रतिबिम्बित लाज (reflected shame) र "इज्जत" को अवधारणा—अर्थात् एक जनाको कारणले पूरै परिवारलाई लाज हुन सक्छ वा परिवारका अरू सदस्यको समस्याले आफूमा लाजको अनुभूति हुन सक्छ—यी पनि नेपाली संदर्भमा महत्त्वपूर्ण छन् [33,36,37]।

हामीले मानसिक स्वास्थ्य समस्याप्रतिको धारणा मापन गर्ने मूल ३५ प्रश्नको मानसिक स्वास्थ्य समस्याप्रतिको मनोभाव (Attitudes Towards Mental Health Problems; ATMHP, Gilbert, 2007) [16] बाट नेपाली संदर्भको लागि एउटा छोटो संस्करण विकास गरेका छौं, जसलाई नेपाली छोटो मानसिक स्वास्थ्य समस्याप्रतिको मनोभाव प्रश्नावली (Nepalese Shorter Version of Attitudes Towards Mental Health Problems Scale; N-SATMHPS) भनिन्छ। यसमा मूल ३५ प्रश्नमध्ये केवल १४ वटा प्रश्नहरू समावेश गरिएका छन्, जुन ७ वटा मुख्य आयामहरूलाई प्रतिनिधित्व गर्ने गरी चयन गरिएका छन्:

यस प्रश्नावलीले मानसिक स्वास्थ्य समस्यासँग जोडिएको लाज, सामाजिक धारणा र व्यक्तिगत अनुभूतिलाई नेपाली संदर्भमा विश्वसनीय रूपमा मापन गर्न सक्छ।

यस १४ प्रश्नको प्रश्नावलीले तलका ७ आयामहरूलाई प्रतिनिधित्व गर्दछ:

१ .समुदायको मनोवृत्ति

प्रश्न १ (२): मेरो समुदायले मानसिक स्वास्थ्य समस्यालाई व्यक्तिगत कमजोरीको रूपमा हेर्छ।

प्रश्न २ (३): मेरो समुदायमा मानसिक स्वास्थ्य समस्या भएको मानिसलाई तिरस्कारको नजरले हेरिन्छ।

२ .पारिवारिक मनोवृत्ति

प्रश्न ३ (७): मेरो परिवारमा मानसिक स्वास्थ्य समस्या भएको मानिसलाई तिरस्कारको नजरले हेरिन्छ।

प्रश्न ४ (८): मेरो परिवार मानसिक स्वास्थ्य समस्या भएका मानिसहरूबाट पर बस्न चाहन्छ।

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३. सामुदायिक बाहिरी लाज

प्रश्न ५ (११): मलाई लाग्छ मेरो समुदायले मलाई काम नलाग्ने मानिसको रूपमा हेर्नेछ।

प्रश्न ६ (१२): मलाई लाग्छ मेरो समुदायले मलाई कमजोर मानिसको रूपमा हेर्नेछ।

४. पारिवारिक बाहिरी लाज

प्रश्न ७ (१५): मलाई लाग्छ मेरो परिवारले मलाई निकृष्ट (तल्लो) व्यक्तिको रूपमा हेर्नेछ।

प्रश्न ८ (१६): मलाई लाग्छ मेरो परिवारले मलाई काम नलाग्ने मानिसको रूपमा हेर्नेछ।

५. आन्तरिक लाज

प्रश्न ९ (१९): म आफूलाई तल्लो व्यक्तिको रूपमा हेर्नेछु।

प्रश्न १० (२०): म आफूलाई काम नलाग्ने व्यक्तिको रूपमा हेर्नेछु।

६. परिवार प्रतिबिम्बित लाज

प्रश्न ११ (२४): मेरो परिवारलाई तल्लो रूपमा हेरिनेछ।

प्रश्न १२ (२५): मेरो परिवारलाई काम नलाग्ने रूपमा हेरिनेछ।

७. आत्म प्रतिबिम्बित लाज

प्रश्न १३ (३३): मेरो आफ्नै मानसम्मानमा हानि पुग्ला कि भनेर म चिन्तित हुनेछु।

प्रश्न १४ (३४): यदि यो कुरा थाहा भयो भने मेरो समुदायमा मेरो प्रतिष्ठा घट्नेछ भनेर मलाई चिन्ता लाग्नेछ।

मूल्यांकन प्रणाली:

यहाँ कोष्ठमा भएको अंकले मूल प्रश्नावलीको प्रश्न नम्बरलाई जनाउँछ। सबै प्रश्नहरू ४-बिन्दु लिकर्ट प्रणालीमा आधारित छन्:

० = पटक्कै सहमत छैन, १ = अलिअलि सहमत, २ = धेरै हदसम्म सहमत, ३ = पूर्ण सहमत

प्राप्त हुन सक्ने जम्मा स्कोर ० देखि ४२ सम्म छ। जति बढी स्कोर, त्यति नै बढी नकारात्मक मनोवृत्ति/प्रतिकूल मनोवृत्तिलाई जनाउँछ।

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