Translation and Validation of Internalized Stigma of Substance Abuse Scale Urdu Version

Iqra Sageer – Lahore School of Behavioural Sciences, The University of Lahore – iqra.sageer61@gmail.com

Alia Asmat – Department of Psychology, University of Central Punjab– dr.alia@ucp.edu.pk

Ayesha Sarfaraz – Department of Psychology, University of Home Economics – ayeshasarfaraz@gmail.com

Rana Saddam Hussain – Department of Criminology, The University of Lahore– saddam.hussain@crim.uol.edu.pk

Arsalan Khan – Department of Psychology, Gomal University, Dera Ismail Khan – arsalankhan8991@gmail.com

Abstract

The present study aimed to evaluate the psychometric properties of the Urdu version of the Internalized stigma of substance abuse scale (ISSA-U). The study was conducted in three phases. In the first phase, forward and backward translation was performed and linguistic equivalence was tested on a sample of 50 bilingual participants. In the second phase, a reliability analysis was conducted using Cronbach's alpha and the split-half method, followed by exploratory factor analysis. Phase three included validation of the scale. Convergent validity was estimated by applying the Hamilton Depression Rating Scale (HDRS) to a sample of 300 drug addicts. The item correlation results showed a highly significant relationship among the items of the ISSA-U. The Cronbach's alpha index was significantly high (r =.93). Exploratory factor analysis revealed five solution factors with high loading values. Moreover, there was a significant positive correlation between the ISSA Urdu and HDRS, demonstrating convergent validity. The ISSA-U showed sound psychometric properties and proved to be a reliable and valid instrument for measuring internalized stigma.

Keywords: stigma, depression, exploratory factor analysis, convergent validity

Introduction

Stigma is described as the dehumanization of a person due to their social association with a negative or undesirable social category (Goffman, 1963). Consequently, a person who has been stigmatized is viewed as undervalued, insignificant, and significantly flawed (Martiny et al., 2024.). People with substance use disorder (SUD) face a stigma that negatively impacts their emotional, mental, and physical health. As a result, they are often labeled as unstable, dangerous, and morally culpable for their illness. These prejudicial and discriminatory perceptions in the community can result in their inability to access care and make treatment decisions (Yang et al., 2017). Therefore, stigma and discrimination decrease the likelihood of receiving treatment. Furthermore, stigma creates barriers between patients and health care providers, leading to an unwillingness to seek treatment (Garpenhag & Dahlman, 2021).

As a consequence, people who are stigmatized avoid social situations where they may be exposed to stares and harassment (Freeman & Schulenberg, 2025). In addition, those with an addictive disorder may experience self-stigma, which can influence their behavior. For instance, it may discourage them from using health services, ultimately leading to poorer health outcomes (Dannatt et al., 2021). Notably, internalized stigma and self-stigma develop psychological issues and affect wellbeing (Cheng et al., 2019; Sarkar et al., 2019). Specially, people suffering from addiction may be stigmatized by healthcare providers (Van Boekel et al., 2013). Moreover, stigma affects the level of sense of self-worth and self-perception in people with mental illness (Khan & Irfan, 2023). Ultimately, stigma leads to a lack of understanding among family and peers.

The Internalized stigma of substance abuse scale (Luoma et al., 2013), adapted from the Internalized stigma of mental illness scale translated into Urdu by (Hassan-Saeed, personal communication, 2010), measures internalized stigma in people with mental illness. Perceived

stigma of substance abuse scale (PSAS) (Luoma et al., 2010) translated into Urdu by Shahzad and his colleagues (2021) measures perceived stigma of substance abuse among patients treated for SUD in Pakistan. However, ISSA, which measures internalized stigma in substance abusers seeking treatment, does not yet have an Urdu version. Therefore, the aim of the current study was to translate the ISSA, a valid and reliable measure for assessing internalized stigma among drug dependent patients, into Urdu language and test its reliability and validity among Pakistani citizens.

Method

Prior to commencing the study, approval was taken from the University of Central Punjab's Ethical Review Committee to translate the scale. The scale was translated to conduct Masters thesis entitled study stigma, caregiver burden, and expressed emotions in caregivers of individuals with drug addiction. Subsequently, permission was obtained from author of the scale to translate it in Urdu. The translation process given by Tsang et al. (2017) was used. This study was conducted in three phases. Phase I included translation of the scale and cross-linguistic validation. In phase II reliability was determined using Cronbach's alpha, split-half reliability, test-retest reliability, and exploratory factor analysis. Phase- III was completed with validation of the scale.

Phase I: Translation and cross-linguistic validation of the Internalized Stigma of Substance Abuse (ISSA)

Translation

In the first stage, the forward translation procedure was carried out in Urdu by three bilingual experts. At least two bilingual translators are recommended for the translation of the scale (Su & Parham, 2002). Consequently, the forward translation was done by language experts. Then, the forward translation of the scale was reviewed by a committee of associate professors,

assistant professors with more than five years of experience in test construction, and the authors. It is a good idea to compare the translated and original versions of the scales for semantic, idiomatic, experiential, and conceptual similarity during the synthesis process (Cruchinho et al., 2024). Subsequently, the synthesis process was critically completed and the best translated items in each scale were selected. Suggestions were considered and minor changes were made. Backward translation of the scales is recommended for quality control (Tsang et al., 2017). In the next step, the ISSA was given to three more bilingual specialists to check content validity with the original versions. A team of experts discussed the backward translation of the scale again. Each item was synthesized by a committee of experts based on its content and meaning. After the recommended suggestions were considered, the final draft of the scale was created.

Sample

Fifty bilingual participants with an age range of 20-35 years (M = 24, SD = 3.89) including male (n = 9) and female (n = 41) from Lahore were selected for the cross-linguistic validation.

Instrument

Internalized Stigma of Substance Abuse Scale. The Internalized stigma of substance abuse scale is a modification of the Internalized Stigma of Mental Illness Scale (Ritsher et al., 2003) and detects internalized stigma in patients with substance abuse. It was based on information provided by Luoma et al. (2013). There are 29 statements in the scale. It has five subscales called stereotype endorsement, alienation, perceived discrimination, stigma resistance and social withdrawal. The scale used for items goes from 1 (strongly disagree) to 4 (strongly agree). Because of how they are worded, items # 7, 14, 24, 26 and 27 on the stigma resistance subscale must be reverse coded. The reliability figures for all subscales are between .74 and .94

and without the stigma resistance subscale, the reliability is from .83 to .94. In this study, the Cronbach's a ranges from .91 to .98 for all subscales and .93 for the total scale.

Procedure

The scale was distributed to participants and they were given instructions and handed a translated version of the scale. The English version of the scale was presented again to the same subjects after a one-week break. SPSS was used to analyze the data and the results were interpreted.

Phase II: Reliability Estimation of Urdu Version of Internalized Stigma of Substance Abuse (ISSA)

In the II phase, reliability was estimated using Cronbach Alpha, split-half reliability, test-retest reliability and exploratory factor analysis.

Sample

A sample of 300 male drug addicts aged 18-45 years (M = 24.32, SD = 5.45) was included in this study.

Procedure

In the second phase of the study, approval was obtained from institutes to collect data. At this stage, the translated version was distributed to the sample.

Phase III: Estimation of validity of ISSA Urdu version

Sample

The total sample included 300 drug dependent men aged 18 to 45 years (M = 24.32, SD = 5.45) who were included in this study.

Instrument

Internalized Stigma of Substance Abuse Scale. Internalized stigma of substance abuse is measured with a 29-item scale which has five subscales. Participants are asked to rate each

item on a scale from 1 (strongly disagree) to 4 (strongly agree). All subscales have a reliability score of .74 to .94, while without the stigma resistance subscale it ranges from .83 to .94.

Hamilton Depression Rating Scale (Hamilton, 1960). Hamilton Depression Rating Scale (HDRS-21) in Urdu version was used to assess the depression of the patients. A score of 0-7 is within the normal range, while a score of 20 or more is required for admission to a clinic or hospital. The internal consistency of the scale is .93. In this study, Cronbach's alpha is .65.

Procedure

After obtaining permission, the sample was taken from the hospitals for the validation process. Urdu version of ISSA was used along with Urdu version of HDRS. Each scale was administered individually, with a five-minute gap between each scale's administration.

Results

For cross-linguistic validation, mean and standard deviation were calculated using descriptive statistical analysis to verify the scale scores. To find out how strongly Urdu and English versions relate, correlation analysis was performed. Item-total correlation was also tabulated. The correlations given in (Table 1) show that Urdu version of ISSA is compatible with the English version.

(Table 2) represents there is moderate to strong positive item total correlation of all items. Item total correlation ranged from .42 to .71. The inter-item correlation (Table 3) of ISSA-U was positive and ranged between .40 and .96 except for item no 7, 14, 24, 26 and 27 which had weak correlation less than .30 across almost all other items.

The internal consistency reliability of the scale was calculated using Cronbach's alpha. The Cronbach's alpha for the five subscales was .96, .96, .91, .96, and .98, and .93 for the total scale. This suggests that the internal consistency of the scale is high as Cronbach's alpha ranges from 0 to 1.00 suggest a higher internal consistency of the dimension (Wells & Wollack, 2003).

In addition, split-half reliability denotes that the scale items are evenly divided into two halves, each assessing the same construct. Split-half reliability for the subscales and the 29 items of the total scale was calculated and was .95, .92, .89, .96, .95, and .95, respectively. This suggests that the correlation between these two total scores has a substantial split-half reliability estimate (Chakrabartty, 2013). The next step was to estimate the reliability of the scale test and the re-test. The test-retest reliability results of ISSA were examined using correlation coefficient statistics. The results showed high correlation in the first and second administration of the scale: .99 for alienation, .96 for stereotyping, .98 for discrimination experience, .99 for social withdrawal, .83 for stigma resistance, and .98 correlation was calculated for the totality of ISSA items. Results are tabulated in (Table 4)

Exploratory factor analysis (EFA) using Principal Component Analysis with Varimax rotation was conducted to estimate the psychometric properties of the Urdu version of the ISSA. Kaiser-Meyer-Olkin measure of sampling adequacy (KMO) and Bartlett's test for sphericity were conducted to determine the adequacy of sampling and its size. The *KMO* value for the total scale was .90, indicating high sampling adequacy. Bartlett's test for sphericity ($X2 = 12122.185$, $p < .001$) indicates that the data are suitable for factor analysis. The component matrix shows that all items of the ISSA are highly loaded. (Table 5) shows that the *KMO* value for all subscales ranged from .91, .93, .80, .92, and .84, and .90 for total items at .000 significance level. High *KMO* values and significant value of Bartlett's test indicate that the data are suitable for factor analysis.

The EFA (Table 6) revealed a five-factor solution based on eigenvalues greater than 1 and the scree plot criteria. The five extracted factors corresponded to the original subscales of the ISSA: Alienation, Stereotype Endorsement, Discrimination, Social Withdrawal, and Stigma Resistance. All items demonstrated high loading values (≥ .73) on their respective factors,

indicating a robust factor structure.revealed five factors. All 29 items were retained and loaded significantly on their respective factors. Factor 1 consisted of items from the Alienation subscale (A-16, A-17, A-8, A-5, A-1, A-21), with factor loadings ranging from .81 to .93. Factor 2 corresponded to the Stereotype Endorsement subscale (SE-19, SE-18, SE-2, SE-6, SE-23, SE-29, SE-10), with loadings ranging from .82 to .89. Factor 3 represented the Discrimination subscale (D-28, D-22, D-15, D-3, D-25), with loadings ranging from .73 to .80. Factor 4 included all Social Withdrawal items (SW-20, SW-4, SW-12, SW-9, SW-13, SW-11), with loadings between .81 and .89. Finally, Factor 5 comprised items from the Stigma Resistance subscale (SR-26, SR-14, SR-7, SR-27, SR-24), with exceptionally high loadings ranging from .91 to .96.

The convergent validity of the Urdu version of the ISSA was estimated by determining the correlations with the HDRS. The results (Table 7) show a significant positive association of the Urdu version of the ISSA with the HDRS scale, indicating adequate convergent validity of the Urdu version of the ISSA. There is also a weak correlation of the Stigma Resistance subscale with the HDRS.

Discussion

The results of this study provide preliminary evidence of the generalizability of the Urdu version of the ISSA in Pakistan. The study followed a structured three-stage process: (1) Translation and cross-linguistic validation, (2) Reliability testing, including Cronbach's alpha, test-retest reliability, split-half reliability, and exploratory factor analysis, and (3) Validity estimation of the scale. Forward and backward translations completed the linguistic equivalence of scale. Based on the language equivalence properties, the translated version of the ISSA was found to be significantly similar to the English version. This was further supported by the significant positive correlation between the Urdu and English versions of the scale.These findings align with Cruchinho et al. (2024), who emphasized that cross-cultural validation is

crucial for maintaining the psychometric properties of translated instruments across diverse populations.

The analysis of internal consistency revealed strong inter-item and overall item correlations, confirming that each item effectively measures the intended construct. These results are consistent with the study conducted by Beaton and his colleagues (2000) who highlighted the importance of internal consistency in the translation and cross-cultural validation of scales, emphasizing its importance in ensuring the reliability and accuracy of research findings across diverse populations.

Reliability testing further reinforced the robustness of the Urdu ISSA. The Cronbach's alpha for all subscales and for the ISSA as a whole was found to be significantly high, indicating that the test is more stable over time. The high correlation value of the five ISSA subscales and the test-retest reliabilities also indicate that the test is consistent and reliable. The results of factor analysis revealed that the ISSA has five components with an eigenvalue greater than 1.0. This finding aligns with the theoretical framework of the ISSA and suggests that the scale measures five domains of internalized stigma related to substance abuse.

Correlations between the HDRS and the Urdu ISSA were studied to test convergent validity. Significant positive correlation between the Urdu version of the ISSA and the HDRS scale shows that the Urdu version has good convergent validity. This study is consistent with earlier research that proves a strong link between internalized stigma and psychological illnesses, for example, depression and anxiety (Barta & Kiropoulos, 2023; Nguyen & Pepping, 2022).

In Pakistan, the validated Urdu language version of the ISSA addresses important issues in substance use studies and treatment. It supports a way to measure self-stigma that is sensitive to different cultures, so it can help guide intervention methods in therapy settings. Further studies

should examine the validity of the instrument among Pakistanis from multiple cultures and areas while also checking its use in clinical and non-clinical settings.

Conclusion

The Urdu version of the ISSA is a valid and reliable instrument for assessing internalized stigma in substance abusers seeking treatment in drug addiction rehabilitation centers. Notably, the ISSA-U exhibits high internal consistency, indicating that its items effectively measure the construct of internalized stigma. Furthermore, the scale shows strong inter-rater reliability, suggesting that different raters or clinicians can consistently assess levels of internalized stigma using the ISSA-U. Given its robust psychometric properties, the ISSA-U has the potential to become a valuable instrument in both clinical practice and research settings, enabling healthcare professionals to better understand and address the complex issues surrounding internalized stigma in individuals struggling with addiction.

Acknowledgment

The authors would like to thank Mayo hospital staff for their assistance in collecting data.

Declaration

All the authors confirm they have no competing interests. The authors write and gather all the information for the article by themselves.

Funding Sources: None

References

Barta, T., & Kiropoulos, L. (2023). The Mediating Role of Stigma, internalized shame, and Autonomous Motivation in the relationship between Depression, anxiety, and

psychological help-seeking attitudes in multiple sclerosis. *International Journal of Behavioral Medicine, 30*(1), 133-145. https://doi.org/10.1007/s12529-022-10078-6

Beaton, D. E., Bombardier, C., Guillemin, F., & Ferraz, M. B. (2000). Guidelines for the process of cross-cultural adaptation of self-report measures. *Spine, 25*(24), 3186-3191.

Chakrabartty, S. N. (2013). Best split-half and maximum reliability. *IOSR Journal of Research & Method in Education*, *3*(1), 1-8. https://www.iosrjournals.org/iosr-jrme/papers/Vol-3%20Issue-1/A0310108.pdf

Cheng, C.M., Chang, C.C., Wang, J.D., Chang, K.C., Ting, S.Y., & Lin, C.Y. (2019). Negative impacts of self-stigma on the quality of life of patients in methadone maintenance treatment: The mediated roles of psychological distress and social functioning. *International Journal of Environmental Research and Public Health*, *16*(7), 1-16. https://doi.org/10.3390/ijerph16071299

Cruchinho, P., López-Franco, M. D., Capelas, M. L., Almeida, S., Bennett, P. M., Miranda da Silva, M., Teixeira, G., Nunes, E., Lucas, L., Gaspar, F., & Gaspar, F. (2024). Translation, Cross-Cultural Adaptation, and Validation of Measurement Instruments: A Practical Guideline for Novice Researchers. *Journal of Multidisciplinary Healthcare*, 2701-2728. https://doi.org/10.2147/JMDH.S419714

Dannatt, L., Ransing, R., Calvey, T., Scheibein, F., Saad, N.A., Shirasaka, T., Ramalho, R., Pant, S., Vadivel, R., Siste, K., Stowe, M. J., Kalita, K. N., Boujraf, S., Testa, R., Arya, S., Morgan, N., & Grandinetti, P. (2021). The Impact of Stigma on treatment services for people with substance use disorders during the COVID-19 Pandemic—Perspectives of NECPAM members. *Frontiers in Psychiatry*, *12*, 223-226. https://doi.org/10.3389/fpsyt.2021.634515

Freeman, G., Li, L., & Schulenberg, K. (2025). " I Have Abused Someone Who Abused Me": Understanding People Who Have Experienced Both Sides of Harassment Accusations in Social VR. *Proceedings of the ACM on Human-Computer Interaction*, *9*(2), 1-26. https://doi.org/10.1145/3711005

Garpenhag, L., & Dahlman, D. (2021). Perceived healthcare stigma among patients in opioid substitution treatment: A qualitative study. *Substance Abuse Treatment, Prevention, and Policy, 16*, 1-12. https://doi.org/10.1186/s13011-021-00417-3

Goffman, E. (1963). *Stigma: Notes on the management of spoiled identity*. Englewood Cliffs, NJ: Prentice Hall.

Hamilton, M. (1960). A rating scale for depression. *Journal of Neurol Neurosurg Psychiatry, 23*, 56-61. https://europepmc.org/backend/ptpmcrender.fcgi?accid=PMC495331&blobtype=pdf

Khan, S. I., & Irfan, M. (2023). Stigmatization and Self-Perception regarding issues related to Mental Health: A qualitative survey from a lower and middle-income country. *Pakistan Journal of Medical Sciences*, *39*(5), 1411. https://doi.org/10.12669/pjms.39.5.7487

Luoma, J.B., Nobles, R.H., Drake, C.E., Hayes, S.C., O'Hair, A., Fletcher, L., & Kohlenberg, B. S. (2013). Self-stigma in substance abuse: Development of a new measure. *Journal of Psychopathology and Behavioral Assessment, 35*(2), 223-234. https://dx.doi.org/10.1007%2Fs10862-012-9323-4

Luoma, J.B., O'Hair, A.K., Kohlenberg, B.S., Hayes, S.C., & Fletcher, L. (2010). The development and psychometric properties of a new measure of perceived stigma toward substance users. *Substance Use & Misuse*, *45*(1-2), 47-57. https://doi.org/10.3109/10826080902864712

Martiny, S. E., Josten, J., & Renger, D. (2024). Too different to be equal: Lack of public respect is associated with reduced self□respect for stigmatized individuals. *Scandinavian Journal of Psychology, 65*(2), 304-310. https://doi.org/10.1111/sjop.12972

Nguyen, J., & Pepping, C. A. (2022). Prospective effects of internalized stigma on same-sex relationship satisfaction: The mediating role of depressive symptoms and couple conflict. *Journal of Consulting and Clinical Psychology, 90*(2), 184.

Ritsher, J. B., Otilingam, P. G., & Grajales, M. (2003). Internalized stigma of mental illness: psychometric properties of a new measure. *Psychiatry Research*, *121*(1), 31-49. https://doi.org/10.1016/j.psychres.2003.08.008

Sarkar, S., Balhara, Y.P.S., Kumar, S., Saini, V., Kamran, A., Patil, V., Singh, S., & Gyawali, S. (2019). Internalized stigma among patients with substance use disorders at a tertiary care center in India. *Journal of Ethnicity in Substance Abuse*, *18*(3), 345-358. https://doi.org/10.1080/15332640.2017.1357158

Shahzad, S., Ali, M., & Begum, M. (2021). Urdu translation and psychometric properties of perceived stigma of substance abuse scale (PSAS) in patients with substance use disorders in Pakistan. National Institute on Drug Abuse. Advancing Addiction Science.

Su, C.T., & Parham, L.D. (2002). Generating a valid questionnaire translation for cross-cultural use. *American Journal of Occupational Therapy*, *56*(5), 581-585. https://doi.org/10.5014/ajot.56.5.581

Tsang, S., Royse, C.F., & Terkawi, A.S. (2017). Guidelines for developing, translating, and validating a questionnaire in perioperative and pain medicine. *Saudi Journal of Anaesthesia*, *11*(1), S80-S89. https://dx.doi.org/10.4103%2Fsja.SJA_203_17

Van Boekel, L.C., Brouwers, E.P., Van Weeghel, J., & Garretsen, H.F. (2013). Stigma among health professionals towards patients with substance use disorders and its consequences

for healthcare delivery: Systematic review. *Drug and Alcohol Dependence*, *131*(1-2), 23-35. https://doi.org/10.1016/j.drugalcdep.2013.02.018

Wells, C.S., & Wollack, J.A. (2003). An instructor's guide to understanding test reliability. *Testing & Evaluation Services.* University of Wisconsin.

Yang, L., Wong, L.Y., Grivel, M.M., & Hasin, D.S. (2017). Stigma and substance use disorders: An international phenomenon. *Current Opinion in Psychiatry*, *30*(5), 378-388. https://dx.doi.org/10.1097%2FYCO.0000000000000351

Table 1

Linguistic Equivalence of English and Urdu Version ISSA

Scales	Languages	*M*	*SD*	*r*
ISSA	English	58.64	15.22	.98*
ISSA	Urdu	58.96	15.67	

Note. ISSA= Internalized Stigma of Substance Abuse; *p<.001

Table 2

Item Total Correlations of Alienation, Stereotype Endorsement, Perceived Discrimination, Social Withdrawal, and Stigma Resistance Subscales of Urdu Version of ISSA (N= 300)

Alienation		Stereotype Endorsement		Perceived Discrimination		Social withdrawal		Stigma resistance	
Items	*r*	Items	*r*	Items	*r*	Items	*r*	Items	*r*
1	.57	2	.53	3	.55	4	.62	7	.43
5	.53	6	.51	15	.62	9	.65	14	.43
8	.60	10	.50	22	.62	11	.62	24	.45
16	.57	18	.56	25	.71	12	.66	26	.42

17	.58	19	.59	28	.63	13	.55	27	.43
21	.63	23	.55			20	.67		
		29	.57						

Table 3

Inter-item Correlation of Internalized Stigma of Substance Abuse

Items	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
1	-	.12	.32	.14	.77	.13	.39	.81	.18	.08	.15	.19	.12	.40	.30	.81	.80	.14	.18	.20	.75	.35	.21	.45	.36	.39	.42	.29	.21
2		-	.29	.39	.09	.77	-.01	.11	.35	.77	.42	.32	.38	-.02	.33	.13	.14	.82	.83	.35	.16	.25	.73	-.00	.40	-.02	-.01	.29	.73
3			-	.33	.42	.26	.18	.31	.27	.28	.33	.31	.35	.20	.57	.36	.32	.27	.29	.32	.38	.75	.20	.22	.68	.18	.21	.55	.27
4				-	.14	.38	.05	.25	.87	.36	.82	.85	.79	.04	.42	.24	.24	.42	.46	.85	.32	.37	.35	.03	.53	.03	.02	.43	.37
5					-	.08	.32	.79	.19	.04	.15	.22	.17	.32	.28	.81	.79	.12	.13	.22	.73	.40	.14	.37	.36	.31	.34	.27	.15
6						-	-.04	.13	.35	.75	.38	.36	.32	-.06	.33	.18	.14	.83	.80	.36	.15	.21	.72	-.06	.45	-.06	-.07	.33	.73
7							-	.33	.10	.00	.10	.10	.05	.95	.13	.26	.30	-.04	-.03	.13	.33	.32	.04	.88	.13	.96	.95	.17	.07
8								-	.26	.06	.24	.33	.20	.32	.31	.85	.83	.17	.18	.31	.82	.37	.20	.38	.42	.32	.34	.33	.18
9									-	.35	.77	.90	.76	.09	.49	.22	.25	.41	.44	.88	.32	.40	.37	.08	.54	.07	.06	.53	.39
10										-	.39	.32	.34	-.00	.40	.12	.12	.78	.75	.30	.11	.22	.65	-.01	.40	-.00	-.00	.36	.65
11											-	.78	.70	.09	.39	.19	.21	.44	.47	.78	.35	.38	.39	.07	.52	.08	.07	.41	.40
12												-	.75	.09	.45	.25	.27	.41	.43	.91	.34	.41	.36	.09	.58	.08	.07	.49	.36
13													-	.04	.36	.24	.24	.40	.40	.79	.24	.26	.27	.04	.40	.03	.03	.32	.32
14														-	.15	.27	.30	-.06	-.05	.13	.34	.34	.02	.94	.15	.96	.94	.19	.05
15															-	.37	.40	.41	.41	.41	.35	.64	.31	.17	.71	.12	.15	.83	.34
16																-	.93	.22	.21	.22	.78	.30	.16	.31	.35	.25	.27	.27	.15
17																	-	.20	.19	.24	.80	.33	.14	.35	.32	.30	.31	.29	.12
18																		-	.90	.38	.18	.20	.76	-.04	.47	-.05	-.04	.36	.76
19																			-	.42	.22	.26	.82	-.03	.50	-.06	-.05	.37	.82
20																				-	.35	.43	.38	.13	.56	.12	.11	.48	.39
21																					-	.43	.22	.38	.47	.34	.36	.40	.19

22				-	.25	.35	.68	.32	.35	.68	.26
23					-	.04	.45	.03	.04	.37	.81
24						-	.16	.89	.89	.20	.06
25							-	.13	.15	.79	.46
26								-	.97	.16	.06
27									-	.18	.07
28										-	.36
29											-

Table 4

Estimation of Cronbach's Alpha, Split-Half and Test-Retest Reliability of Total ISSA and its Subscales

Scale	α (n = 300)	Split-Half Reliability (n = 300)	Test-Retest Reliability (n = 50)
Alienation	.96	.95	.99*
SE	.96	.92	.96*
DE	.91	.89	.98*
SW	.96	.96	.99*
SR	.98	.95	.83*
ISSA Total	.93	.95	.98*

Note. SE= Stereotype endorsement; DE= Discrimination experience; SW= Social withdrawal; SR= Stigma resistance; p<.001

Table 5

Kaiser-Meyer-Olkin Measure of Sampling Adequacy and Bartlett's Test of Sphericity for Urdu version of ISSA (N=300)

Subscales	*KMO*	X^2	Bartlett's Test	
			df	*P*
Alienation	.91	2156.332	15	.00
Stereotype	.93	2340.964	21	.00
Discrimination	.80	1187.904	10	.00
Social withdrawal	.92	2255.069	15	.00
Stigma resistance	.84	3249.523	10	.00
ISSA-Total	.90	12122.185	406	.00

Table 6

Rotated Component Matrix for Overall Items of Urdu Version of ISSA Using Varimax Rotation Method (N = 300)

		Component				
Total items of ISSA	Subscale wise items	1	2	3	4	5
16	A-16	.93				
17	A-17	.91				
8	A-8	.88				
5	A-5	.85				
1	A-1	.85				
21	A-21	.81				
19	SE-19		.89			
18	SE-18		.89			
2	SE-2		.87			
6	SE-6		.86			
23	SE-23		.85			
29	SE-29		.84			
10	SE-10		.82			
28	D-28			.80		
22	D-22			.80		
15	D-15			.77		
3	D-3			.76		
25	D-25			.73		
20	SW-20				.89	
4	SW-4				.89	
12	SW-12				.89	
9	SW-9				.88	
13	SW-13				.83	
11	SW-11				.81	
26	SR-26					.96
14	SR-14					.96
7	SR-7					.95

27	SR-27					.95
24	SR-24					.91
Eigen values		2.904	10.948	1.811	6.050	2.821
% of Variance		10.015	37.752	6.244	20.862	9.728
Cumulative %		68.630	37.752	84.601	58.615	78.357

Note. ISSA= Internalized Stigma of Substance Abuse; A= Alienation; SE= Stereotype Endorsement; D= Discrimination; SW= Social Withdrawal; SR= Stigma Resistance

Table 7

Estimation of Convergent Validity of Urdu version of ISSA with HDRS (N = 300)

Scale	Item	HDRS
		r
Alienation	6	.56*
Stereotype	7	.35*
Discrimination	5	.49*
Social withdrawal	6	.42*
Stigma resistance	5	.29*
Total ISSA	29	.63*

Note. ISSA= Internalized stigma of substance abuse; HDRS= Hamilton depression rating scale; p<.001