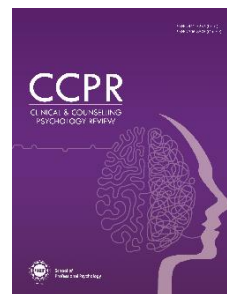
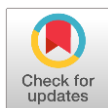


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Psychometric Validation: The Self-Reflection and Insight Scale for Adults

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Abstract

The original Self-Reflection and Insight Scale (SRIS; Grant et al., [2002](#)) was translated into Urdu by using guidelines of Beaton et al.'s ([2000](#)) Cross-Cultural Adaptation of Self-Report Measures. It was given to a sample of 300 individuals (aged 18-30 years). Exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) validated the scales three-component model. A clean factor structure was produced by the analysis, and factor loadings for each item ranged from roughly .86 to .89, demonstrating high correlations between the factors and the items. The first factor explained 22.98% of the variation, and the extracted factors explained 78.11% of the cumulative variance. The model fit indices, which were χ^2/df 1.180, GFI .940, AGFI .924, CFI .994, IFI .994, and RMSEA .025, displaying a good match to the data. The degree of internal consistency was great, .84 in total ($\alpha = .86$ Engagement, $\alpha = .86$ for Self-Reflection Need, and $\alpha = .87$ for Insight). Additionally, the scale showed respectable levels of convergent validity and composite reliability. Strong criterion-related validity was demonstrated by the Urdu version of SRIS, which had significant negative correlations with measures of social anxiety and stress. The removal of language barrier contributed to inclusivity in testing and research. This validation of the scale provides a basis for conducting cross-cultural comparisons across different populations. In the areas like personality development, education, and counselling, the valid Urdu version will help in research. These results imply that the Urdu-translated SRIS is a reliable psychometric tool for self-awareness in Urdu-speaking communities.

Keywords: insight, psychometric validation, self-reflection, SRIS, Urdu adaptation

Introduction

Reflection is grounded in personal experiences and the base for reflection includes experiences and the real-world application which strengthens the

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actions, attitudes and cogitation (Ong et al, [2024](#)). According to Rice et al. ([2022](#)), self-reflection is regarded as a fundamental skill for psychologists. In recent years, self-reflection has drawn a lot of attention from researchers in the helping professions (Lilienfeld & Basterfield, [2020](#)). Furthermore, self-reflection together with insight is very important as it traces the development of people to evaluate results and use feedback to enhance their behavior. For personal development, self-reflection and insight are very essential, as it helps people to improve their performance and behavior (Grant et al., [2002](#)).

In today's era of rapid global advancement, technology and artificial intelligence stand as powerful agents of transformation. Yet enduring change in human behavior arises from self-reflection than from external technological progress. Engaging in reflective processes is fundamental for both personal and professional growth and supports adaptability in a dynamic environment that continues to evolve (Zia et al., [2024](#)). Insight is the reflection of internal state of awareness (Grant et al., [2002](#)). Insight is the expression of one's feelings and their expression. People may spare time for self-reflection and still they are out of insight. Self-regulatory processes are central for self-reflection and insight (Grant et al., [2002](#)).

Self-reflection is mandatory for getting directions and gaining awareness with an increasing recognition of its value in last five years. Various psychometric tools have been established to assess different dimensions of self-reflection due to their long-standing importance in psychological and in educational studies. One of the earliest used instruments is the private self-consciousness scale, which measures an individuals tendency to focus on internal thoughts and feelings (Fenigstein et al., [1975](#), as cited in Silvia, [2021](#)). This scale has been criticized for not distinguishing between maladaptive rumination and adaptive self-reflection. In response to these hurdles, Grant et al. ([2002](#)) created scale called Self-Reflection and Insight Scale (SRIS). It evaluates two key concepts; self-reflection, the conscious examination of ones thoughts and actions, and insight, the understanding of internal states. The 20 items on a 6-point Likert scale demonstrated strong validity, reliability, and internal consistency.

Other instruments include the Beck Cognitive Insight Scale (BCIS) by Beck et al. ([2004](#)), which distinguishes between self-certainty and self-reflectiveness, Groningen reflection capacity scale (GRAS) by Aukes et al.

([2007](#)) used to help medical students to reflect capacity in areas such as communication, empathy, and insight. Considering the increasing levels of psychological difficulties, tension, and anxiety among Pakistani students (Kumar et al., [2019](#)).

Despite the fact that self-reflection has been extensively studied in Western literature (Eng & Pai, [2015](#); Rice et al., [2022](#); Ong et al, [2024](#); Zia et al., [2024](#)), there is still a dearth of empirical research on the topic in Pakistan. Nonetheless, some recent research has brought attention to its importance in a number of areas, including personal development, emotional intelligence, psychological health, and academic achievement. For example, studies have shown how important reflection is for improving learning and personal development. Deeper introspection is encouraged by the usefulness of formal reflecting tools and frameworks. The practice and experience of reflection in Pakistani contexts are influenced by cultural and practical issues (Mufti et al., [2025](#); Muhammad et al., [2024](#)). Notwithstanding these important advancements, a significant barrier to furthering research and practice is the absence of standardized, culturally validated instruments for evaluating self-reflection in Urdu. In order to facilitate future research and interventions in educational, clinical, and organizational contexts in Pakistan, it is imperative that validated tools such as the Self-Reflection and Insight Scale (SRIS) be made available.

The SRIS was created by Grant et al. ([2002](#)) to evaluate individual variations in these cognitive-emotional characteristics. A key element of self-awareness and personal growth is self-reflection and insight. They defined insight as the clarity of knowledge that results from self-reflection, which they defined as the deliberate turning of one's attention inward to evaluate ideas, feelings, and behaviors. Insight and self-reflection are fundamental concepts in lifelong learning, emotional control, and psychological growth. These metacognitive processes are becoming more widely acknowledged as crucial elements of academic and professional achievement, and they are at the heart of theories of self-regulation, personal development, and clinical functioning.

The value of reflective practice in the fields of education and health sciences is firmly supported by theoretical and empirical frameworks. The concept of the "reflective practitioner" was first proposed by Schon, who emphasized that professionals develop not only by experience but also via reflection on that experience (Bucknell et al., [2024](#)). Building on this, Moon

(2004) defined reflection as an organized procedure that facilitates difficult decision-making and improves learning. Self-reflection is deliberate introspection to comprehend one's feelings, ideas, and behaviors (Bucknell et al., 2024).

Lyke (2009) discovered that cognitive flexibility and psychological well-being are linked to insight. Self-reflection has been associated with greater emotional functioning, increased self-awareness, and less distress in mental health contexts. Additionally, insight was distinguished from introspection. Unlike the self-knowledge acquired through reflective practice, self-reflection is the deliberate process of considering prior events such as stressors (Falon, 2021).

There is not much local empirical research, despite the fact that Pakistani medical, teaching, and higher education programs are incorporating reflective practices. According to studies from institutions like Aga Khan University and Khyber Medical University, reflective journaling improves pupils' clinical judgment, critical thinking, and self-awareness. Nevertheless, it is challenging to assess the extent and developmental impact of the majority of interventions since they lack standard evaluation methods (Aziz et al., 2020; Qamar et al., 2022).

This disparity emphasizes the value of culturally appropriate tools like the Self-Reflection and Insight Scale (SRIS), which was first created by Grant et al. (2002). Researchers, educators, and therapists will have a trustworthy way to evaluate reflective abilities in Urdu-speaking people if the SRIS is validated in Urdu. These tools can help academic and professional development programs in a variety of sectors.

For quality reasons, the instrument was translated so that participants with more proficiency in the target language could accurately collect data. The adaptation process ensured the validity and reliability of the instrument's and also maintained linguistic and cultural suitability for the target population. Instead of developing a new instrument, the translation aimed to ensure that the items of the instruments were understood by participants while maintaining the reliability and validity of the original measure. High-quality translation increases research validity, lowers measurement error, and increases the accuracy of study results.

Method

The study was conducted in two stages: first, the SRIS was translated into

Urdu using forward-backward translation (Cross-Cultural Adaptation methods) by ISPOR standards (Wild et al., [2005](#)) and expert reviewed to assure its validity and cultural relevance; second, its psychometric properties were examined using exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) to evaluate the three subscales-Insight, Need, and Engagement, along with overall model fit, construct validity, and reliability.

Phase I: Urdu Translation and Back Translation of SRIS

The Self-Reflection and Insight Scale (SRIS; Grant et al., [2002](#)) was initially translated into Urdu using established cross-cultural adaptation methods following ISPOR standards (Wild et al., [2005](#)), consent was taken from the authorities. During the first step, four experts (one professor, two associate professors, and one assistant professor) were asked to translate the SRIS into Urdu language as they were bilingual experts in the field. Professors were required to make the exact version, with precise and to the point statements. Then a panel of 4 members (two professors and two assistant professors) was asked for the authentic reviews on the draft of four translations produced by the professors. The accepted draft was then back translated into English by Brislin ([1976](#)) method. In the last step, 4 experts (one from Urdu, one from English, and two from psychology) were requested for back-translation. It was made sure that the back-translated scale is the exact and appropriate version of original scale. Sentence structure, wording, and expression in Urdu were maintained through thorough selection of words suitably. The next step was pilot study which was done on a sample of 60 students. Results showed good reliability ($\alpha = .80$), Urdu translation was reliable, vibrant, and rational. No irregularity was found in the scale, so it was approved for further use.

Phase II: Psychometric Assessment of the Urdu SRIS

In the second phase, the Urdu version was administered to 300 individuals who were familiar with the Urdu language. The psychometric properties were then measured using EFA and CFA verified the model with CR and AVE, which have three subscales: Insight (8 items), Need for Self-Reflection (6 items), and Engagement in Self-Reflection (6 items).

Sample

To ensure accurate responses, the SRIS Urdu adaptation and validation study mandated that participants be at least 18 years old, able to self-reflect,

and proficient in Urdu, with an equal gender distribution (50% male, 50% female) using purposive convenient sampling. The current study grabbed the sample from the population of university students. The consent was taken by pertinent authorities (administration and head of the departments of Hazara University), as university students were the sample for the current study. Sample was grabbed through written informed consent. Additionally, the inclusion of Hazara University students made it possible to investigate a population pertinent to the context of higher education with respect to the study variables. All participants gave their verbal agreement and were told about the data gathering procedure; participation was entirely voluntary. Throughout the research process, all replies were kept private and anonymous.

Measures

The Self-Reflection and Insight Scale (SRIS)

It consists of three subscales: Engagement in Self Reflection, which measures intentional introspection using six items (1R, 8R, 10, 13R, 16, 19; $\alpha = .77$); Need for Self-Reflection, which measures the perceived importance of self-reflection using six items (2R, 5, 7, 12, 15, 18; $\alpha = .77$); and Insight, which evaluates clarity in understanding ones own and others internal states using eight items (3, 4R, 6, 9R, 11R, 14R, 17R, 20; $\alpha = .78$). All items are scored using a 6-point Likert scale (1 = *strongly disagree* to 6 = *strongly agree*), with higher scores indicating more introspective engagement, a perceived need for reflection, or self-awareness, (Grant et al., 2002). Internal consistency, that is Cronbach alpha coefficient, was satisfactory completely on current sample engagement .86, need .86, and insight .87. Composite reliability was also within range, 0.95, 0.95, and 0.96 respectively.

Mindful Attention Awareness Scale (MAAS)

This scale evaluates how often people experience moments of present-centered awareness and attention in their everyday lives. There are fifteen items in it. Responses are recorded using a 6-point Likert scale that ranges from one (*almost always*) to six (*almost never*). Since no item is reverse-scored, higher total scores indicate greater mindfulness or awareness of the present moment. The scale has shown strong internal consistency, with Cronbach alpha coefficient of .82 (Brown & Ryan, 2003). Convergent validity was also measured in the present study.

Self-Consciousness Scale-Revised Version (SCS-R)

This scale measures variations in self-focused attention and self-awareness among individuals across three areas: Social Anxiety, Private Self-Consciousness, and Public Self-Consciousness. The current study utilized the Private Self-Consciousness Subscale, which assesses an individuals propensity to reflect inwardly on their thoughts, emotions, and personal experiences. It demonstrates self-reflection and an awareness of ones inner self. Responses are recorded on a 4 -point Likert scale. A greater propensity for introspection and inner self-focus is indicated by a higher score on this subscale. With a Cronbachs alpha coefficient of .79 (Sch eier & Carver, [1985](#)), the subscale shows strong internal consistency with convergent validity.

Social Interaction Anxiety Scale (SIAS)

This measure evaluates the degree of discomfort people feel during social interactions, particularly when they involve strangers. There are twenty things in it. Each item is assessed using a 5-point Likert scale, with 0 representing Not at all characteristic of me and 4 representing Extremely characteristic of me. A higher score denotes increased social interaction anxiety. With an alpha coefficient of .93, the scale has demonstrated outstanding internal consistency (Mattick & Clarke, [1998](#)). Divergent validity is used in the current study.

Perceived Stress Scale (PSS)

This scale assesses how many people view circumstances in their life as stressful and out of their control. Responses are collected on a 5-point Likert scale ranging from 0 (Never) to 4 (Very Often) for 10 items. The reverse scoring is applied to 4, 5, 7, and 8. Greater levels of perceived stress are indicated by higher ratings. The alpha coefficient of .78 (Cohen et al., [1983](#)) indicates that the scale has excellent internal consistency. The scale was used to calculate divergent validity in the present study.

Mindful attention awareness scale, self-consciousness scale, social interaction anxiety scale and perceived stress scale were used to measure the criterion related validity through the convergent and divergent validity analyses.

Procedure

Informed consent was acquired prior to participation. Proper guidelines were given to participants for responding on scale, they were urged to answer each question honestly and completely. To maximize the response rate of the participants the questionnaire protocol was administered manually and all the queries related to the current study was addressed. Adult participants were given 450 questionnaires in total; 150 questionnaires were discarded because those were not completed. Three hundred participants made up the final sample used for data analysis, with 66% percent of the questionnaires provided being filled out and returned.

Data Analyses

The SRIS's psychometric properties were assessed using SPSS 23 and AMOS 23. The EFA with principal axis factoring and varimax rotation identified the underlying factor structure (Field, [2018](#); Tabachnick & Fidell, [2019](#)), followed by CFA to verify the model fit. Consistent with Cabrera-Nguyen's ([2010](#)) recommendation, a sample size of 300 was deemed adequate for factor analysis.

Results

Table 1

Loading for Exploratory Factor Analysis by Using Varimax Rotation Analysis of SRIS (N = 300).

Item No.	Factor 1	Factor 2	Factor 3
1	.88		
8	.89		
10	.89		
13	.87		
16	.88		
19	.87		
2		.87	
5		.87	
7		.87	
12		.88	
15		.89	
18		.89	
3			.89

Item No.	Factor 1	Factor 2	Factor 3
4			.89
6			.89
9			.86
11			.88
14			.88
17			.86
20			.88
% Variance		22.98	
Cumulative variance		78.11	
Kaiser–Meyer–Olkin measure		.931	
Bartlett’s test of sphericity		0.708 < 0.0001	

Table 1 describes the factor loadings from the EFA using Varimax rotation for the Urdu-translated version of SRIS. The analysis revealed a three-factor structure, Engagement in Self-Reflection, Need for Self-Reflection, and Insight showing satisfactory loadings for all respective items. The Kaiser-Meyer-Olkin (KMO) value was .931, and Bartlett’s test of sphericity was significant ($\chi^2 = .708$, $p < .001$), indicating sample adequacy for factor analysis. The cumulative variance explained by the three factors was 78.11%, with Factor 1 contributing 22.98%.

Table 2

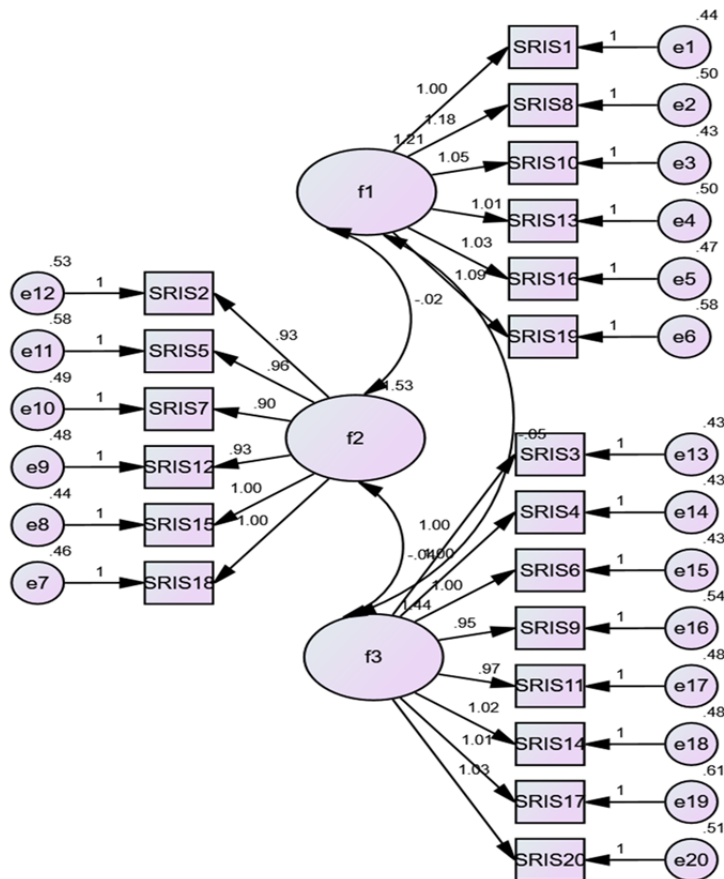
Communalities Values of Extraction Method by using Principal Components Analysis of SRIS (N = 300)

Item No.	Value
1	.78
2	.76
3	.79
4	.80
5	.76
6	.79
7	.76
8	.80
9	.74
10	.79
11	.77
12	.78

Item No.	Value
13	.76
14	.78
15	.80
16	.77
17	.75
18	.80
19	.76
20	.78

Figure 1

Graphical Presentation of Three Dimensions of SRIS



Note. SRIS = Self-Reflection and Insight Scale.

Table 2 states that communalities are all higher than the recommended limit of .40, suggesting that each item shares a significant amount of variance with the retrieved components. The values, which ranged from .74 to .80, imply that the underlying factors well represent the items and that there is a strong common variance between them.

Table3

Model Fit Indices for SRIS (N = 300)

Model	$\chi^2(df)$	χ^2/df	GFI	AGFI	CFI	IFI	RMSEA
SRIS-	29.53	1.180	.940	.924	.994	.994	.025

Note. SRIS= Self-Reflection and Insight Scale; GFI = goodness-of-fit index; AGFI = adjusted goodness-of-fit index; CFI = comparative fit index; IFI = incremental fit index; RMSEA = root mean square error of approximation.

The CFA model fit indices are shown in Table 3. The following indices demonstrate how well the model fit the data: $\chi^2/df = 29.53$, $\chi^2/df = 1.180$, GFI = .940, AGFI = .924, CFI = .994, IFI = .994, RMSEA is .025. These findings support the good structural fit of the SRIS three-factor model.

Table4

The Confirmatory Factor Analysis Reliability and Validity Results for Final Model of SRIS (N = 300)

Construct	Items	Factor loading	Cronbach's alpha ($\geq .7$)	CR ($\geq .6$)	AVE ($\geq .5$)
Factor 1 (engagement in self-reflection)	SRIS.1	.88	.86	0.95	0.77
	SRIS.8	.89			
	SRIS.10	.89			
	SRIS.13	.87			
	SRIS.16	.88			
Factor 2 (need for self-reflection)	SRIS.19	.87	.86	0.95	0.77
	SRIS.2	.87			
	SRIS.5	.87			
	SRIS.7	.87			
	SRIS.12	.88			
	SRIS.15	.89			
	SRIS.18	.89			

Construct	Items	Factor loading	Cronbach's alpha ($\geq .7$)	CR ($\geq .6$)	AVE ($\geq .5$)
Factor 3 (insight)	SRIS.3	.89	.87	0.96	0.77
	SRIS.4	.89			
	SRIS.6	.89			
	SRIS.9	.86			
	SRIS.11	.88			
	SRIS.14	.88			
	SRIS.17	.86			
	SRIS.20	.88			

Note. SRIS = Self-Reflection and Insight Scale; CR = composite reliability; AVE = average variance extracted.

The validity and reliability statistics are shown in Table 4. Convergent validity and satisfactory to strong dependability were demonstrated by all three subscales: Factor 1: Engagement in Self Reflection: $\alpha = .86$, CR = .95, AVE = .77, Factor 2: Need for Self-Reflection: $\alpha = .86$, CR = .95, AVE = .77, Factor 3: Insight: $\alpha = .87$, CR = .96, AVE = .77. Given that the AVE values were higher than the suggested cutoff of 0.50, these results demonstrate great internal consistency and adequate convergent validity.

Table 5

Correlation Among Subscales of SRIS (N = 100)

Scales	ENG-SRIS	N-SRIS	INS
ENG-SR	—	-.11	.03
N-SR	—	—	.17
INS	—	—	—

Note. ENG-SR = Engagement in Self-Reflection; N-SR = Need for Self-Reflection; INS = Insight subscale. $**p < .01$.

Inter-subscale correlations within SRIS are displayed in Table 5. Self-Reflective Behavior and the Need for Self-Reflection ($r = -.11$), Insight and Engagement ($r = .03$), Insight and Need ($r = .17^{**}$).

The SRIS and other psychological constructs are correlated in Table 6 to demonstrate both discriminant and convergent validity. Significant strong positive relationships were found between SRIS and MAAS ($r = .31^{**}$), SCS ($r = .37^{**}$), and non-significant correlation of SRIS and SIAS ($r = -.17$), PSS ($r = -.13$). The convergent validity of the SRIS Urdu version

is supported by these findings. These correlations imply discriminant validity since they show concept relatedness without multicollinearity.

Table 6

Correlation among Scales of SRIS, MAAS, SCS, SIAS, and PSS Scale (N = 100)

Scales	SRIS	MAAS	SCS	SIAS	PSS
SRIS	—	.31**	.37**	-.17	-.13
MAAS	—	—	.35**	-.13	-.15
SCS	—	—	—	-.16	-.03
SIAS	—	—	—	—	.21*
PSS	—	—	—	—	—

Note. SRIS = Self-reflection and Insight Scale; MAAS = Mindful Attention Awareness Scale; SCS = Self Consciousness Scale; SIAS = Social Interaction Anxiety Scale; PSS = Perceived Stress Scale. * $p < .05$. ** $p < .01$.

Table 7

Gender Differences on SRIS.

Variables	Males ($n = 150$)		Females ($n = 150$)		$t(298)$	p	Cohen's d	95% CI	
	M	SD	M	SD				LL	UL
SRIS	75.10	8.25	80.80	7.60	6.45	.001	0.74	0.98	0.50

SRIS scores are compared by gender in Table 7. The findings show that there is discernible gender difference in the overall SRIS scores of males and females. Females reported significantly higher scores as compared to males.

Discussion

The goal of the current work was to translate and validate the SRIS in Urdu. For the three factors, including engagement, need, insight (.86, .86, .87), reliability was acceptable. A three-factor structure was found by EFA, and this was validated by CFA, which had a strong fit index for the model. For all variables, composite reliability was high (0.95, 0.95, 0.96), and convergent validity was excellent (0.77 for each). Positive correlations between items and total scores were found to be statistically significant,

indicating high construct validity. The χ^2 value of 29.53 and the χ^2/df value of 1.18, both of which are significantly below the allowed limit of 3, indicate that the goodness-of-fit indices for both SRIS dimensions were acceptable. A χ^2/df value between 1 and 2 is ideal, between 2 and 5 is good, and between 5 and 5 is not acceptable as it does not represent a meaningful interval. The sample size has an impact on this index (Marques et al., [2014](#)).

The fit indices were all over the 90 thresholds (Sathyanarayana & Mohanasundaram, [2024](#)), indicating a strong model fit: GFI = 0.940, AGFI = 0.924, CFI = 0.994, IFI = 0.994, TLI = 0.994, and NFI = 0.965. The scales strong model fit was confirmed by the fact that its RMSEA was 0.025, much lower than the 0.05 threshold for a strong fit (Chen et al., [2008](#)). The three-factor structure of the SRIS derived in the current work (Engagement, Need, and Insight) corroborates the results of Roberts and Stark ([2008](#)), who generated an initial three-factor solution from an exploratory factor analysis. These included 2 motivational components of self-reflection: the Need for Self-Reflection which represents the degree to which people want to or feel forced to self-reflect, and Engagement in Self-Reflection, denoting the amount and depth of self-reflective practices. The third construct, Insight, was adopted as described by Grant et al. ([2002](#)), indicating the clear understanding of one's own inner processes. The current study's model is empirically supported by their validation of the three-factor structure, which implies that a more nuanced understanding of self-reflective processes can be obtained by differentiating between the motivation to reflect and the actual practice of reflection. The current model's theoretical and psychometric underpinnings are strengthened by this connection. Roberts and Stark ([2008](#)), divided the scale into three separate subscales: Self-Insight, Self-Reflection Need, and Self-Reflection Engagement. This framework encapsulates the cognitive and motivational elements in addition to the behavioral propensity to reflect. Similarly, Carr and Johnson ([2013](#)) reported the same three factors SRIS model on self-reflection with students. The findings showed strong CFA result for these three subscales. The study strengthened this conceptual framework by demonstrating the distinct role each subscale plays in enhancing academic and professional development. The use of the three-factor structure of the SRIS in Carr's research provided further empirical support for its effectiveness within medical education and its applicability across other academic disciplines.

Furthermore, the Urdu version of the SRIS demonstrated a strong positive association with the original scale, confirming its reliability. Criterion-related validity was assessed using the mindfulness scale (MAAS) and the self-consciousness scale (SCS), both of which showed positive correlations $r = .31$ and $r = .37$. In contrast, negative correlations were found with the social interaction anxiety scale and the perceived stress scale $r = -.17$ and $r = -.13$, (Wang, [2023](#)). These results align with previous research indicating that higher stress and anxiety levels are linked to lower self-reflection. Additionally, the positive correlation between the SRIS and SCS supports the scale's convergent validity and highlights the psychological benefits of reflective practices (Majolo et al., [2023](#)).

Psychological discomfort leads to lessening self-reflection and insight. Individuals who experience higher levels of psychological discomfort generally show lower levels of self-reflection and insight, that mental suffering may impede a patient's ability to truly comprehend their inner self (Lyke, [2009](#); Rodolico et al., [2023](#)). The discriminant validity of the SRIS was assessed by comparing the scores of individuals with high and low psychological distress. The findings revealed significant differences in SRIS scores between the two groups, indicating meaningful variations across the scale's dimensions. The Urdu version of the SRIS was found to be a reliable and suitable instrument for evaluating self-reflection and insight among adolescents and young adults. The cross-cultural validity of the scale was confirmed through the Urdu version's accurate replication of the original factor structure. This study supports the SRIS as a consistent and valid tool for use among Urdu-speaking populations in Pakistan, similar to the findings of original scale, which identified two distinct but related constructs.

In order to enhance emotional regulation and adaptive functioning, there is an increasing need to cultivate self-awareness, and personal insight. The key to psychological resilience, academic adjustment, and interpersonal effectiveness is having the clarity to comprehend oneself and the ability to reflect on one's thoughts, feelings, and behaviors. The evaluation of these metacognitive skills in local cultural contexts has received little attention, despite their obvious importance. This study adds to the body of knowledge and useful strategies for improving self-regulation and mental health among Pakistani students and other adult populations by offering a valid and culturally appropriate assessment.

Conclusion and Implications

The Urdu SRIS is a reliable and valid tool for assessing self-reflection and insight among adults in Pakistan. The translated version successfully retained the strong psychometric properties and theoretical foundation of the original scale. Its use is suitable for Urdu-speaking individuals in clinical, counseling, and educational contexts. The scale has also proven culturally appropriate for Pakistani students and the general population, demonstrating solid psychometric performance. The Urdu SRIS effectively measures self-reflective behaviors and insight across different subcultures in Pakistan. It enhances the understanding of cognitive self-awareness and metacognitive practices within culturally specific contexts, making it relevant to various demographic groups. This adaptability strengthens its value for exploring self-reflection and insight within Pakistan's diverse cultural and social settings.

Limitations and Suggestions

As the SRIS depends entirely on self-reporting, responses may be affected by social desirability or a participant's limited self-awareness, which could influence the accuracy of the data. The translation process may also have been shaped by minor cultural differences in how reflection and insight are understood, possibly affecting the interpretation of some items. Clinical populations, such as individuals with mood or personality disorders, could be included in future studies to evaluate the scale's discriminant validity and strengthen its practical value in clinical psychology. This would help improve its overall usefulness and generalizability.

Future research should validate the SRIS across various age groups, professions, and clinical samples. Longitudinal studies can be conducted to observe how self-reflection and insight change over time or in response to therapeutic interventions. Researchers and practitioners may also explore the effectiveness of the SRIS as a pre and post assessment tool in programs designed to enhance self-awareness, such as cognitive therapy or mindfulness-based training.

Author Contribution

Nida Munawar: conceptualization, methodology, project administration, investigation, data curation, formal analysis, visualization, writing – original draft. **Syeda Farhana Kazmi:** supervision, resources, validation, project administration, formal analysis, writing – review & editing.

Conflict of Interest

The authors of the manuscript have no financial or non-financial conflict of interest in the subject matter or materials discussed in this manuscript.

Data Availability Statement

The data generated and/or analyzed during the current study are not publicly available due to confidentiality and ethical restrictions concerning participant privacy. However, de-identified data may be made available from the corresponding author upon reasonable request and subject to appropriate ethical and institutional approval.

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Generative AI Disclosure Statement

The authors did not use any type of generative artificial intelligence software for this research.

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