Translation and Validation of Brief Adjustment Scale-6 (BASE-6) in Urdu

Nazish Rehman[1*], Shumaila Tasleem[2], Zara Asghar[1]

Abstract

The current study aimed to translate and validate the Brief Adjustment Scale–6 (BASE-6) to measure the psychological maladjustment in adolescents. The present study further established the psychometric properties and the general utility of the BASE-6. The sample consisted of Adolescents of age (M= 14.61, SD= .968) of class 9th and 10th (N=150) who were recruited through purposive sampling. In this study the process of translation was done by following MAPI guidelines. Through confirmatory factor analysis, the study ascertained that all items in the translated questionnaire effectively aligned with the intended scales. Furthermore, an evaluation of convergent validity underscored the good quality of validity and reliability achieved by the Urdu-translated version of the Brief Adjustment Scale-6 (BASE-6)**.** The results demonstrated a high level of discriminant and convergent validity in the sample. The one-dimensional structure of BASE-6 was confirmed and factorial invariance was established. Therefore, the study provides strong evidence for the utility of the BASE-6 as a valuable instrument for assessing psychological maladjustment in adolescents, with a high level of discriminant and convergent validity.
Keywords: Adolescents, Psychological Maladjustment, Psychometric Properties, Translation, Validation

[1]MS Scholar, Department of Psychology, Air University, Islamabad, Pakistan.
[2]Assistant Professor, Department of Psychology, Air University, Islamabad, Pakistan.

*Corresponding Author Email:
nazishmalik195@gmail.com

Introduction

Psychological maladjustment explains the inability of individuals to efficiently cope with stress, foster positive relationships, and cultivate a sense of well-being (Chourasiya, 2022). It is crucial for individuals to adapt and function optimally in their everyday lives within their environment. When individuals are psychologically maladjusted, they struggle to manage the challenges and pressures they encounter. These difficulties can manifest in various ways, such as feeling overwhelmed by stress, experiencing strained relationships, and lacking a sense of overall satisfaction and contentment (Deborah & Kendall, 2010). Psychological adjustment on other hand refers to the process by which individuals adapt to changes, stressors, and challenges in their environment. It encompasses various psychological, behavioral, and physiological responses aimed at restoring balance and maintaining well-being. It involves a person's thoughts, emotions, behaviors, and overall functioning, as well as their ability to cope with stress, build resilience, and recover from adversity (Crick & Grotpeter, 1995). Adolescents who face less abuse and have a strong parenting perception and have supportive and friendly environment they adjust in the environment accordingly and if they face any adverse situation due to strong support, they can manage such adversities with patience (Holmbeck et al., 2008). In contrast, adolescents who are psychologically maladjusted may experience negative

feelings and would not be able to cope up with the problems easily. These negative feelings would be irritable, resentful, anxious, unhappy, afraid and tense feelings (Rowe & Fitness, 2018). One may face emotional distress inferred with the feelings about themselves. It is very Important for adolescents to develop successful psychological adjustment. Successful psychological adjustment requires developing resilience, fostering social support networks, and cultivating a positive outlook (Abiky, 2021). By harnessing these factors, adolescents can navigate life's challenges more effectively, leading to improved psychological well-being and a greater ability to thrive in their environments (Huppert, 2009). Psychological maladjustment in adolescents refers to the presence of emotional, behavioral, and interpersonal difficulties that hinder their overall well-being and functioning. This study attempted to address this gap by translating the BASE- 6 in Urdu language to assess the psychological maladjustment of adolescents in context to Pakistani culture. Prior studies utilized questionnaires and scales like General Health Questionnaire (GHQ), World's Health Organization Quality of Life (WHOQOL), Social Readjustment Rating Scale (SRRS) to measure psychological maladjustment. GHQ used to measure general medical care. It has 4 subscales which measure anxiety, severe depression, somatic symptoms and social dysfunction (Goldberg & Miller, 1979). It has 28 items. WHOQOL- 100 also measures maladjustment but in several domains i.e., social, psychological, physical. Brief version WHOQOL- BREF has 26 items, it is mostly used for adults and individuals older than 18 (World Health Organization (WHO), 2012). SRRS measured positive and negative life events indicating the adjustment and maladjustment of individuals. It has 43 items (Holmes & Rahe, 1967). The scales

mentioned above are all old and time consuming. BASE-6 was used in the study as it has both clinical and research perspective, it has 6 items covering all domains of emotional, psychological and mental well-being. Adolescents strive to give less attention to long and comprehensive scales therefore a short version of scale was used to measure Maladjustment in Adolescents.

The present research centers on the task of translating a scale into Urdu. This endeavor is aimed at tailoring a comprehensive and thorough measurement of BASE-6 that aligns with the cultural context of Pakistan. Therefore, the primary objective of this study was to translate a scale designed to evaluate various forms of emotional abuse experienced by adolescents (Cruz et al., 2020).

Method

Research Design

The current study followed a two-phase approach within a cross-sectional design. Phase I involved the translation of the Brief Adjustment Scale – 6 (BASE-6), utilizing a standardized forward-backward translation procedure as recommended by the MAPI Institute (2019). In Phase II, we conducted the linguistic validation of the Brief Adjustment Scale – 6 (BASE-6), obtaining the necessary permissions from the scale's author for both the translation and validation processes.

Phase I

Translation of Brief Adjustment Scale-6 (BASE-6)

Translation was carried out by using the following method of standardized forward/backward translation.

Step 1

Forward Translation

First step of the translation process involved the specialists from both the English and the Psychology department having efficient knowledge in their domain with a minimum qualification of MPhil/MS in English and

Psychology and the maximum qualification of PhD. These bilingual specialists independently conducted forward translation from English to Urdu of the Brief Adjustment Scale-6 (BASE-6). The bilingual experts were given specific instructions, which included guaranteeing conceptual equivalence rather than a literal translation and making the translation simple, concise, and easily understandable.

Step 2

Committee Approaches

The translation committee, consisting of a scholar and a supervisor, assessed and compared three distinct forward translations of the Brief Adjustment Scale-6 (BASE-6). The evaluations were based on criteria such as conceptual equivalence, clarity, and comprehensibility. The specialists carefully documented and analyzed each item, considering its cultural and linguistic implications. Translated items with 70 to 80 % consensus of both experts were retained in the final draft of forward translation.

Step 3

Backward Translation

For the backward translation, two other bilingual experts were selected. They translated the Urdu version of Brief Adjustment Scale-6 (BASE-6) back to English. The purpose of this step was to reconcile and compare the forward translation of the Urdu with the original English version of the scale. The retained items were compared ensuring that the contextual meaning of the items is captured.

Step 4

Cognitive Debriefing and Experts' Review

Experts were instructed to reflect upon each item with practical suggestions. The review committee again modified a few statements and words to obtain thrift by using language that is clearer and appropriate for adolescents as a result of the cognitive debriefing phase. Thus, a pre final Urdu version of BASE consisted of 6 items.

Step 5

Pre-test

In the pre-testing phase, 20 adolescents were randomly selected for the administration of the questionnaire. A debriefing session was conducted before and after the pilot study. Participants were from the age of 13- 17. They were asked to mention and identify items which they find difficult to understand. Along that time was also mentioned to see how long the students take time to fill the scale. They were also given an opportunity to share their thoughts and opinions about the questionnaire items.

Following the debriefing and data collection process, participants received counseling sessions to educate them on parenting and emotional abuse. Given that the population consisted of adolescents with limited knowledge about abuse and psychological adjustment, these counseling sessions aimed to provide relevant information and guidance to increase their awareness and understanding. Overall, the debriefing session served as a valuable feedback-gathering mechanism, while the subsequent counseling sessions helped address the participants' knowledge gaps and promote their well-being.

Phase II

Psychometric Properties of Brief Adjustment Scale- 6 (BASE-6)

The psychometric properties of the Urdu-translated Brief Adjustment Scale- 6 (BASE-6) were examined, encompassing factors like reliability and validity, specifically convergent validity.

Research Sample

A sample of 150 adolescents was taken from two schools in Rawalpindi. Sample size was calculated by using a statistical calculator known as G- Power. The students were from the classes of 9th and 10th. Both the girls and the boys were taken from both 9th and 10th classes and were divided with the 50 to 50 ratio. Purposive sampling was used.

Measures

Demographic Sheet

A demographic sheet was employed to collect fundamental socio-demographic information, including gender, age, birth order, school/institute attended, family structure and socioeconomic status.

Brief Adjustment Scale -6 (BASE-6)

The Urdu version of Brief Adjustment Scale -6 (BASE-6) was originally developed by Cruz et al in 2020 which was translated in the current study. It was used to measure the psychological maladjustment in adolescents. The reliability of the translated instrument was found to be .80 (>.70), which indicates a good internal consistency.

The study began by obtaining permission from the original author to translate the Brief Adjustment Scale -6 (BASE-6). The translation process adhered to the standardized procedure outlined by the MAPI Institute (2019). Following translation, additional permissions were obtained from relevant authorities' i.e., the principals of the schools that were selected for the conduction of study. After discussing the objectives of the translation process permission was granted. The students were debriefed accordingly. Data collection encompassed the use of a demographic questionnaire and the Brief Adjustment Scale- 6 (BASE-6). Students retained the freedom to withdraw from the study at any point if they wished to do so. Once data collection was concluded, participants were acknowledged for their valuable cooperation and time.

Data Analysis

Descriptive statistics were used to provide a summary of the demographic characteristics of the study participants. Additionally, a structural equation model (SEM) was employed to perform confirmatory factor analysis, which aimed to assess and confirm the psychometric properties of the Urdu version of the Brief Adjustment Scale– 6 (BASE- 6).

Ethical Considerations

The school administration was contacted to obtain permission for data collection. The purpose of the study was explained and the written consent from each school was obtained, ensuring adherence to ethical considerations. Additionally, participants were requested to provide both written and verbal consent to participate in the data collection process. Participants were given the right to withdraw their involvement in the research if they chose to do so. Strict confidentiality of the participants' information was ensured. Prior to commencing data collection, a debriefing session was conducted with the administration to provide them with an overview of the research objectives and procedures.

Results

The mean age of adolescents was 14.61 and standard deviation as .96 years. Overall sample size was 150 dividing into boys 50% (n=75) and girls 50% (n=75). The 42.7% (n=64) adolescents were of age 13 to 14 years while 40.7% (n=61) were at the age of 15 and 16.7% (n=25) were found to be in between 16 to 17 years. Equally distributed adolescents from class 9th were 50% (n=75) and 50% (n=75) from class 10th. Therefore, majority of students 72.7% (n=109) belonged to the non-profit school and 27.3% (n=41) belonged to the private school. Majority of the adolescents 90.9% (n=136) belonged to the middle-class socioeconomic status and 9.3% (n=14) belonged to the upper-class socioeconomic status. While, 0% (n=0) were found to be in lower-class socioeconomic status. It was found that 70% (n= 105) adolescents belonged to nuclear family system and 30% (n= 145) belonged to the joint family system. However, among these adolescents 35.3% (n=53) were first born children, 44.7% (n= 67) were un the category of middle child and 15.3% (n= 23) were last

born children. Whereas, 4.7% (*n*= 7) were found to be single child.

Table 1

Confirmatory Factor Analysis, Fit Indices for Brief Adjustment Scale- 6 (BASE-6) (N=150)

Model	X^2	Df	X^2/df	GFI	CFI	RMSEA	TLI
Model Fit	24.10	9	2.68	.94	.94	.11	.90

Note. GFI= Goodness of fit index, CFI=comparative fit index, RMSEA=root mean square error of approximation, TLI= Tucker Lewis Index

Table 1 displays the model's absolute fit index reading as $\chi^2(9) = 24.10, p < .05$. In a typical model, the sample size and the number of estimated parameters are thought to have a significant impact on the chi-square statistic, which is used to measure the absolute model fit (Hair et al., 2010). Therefore, in this perspective, researchers advised taking into account various relative fit indices, such as the Goodness of Fit Index (GFI), Cumulative Fit Index (CFI), Root Mean Square Approximation Error (RMSEA), and Tucker Lewis Index (TLI). The $\chi^2/df= 2.68$ that varied between 0 and 3. To be deemed excellent estimates for the model, The RMSEA= .11deemed estimates are excellent for the model as it must be .08 or less, while the CFI and GFI estimates must be .90 or higher (Hu & Bentler, 1999). The CFI= .94 and GFI=. 94 showed excellent Goodness and Cumulative fit index. The TLI = .90 was also greater than .9 which indicated the excellent model fit. As a result, the model

fit indices and criteria fell into the category of excellent model fit. After achieving the stringent criteria of model fit, the factor structure of the Brief Adjustment Scale- 6 (BASE-6) was psychometrically evaluated and reliability and validity (convergent validity) of the Brief Adjustment Scale- 6 (BASE-6) was determined. The composite reliability and Cronbach's alpha reliability coefficients should be .70 or greater for the constancy of the factor structure while the index of average variance extracted (AVE) should be .50 or greater to claim the good convergence of the measurement (Hair et al., 2010). The average variance extracted (AVE) is the average of the square root of the factor loading for the respective factor (Hair et al., 2010). The percentage of the variance for the Brief Adjustment Scale- 6 (BASE-6) was found to be .42. However, the reliability coefficients, including composite and Cronbach's alpha, ranged from .80 to .81.

Figure 1

Confirmatory Factor Analysis of Brief Adjustment Scale- 6 (BASE-6) (N = 150)
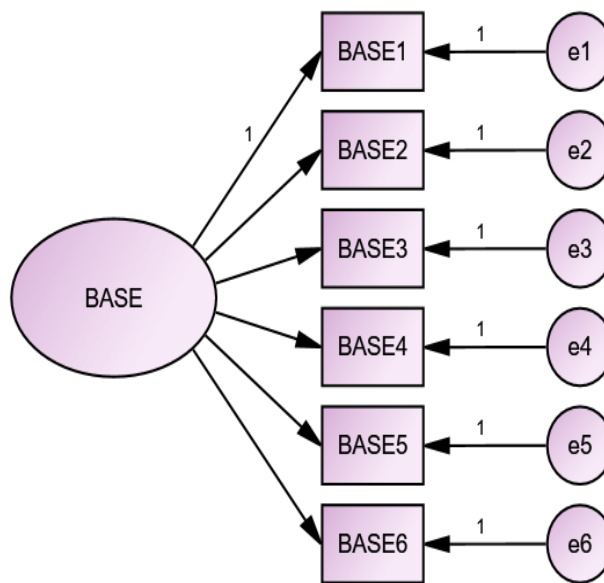
Table 2

Psychometric Evaluation of Brief Adjustment Scale -6 (BASE-6) (N = 150)

Items		α	CR	AVE	Λ
Brief Adjustment Scale -6		.80	.81	.42	
BASE-1	اس ہفتے آپ نے کس حد تک چڑچڑا پن، غصہ، اور/یا ناراضگی محسوس کی ہے؟				1
BASE-2	اس ہفتے آپ نے کس حد تک تناؤ، بے چینی اور/یا خوف محسوس کیاہے				1.39
BASE-3	اس ہفتے آپ نے کس حد تک نا خوشی، حوصلہ شکنی اور/یا افسردگی محسوس کی				1.54
BASE-4	اس ہفتے اپنے بارے میں اچھا محسوس کرنے میں جزباتی تناؤ نے کتنا دخل دیا ہے				.85
BASE-5	اس ہفتے جزباتی تناؤ نے آپ کے تعلقات میں کتنا دخل دیا ہے				1.23
BASE-6	اس ہفتے جزباتی تناؤ نے آپ کی کارکردگی کی صلاحیت میں کس حد تک دخل دیا؟ کام،سکول وغیرہ				1.03

Discussion

There has been a significant increase in the prevalence of adaptations in recent years, making them a common practice (Epstein et al., 2015). Transcultural adaptation, involves the creation of assessment instrument versions that maintain parity with the original tool while also incorporating linguistic and cultural modifications (Valer et al., 2015). The Brief Adjustment Scale-6 (BASE-6) items were translated into straightforward and understandable Urdu for the target audience. Phase I of our study primarily aimed at providing context and clarity. Phase II, on the other hand, focused on linguistically validating the BASE-6.

In any practical field, it is essential to assess the psychometric properties of a test, with a strong emphasis on its validity and reliability. The psychometric evaluation of the BASE-6 revealed good reliability, as evidenced by reliability coefficients such as composite and

Cronbach's alpha, which fell within the range of .80 to .81. Additionally, the construct's convergent validity, assessed using average variance extracted (AVE), yielded positive results.

To ensure the appropriateness of the model, we initiated a process of modifying it, and the model fit indices indicated that it was a good fit. Therefore, reliability coefficients and convergent validity were reported as good but other psychometric properties such as test-retest reliability, discriminant validity and factorial validity if evaluated could ensure comprehensive assessment of the scale. To enhance the validity of BASE-6 Combing it with other validated psychological assessment tool may provide the fuller picture of psychological wellbeing. The scale was administered on a homogeneous sample, not generalizing the Urdu speaking population. Since Pakistan is a country where different languages are spoken other than Urdu including Punjabi, Siraiki, Pashto, Hindko, Sindhi, Balochi etc. People from different regions have different dialects and could have cultural differences in expressing emotions. There are different terms drives from English version of BASE-6 i.e., resentful, emotional distress, anger etc. Psychological distress or Emotional distress in different cultures is expressed differently thus reporting difficulty on respondents understanding and comprehension. Cultural nuances and context can affect respondent responses (Heiervang et al., 2008). Despite the above-mentioned limitations, the present study has several implications and strengths. Notably, this study represents the first validation of the BASE-6 in Urdu, confirming its reliability and validity. Furthermore, the study has significant implications for research and clinical practice. The BASE-6 can reliably capture therapeutic changes, supporting its use as a brief, valid, and no-cost tool for routine outcome monitoring of psychological

adjustment and distress (Cruz et al., 2020). Incorporating the BASE-6 in treatment settings as part of research and clinical proactive could be both feasible and valuable. Moreover, the study is the foundation for future studies as it provides a valid and reliable tool for the future researches assessing psychological distress and maladjustment in Urdu speaking population. Aiding in understanding cross-cultural psychological constructs across the nations. Urdu construct of BASE-6 will help in early identification of psychological distress and maladjustment in Urdu speaking population providing early and timely interventions by utilizing the research data in making policies for Mental Health program tailored to need in Urdu speaking population.

Conclusion

The Brief Adjustment Scale-6 (BASE-6) evaluates psychological maladjustment, assesses psychological maladjustment by measuring feelings such as irritability, anger, resentment, tension, anxiety, unhappiness, discouragement, and depression, all of which are indicative of emotional distress related to self-perception (Cruz et al., 2020). This study's primary goal was to translate and validate the BASE-6 into Urdu, thus making it applicable in non-English speaking nations like Pakistan, where Urdu is the official language. The research results affirmed the strong validity and reliability of the Urdu-translated BASE-6 items, confirming its psychometric credibility. Furthermore, the evidence indicated that the Urdu-adapted version of the BASE-6 can be effectively utilized in future research initiatives within Pakistan.

Limitations and Recommendations

These findings reinforce the idea that the BASE-6 is a dependable, valid, concise, and cost-effective instrument suitable for regular outcome monitoring of psychological adjustment and distress. It also suggests that integrating the BASE-6 into treatment

environments can be valuable for both clinical practice and research purposes. For future studies employing the translated version of the BASE-6, it is advisable to include a broader age range and a geographically diverse sample to ensure a more precise and representative analysis of BASE-6.

Contribution of Authors

Nazish Rehman: Conceptualization, Investigation, Methodology, Data Curation, Formal Analysis, Writing – Original Draft

Shumaila Tasleem: Methodology, Writing - Reviewing & Editing, Supervision

Zara Asghar: Methodology, Formal Analysis, Writing - Reviewing & Editing

Conflict of Interest

There is no conflict of interest declared by the authors.

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Data Availability Statement

The datasets of the current study are not available publicly due to ethical reasons but are available from the corresponding author [N.R.] upon the reasonable request.

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