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RESEARCH ARTICLE

BASE-6 psychological adjustment scale validation in the context of Indonesian adolescents

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ABSTRACT

This study aimed to adapt and validate the Brief Adjustment Scale–6 (BASE-6) for use among Indonesian adolescents. Psychological adjustment plays a critical role in adolescent development, making it essential to establish a culturally relevant and age-appropriate assessment tool. The BASE-6, a brief yet robust measure of psychological adjustment, was selected for adaptation. Confirmatory factor analysis demonstrated strong construct validity, with model fit indices, including the Comparative Fit Index (CFI), Tucker–Lewis Index (TLI), Root Mean Square Error of Approximation (RMSEA), and Standardized Root Mean Square Residual (SRMR), collectively indicating a well-fitting model for the Indonesian context. The findings support the suitability of the adapted BASE-6 for assessing psychological adjustment in the Indonesian adolescent population. This validated instrument is expected to contribute to future research and inform interventions designed to promote adolescent mental health.

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INTRODUCTION

Psychological adjustment is crucial in helping adolescents navigate complex cognitive and emotional transitions by enabling adaptive responses to challenges in constructive and healthy ways (Erikson, 1968; Masten, 2014). Within Erikson's psychosocial developmental framework, psychological adjustment refers specifically to adolescents' ability to manage the tension between identity formation and role confusion, a central conflict during this developmental stage (Erikson, 1968). In this context, adjustment reflects effective adaptation to developmental demands, rather than merely the absence of distress or the presence of well-being. Psychological adjustment also facilitates the acquisition of essential life skills such as emotional regulation and stress management, which are critical during the transition from childhood to adulthood (Arnett, 2000). As Arnett (2000) suggests, adjustment is a "bridge" that helps adolescents navigate changing societal roles. Thus, psychological adjustment can be conceptualized as an ongoing adaptive process that enables adolescents to cope with challenges, resolve identity conflicts, and develop competencies necessary for healthy maturation.

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The Brief Adjustment Scale–6 (BASE-6) operationalizes psychological adjustment as an individual's level of psychological distress and capacity to adapt to life's challenges, using a brief self-report format (Erdur-Baker, 2013; Sinclair & Wallston, 2004). Unlike broader measures of mental well-being that emphasize positive functioning or life satisfaction (Diener et al., 1999; Ryff & Keyes, 1995), the BASE-6 focuses on the presence or absence of adjustment difficulties, capturing symptoms such as emotional distress, social withdrawal, and difficulty coping. In this framework, higher scores reflect greater psychological distress and impaired adaptation, while lower scores indicate better adjustment (Sinclair & Wallston, 2004). This conceptualization aligns with established models of psychological adjustment as a process of managing internal and external stressors (Lazarus & Folkman, 1984; Compas et al., 2001). Adapting the BASE-6 for use among Indonesian adolescents would provide a culturally sensitive tool for assessing their adjustment capacities to both developmental and contextual demands. Since psychological adjustment can manifest differently across cultural settings (Helms, 2015; Van de Vijver & Leung, 1997), such adaptation is essential to ensure valid and meaningful measurement.

To contextualize this adaptation, it is necessary to examine the psychosocial landscape of adolescence in Indonesia. Adolescence is a transitional period characterized by rapid changes across biological, cognitive, emotional, and social domains (Wood et al., 2018). During this stage, adolescents begin experimenting with new behaviors and develop coping mechanisms in response to emerging risks and responsibilities (Dorn et al., 2019; Stallard, 2019). They must also navigate moral dilemmas, undergo physical transformations, and adapt to shifting social roles and environments (Berk, 2015; Carr, 2015). Understanding these multifaceted challenges—especially how psychological and social factors interact—is essential for effectively supporting adolescent development.

Psychological adjustment is deeply interconnected with these developmental demands. Adolescents who adjust effectively tend to report lower levels of psychological distress and higher levels of self-esteem (Goldfield et al., 2011). In contrast, those who face social difficulties, such as bullying or isolation, often experience reduced adjustment and greater internalized distress (Gunn & Goldstein, 2017; Herd & Kim-Spoon, 2021). For instance, during the COVID-19 pandemic, stress among adolescents was linked to poorer adjustment outcomes, including heightened loneliness and depressive symptoms (Ellis, Dumas, & Forbes, 2020). Although effective adjustment is associated with fewer mental health concerns such as anxiety and depression (Hadjimina & Furnham, 2017), other influences, such as family support, home stability, and access to mental health services, are also crucial in fostering adolescent resilience (Resnick et al., 1997).

Recent studies in Indonesia emphasize the contextual factors shaping adjustment. Subarkah and Resyanta (2021) found that vulnerable Indonesian men showed more positive psychological adjustment when supported by family. Adelia and Eliana (2012) also reported that Indonesian women with traits like openness, extraversion, and agreeableness adapted more easily to new environments. These findings highlight how psychological adjustment is shaped by personality, social support, and life transitions (Cheng, Lau, & Chan, 2014; Priya & Raina, 2016). Given its sensitivity to such factors, the BASE-6 provides a flexible framework for assessing adjustment across diverse individual and cultural contexts.

Cultural and linguistic adaptation of psychological instruments is essential to ensure accurate and valid assessment (Baker, 2018). Psychological constructs may not translate directly across languages, and without proper adaptation, critical nuances in meaning can be lost (Sterling et al., 2017). Locally adapted instruments improve the ecological validity of assessments, enhance mental health awareness, and reduce stigma by making tools more accessible to local populations (Bryant et al., 2022; Goodfellow et al., 2023). This issue is particularly relevant in Indonesia, where over 20 million

adolescents live (Badan Pusat Statistik, 2023), many of whom may have limited English proficiency (Maruf et al., 2020). Past studies, such as Dessyrianti and Eames (2023), have shown that the use of unadapted psychological tools can yield inconsistent or misleading results, underscoring the methodological importance of culturally appropriate validation.

Therefore, the present study aims to validate an Indonesian version of the Brief Adjustment Scale–6 (BASE-6) for adolescents. By developing a culturally appropriate tool, this research seeks to support more accurate assessments of psychological adjustment and inform targeted, context-sensitive intervention strategies (Rossier & Duarte, 2019).

METHOD

This research employed a self-report methodology, using the Brief Adjustment Scale–6 (BASE-6), which was distributed via Google Forms along with an informed consent form. The measurement tool used was the Brief Adjustment Scale–6 (BASE-6) (Cruz et al., 2020). All participants completed the questionnaire in Indonesian, with an average completion time of less than one minute. The BASE-6 is a unidimensional measurement tool comprising six items, each rated using a Likert scale ranging from 1 (“never”) to 5 (“always”). The maximum total score is 30, with higher scores indicating lower psychological adjustment.

Notably, in previous research involving adolescent populations in the United States, the BASE-6 demonstrated excellent internal consistency, with Cronbach’s alpha values ranging from 0.87 to 0.93 across three sample groups (Cruz et al., 2020). In the current study, the BASE-6 produced a Cronbach’s alpha of 0.77, with item-rest correlations ranging from 0.429 to 0.657. These results indicate acceptable internal consistency and support the reliability of the instrument in this context.

The adaptation of the scale followed the methodology proposed by Beaton et al. (2000). Prior to the adaptation process, permission was requested from Cruz and colleagues via email to modify the original BASE-6. The first step involved forward translation, in which the original English version was linguistically translated into Indonesian. This was followed by a back-translation process, where the Indonesian version was translated back into English. A synthesis phase was then conducted to compare the original and back-translated versions to ensure consistency of meaning and content validity. Any discrepancies were resolved to maintain the integrity of the original meaning. Different translators were involved at each stage.

The translated version was then reviewed by experts, who assessed four areas of equivalence as proposed by Beaton et al. (2000): semantic, idiomatic, experiential, and conceptual equivalence. Expert review resulted in a Content Validity Index (CVI) ranging from 0.85 to 1.00 for individual items, and an overall CVI of 0.92, indicating strong content validity. Construct validity was subsequently examined through Confirmatory Factor Analysis (CFA). All statistical analyses were conducted using JASP software, version 0.17.1.

The population of this study consisted of adolescents. Several studies have attempted to determine the age range for adolescence. The World Health Organization (WHO, 2025) defines adolescence as the period between 10 and 19 years of age, while Sawyer et al. (2018) proposed an extended range from 10 to 24 years. In this study, the definition of adolescence follows WHO’s classification, including individuals aged 10–19 years.

The population of this study was adolescents. Several studies have attempted to determine the age limit of adolescents. WHO (2025) stated that the age of adolescents ranges from 10-19 years, while Sawyer et al. (2018) expanded the age range of adolescents from 10-24 years. In this study, the

age of adolescents in the population is defined by the WHO as between 10 and 19 years. The sample size of this study is 191 adolescents, providing a comprehensive data set for scrutiny. Data collection was conducted using a Google Form distributed through online networks. Informed consent was explained on the homepage of the questionnaire provided. For participants under the age of 18, parental or guardian consent was obtained through an online consent form embedded in the initial stage of the Google Form. Parents or guardians were required to read an explanation of the study and provide consent by checking a box indicating their agreement before their child could proceed to the questionnaire. Only after this step could the adolescent participant access and complete the survey. This process ensured ethical compliance with consent requirements for minors. The informed consent page included: (1) the purpose of the research, (2) an explanation of what respondents would do if they were involved in the research, (3) a statement of willingness to participate without coercion, (4) information that respondents could stop completing the questionnaire at any time without consequences if they experienced discomfort, and (5) contact information for assistance with filling out the questionnaire or for psychological support if needed. These efforts were made as a form of respect and protection for respondents who participated in this research.

RESULT

Table 1. Demographic data

Characteristics	n (%)
Gender	
Male	24 (12.56)
Female	167 (87.44)
Age (year)	
13	13 (6.81)
14	25 (13.09)
15	27 (14.14)
16	35 (18.32)
17	30 (15.71)
18	61 (31.94)
Live with whom	
Only with father	5 (2.62)
Only with mother	25 (13.09)
Both parent	150 (78.53)
Parental guardian	7 (3.66)
Live alone	4 (2.09)
Domicile	
Banten	37 (19.37)
Jakarta	24 (12.56)
West Java	44 (23.04)
Central Java	16 (8.38)
East Java	35 (18.32)
South Kalimantan	3 (1.57)
East Kalimantan	3 (1.57)
Lampung	3 (1.57)
Riau	4 (2.09)
Central Celebes	1 (.52)
South Celebes	1 (.52)
South Sumatera	3 (1.57)
North Sumatera	8 (4.19)
Yogyakarta	2 (1.05)
West Kalimantan	1 (.52)
Central Kalimantan	1 (.52)

The demographic characteristics of the 191 adolescent participants are summarized in Table 1. Respondents were dominated by women (87.435%), aged 18 years (31.937%), living with both parents (78.534%), and domiciled in West Java (23.037%).

Table 2. Factor Loadings

Item	Factor Loading	Item Rest Correlation	Alpha Cronbach
To what extent have you felt irritable, angry, and/or resentful this week? *Sejauh mana Anda merasa mudah tersinggung, marah, dan/atau kesal minggu ini?*	.572	.453	.770
To what extent have you felt tense, anxious, and/or afraid this week? *Sejauh mana Anda merasa tegang, cemas, dan/atau takut minggu ini?*	.524	.429	
To what extent have you felt unhappy, discouraged, and/or depressed this week? *Sejauh mana Anda merasa tidak bahagia, putus asa, dan/atau tertekan minggu ini?*	.727	.576	
How much has emotional distress interfered with feeling good about yourself this week? *Seberapa besar tekanan emosional telah mengganggu perasaan baik tentang diri Anda minggu ini?*	.825	.657	
How much has emotional distress interfered with your relationships this week? *Seberapa besar tekanan emosional mengganggu hubungan Anda minggu ini?*	.661	.544	
How much has emotional distress interfered with your ability to perform at work, school, etc. this week? *Seberapa besar tekanan emosional telah mengganggu kemampuan Anda untuk beraktivitas di sekolah, dalam minggu ini?*	.523	.452	

Factor loading for the six-item model of the Indonesian version of the Brief Adjustment Scale-6 (BASE-6) intended for adolescents had a range of 0.523-0.825. Factor loading illustrates the relationship between indicators and latent variables. Brown (2015) argued that 0.3 is the minimum limit of factor loading, while Ford has argued for a slightly higher threshold, setting the lower limit of factor loading at 0.4 (Ford, MacCallum, & Tait, 1986). Based on these calculations, the factor loading results for the items in the Indonesian version of the Brief Adjustment Scale-6 (BASE-6) consistently surpass these thresholds. This signifies that the items employed in our measurement instrument successfully capture the essence of what we aimed to assess: psychological adjustment. These robust factor loading values lend additional support to the construct validity of the BASE-6 in the context of our study.

Table 3. Fit Indices

Index	Value
Comparative Fit Index (CFI)	1.00
Tucker-Lewis Index (TLI)	1.00
Root mean square error of approximation (RMSEA)	.007
Standardised root mean square residual (SRMR)	.042
Goodness of fit Index (GFI)	.996

The indicator used to assess the model's fit in this study is the Comparative Fit Index (CFI), with a cutoff CFI value of 0.90 indicating a good fit. Wang & Wang and the Tucker Lewis Index (TLI) with an expected value above 0.90, which is included in the Incremental Fit Indices (Wang & Wang, 2020). Root Mean Square Error Approximation (RMSEA) was also considered, with a threshold value of less than 0.8 (Wang & Wang, 2020). Furthermore, the Standardised Root Mean-Square Residual (SRMR) was evaluated, and an SRMR value below 0.08 was set as the criterion for a well-fitting model (Kline, 2015). Both RMSEA and SRMR are part of the Absolute Fit Indices category (Cruz et al., 2020). In evaluating the Chi-Square value, a result > 0.05 is expected, which indicates no significant difference between the model and the data (Jöreskog & Sörbom, 1993). This study's Chi-Square value exceeded 0.05, with CFI = 1.000, TLI = 1.000, RMSEA = 0.007, SRMR = 0.042, and GFI = 0.996. Based on these results, it can be confidently asserted that the adapted Brief Adjustment Scale-6 (BASE-6, tailored for the Indonesian adolescents' context) exhibits a well-fitting model within the framework of the study.

DISCUSSION

This study aimed to adapt and validate the Brief Adjustment Scale–6 (BASE-6) for use among Indonesian adolescents. The successful adaptation of this instrument represents a critical step toward enhancing the cultural sensitivity of psychological assessment tools within the Indonesian context. Through a rigorous translation and back-translation process, combined with expert evaluations, the adaptation focused on preserving the original meaning of the scale while ensuring its linguistic and cultural appropriateness. This process aligns with best practices in cross-cultural instrument adaptation, which emphasize the importance of maintaining both the conceptual and functional framework (Beaton et al., 2000). This rigorous process aimed to mitigate the challenges of linguistic and idiomatic discrepancies often encountered when translating Western-centric psychological constructs into diverse non-Western contexts.

The psychometric properties of the Indonesian BASE-6 demonstrated satisfactory results, with internal consistency metrics comparable to those reported in the original scale's development (α = .87-.93) across 1 week (Cruz et al., 2020). Specifically, our findings for the Indonesian version align closely with the internal consistency observed in the original validation. The consistency of these psychometric indicators across diverse cultural adaptations provides compelling evidence for the cross-cultural robustness and generalizability of the BASE-6 as a brief, self-report tool for assessing psychological adjustment. This consistency underscores that, when carefully adapted, brief self-report instruments can indeed maintain their psychometric integrity across varied cultural contexts (Manuel et al., 2024). Moreover, expert consultation and pre-testing with adolescents during the adaptation phase helped to ensure item relevance and comprehensibility, further reinforcing the scale's content validity.

Nevertheless, several limitations need further consideration. While the sample size (N = 191) was adequate for initial validation, it limits the generalizability of findings across Indonesia's diverse adolescent population. Future studies should involve larger, more demographically and geographically diverse samples to enhance representativeness and capture regional variations in adjustment experiences. Although various efforts were made to ensure linguistic and content equivalence, the potential Influence of subtle cultural nuances such as expressions of distress, coping strategies, or family dynamics may not be fully captured through quantitative methods alone. Complementary qualitative or mixed-methods research would offer deeper insights into these culturally sensitive constructs.

From a practical standpoint, the validated Indonesian version of the BASE-6 has significant implications for clinical practice, educational settings, and public mental health initiatives. It is simple and easy to use, making it a feasible tool for early screening and intervention planning. Mental health professionals, educators, and policymakers can use the scale to identify adolescents at risk of maladjustment and to inform the development of targeted, culturally appropriate support services.

Moving forward, several research directions are recommended. Future studies should focus on longitudinal validation to examine the stability and predictive validity of the BASE-6 over time. Further, integrating the scale into school-based mental health programs could provide an accessible means of identifying and addressing adjustment difficulties early. Expanding research to explore additional dimensions of adjustment, including culturally specific expressions of distress, will enhance the scale's utility and ecological validity. Lastly, the continued development and validation of culturally sensitive assessment tools are essential for advancing psychological research and practice in Indonesia and other non-Western contexts.

CONCLUSION

This research successfully adapted the BASE-6 scale to fit the sociocultural and developmental context of Indonesian adolescents. The findings demonstrate that the Indonesian version is a reliable tool, filling a significant gap in culturally appropriate assessments of psychological adjustment for this population. This adaptation is particularly relevant given the unique challenges adolescents face during the transition to adulthood, including identity formation, emotional regulation, and social integration. Nonetheless, the study has limitations, such as the sample size and representation, which future research should address. It is important to note that this study did not perform measurement invariance testing across demographic subgroups such as gender or age due to sample size limitations. Further validation in diverse settings, including schools and healthcare facilities, will help establish the scale's generalizability.

Additionally, exploring the relationships between BASE-6 scores and other psychological, educational, or social factors could deepen understanding of adolescent adjustment in Indonesia. Additionally, test-retest reliability, convergent validity, and discriminant validity were not assessed in this study; future research is recommended to address these psychometric properties to establish further the robustness of the adapted BASE-6 in the Indonesian adolescent population. Overall, this work provides a valuable resource for psychologists, educators, and policymakers to support healthy adolescent development in the country better.

DECLARATION

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The authors declare no conflict of interest.

Additional information

No additional information is available for this paper.

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