

Validity and Reliability of the Indonesian ADNM-8 in Nonclinical Adolescents

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Abstract. Adjustment Disorder (AjD) is a prevalent yet understudied mental health condition among adolescents, particularly in non-Western contexts. Despite its clinical relevance, validated instruments for assessing AjD in Indonesian youth are limited. This study aimed to evaluate the reliability and construct validity of the Indonesian version of the Adjustment Disorder New Module-8 (ADNM-8) as a screening tool for adolescents. Using stratified random sampling, 494 adolescents aged 11–18 years from urban areas in Java, Indonesia, were recruited. Participants were school-attending adolescents who had experienced at least one significant life stressor. The adaptation process included forward translation, expert-based content validation, and back translation to ensure linguistic and conceptual equivalence. Psychometric evaluation involved internal consistency analysis using Cronbach's alpha and confirmatory factor analysis (CFA) with the DWLS estimator to accommodate ordinal data. The Indonesian ADNM-8 demonstrated strong internal consistency ($\alpha = 0.890$). CFA results showed good incremental model fit (CFI = 0.965; TLI = 0.951), although RMSEA was elevated (0.143), indicating a limitation possibly related to model complexity. Overall, the findings support the Indonesian ADNM-8 as a reliable and valid screening instrument for AjD in adolescent populations.

Keywords: *Adjustment disorder, adolescent, ADNM-8, instrument, reliability, validity*

Abstrak. Gangguan Penyesuaian (Adjustment Disorder/AjD) merupakan masalah kesehatan mental yang umum namun masih kurang diteliti pada remaja, khususnya di konteks non-Barat. Meskipun relevan secara klinis, instrumen terstandar untuk menilai AjD pada remaja Indonesia masih terbatas. Penelitian ini bertujuan untuk menguji reliabilitas dan validitas konstruk versi Bahasa Indonesia dari Adjustment Disorder New Module-8 (ADNM-8) sebagai alat skrining pada remaja. Penelitian ini melibatkan 494 remaja berusia 11–18 tahun dari wilayah perkotaan di Pulau Jawa, Indonesia, yang direkrut melalui teknik stratified random sampling. Partisipan merupakan siswa sekolah yang telah mengalami setidaknya satu stresor kehidupan yang signifikan. Proses adaptasi instrumen meliputi forward translation, expert judgment for content validity, dan back translation untuk menjamin kesetaraan linguistik dan konseptual. Analisis psikometrik mencakup uji konsistensi internal menggunakan Cronbach's alpha dan confirmatory factor analysis (CFA) dengan estimator DWLS. Hasil menunjukkan konsistensi internal yang kuat ($\alpha = 0,890$) serta validitas struktur yang memadai.

Temuan ini mendukung penggunaan ADNM-8 versi Indonesia sebagai alat skrining AjD pada remaja, dengan mempertimbangkan keterbatasan nilai RMSEA.

Kata kunci: ADNM-8, gangguan penyesuaian, instrumen, reliabilitas, remaja, validitas

Adjustment Disorder (AjD) is a maladaptive response to significant life stressors, such as financial instability, major life changes, health-related challenges, or divorce. The symptoms are defined by emotional and behavioral stress responses that result in significant distress and impairment in everyday functioning (American Psychiatric Association, 2013). It typically manifests within a month of exposure and resolve within six months, unless the stressor persists for an extended period (Maercker et al., 2013; World Health Organization, 2018). Although AjD is usually known to be common among adolescents and children, there is a clear dearth of epidemiological data and studies targeted on its diagnosis, especially in Indonesia. This disparity inhibits the creation of culturally relevant evaluation instruments and treatments targeted for the young people experiencing pressures in this context.

The prevalence of AjD range from around 5% to as high as 21% in global setting. This estimation depends upon the demographic and assessment environment. A recent cross-cultural study that examined adolescents in Japan and Lithuania, for instance, found respective prevalence rates of 6.9% and 11.7%, using the ICD-11-based Adjustment Disorder New Module-8 (ADNM-8) (Abe et al., 2022). In clinical settings, AjD also appears to be common in therapeutic environments. A comprehensive review of insurance and clinical data encompassing 22,353 children aged 3 to 17 revealed a significant prevalence of diagnoses linked to AjD and associated problems, highlighting its clinical significance and the necessity for early detection and care (Lee et al., 2023). The frequency among young adults, especially university students, is particularly high. A recent study including 401 first-year medical students found 67% met the criteria for AjD as measured by The Adjustment Disorder New Module 20 (ADNM-20). It appears that academic stress, financial problems, relocation, and disturbance of daily routines are identified as main contributing factors (Agarwal et al., 2024).

During adolescence, individuals experience rapid transformations in mental, physical, and social aspects that makes them more prone to pressures related to family relationships, peer interactions, and academic demands (American Psychological Association, 2002; Sisk & Gee,

2022). These issues can lead to emotional and behavioral difficulties, some of which may exhibit indications of AjD. Although particular epidemiological data on AjD in Indonesia remain scarce, recent research assessing adolescent mental health demonstrate persistent patterns of emotional, peer-related, and conduct difficulties across both junior and senior high school students (Syakarofath et al., 2024). Distinct emotional and behavioral profiles emerge as these challenges vary across developmental stages and genders.

Common stressors contributing to AjD in adolescents include bullying, relocation, changing schools, parental divorce, identity crises, the death of a family member, financial problems within the family, the dissolution of friendships, academic failures, and difficulties in studies (Abe et al., 2022). When encountered with intense stress, adolescents may struggle to manage them, which can lead to maladaptive coping behaviors (Alvarado, 2021). Research shows that bullying is closely linked to elevated emotional and behavioral challenges in this age group (Zhao et al., 2023). Similarly, family-related instability such as economic problems or parental divorce can heightened stress levels and increase the risk of adjustment problems (Maya et al., 2018). Challenges in academics, such as failing tests or study-related challenges, are major stress factors linked to the onset of AjD (Guo & Qiu, 2024). These findings bring attention to the risk that unresolved adjustment difficulties can potentially worsen and lead to significant mental health issues like depression and anxiety (Morgan et al., 2022). This highlights the critical importance of implementing early detection, formulating diagnostic criteria that reflect cultural contexts, and provide interventions for adolescents in both educational and community settings.

The ADN-20 is a screening instrument created to evaluate AjD, developed in line with Maercker and his colleagues' conceptual framework (Einsle et al., 2010). This theoretical features core criteria encompassing stressor identification, persistent ruminative thoughts, avoidance, adaptation failure, and symptoms including depression, anxiety, and impulse-related difficulties (Maercker et al., 2007). Studies evaluating the reliability and validity of the ADN-20 have demonstrated strong psychometric features (Bley et al., 2008; Einsle et al., 2010). Nevertheless, it could be less practical in clinical or epidemiological studies requiring several tools. Therefore, there is still need for a thorough and methodical instrument for evaluating AjD symptoms (Casey, 2014). Shorter diagnostic measures reveal core criteria of a disorder, thereby reducing the

probability of misleading comorbidities of psychiatric conditions and at the same time will reduce the influence of cultural factors in diagnostic evaluations. Addressing diagnostic challenges in psychiatry has been a longstanding concern in academic literature (Maercker et al., 2013). Findings supporting the unidimensional structure of ADNM-20 indicate the potential for a briefer alternative (Glaesmer et al., 2015; Lorenz et al., 2018).

To enhance the practicality of AjD assessment, researchers developed shorter instruments that retain the core diagnostic features of the Adjustment Disorder New Module-20 (ADNM-20) while offering improved feasibility for both research and clinical applications. The ADNM-8, consisting of eight items, was designed to balance brevity with diagnostic comprehensiveness, preserving essential symptom domains such as preoccupation and functional impairment. Subsequently, the ADNM-4 was introduced as an ultra-brief screening tool. Both versions have demonstrated satisfactory psychometric properties across various populations (Ben-Ezra et al., 2018; Harris et al., 2023). Among these, the ADNM-8 has emerged as a particularly advantageous tool due to its alignment with ICD-11 criteria and its ability to provide reliable assessments without imposing excessive respondent burden.

In the context of Indonesian adolescents, the ADNM-8 offers several theoretical and practical advantages over other available instruments. Its moderate length facilitates administration in educational and community settings, which is especially valuable in resource-limited environments (Ben-Ezra et al., 2018; Harris et al., 2023). Compared to the lengthier ADNM-20, the ADNM-8 enhances efficiency while maintaining diagnostic integrity; in contrast to the ADNM-4, it offers improved content coverage, thereby reducing the risk of under-identification of clinically relevant symptoms (Maercker & Lorenz, 2018). Furthermore, the ADNM-8 has demonstrated cross-cultural robustness in diverse populations, supporting its adaptability to non-Western contexts (Abe et al., 2022; Kazlauskas et al., 2018). When tailored to developmentally salient and culturally relevant stressors—such as academic failure, familial discord, or peer-related adversity—the ADNM-8 achieves greater ecological validity and diagnostic precision (Munir et al., 2020; Caro-Cañizares et al., 2024), reinforcing its suitability for adolescent populations in Indonesia.

This study is the first to validate the Indonesian version of the ADN-8 among adolescents, addressing a critical gap in the availability of culturally adapted screening tools for adjustment disorder in this population. Despite the growing recognition of AjD as a significant mental health concern among youth, few instruments have been validated for use in Southeast Asian contexts. By establishing the reliability and construct validity of the ADN-8 within an Indonesian adolescent sample, this research contributes novel evidence to the field of developmental psychopathology. The findings have important implications for enhancing early detection practices, informing culturally responsive interventions, and supporting the integration of AjD screening into adolescent mental health services and educational settings across Indonesia.

Methods

Participants

The study sample comprised 529 adolescents aged 11 to 18 years, of whom 494 met the inclusion criteria and were included in the final analysis. Inclusion criteria were enrollment in middle or high school, proficiency in the Indonesian language, residence in Indonesia, and exposure to at least one significant life stressor. Participants were male and female students recruited from diverse urban areas in Java, Indonesia. Stratified random sampling was used to achieve proportional representation across age, gender, and region.

The final sample consisted of 494 adolescents, with females comprising slightly more than half of the participants. For analytical purposes, age was categorized into early adolescence (11–14 years; $M = 13.75$, $SD = 0.56$) and middle adolescence (15–18 years; $M = 16.31$, $SD = 1.03$). Additional demographic characteristics are presented in Table 1.

Table 1

Participants Socio Demographic Data

Demographic Characteristics	Frequency	Percentage (%)
Age		
11-14 years old	108	21.86
15-18 years old	386	78.13
Gender		
Male	150	30.36
Female	344	69.63

Demographic Characteristics	Frequency	Percentage (%)
Parenting Type		
Raised by both parents	272	55.06
Raised by mother	127	25.70
Raised by father	24	4.85
Raised by a guardian (e.g., grandparents, relatives, boarding school, etc.)	65	13.15
Living alone	6	1.21
Parental Marital Status		
Divorced (Yes)	196	39.67
Not Divorced (No)	298	60.32
Counseling History		
Has received counseling	170	34.41
Has never received counseling	324	65.58
My family can usually afford to buy what I need		
Strongly agree	167	33.80
Agree	266	53.84
Disagree	57	11.53
Strongly disagree	4	0.80

Research Instruments

The Adjustment Disorder New Module-8 (ADNM-8) was originally developed for adult populations. In the present study, an adolescent-adapted Indonesian version of the short ADNM-8 was used to evaluate symptoms of adjustment disorder. As part of the adaptation process, the life stressor items were revised to align with adolescent experiences. In the first section, participants identified which of the 14 listed events they had experienced as significant stressors within the past year. This list was revised and adapted by the study authors to be developmentally appropriate for adolescents (e.g., parental separation, school transitions, bullying, etc.). The second section required participants to rate the frequency with which they experienced each symptom. The items in the scale underwent a rigorous translation and back-translation process carried out by experts in the field, followed by evaluation from three independent expert judges to assess content validity. Using a 4-point Likert scale, participants assessed each item as follows: 1 = never, 2 = rarely, 3 = sometimes, and 4 = often. In the confirmatory factor analysis (CFA), the Likert-scale items were analyzed as ordinal categorical

data using the Diagonally Weighted Least Squares (DWLS) estimator, which is considered appropriate for scales with fewer than five response options (Rhemtulla, et al., 2012). Four of the symptom items targeted cognitive preoccupation with the stressor, including recurring thoughts about it. The other symptom items focused on assessed maladaptive responses, such as concentration problems, sleep difficulties, social withdrawal, and impairment in daily functioning (Ben-Ezra et al., 2018). The scale had a very high internal reliability, with a Cronbach's alpha of 0.90 (Ben-Ezra et al., 2018). This adolescent version of the ADN-8 was consistent with versions previously employed in adult populations.

Forward Translation

The questionnaire underwent translation from English to Indonesian by a translator with psychological expertise and proven advanced English skills, evidenced by an IELTS score exceeding 7.0. The translator is a native Indonesian speaker who had studied in English-speaking countries, allowing for cultural and language accuracy that improved the translation's quality. To ensure cultural and linguistic appropriateness, the process focused on conceptual and contextual alignment over literal translation. This method preserved the original meaning while adapting it to the local linguistic and cultural context.

Content Validity by Multi-SME (Subject Matter Experts)

The content validity of the Indonesian version of the ADN-8 questionnaire was evaluated using the Content Validity Index (CVI). Four Subject Matter Experts (SMEs), all holding degrees in psychology, assessed whether each item adequately reflected the theoretical construct of adjustment disorder. According to Lynn's (1986) guidelines, for a panel of three experts, the minimum acceptable CVI for each item is 1.00, meaning all experts must agree the item is essential for it to be retained. In this study, all translated ADN-8 items achieved a CVI of 1.00, demonstrating excellent content validity.

Back Translation

The next step involved back-translating the adapted ADNM-8 questionnaire into English by a different translator with the same criteria as above. This back-translation process aims to ensure that the original meaning of each item remains unchanged during the translation into the target language.

Research Procedure

Prior to data collection, formal permission to conduct the study was obtained from the relevant school authorities. The study was then implemented in several stages. First, the ADNM-8 was translated and culturally adapted through forward translation, expert evaluation for content validity, and back translation to ensure conceptual equivalence with the original instrument. Following institutional approval, data collection was carried out in participating schools using both online and paper-based questionnaires administered during scheduled sessions. Before participation, adolescents were provided with written and verbal information regarding the study objectives, voluntary participation, confidentiality, and their right to withdraw at any time without consequences. Informed consent was obtained from all participating adolescents prior to completing the questionnaire. All responses were collected anonymously and screened for completeness. Data that met the inclusion criteria were then compiled and prepared for subsequent psychometric analyses.

Data Analysis

Internal consistency of the ADNM-8 was assessed using McDonald's Omega (ω) via unidimensional reliability analysis in JASP. This method is preferred over Cronbach's alpha for Likert-type items, as it does not assume tau-equivalence, the assumption that all items contribute equally to the underlying construct (Dunn et al., 2014; Trizano-Hermosilla & Alvarado, 2016). A value of ω 0.70 or higher is generally considered acceptable, with values above 0.80 indicating good reliability. For comparison, Cronbach's alpha was also calculated, though it is interpreted with caution due to its more restrictive assumptions, including equal factor loadings and normally distributed continuous data (Tavakol & Dennick, 2011). As noted by Nunnally and

Bernstein (1994), a reliability coefficient of 0.70 or higher is acceptable for most research, while a threshold of 0.60 may suffice in exploratory studies.

To further evaluate the psychometric properties of the ADN-8, confirmatory factor analysis (CFA) was conducted using the Diagonally Weighted Least Squares (DWLS) estimator. Model fit was assessed through several indices, including the Comparative Fit Index (CFI), Tucker–Lewis Index (TLI), and Root Mean Square Error of Approximation (RMSEA), with CFI and TLI values ≥ 0.90 indicating acceptable fit (Hu & Bentler, 1999) and RMSEA values ≤ 0.08 considered acceptable (Browne & Cudeck, 1993). This analysis aimed to confirm the theoretical unidimensional structure of the ADN-8 and provide construct validity evidence in the Indonesian adolescent population. Tests of convergent and discriminant validity were not conducted, as no comparable validated measures of adjustment disorder currently exist for Indonesian adolescents. Accordingly, this study prioritized internal structure (CFA), content validity (CVI), and internal consistency as key indicators of validity and reliability in this initial validation effort.

Results

Validity and Reliability of the ADN-8 (Adolescent Version)

The internal consistency of the ADN-8 adolescent version was strong. McDonald's Omega (ω), which does not assume tau-equivalence, was 0.891 (SE = 0.008), with a 95% confidence interval ranging from 0.876 to 0.905. This indicates a high level of internal consistency. For comparison, Cronbach's alpha was also calculated and yielded a coefficient of 0.890 (SE = 0.008), with a 95% confidence interval ranging from 0.875 to 0.903. The average inter-item correlation was 0.503, reflecting good item homogeneity.

Confirmatory Factor Analysis (CFA) demonstrated an improved model fit compared to the baseline model. The chi-square test was significant, $\chi^2(20) = 222.304$, $p < .001$, indicating imperfect fit; however, the baseline model's chi-square was much higher, $\chi^2(28) = 5863.993$. Additional fit indices showed acceptable fit, with a Comparative Fit Index (CFI) of 0.964 and Tucker-Lewis Index (TLI) of 0.950 (Figure 1; Table 2). Although the Root Mean Square Error of

Approximation (RMSEA) was 0.143 ($p < .001$), suggesting a poor fit by this criterion, the overall pattern of indices indicates that the factor structure is reasonably supported (Kenny et al., 2015; Shi et al., 2019).

Table 2

Item properties of the ADN-8

No	Item	M	SD	Skewness	Kurtosis	CVI	CITC	CID	COID	Factor Loading (95% CI)
1	Item 1	2.75	1.01	-0.33	-0.98	1.00	0.61	0.87	0.87	0.76 (1.00, 1.00)
2	Item 2	2.93	0.98	-0.54	-0.74	1.00	0.74	0.86	0.86	0.88 (1.08, 1.21)
3	Item 3	3.09	0.93	-0.80	-0.27	1.00	0.62	0.87	0.87	0.72 (0.86, 1.01)
4	Item 4	2.82	1.00	-0.38	-0.95	1.00	0.74	0.86	0.86	0.86 (1.06, 1.19)
5	Item 5	2.75	0.99	-0.32	-0.93	1.00	0.74	0.86	0.86	0.86 (1.05, 1.18)
6	Item 6	2.21	1.07	0.30	-1.21	1.00	0.59	0.88	0.88	0.69 (0.82, 0.97)
7	Item 7	2.609	1.094	-0.16	-1.27	1.00	0.62	0.87	0.87	0.70 (0.84, 0.99)
8	Item 8	2.668	1.114	-0.29	-1.26	1.00	0.60	0.88	0.88	0.68 (0.92, 0.97)

M, mean; SD, standard deviation; CITC, corrected item-total correlation; CID, Cronbach's alpha if item deleted; COID, Cronbach's omega if item deleted CI, confidence interval.

Figure 1

Factor Loading

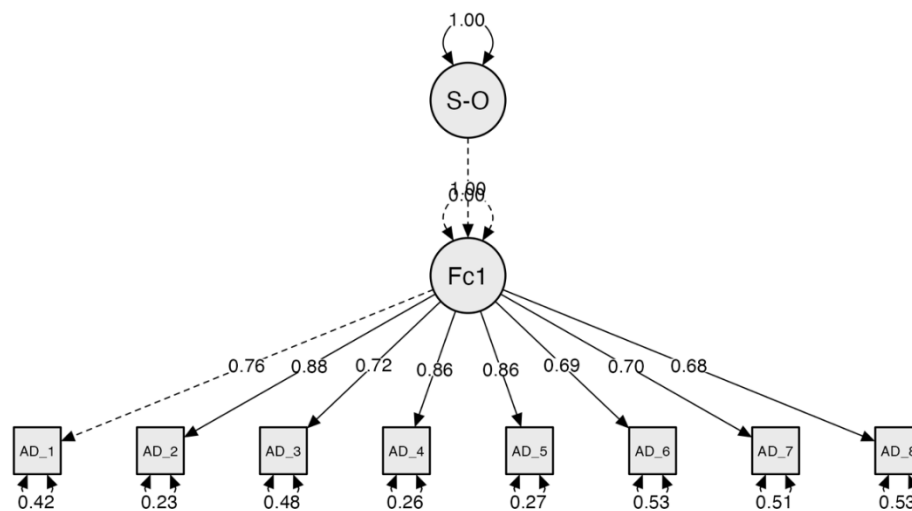


Table 2 presents the descriptive statistics, item-level psychometric properties, and factor loadings for the Indonesian version of the ADN-8. The mean scores (M) and standard deviations (SD) indicate the distribution of responses across the eight items. Skewness and kurtosis values fall within acceptable ranges (± 2), supporting the assumption of univariate

normality. The corrected item-total correlations (CITC) ranged from 0.59 to 0.70, suggesting that each item contributed adequately to the overall scale. Internal consistency was further examined through Cronbach's alpha if item deleted (CID) and Cronbach's omega if item deleted (COID), both of which remained stable ($\alpha = 0.86\text{--}0.88$; $\omega = 0.86\text{--}0.88$), indicating no single item substantially lowered reliability. Confirmatory factor analysis (CFA) loadings demonstrated strong associations between the items and the latent factor, with standardized loadings ranging from 0.68 to 0.88 (95% CI). These results support the internal consistency and structural validity of the ADN-8 in the Indonesian adolescent sample.

For internal validation, the Content Validity Index (CVI) was calculated for each item of the ADN-8. All expert ratings yielded a CVI score of 1.00, indicating perfect agreement among the panel regarding the relevance, clarity, and representativeness of each item. This result, as summarized in Table 2, demonstrates that all items were considered highly appropriate and relevant for assessing adjustment disorder in the target population.

Figure 1 displays the standardized factor loadings from the confirmatory factor analysis (CFA) of the Indonesian version of the ADN-8. All eight items loaded significantly onto a single latent factor, with loadings ranging from 0.68 to 0.88, indicating strong item-factor associations. The error variances for each item are shown adjacent to the observed variables, with values between 0.23 and 0.53, suggesting that a substantial proportion of variance in each item is explained by the latent construct. The model supports a unidimensional structure for the ADN-8, consistent with prior validation studies (Ben-Ezra et al., 2018).

Discussion

This study aimed to examine the validity and reliability of the Indonesian version of the ADN-8 for adolescents. To our knowledge, this is the first study to statistically evaluate the psychometric properties of an AjD-specific scale among Indonesian adolescents. The ADN-8 appears to be culturally appropriate and effective for assessing AjD in Indonesian adolescents. Its structured design, with an opening section that targets recent life stressors, supports its use in descriptive studies in exploring the prevalence and risk factors associated with specific stressors. This feature, combined with its adaptability for use in educational and community environments,

strengthens the tool's value to support early detection and intervention strategies that align with the specific needs of Indonesian adolescents.

The instrument also demonstrated robust internal consistency, reflecting a reliable measurement of the underlying construct across all items. The inter-item relationships further indicated satisfactory item coherence, suggesting that the scale components collectively capture the intended psychological domain. These psychometric qualities align with established benchmarks for psychological assessments and are consistent with evidence from cross-cultural validation studies of the ADN-8. For instance, Harris et al. (2023) reported a Cronbach's alpha of 0.90 among oncology patients in Australia. Similarly, a nationally representative study conducted in Israel with 1,003 participants demonstrated a reliability coefficient exceeding 0.80 (Ben-Ezra et al., 2018). Kazlauskas et al. (2018) also found high reliability, with a total scale alpha of 0.83, and subscale alphas of 0.85 for preoccupation and 0.71 for failure to adapt.

Confirmatory Factor Analysis (CFA) revealed that the revised model significantly enhanced fit compared to the baseline model, with multiple fit indices indicating the adequacy of the proposed factor structure. Incremental fit indices, such as the Comparative Fit Index (CFI) and Tucker-Lewis Index (TLI), exceeded commonly accepted thresholds, suggesting that the model offers a satisfactory representation of the data (Schermerhorne et al., 2003). Although one fit index suggested a less than ideal value, this is likely influenced by the large sample size and small degrees of freedom, factors known to affect certain fit statistics such as RMSEA (Kenny et al., 2015). This interpretation is also consistent with the argument by Lai and Green (2016), who note that RMSEA can sometimes suggest poor fit while incremental fit indices such as CFI and TLI indicate acceptable fit. They emphasize that relying solely on RMSEA may lead to overly strict conclusions about model inadequacy, particularly in models with smaller degrees of freedom or complex structures. Thus, in line with their recommendation, greater weight is given to the combined evidence from multiple fit indices rather than RMSEA alone. Overall, the CFA results endorse the validity of the single-factor or hierarchical model of adjustment disorder symptoms in the Indonesian adolescent sample, with the model fit considered acceptable despite the elevated RMSEA value.

The validated Indonesian version of the ADNM-8 scale can be a valuable tool in various settings such as schools, and community health centers. In schools, it can be used for early screening to identify adolescents who are experiencing adjustment difficulties related to recent life stressors, enabling timely referral to counseling or mental health services (Harris et al., 2023; Kazlauskas et al., 2018). Moreover, the ADNM-8 can support prevention efforts by helping educators and healthcare providers recognize at-risk youth before symptoms escalate into more severe mental health conditions (Maercker & Lorenz, 2018; Shevlin et al., 2020). Overall, its ease of administration and focus on both stressors and symptoms make it practical for routine use, promoting early detection, targeted intervention, and ultimately better mental health outcomes for Indonesian adolescents.

Culturally and developmentally adapting the life stressor section of AjD scales is essential when applying adult-derived instruments, such as the ADNM-8, to adolescent populations. Adult stressor checklists often reflect life events more relevant to mature individuals—such as job loss, divorce, or financial responsibility—while overlooking stressors that are developmentally salient for adolescents (Kendler & Gardner, 2016; Monroe & Slavich, 2020; Nurius & Norris, 2017). In the Indonesian context, adolescents are more likely to experience psychosocial distress stemming from academic failure, peer conflict, family expectations, identity-related confusion, parental separation, or the loss of friendships (Munir et al., 2020). These events may not carry the same implications in adulthood but can significantly disrupt adolescent emotional and social development. Thus, including stressors that are both age-appropriate and culturally relevant increases the scale's ecological and diagnostic validity (Arnett, 2000; Santrock, 2019). Without such adaptation, there is a risk of under-identifying adolescents in distress, thereby reducing the effectiveness of early screening and intervention efforts. By refining the stressor checklist to reflect the lived experiences of Indonesian adolescents, practitioners and researchers can more accurately assess adjustment difficulties and develop context-sensitive mental health strategies.

One limitation of this study is the absence of comparison with other established psychological instruments (e.g., depression, anxiety, or stress scales). Without such comparisons, it is not possible to evaluate the convergent validity of the ADNM-8, limiting the evidence for

how well it aligns with related constructs in AjD. Another limitation of this study is that the sample may not be nationally representative. Participants were drawn primarily from urban areas in Java, Indonesia, which may limit the generalizability of the findings to adolescents in other regions or with different socio demographic backgrounds. To strengthen the validity of the ADN-8, future researchers are encouraged to include comparative measures, such as validated scales for depression (e.g., PHQ-9), anxiety (e.g., GAD-7), or stress (e.g., DASS-21). This would allow for the assessment of convergent and discriminant validity. Moreover, future research should include broader, nationally representative samples, incorporating adolescents from rural, suburban, and various cultural or ethnic backgrounds across Indonesia. This would improve the generalizability of the findings and ensure that the ADN-8 is applicable across diverse populations.

Conclusion

This study represents the first publication to validate the use of the ADN-8 as a screening instrument for Adjustment Disorder (AjD) within the Indonesian context. The findings provide preliminary evidence supporting the scale's reliability and construct validity among adolescents. These results indicate that the ADN-8 is a promising tool for future research and clinical screening of AjD in Indonesia, particularly within educational and youth mental health settings. The study underscores the importance of early identification of adjustment difficulties in adolescents, which may facilitate timely psychological intervention and help prevent the progression to more severe mental health problems. Moreover, the integration of validated screening instruments such as the ADN-8 into school-based mental health initiatives has the potential to improve the accuracy and responsiveness of psychosocial support services. Given the increasing need to strengthen mental health services in schools, the Indonesian version of the ADN-8 may also serve as an initial reference for the development of national mental health screening policies in educational contexts.

Suggestions

Future research is recommended to further examine the psychometric properties of the Indonesian ADN-8 across more diverse samples, including adolescents from rural areas and

different socio-cultural backgrounds. Longitudinal studies are needed to assess the instrument's sensitivity to change and its predictive validity in identifying long-term mental health outcomes. Additionally, future studies should explore measurement invariance across gender and age groups to ensure broader applicability. From a practical perspective, training school counselors and mental health practitioners in the use of the ADNM-8 could support early detection and intervention efforts. Finally, integrating the ADNM-8 into comprehensive school-based mental health programs may contribute to more systematic and evidence-based screening practices in Indonesia.

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