

# VALIDITY AND RELIABILITY TESTING OF THE GENERALIZED ANXIETY DISORDER 7 (GAD-7) AND DEPRESSION ANXIETY STRESS SCALE (DASS-42) MALAY LANGUAGE VERSION

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## ABSTRACT

This study aimed to conduct validity and reliability testing of the Generalized Anxiety Disorder 7 (GAD-7) and Depression Anxiety Stress Scale (DASS 42) Malay language versions, addressing the need for standardised instruments in specific populations. The research methodology integrated quantitative components relevant to a development and validation framework. The qualitative phase involved translators and experts in anxiety and stress, with translation into Malay Language performed using a back-translation technique, and content validation conducted by experts in stress and anxiety to assess the clarity and comprehensibility of the questionnaire items. Subsequently, the quantitative phase involved statistical analysis for validity and reliability testing. The study's population consisted of active students and athletes in Malaysia, aged 18-30 years, participating in various sports. A sample of 58 athletes was selected using stratified random sampling to ensure representation from various sports, age groups, and regions. Data collection was conducted online using Google Forms over a period of four weeks. Demographic results showed an average respondent age of 22.21 years, with the youngest being 20.0 years and the oldest 28.0 years. The majority of respondents were male (69.1%), pursuing sport study programmes (83.6%), engaged in large ball games (58.2%), and had achieved their highest performance level at university (67.3%). For the GAD-7, all items were found to be valid, with r-values ranging from 0.713 to 0.840, exceeding the r-table value of 0.2069. High reliability was also established, with a Cronbach's Alpha of 0.793. Similarly, all DASS 42 items were valid, with r-values between 0.518 and 0.976, surpassing the r-table value of 0.2542. The DASS 42 demonstrated good reliability, with a Cronbach's Alpha of 0.669. In conclusion, the Malay language versions of the GAD-7 and DASS 42 questionnaires are valid and reliable for use in the Malaysian student-athlete population, supporting their application in research and practice.

**Keywords:** GAD-7, DASS 42, Validity, Reliability, Malay Version.

## INTRODUCTION

Mental health is a significant concern for athletes, who often face immense pressures such as high expectations and injuries, both of which can profoundly impact their psychological well-being. Anxiety and stress are common issues that can disrupt an athlete's performance and quality of life. Therefore, accurate and reliable assessment tools are urgently needed for early detection and effective intervention. In Malaysia, many active student-athletes aged 18-30 are involved in various sports. It is crucial to have culturally appropriate and validated psychological assessment instruments for them. While the GAD-7 (for Generalised Anxiety Disorder) and DASS 42 (for depression, anxiety, and stress) are widely recognised, Bahasa Melayu versions of these tools require rigorous validation to ensure their results are accurate and relevant in the Malaysian context. The primary problem of this research is the limited availability of validated Bahasa Melayu versions of the GAD-7 and DASS 42 specifically for student-athletes in Malaysia. Without validated tools, mental health assessments may be inaccurate, leading to less effective interventions. This creates a clear research gap, as existing studies may not have adequately tested the validity and reliability of these translated instruments in this unique population. Therefore, this research aims to comprehensively test the validity and reliability of the Bahasa Melayu versions of the Generalised Anxiety Disorder 7 (GAD-7) and Depression Anxiety Stress Scale (DASS 42) questionnaires. Specifically, this study aims to evaluate the validity and assess the reliability of the Bahasa Melayu versions of the Generalised Anxiety Disorder 7 (GAD-7) and Depression Anxiety Stress Scale (DASS 42) questionnaires among Malaysian student-athletes. By validating these instruments, this research will provide reliable tools for mental health assessment, thereby supporting the well-being and performance of student-athletes in Malaysia.

## LITERATURE REVIEW

### *The Importance of Validated Psychometric Instruments within Local Cultural Contexts*

Mental health has emerged as a critical domain of concern in modern sport, particularly given the escalating demands placed upon athletes. These individuals not only contend with immense performance pressures and high expectations, but also with inherent vulnerabilities to physical injuries, all of which can profoundly impact their psychological well-being (Harwood & Thrower, 2023). Anxiety and stress, in particular, are prevalent issues with the potential to impair athletic performance and significantly diminish quality of life (Ramón-Arbués et al., 2020). Consequently, there is an urgent need for valid and reliable assessment instruments to facilitate early detection and timely intervention within the sporting community.

Recent years have witnessed a substantial increase in the prevalence of anxiety and depressive disorders, largely exacerbated by the socio-psychological impacts of the COVID-19 pandemic (O'Sullivan et al., 2023). Amidst the growing demand for mental health services across the Southeast Asian region Low et al. (2023), the availability of psychological instruments that are not only robust in terms of validity and reliability, but also linguistically adapted and culturally relevant, becomes a critical imperative. Mere linguistic adoption proves insufficient; instead, a comprehensive psychometric validation process is required to accurately capture the cultural nuances, social contexts, and religious values inherent within local societies (Toombs et al., 2020). In Malaysia, although instruments such as the Generalized Anxiety Disorder-7 (GAD-7) and the Depression Anxiety Stress Scale (DASS) are increasingly utilised in clinical practice and research, comprehensively validated full versions in Bahasa Melayu particularly the DASS-42 remain scarce. This dearth of locally validated instruments poses a substantial risk to the accuracy of measurement interpretations, potentially leading to diagnostic biases and suboptimal assessments of psychological conditions within the local population. Therefore, cross-cultural validation research is fundamental to ensuring that mental health assessment tools are relevant, accurate, and equitable across diverse demographic groups (Congsheng et al., 2022).

### *Generalized Anxiety Disorder-7 (GAD-7): A Validation Review in the Malay Language Context*

The Generalized Anxiety Disorder-7 (GAD-7) is a brief screening instrument developed to identify symptoms of generalised anxiety disorder, based on the criteria in the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (Williams, 2014). Its practicality has established the GAD-7 as one of the most frequently utilised tools in population surveys and primary healthcare settings worldwide. Over

time, various translated versions of the GAD-7 have been widely adopted across diverse countries, including those in the Southeast Asian region. Peh et al. (2023) conducted a study to elucidate the factor structure of the GAD-7 instrument within the Malaysian cultural context, in light of previous research indicating varying factor patterns. This investigation involved 1,272 adult respondents from diverse age groups, who were randomly assigned to two groups for analysis using both exploratory factor analysis (EFA) and confirmatory factor analysis (CFA).

The initial analysis identified four plausible factor models, ranging from a one-factor, seven-item model to a three-factor model comprising only six items. Following a comparative analysis using CFA, the most appropriate structure was determined to be the GAD-6 model. This specific model featured a single general factor (anxiety) with three distinct sub-factors, each composed of two items (Shafiq et al., 2022). This structure was deemed statistically harmonious and culturally relevant for the Malaysian population.

Furthermore, the six-item version and its three subscales demonstrated satisfactory internal reliability and construct validity. These findings suggest that, while the GAD-7 is widely used internationally, a more concise adapted form and item structure, such as the GAD-6, may offer a more accurate representation of anxiety experiences within the Malaysian cultural context. Consequently, this refined model is considered more appropriate for both clinical assessment and local research.

#### *Depression Anxiety Stress Scale-42 (DASS-42) and the Need for Validation of the Long Version in the Malay Language*

The Depression Anxiety Stress Scale-42 (DASS-42), developed by Lovibond (1995), is designed to measure three primary psychological dimensions: depression, anxiety, and stress. Compared to its shorter version, the DASS-21, the DASS-42 inherently possesses a broader scope and higher sensitivity in detecting a more profound spectrum of emotional symptoms (Sulak et al. 2024). Nevertheless, a common practice in Malaysia indicates that most research tends to utilise the DASS-21, whilst comprehensive validation of the full DASS-42 version within the local context remains highly limited. A study by Shayan et al. (2021) investigated the validity and reliability of the Dari language version of the Depression, Anxiety, and Stress Scale-42 (DASS-42) among a non-clinical adult population in Herat Province, Afghanistan. The research involved 1,310 randomly selected respondents and utilised the Dari-translated version of the DASS-42. Analyses were performed using IBM SPSS Statistics 23.0 and AMOS 23.0, encompassing internal reliability testing, exploratory and confirmatory factor analyses, and inter-construct correlations.

The results indicated high internal reliability for each subscale, with Cronbach's alpha values of 0.888 for depression, 0.866 for anxiety, and 0.833 for stress. Construct validity was further supported by significant correlation values between the respective subscales: 0.799 for depression, 0.822 for anxiety, and 0.818 for stress ( $p < 0.01$ ).

These findings affirmed the Dari language version of the DASS-42 as a reliable and valid instrument for measuring mental health dimensions within the general population of Afghanistan. The study also made a significant contribution to the cross-cultural measurement literature, particularly within the context of developing countries facing complex psychosocial challenges (Holzapfel., 2025).

Nevertheless, to date no comprehensive study has examined the validity and reliability of the Bahasa Melayu version of the DASS-42, particularly in conjunction with other instruments such as the GAD-7. The absence of research integrating the validation of these two key instruments within a unified psychometric framework in Malaysia represents a significant gap in the literature. Research capable of rigorously examining the factor structure, construct validity, and cross-demographic consistency of the DASS-42 would constitute a significant contribution to the development of culturally and scientifically appropriate mental health measurement tools.

### *Cross-Cultural and Ethnopsychological Considerations in Instrument Validation*

Cross-cultural validation is far more than simply translating a psychological instrument word-for-word. It involves adapting the underlying meaning, norms, and cultural context that shape how individuals understand and respond to the statements within the tool. Inconsistent terminology can lead to semantic gaps that impact construct validity, making measurement results prone to bias or misinterpretation (Miyaoaka et al., 2021). To ensure conceptual compatibility across cultures, the construct equivalence approach is highly recommended in the validation process (Sanders et al., 2021). This evaluation aims to confirm that the psychological construct being measured remains conceptually meaningful in the target culture, without distorting the original meaning (Cooperman et al., 2022).

Instruments not rigorously tested for construct equivalence might inadvertently measure different phenomena, ultimately reducing their overall validity and appropriateness for local use. The latest guidelines from the International Test Commission Bartram et al. (2018) emphasise that psychological instrument adaptation should adopt a triangulation approach. This method combines quantitative statistical validation with qualitative methods, such as interviews with cultural experts and representatives from the target population (Parnabas et al., 2018). Such a triangulative approach is believed to not only enhance psychometric accuracy but also strengthen the instrument's cultural sensitivity and ecological validity, making it more suitable for use in multicultural contexts like Southeast Asia (Jackson et al., 2019).

### *Research Gap and Study Contributions*

Despite several psychological instrument validation studies conducted in Malaysia, most have been limited to using shorter versions like the DASS-21 or evaluating only one instrument in isolation without an integrative approach. As of now, no recent studies within the 2020–2025 timeframe have simultaneously tested the validity and reliability of the Bahasa Melayu versions of the GAD-7 and DASS-42 using advanced statistical methods, such as test-retest reliability or discriminant and convergent validity analyses.

This situation indicates a significant methodological and practical gap in the current literature, particularly in the context of measuring anxiety and depressive symptoms in the Southeast Asian region. Given the crucial role of both instruments in psychological practice and clinical research, integrated validation is highly needed to ensure accuracy, construct equivalence, and cultural sensitivity in measurement.

This study aims to bridge this gap by combining two widely used instruments the GAD-7 and DASS-42 within a comprehensive validation framework that is linguistically, statistically, and culturally integrated. Specifically, this research focuses on assessing validity using item-total correlation (compared with *r*-tables) and reliability using Cronbach's Alpha, which are fundamental and crucial steps in the initial validation process. The findings from this study are expected to provide a strong scientific foundation for using both scales in the Malay-speaking population, serving clinical diagnosis, mental health mapping, and evidence-based academic research in the Southeast Asian region.

## **METHODOLOGY**

**Table 1.** Research Design and Methods

No.	Research Design	Description
1.	Research Design	This research combines quantitative components to align with a development and validation framework, as supported by (Ahmed et al., 2021; Surucu et al., 2020). The qualitative phase involved both translators and experts in anxiety and stress. Language specialists assisted in translating the instruments into Bahasa Melayu, employing a back-translation technique for this study. Subsequently, the stress and anxiety experts carried out content validation to assess the clarity and comprehensibility of the

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questionnaire items. Following this, the quantitative phase focused on testing validity and reliability through statistical analysis.

2. Population dan Sample  
The population for this study comprised active university students in Malaysia who were also active athletes, aged between 18 and 30 years, and participating in various sports disciplines. A sample of 58 athletes was selected using stratified random sampling to ensure representation from diverse sports branches, age groups, and geographical regions within the country.
  3. Data Collection  
The data collection tools for this study were the Bahasa Melayu versions of the demographic questionnaire, the Generalised Anxiety Disorder 7 (GAD-7), and the Depression Anxiety Stress Scale (DASS 42). Data was collected via an online survey using Google Forms, with the link shared through social media and sports organisations. The data collection period lasted four weeks, allowing respondents ample time to complete the survey at their convenience.
  4. Data Analysis  
Data analysis in this study was conducted to determine the demographic data of the research sample, as well as to test the validity and reliability of the Malay (Bahasa Melayu) versions of the GAD-7 and DASS 42. Both analyses were performed using SPSS Version 26.
  5. Ethical Approval  
This study received ethical approval from the university's research ethics committee. All participants provided written informed consent before participating in the interviews and visual techniques. The research protocol adhered to ethical standards, including the protection of privacy and confidentiality of participant information (Karmakar et al., 2025).
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## RESULT

### *Demographic Findings*

The findings of this study indicate an average respondent age of 22.21 years, with the youngest participant being 20.0 years old and the oldest 28.0 years old. The mean Cumulative Grade Point Average (CGPA) among respondents was 3.31, with a minimum CGPA of 2.33 and a maximum of 3.99. Meanwhile, the average number of credit hours currently undertaken was 19.23, with a minimum of 3.0 credit hours and a maximum of 72.0 credit hours.

**Table 2.** Distribution of Respondents by Age, Cumulative Grade Point Average (CGPA), and Credit Hours Undertaken

Characteristics	Mean	Min	Max	Std. Deviation
Age	22.21	20.00	28.00	1.24
Cumulative Grade Point Average	3.31	2.33	3.99	0.34
Number of Credit Hours Undertaken	19.23	3.0	72.00	6.44

**Table 3.** Distribution of Respondents by Gender, Study Programme, Sport Branch, and Highest Achievement Level

Characteristics		n	%
<b>Sex</b>			
Male		38	69.1
Female		17	30.9
<b>Study Programme</b>			
Sport Study Programme		46	83.6
Non-Sport Study Programme		9	16.4
<b>Sport Branch</b>			
Martial Arts		11	20.0
Large Ball Games		32	58.2
Small Large Ball Games		7	12.7
Athletics		5	9.1
<b>Highest Achievement Level</b>			
University		37	67.3
Province		1	1.8
National		11	20.0
International		6	10.9

Table 3 illustrates that the majority of respondents were male (69.1%), enrolled in sport study programmes (83.6%), primarily participated in large ball games (58.2%), and had achieved their highest performance level at the university level (67.3%).

#### *Validity and Reliability Test Results*

In this study, validity and reliability testing were performed using SPSS Version 26. The decision criterion for validity testing involved comparing the calculated r-value (rcount) with the critical r-table value (rtable), where an item was deemed valid if rcount was greater than rtable. For this research, the rtable value used was 0.2069 (for n = 55). Meanwhile, reliability testing was conducted using Cronbach's Alpha values.

#### *Generalized Anxiety Disorder 7 (GAD-7)*

The validity testing results for the GAD-7 questionnaire in this study indicate that all items had calculated r-values (rcount) ranging from 0.713 to 0.840. These values were greater than the critical r-table value (rtable) of 0.2069 used, thus confirming all GAD-7 items in this study as valid (Table 3). Furthermore, the reliability test yielded a Cronbach's Alpha value of 0.793, signifying that the GAD-7 questionnaire in this study is highly reliable.

**Table 4.** Results of Validity Testing for Generalized Anxiety Disorder 7 (GAD-7)

No Item	Question	r-Value	Conclusion
1	Feeling nervous, anxious, or on edge	0.788	Valid
2	Not being able to stop or control worrying	0.840	Valid
3	Worrying too much about different things	0.760	Valid
4	Struggling to relax	0.713	Valid
5	Being so restless that it is hard to sit still	0.720	Valid
6	Becoming annoyed or irritable easily	0.752	Valid
7	Feeling afraid, as if something awful might happen	0.789	Valid

### *Depression Anxiety Stress Scale (DASS-42)*

The validity testing results for the DASS-42 questionnaire in this study indicate that all items had calculated r-values (rcount) ranging from 0.518 to 0.976. These values were greater than the critical r-table value (rtable) of 0.2542 used, thus confirming all DASS 42 items in this study as valid (Table 5). Furthermore, the reliability test yielded a Cronbach's Alpha value of 0.669, signifying that the DASS-42 questionnaire in this research is reliable with a good level of reliability.

**Table 5.** Results of Validity Testing for Depression Anxiety Stress Scale (DASS-42)

No Item	Question	r-Value	Conclusion
1	Getting angry over small or trivial things	0.678	Valid
2	Mouth feels dry	0.558	Valid
3	Unable to see the positive side of an event	0.591	Valid
4	Experiencing breathing difficulties (rapid breathing, shortness of breath)	0.626	Valid
5	Feeling like you can no longer carry out an activity	0.646	Valid
6	Tending to overreact to situations	0.619	Valid
7	Weakness in body parts	0.635	Valid
8	Difficulty relaxing	0.725	Valid
9	Excessive anxiety in a situation but feeling relieved once it ends	0.788	Valid
10	Pessimistic	0.714	Valid
11	Easily irritated	0.677	Valid
12	Feeling like anxiety consumes a lot of energy	0.707	Valid
13	Feeling sad and depressed	0.708	Valid
14	Impatient	0.638	Valid
15	Fatigue	0.592	Valid
16	Loss of interest in many things (e.g., eating, mobility, socializing)	0.703	Valid
17	Feeling unworthy	0.823	Valid
18	Easily offended	0.595	Valid
19	Sweating (e.g., sweaty hands) without stimulation from weather or physical activity	0.721	Valid
20	Fear without a clear reason	0.782	Valid
21	Feeling that life is worthless	0.600	Valid
22	Difficulty resting	0.578	Valid
23	Difficulty swallowing	0.739	Valid
24	Unable to enjoy things I do	0.528	Valid
25	Changes in heart activity and pulse rate without physical activity stimulation	0.747	Valid
26	Feeling hopeless and despair	0.694	Valid
27	Easily angered	0.728	Valid
28	Easily panic	0.799	Valid
29	Difficulty calming down after something distressing	0.777	Valid

No Item	Question	r-Value	Conclusion
30	Fear of being overwhelmed by unfamiliar tasks	0.783	Valid
31	Difficulty feeling enthusiastic about many things	0.806	Valid
32	Difficulty tolerating interruptions while doing something	0.680	Valid
33	Being in a tense state	0.784	Valid
34	Feeling worthless	0.676	Valid
35	Unable to tolerate anything that prevents you from completing what you are doing	0.669	Valid
36	Fear	0.518	Valid
37	No hope for the future	0.718	Valid
38	Feeling that life is meaningless	0.609	Valid
39	Easily restless	0.750	Valid
40	Worried about situations where you might panic and embarrass yourself	0.733	Valid
41	Trembling	0.809	Valid
42	Difficulty initiating actions	0.976	Valid

## DISCUSSION

This study convincingly affirms that the Bahasa Melayu versions of the Generalized Anxiety Disorder-7 (GAD-7) and the Depression Anxiety Stress Scale-42 (DASS-42) are valid and reliable instruments for measuring mental health conditions, particularly among student-athletes in Malaysia. All items in both questionnaires demonstrated significant item-total correlations, accompanied by adequate internal reliability, with Cronbach's Alpha values of 0.793 for the GAD-7 and 0.669 for the DASS-42. These results indicate that both instruments not only consistently measure relevant psychological symptoms but also provide a strong empirical foundation for their use within the local cultural context.

This established validity and reliability align with previous studies, such as that reported by Pheh et al. (2023), which demonstrated the GAD-7's factor structure remains stable and effectively applicable within the adult Malaysian population. The instrument's stability within the local context is highly crucial, given that cultural differences can influence individuals' interpretation of psychological symptoms (Laborde et al., 2020). The validity of instruments becomes increasingly vital when applied to student-athlete populations, as this group faces complex psychological pressures stemming from a combination of high academic demands, expectations for athletic performance, and the need to balance both simultaneously (Beasley et al., 2023). These conditions can increase the risk of developing mental health disorders such as anxiety, chronic stress, and burnout, which, if not detected and addressed early, can negatively impact both their academic performance and sporting achievements (Daumiller et al., 2024). Consequently, the availability of concise, easily implementable psychological instruments that maintain high sensitivity and robust cultural validity becomes a key element in supporting effective psychological interventions and continuous mental health monitoring. In this context, the Bahasa Melayu versions of the GAD-7 and DASS-42 offer a practical and applicable alternative that can be utilised by researchers, counselling staff, and mental health practitioners within higher education institutions and sports facilities.

These two instruments not only function as tools for measuring psychological symptoms but also hold the potential for integration into mental health policies and programmes within educational institutions and sporting environments. Their capacity to rapidly and efficiently detect at-risk individuals makes them highly relevant for initial screening and ongoing monitoring. This validation further provides a robust scientific foundation for the development of similar assessment tools in other languages and cultures across

the Southeast Asian region, simultaneously enriching the psychometric literature focused on cross-cultural contexts.

The successful validation process in this study further reinforces the findings of Pheh et al. (2023), which stated that the Bahasa Melayu version of the GAD-7 is an effective and reliable instrument within the context of primary healthcare services in Malaysia. This consistency indicates that the GAD-7 maintains its psychometric quality even when used outside its original cultural context, provided that the linguistic adaptation process employs appropriate methodology. Similar findings were observed in Wahab et al. (2020) study, which evaluated the DASS-42 among university students in Malaysia; the scale consistently demonstrated strong validity and reliability despite being translated and applied in a significantly different cultural context. This underscores that globally standardised psychological instruments retain their potential for cross-cultural use, provided they undergo rigorous and contextual linguistic adaptation and methodological validation processes.

While this study did not conduct further exploration of factor structures (e.g., through Confirmatory Factor Analysis, CFA), the adopted approach namely, item-total correlation analysis and internal reliability testing with Cronbach's Alpha represents a fundamental and recommended initial stage in the validation process of psychological instruments. This methodology permits preliminary assessment of internal consistency and clarity of item structure before progressing to more complex factor analyses. The reliability value obtained for the DASS-42 ( $\alpha=0.669$ ), though slightly lower than that of the GAD-7 ( $\alpha=0.793$ ), remains within an acceptable category. This difference can be explained by the DASS-42's characteristic as a multidimensional instrument measuring three distinct psychological constructs depression, anxiety, and stress each possessing its own measurement complexities. Therefore, this finding highlights the necessity for further research involving more advanced factor analytical techniques and measurement invariance testing to ensure the structural stability of the instrument across various population groups and cultural backgrounds. This step is crucial to ensure that the instrument is not only statistically accurate but also culturally relevant and reliable for both screening and intervention purposes within broader contexts.

The primary contribution of this research is the provision of culturally adapted, validated, and reliable mental health assessment instruments for the student-athlete population in Malaysia. In the post-COVID-19 pandemic context, where the prevalence of psychological disorders among youth and university students in Southeast Asia has significantly increased, the demand for accurate, culturally sensitive, and practical measurement tools has become increasingly urgent. This study also addresses a gap in the cross-cultural validation literature, which has historically been dominated by research from Western countries. Therefore, the Malay language versions of the GAD-7 and DASS-42 are not only relevant for academic purposes and initial clinical screening but also hold the potential for informing mental health policy formulation in higher education institutions and sporting environments. To enhance the broader applicability of these instruments, further studies are recommended to evaluate their construct validity more thoroughly and to test their stability across demographic groups, optimising their use in diverse population and cultural contexts.

Despite the strengths of this study in validating the Malay (Bahasa Melayu) versions of the GAD-7 and DASS-42 among student-athletes in Malaysia, several limitations should be acknowledged. First, the study did not conduct Exploratory Factor Analysis (EFA) or Confirmatory Factor Analysis (CFA), which limits understanding of the underlying factor structure and the clustering of items within each instrument. Second, although the DASS-42 assesses three distinct constructs, namely depression, anxiety, and stress, the current analysis primarily focused on overall internal consistency, and subscale-specific reliability was not evaluated. Third, test-retest reliability was not assessed, preventing conclusions regarding the temporal stability of the instruments. Finally, the relatively modest sample size may have affected the precision of correlation estimates and restricts the generalisability of the findings to broader populations. Future research employing larger and more diverse samples, alongside advanced psychometric analyses including factor structure examination and test-retest evaluation, is recommended to strengthen the robustness and applicability of these instruments across different demographic and cultural contexts.

## CONCLUSION

This study aimed to examine the validity and reliability of the Bahasa Melayu versions of the Generalized Anxiety Disorder-7 (GAD-7) and the Depression Anxiety Stress Scale-42 (DASS-42) questionnaires within the context of student-athletes in Malaysia. Employing a validation approach that included item-total correlation analysis and reliability testing using Cronbach's Alpha, all items in both instruments proved to be valid and reliable. The results indicated that the GAD-7 exhibited high reliability ( $\alpha=0.793$ ), while the DASS-42 demonstrated good reliability ( $\alpha=0.669$ ).

These findings support the utilisation of the Bahasa Melayu versions of the GAD-7 and DASS-42 as reliable mental health assessment tools for the student-athlete population in Malaysia. The success of this validation contributes significantly to the availability of culturally appropriate psychometric instruments, simultaneously bridging a gap in the cross-cultural validation literature within the Southeast Asian region. Therefore, these instruments are recommended for use in academic research, mental health mapping, and initial evidence-based clinical assessments.

## AUTHORS' CONTRIBUTION

YSP conducted the research planning, data collection, analysis, and manuscript write-up. SA, MY, MAMN, KR, and MPR supervised the study.

## CONFLICT OF INTEREST

The authors declare no conflicts of interest related to the writing of this article.

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