



Need Assessment for Developing a Culturally Adapted Interactive Workbook to Manage Academic Stress in School Counseling

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ABSTRACT

Purpose of the study: This study aims to conduct a needs assessment as the basis for developing an interactive workbook for academic stress management within school counseling services.

Methodology: This study employed a Research and Development approach using the ADDIE model, limited to the analysis phase. A mixed-method design was applied to obtain comprehensive data. Quantitative data were collected through a questionnaire administered to 169 students, while qualitative data were obtained through in-depth interviews with 10 students and one school counselor, as well as classroom observations. The instruments included the Academic Stress Scale (34 items, $\alpha = 0.918$) and semi-structured interview guidelines. Quantitative data were analyzed descriptively and inferentially using ANOVA and Pearson correlation, while qualitative data were analyzed through thematic analysis.

Main Findings: The findings indicate that academic stress among students is relatively high, with 91.3% of participants experiencing moderate to high levels of stress. The primary sources of stress include examination pressure (60%), social conflicts (25%), and family expectations (15%). Students expressed strong preferences for counseling media that are visual, simple, culturally relevant, and usable independently. In particular, students preferred workbook-based media integrating local cultural values such as cooperation (gotong royong) and Islamic spirituality.

Novelty/Originality of this study: This study highlights the urgent need for culturally adapted counseling media to support students' emotional regulation and stress management. The novelty of this study lies in integrating the needs assessment of academic stress with cultural adaptation of Dialectical Behavior Therapy principles into an interactive workbook format suitable for school counseling.

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1. INTRODUCTION

Academic stress is a psychological problem frequently experienced by high school students, particularly during adolescence, which is characterized by various developmental demands and academic pressures. This pressure can stem from academic achievement demands, peer competition, and family expectations regarding

student achievement. This condition can impact learning concentration, anxiety, sleep disturbances, and even a decline in students' psychological well-being [1], [2]. Various studies indicate that levels of academic stress in adolescents tend to be high. National surveys indicate that approximately 37–53% of students in Indonesia experience moderate to high levels of academic stress, influenced by academic pressure, social dynamics, and family expectations [3]. In a collectivist cultural context like Indonesia, academic success is viewed not only as an individual achievement but also as a representation of the success of the family and social environment. This makes the academic pressure experienced by students more complex and multi-layered.

In the practice of guidance and counseling services in schools, various approaches have been used to help students manage academic stress, one of which is Dialectical Behavior Therapy (DBT), which has been proven effective in improving emotional regulation and individual coping skills [4]. However, most DBT-based interventions are still developed in a Western cultural context, so they are not fully aligned with the characteristics of local Indonesian culture, which upholds the values of collectivity, mutual cooperation, and spirituality. Furthermore, the limited number of guidance and counseling teachers in schools also hinders the provision of optimal services to all students. This situation results in not all students receiving intensive and continuous counseling services. Therefore, innovative service channels are needed that allow students to access support independently and flexibly.

One potential alternative solution is the development of interactive workbooks as a form of self-counseling service. Workbooks allow students to engage in self-reflection, practice emotional regulation, and develop coping strategies systematically without relying entirely on a counselor. Furthermore, these tools can be contextually tailored to students' needs and characteristics. However, previous studies have shown that the development of self-counseling tools, particularly workbook-based tools, remains limited and has not integrated psychological therapy approaches with local cultural values. Most research focuses on conventional interventions or general digital media without considering specific cultural adaptations.

Thus, a research gap exists between: (1) the high demand for contextual and self-counseling counseling tools for students, and (2) the limited availability of services that are adaptive to local culture and students' psychological needs. Based on this gap, this study proposes a solution approach in the form of developing interactive workbooks based on cultural adaptation and the principles of Dialectical Behavior Therapy (DBT), grounded in student needs analysis. This research is important to conduct because it not only contributes to identifying students' academic stress conditions, but also provides an empirical basis for developing more relevant, practical, and contextual guidance and counseling service media, especially in local culture-based educational environments.

The research questions are formulated as follows: 1) What are the levels of academic stress experienced by students?; 2) What are the main sources of students' academic stress?; 3) What are students' needs for guidance and counseling services to manage academic stress?; 4) What are students' preferences for interactive workbooks that are adaptive to local cultural values.

2. RESEARCH METHOD

This study used a Research and Development (R&D) approach with the ADDIE (Analysis, Design, Development, Implementation, Evaluation) model developed by Branch [7]. However, this research was limited to the Analysis stage (needs analysis) as the basis for developing interactive workbook media for guidance and counseling services. The research approach used was a mixed methods approach, combining quantitative and qualitative methods to gain a comprehensive understanding of students' needs in managing academic stress. This approach was used to triangulate data, thereby increasing the validity of the research findings [5], [6].

The population in this study was all 296 students in grades VII, VIII, and IX. The research sample consisted of two data groups: 1). A quantitative sample of 169 students, selected using proportional random sampling to obtain representation from each grade level. 2). A qualitative sample of 10 students and 1 guidance and counseling teacher, selected using purposive sampling with the criteria of being willing to be research participants, having varying levels of academic stress (high, medium, low) and representing differences in gender and grade level.

Academic stress levels were measured using the Academic Stress Scale adapted from Rostianti [11]. This instrument consists of 34 items using a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree). The reliability test results showed a Cronbach's Alpha value of 0.918, indicating a very high level of reliability. The instrument's content validity was tested through expert judgment, with a Content Validity Ratio (CVR) value of >0.8, thus declaring the instrument suitable for use.

To obtain qualitative data, a semi-structured interview guide was used to explore the sources of students' academic stress, their coping strategies, and their needs and preferences for counseling services. Interviews were conducted in person and lasted approximately 30–40 minutes for each participant. An observation sheet was used to observe student behavior during the learning process related to academic stress. Data in this study were collected through three main techniques: a questionnaire survey, used to quantitatively

measure students' academic stress levels; in-depth interviews, used to explore students' experiences and needs for guidance and counseling services; and classroom observations, used to obtain contextual data regarding student behavior during the learning process. The use of these three techniques aims to triangulate data and thus increase the validity of the research results [6].

Quantitative data obtained from the questionnaires were analyzed using descriptive and inferential statistical analysis with the help of SPSS software. Descriptive analysis was used to determine the distribution of students' academic stress levels by calculating the mean, standard deviation, and percentage. Furthermore, inferential analysis was conducted using ANOVA to examine differences in stress levels by grade level, and Pearson correlation to examine the relationship between demographic variables and academic stress levels. Meanwhile, qualitative data from interviews were analyzed using thematic analysis according to Braun and Clarke [8], with the following stages: interview data transcription, data coding, theme identification, and data interpretation. This approach was used to identify patterns of student needs for guidance and counseling services.

3. RESULTS AND DISCUSSION

Student Academic Stress Level

The descriptive analysis results indicate that most students experience relatively high levels of academic stress. The distribution of academic stress levels is presented in Table 1.

Table 1. The Distribution of Academic Stress Levels

Stres Category	Frekuensi (%)
Very High	6.21%
Medium-High	91.30%
Low	2.48%
Total	100%

The mean academic stress score was 99.45 with a standard deviation of 16.64, indicating that most students were in the moderate to high stress category. The results of the inferential analysis showed differences in academic stress levels based on grade level ($F = 4.23$, $p = 0.016$). Furthermore, there was a significant relationship between gender and academic stress levels ($r = 0.18$, $p = 0.022$), with female students tending to have higher stress levels.

Source of Student Academic Stress

Based on the results of the thematic analysis of interview and observation data, three main sources of academic stress experienced by students were identified, as shown in Table 2.

Table 2. Three Main Sources of Academic Stress Experienced By Students

Source of Stres	Persentase
Exam and Assigment Pressure	60%
Social Conflict	25%
Family Ekspektation	15%
Total	100%

These findings indicate that academic pressure is the dominant factor triggering student stress, followed by social and family factors. Observations also indicate the presence of symptoms of academic stress during the learning process, such as difficulty concentrating, learning fatigue, and anxiety when facing assignments.

Student Needs and Preferences for Workbook Media

Interview results indicate that students have a need for guidance and counseling service media that can be used independently. Student preferences for workbook media are presented in Table 3.

Table 3. Student Preferences for Workbook Media

Media Characteristic	Deskriptio of Needs Uses
Visual and Engaging	Image / Ilustration
Simple Language	Easy for student to understand
Self-help	Can be used without a guidance counselor
Culture Based	Incorporates the values of mutual cooperation and spirituality

These findings suggest that students need media that is not only practical, but also relevant to their cultural context.

The research results show that students' academic stress levels are relatively high. This finding not only reflects empirical conditions but also indicates that students are under psychological pressure that has the potential to disrupt their learning process and emotional development. This high level of stress reflects an imbalance between academic demands and students' coping abilities to manage these pressures. This condition aligns with adolescent development theory, which states that this phase is a period vulnerable to stress due to academic and social demands [1], and is supported by findings regarding the psychological impact of stress on individual well-being [2].

Upon further examination, the dominance of exam and assignment pressure as the primary source of stress indicates that a results-oriented learning system remains a major factor triggering student stress. This reinforces previous research findings that academic demands are a dominant factor in triggering stress in adolescents [4]. However, this research also indicates that academic stress does not exist in isolation but is influenced by social factors such as conflict with peers and family expectations. In collectivist cultural contexts, this social pressure tends to be stronger because individual success is often linked to family and social honor [3].

In general, these findings can be generalized to indicate that academic stress in high school students in collectivist cultural contexts is influenced not only by academic factors but also by interacting social and cultural factors. Therefore, effective interventions should not solely focus on academic aspects but must also consider students' social and cultural dimensions. Another important finding in this study is the students' need for guidance and counseling services that can be used independently. This indicates a gap between the need for services and the availability of counseling services in schools. In this context, interactive workbooks can be a relevant solution because they allow students to engage in self-reflection and practice emotional regulation independently. This finding aligns with the design-based research approach, which emphasizes the importance of developing contextual learning media based on user needs [9].

Furthermore, students' preference for culturally based media suggests that the success of counseling interventions is strongly influenced by their alignment with students' values and experiences. Integrating the values of mutual cooperation and spirituality into workbooks can increase student engagement and intervention effectiveness. This is supported by research showing that cultural adaptation in psychological interventions can enhance program acceptance and effectiveness [12]. Theoretically, this research contributes to the development of guidance and counseling studies, particularly regarding the importance of integrating psychological approaches with local cultural values in developing service media. Practically, the results provide a basis for guidance and counseling teachers to develop independent counseling service media that are more contextual, adaptive, and tailored to student needs, especially given the limited availability of counseling services in schools.

The novelty of this research lies in the integration of student needs analysis, the Dialectical Behavior Therapy (DBT) approach, and local cultural values (mutual cooperation and spirituality) in the development of interactive workbook media for guidance and counseling services. This approach offers a new perspective in developing counseling media that is not only based on psychological theory but also culturally contextual. This research has several limitations. First, the study was conducted in only one school, so the results cannot be widely generalized. Second, this study was limited to the needs analysis stage of the ADDIE model, so the effectiveness of the designed workbook media has not been empirically tested. Third, the use of self-report data in the questionnaire may introduce subjective bias from respondents. Based on these limitations, further research is recommended to continue the workbook media development phase through to the implementation and evaluation phase, test the workbook's effectiveness in reducing students' academic stress levels, involve a broader sample from various types of schools, and Develop a more comprehensive, culture-based counseling intervention model.

4. CONCLUSION

This study aimed to identify students' needs for the development of interactive workbooks within guidance and counseling services to help manage academic stress. The results showed that most students experienced moderate to high levels of academic stress, primarily caused by the pressure of exams and schoolwork, social conflicts with peers, and family expectations regarding academic achievement. The research findings also indicated that students needed guidance and counseling services that could help them manage academic stress independently. Students indicated a preference for workbooks that were visual, used simple language, could be used independently, and integrated local cultural values such as mutual cooperation (*gotong royong*) and Islamic spirituality. Based on the results of this needs analysis, it can be concluded that the development of interactive workbooks that integrate the Dialectical Behavior Therapy (DBT) approach with local cultural values has the potential to become a relevant guidance and counseling service tool to help students manage academic stress in the school environment. Based on the research findings, it is recommended that the next phase focus on the development, validation, and effectiveness testing of culturally based interactive workbooks to help students manage academic stress. Furthermore, guidance and counseling teachers can

consider using independent counseling media that are appropriate to student characteristics and the school's cultural context. Future research should also involve a broader sample size to ensure more robust results.

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AUTHOR CONTRIBUTIONS

Feida Noorlaila Isti'adah: conceptualization, methodology, data collection, data analysis, writing original draft. Cucu Arumsari: data collection, qualitative analysis. Agung Nugraha: methodology, validation, review and feedback Merlin Effendi: editing, writing and drafting. All authors approved the final manuscript.

CONFLICTS OF INTEREST

The author(s) declare no conflict of interest.

USE OF ARTIFICIAL INTELLIGENCE (AI)-ASSISTED TECHNOLOGY

The authors declare that no artificial intelligence (AI) tools were used in the generation, analysis, or writing of this manuscript. All aspects of the research, including data collection, interpretation, and manuscript preparation, were carried out entirely by the authors without the assistance of AI-based technologies.

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