

Pocketbook-based mental health education: Effects on knowledge and attitudes among Makassar high school students

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ABSTRACT

Adolescent mental health literacy remains a major challenge, and practical educational media that can improve both knowledge and attitudes are still needed; this study evaluates a pocketbook as an accessible school-based mental health promotion tool. This study aimed to analyze the effect of pocketbook-based education on high school students' knowledge and attitudes regarding mental health. A quantitative quasi-experimental study with a pretest-posttest control group design was conducted from March to April 2026 at State Senior High School 12 Makassar and State Senior High School 13 Makassar. A total of 128 students were recruited using convenience sampling and divided equally into intervention and control groups. The intervention group received mental health education using a pocketbook, while the control group received lecture-based education. Both approaches improved students' knowledge and attitudes; however, post-intervention comparisons using the Mann-Whitney test demonstrated significant differences between the two groups for both outcomes ($p < 0.001$). The pocketbook offered practical advantages by presenting information in an engaging, portable, and reusable format that supports repeated learning. These findings indicate that pocketbook-based mental health education can complement conventional teaching and may be integrated into classroom learning, school health services, and adolescent health promotion programs.

ABSTRAK

Literasi kesehatan mental remaja masih menjadi tantangan utama, sementara media edukasi praktis yang dapat meningkatkan pengetahuan sekaligus sikap masih diperlukan; penelitian ini mengevaluasi buku saku sebagai media promosi kesehatan mental berbasis sekolah yang mudah diakses. Penelitian ini bertujuan untuk menganalisis pengaruh edukasi berbasis buku saku terhadap pengetahuan dan sikap siswa sekolah menengah atas mengenai kesehatan mental. Penelitian kuantitatif dengan desain quasi-experimental menggunakan pendekatan pretest-posttest control group dilaksanakan pada Maret hingga April 2026 di SMA Negeri 12 Makassar dan SMA Negeri 13 Makassar. Sebanyak 128 siswa direkrut menggunakan teknik convenience sampling dan dibagi secara seimbang ke dalam kelompok intervensi dan kelompok kontrol. Kelompok intervensi memperoleh edukasi kesehatan mental menggunakan buku saku, sedangkan kelompok kontrol memperoleh edukasi berbasis ceramah. Kedua pendekatan meningkatkan pengetahuan dan sikap siswa; namun, perbandingan pascaintervensi menggunakan uji Mann-Whitney menunjukkan adanya perbedaan yang signifikan antara kedua kelompok pada kedua luaran tersebut ($p < 0,001$). Buku saku memiliki keunggulan praktis karena menyajikan informasi dalam format yang menarik, mudah dibawa, dan dapat digunakan kembali sehingga mendukung pembelajaran berulang. Temuan ini menunjukkan bahwa edukasi kesehatan mental berbasis buku saku dapat melengkapi metode pembelajaran konvensional dan berpotensi diintegrasikan ke dalam pembelajaran di kelas, layanan kesehatan sekolah, serta program promosi kesehatan remaja.

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INTRODUCTION

Mental health is a state of psychological well-being that enables individuals to realize their abilities, cope with everyday stressors, learn and work productively, and contribute meaningfully to their communities (WHO, 2022). It is an integral component of overall health, recognized as both a fundamental human right and a priority within the global public health agenda (WHO & UNHR, 2023). Despite its importance, mental health remains insufficiently addressed in many communities because stigma, misconceptions, and negative social perceptions continue to discourage prevention, early detection, and professional help-seeking. Globally, approximately one in eight people lives with a mental disorder, while mental disorders are among the leading contributors to years lived with disability (Cuijpers et al., 2023; WHO, 2022).

Adolescents constitute a particularly vulnerable population because adolescence is characterized by substantial biological, psychological, cognitive, and social transitions. Approximately one in seven adolescents globally, or 14%, experiences a mental disorder, contributing substantially to the total disease burden in this age group (WHO, 2024). In Indonesia, the 2023 Indonesia Health Survey reported a depression prevalence of approximately 2% among individuals aged 15–24 years, with a substantial proportion of affected adolescents reporting suicidal thoughts (SKI, 2023). The Indonesia-National Adolescent Mental Health Survey further estimated that 34.9% of Indonesian adolescents experienced at least one mental health problem during the previous 12 months, while approximately 5.5% experienced a diagnosable mental disorder (I-NAMHS, 2022). In South Sulawesi, adolescent mental health concerns are similarly important, with increasing psychological service utilization and reports of severe stress associated with academic, social, and family pressures (Nurhidayanti et al., 2025).

Adolescence represents a developmental period in which difficulties in managing changing biological, emotional, academic, and social demands may contribute to mental and emotional disorders that affect psychological functioning, behavior, interpersonal relationships, and quality of life (Endriyani et al., 2022; Florensa et al., 2023). Prevention therefore requires more than clinical services after disorders have developed. WHO emphasizes the importance of strengthening adolescents' social and emotional competencies, minimizing exposure to risk factors, improving supportive environments, and ensuring access to appropriate mental health information and services. Within this preventive framework, knowledge and attitudes are important determinants because adolescents with adequate mental health literacy are more capable of recognizing warning signs, understanding psychological well-being, reducing stigmatizing perceptions, and identifying appropriate sources of support (Jorm, 2012). Health promotion in schools consequently offers an important strategy for strengthening early prevention through accessible and age-appropriate mental health education.

Health education interventions can improve adolescent mental health literacy when the educational content is understandable, relevant, engaging, and appropriate to adolescents' learning characteristics. Various health promotion media have been developed to improve knowledge and attitudes toward mental health, including lectures, audiovisual media, digital platforms, printed educational materials, and interactive interventions (Ibnu & Sandy, 2025). However, low health literacy among adolescents remains a challenge, indicating that educational strategies should facilitate repeated exposure to information and independent learning rather than depend solely on one-time verbal communication (Wardiati et al., 2023).

A pocketbook represents a potentially useful print-based educational medium because it is concise, structured, portable, and can be accessed repeatedly without requiring digital devices or internet connectivity. Its practical format allows students to revisit information at their own pace, reinforce understanding, and use the material as a reference after formal health education sessions. The effectiveness of this approach may be particularly relevant in school-based interventions, where educational materials must be easily integrated into learning environments. Thenu et al. (2025) reported that pocketbooks are practical, efficient, and feasible for health promotion activities and can support continuous health education in schools. Compared with lecture-only approaches, a pocketbook may provide additional reinforcement by enabling repeated and self-directed learning

after the educational session has ended.

Although numerous health promotion strategies have been developed to improve adolescent mental health literacy, evidence regarding the effectiveness of pocketbooks as a specific mental health promotion medium among senior high school students remains limited. Previous interventions have often focused on conventional lectures or broader educational media, while fewer studies have directly evaluated whether a portable printed resource can improve both knowledge and attitudes toward mental health. This research gap is relevant because improving knowledge alone may be insufficient if adolescents continue to hold negative attitudes, stigma, or reluctance toward mental health issues and help-seeking.

The novelty of this study lies in evaluating a structured pocketbook intervention and comparing its effects on both knowledge and attitudes with a conventional lecture approach among high school students in Makassar. The study employed a quantitative quasi-experimental design conducted from March to April 2026 at State Senior High School 12 Makassar and State Senior High School 13 Makassar, involving 128 students allocated to intervention and control groups through convenience sampling. By simultaneously assessing cognitive and attitudinal outcomes, this study provides evidence relevant to school-based mental health promotion. Accordingly, the study aimed to analyze the effect of a mental health pocketbook on improving high school students' knowledge and attitudes toward mental health and to compare post-intervention outcomes between the pocketbook and lecture groups.

METHODS

Study Design and Setting

This study employed a quantitative approach using a quasi-experimental pretest-posttest control group design. Two groups were included: an intervention group and a control group. The intervention group received mental health education using a pocketbook, whereas the control group received mental health education through a lecture method (see Table 1). Both groups completed a pretest before the intervention and a posttest after the intervention. This design was selected to evaluate the effect of the pocketbook as a health promotion medium on adolescents' knowledge and attitudes regarding mental health.

The study was conducted at State Senior High School 12 Makassar and State Senior High School 13 Makassar, South Sulawesi, Indonesia, from March 31 to April 2026. The study sites were selected because they met the characteristics and risk considerations relevant to adolescent mental health promotion.

Table 1
Research Design

Group	Pretest	Treatment	Posttest
Control group	O1	X1	O2
Intervention group	O1	X2	O2

Notes: O1 = pretest before intervention; O2 = posttest after intervention; X1 = lecture method; X2 = pocketbook-based education.

Population, Sample, and Sampling Technique

The study population consisted of 682 students enrolled at the selected senior high schools. The minimum sample size was calculated using G*Power version 3.1.9.7 based on a two-group independent *t*-test with a two-tailed significance level of $\alpha=0.05$, statistical power of 0.80, and effect size of 0.5. The calculation resulted in a minimum required sample of 128 respondents. A total of 128 students were included in the study, consisting of 64 participants in the intervention group and 64 participants in the control group. Participants were selected using convenience sampling based on accessibility and willingness to participate during the study period.

Study Variables and Intervention

The independent variable was the type of mental health education provided, specifically

pocketbook-based education in the intervention group and lecture-based education in the control group. The dependent variables were students' knowledge and attitudes regarding mental health.

The intervention group received educational material through a specially prepared mental health pocketbook designed to provide concise, structured, and accessible information that could be reviewed repeatedly. The control group received the same general topic through a conventional lecture method. Pretest measurements were conducted before educational exposure, while posttest measurements were performed after completion of the intervention to evaluate changes in the outcome variables.

Research Instruments and Data Collection

Data were collected using a knowledge questionnaire, an attitude questionnaire, and the Depression Anxiety Stress Scales-21 (DASS-21). The knowledge questionnaire was used to measure students' understanding of mental health concepts, while the attitude questionnaire assessed their perceptions and attitudes toward mental health issues. The DASS-21 was used to assess symptoms related to depression, anxiety, and stress as relevant participant characteristics.

Data collection was conducted in stages. First, eligible students were recruited and provided with information regarding the study. Second, respondents completed the pretest instruments. Third, the intervention group received pocketbook-based education, whereas the control group received lecture-based education. Finally, both groups completed posttest measurements using the same knowledge and attitude instruments.

Data Analysis

Data were analyzed using univariate and bivariate statistical procedures. Univariate analysis was used to describe respondent characteristics and study variables using frequencies, percentages, and appropriate measures of central tendency and dispersion.

Before bivariate analysis, a normality test was conducted to determine the distribution of continuous data and guide the selection of statistical tests. Within-group comparisons between pretest and posttest scores were conducted using parametric or non-parametric tests according to the distribution of the data. Between-group comparisons were subsequently performed to evaluate differences in knowledge and attitude outcomes between the pocketbook and lecture groups. Statistical significance was established at $p < 0.05$.

Ethical Considerations

This study received ethical approval from the Health Research Ethics Committee of the Faculty of Medicine and Health Sciences, UIN Alauddin Makassar, under approval number B.14/KEPK/FKIK/I/2026. All participants were informed about the purpose, procedures, confidentiality, voluntary nature of participation, and their right to withdraw from the study. Informed consent was obtained from all participants before data collection, and all collected information was treated confidentially and used solely for research purposes.

RESULTS AND DISCUSSION

Table 2

Respondent Characteristics

Characteristics	Intervention (n=67)	%	Control (n=65)	%
Age				
15	15	22.4	33	50.8
16	45	67.2	31	47.7
17	6	9	1	1.5
18	1	1.5	–	–
Gender				
Male	32	47.8	32	49.2
Female	35	52.2	33	50.8

Based on [Table 2](#), the characteristics of the 67 respondents in the intervention group are presented by age and gender. In terms of age, the majority of respondents were 16 years old, totaling 45 people (67.2%), followed by 15 people (22.4%) who were 15 years old, 6 people (9.0%) who were 17 years old, and 1 person (1.5%) who was 18 years old. Meanwhile, based on gender, there were 35 female respondents (52.2%) and 32 male respondents (47.8%). Furthermore, in the control group, which consisted of 65 respondents, age characteristics showed that the majority of respondents were 15 years old, totaling 33 people (50.8%), followed by 31 people (47.7%) aged 16, and 1 person (1.5%) aged 17. As for gender, there were 33 female respondents (50.8%) in this group, while male respondents numbered 32 (49.2%).

Table 3

Frequency Distribution of the Sample Based on Knowledge and Attitude Scores Before and After Education

Group	Measurement	Knowledge: Good n (%)	Knowledge: Fair n (%)	Knowledge: Poor n (%)	Attitude: Positive n (%)	Attitude: Negative n (%)
Intervention (n=67)	Pre-test	26 (38.8)	21 (31.3)	20 (29.9)	66 (98.5)	1 (1.5)
	Post-test	63 (94.0)	4 (6.0)	0 (0.0)	67 (100.0)	0 (0.0)
Control (n=65)	Pre-test	30 (46.2)	14 (21.5)	21 (32.3)	65 (100.0)	0 (0.0)
	Post-test	54 (83.1)	9 (13.8)	2 (3.1)	65 (100.0)	0 (0.0)

Based on [Table 3](#), the distribution of respondents' knowledge levels before and after the intervention in both study groups is shown. In the intervention group (n = 67), the pretest results indicated that 26 respondents (38.8%) had "good" knowledge, 21 respondents (31.3%) had "fair" knowledge, and 20 respondents (29.9%) had "poor" knowledge. After receiving education using the pocketbook, the proportion of respondents with "good" knowledge increased to 63 (94.0%), while those in the "fair" category decreased to 4 (6.0%), and there were no longer any respondents in the "poor" category.

In the control group (n = 65), the pretest results showed that 30 respondents (46.2%) had "good" knowledge, 14 respondents (21.5%) had "fair" knowledge, and 21 respondents (32.3%) had "poor" knowledge. Posttest results showed an increase in the number of respondents with "good" knowledge to 54 (83.1%), while those in the "fair" category increased to 9 (13.8%) and those in the "poor" category decreased to 2 (3.1%).

Table 4

Knowledge and Attitude Score

Variable	Category	Intervention (n=67)	Min	Max	P value	Control (n=65)	Min	Max	P value
Knowledge		Median				Median			
	Pre-test	10	6	15	0.000 ²	10	4	15	0.000 ²
	Post-test	15	11	15		14	7	15	
Attitude		Mean				Median			
	Pre-test	45.45	29	60	0.000 ¹	48.5	36	58	0.012 ²
	Post-test	52.55	45	60		50	36	59	

Note: ¹) Paired t-test; ²) Wilcoxon test

Before conducting the statistical analysis, a normality test was first performed using the Kolmogorov–Smirnov test. The results of the normality test indicated that the data were not normally distributed, as indicated by a p-value less than 0.05. Therefore, the subsequent statistical analysis used a nonparametric test specifically, the Wilcoxon Signed-Ranks Test to analyze the differences in knowledge scores before and after the intervention in each group. [Table 4](#) shows that in the intervention group, the minimum knowledge scores before and after the treatment using the pocketbook medium were 6 and 11, respectively, while the maximum score for both measurements was 15. In the control group, the minimum knowledge scores before and after the treatment using the

lecture method were 4 and 7, respectively, while the maximum score for both measurements was 15. Based on the average scores, there was an increase in knowledge in both groups. In the intervention group, the average knowledge score increased from 10.00 before the treatment to 15.00 after the treatment, while in the control group, it increased from 10.00 to 14.00 after the treatment.

The results of the Wilcoxon Signed-Ranks Test for both groups showed a p-value of 0.000, indicating a significant difference in knowledge scores before and after the intervention in each group. Thus, both the pocketbook and the lecture method were equally effective in improving the respondents' knowledge. However, based on the increase in average scores and the absence of any respondents who experienced a decrease in scores in the intervention group, the pocketbook medium showed better results in terms of knowledge improvement compared to the lecture method.

The results of this study are consistent with a study (Wulansari et al., 2021), which found that health promotion using pocket books had an effect on increasing the knowledge of adolescents at MAN 1 Blitar City. That study showed that the respondents' average knowledge score increased from 57.50 before the intervention to 84.59 after the intervention. Statistical test results also indicated a significant difference between the pre- and post-intervention periods, thus confirming that pocket booklets are effective in improving adolescents' knowledge. Similar findings were also reported by (Purnamasari & Rosita, 2025), who concluded that pocket guides are effective in increasing respondents' knowledge. Health education delivered through this medium was shown to significantly increase knowledge following the intervention, as evidenced by a statistically significant difference between pre- and post-intervention conditions. The consistency between the results of previous studies and this study further strengthens the evidence that pocketbooks are an effective educational medium for increasing respondents' knowledge of mental health.

Adolescents' low level of knowledge about mental health can increase their vulnerability to various psychological problems, such as stress, anxiety, depression, and other risky behaviors. This situation indicates that limited understanding of mental health can affect adolescents' ability to recognize, cope with, and overcome the psychological pressures they experience. Therefore, providing mental health education early on in the school setting is a crucial step in ensuring that adolescents can understand their psychological state, manage their emotions adaptively, and be aware of the need to seek appropriate help when facing mental health issues. These findings are supported by Social Cognitive Theory (SCT), proposed by Albert Bandura, which explains that individual behavior is shaped through the reciprocal interaction between personal factors, the environment, and behavior. This theory emphasizes that the learning process occurs through both direct experience and observation of others' behavior, enabling individuals to develop the knowledge, skills, attitudes, and beliefs needed to cope with various situations (Yanuardianto, 2019).

In the context of this study, the pocketbook serves as a learning tool that provides information on mental health in a systematic and easy-to-understand manner. Through the process of reading and comprehending the content of this resource, adolescents gain new knowledge that can shape their understanding and influence how they address various mental health issues. Additionally, a school environment that supports the educational process further reinforces the development of positive behaviors in line with the SCT concept. This theory also emphasizes the importance of self-efficacy and self-regulation that is, an individual's belief in their ability to control their thoughts, emotions, and behaviors when facing psychological stress. With increased knowledge about mental health, adolescents are expected to be able to make sound decisions, adopt more adaptive behaviors, and be aware of the need to seek professional help if they experience mental health issues.

Table 3 shows the distribution of respondents' attitude categories before and after the intervention in both study groups. In the intervention group (n = 67), the pretest results showed that 66 respondents (98.5%) had a positive attitude and 1 respondent (1.5%) had a negative attitude. After receiving education using the pocketbook, all respondents (100.0%) fell into the positive attitude category, meaning there were no longer any respondents in the negative attitude category. In the control group (n = 65), the pretest and posttest results showed the same distribution: all respondents (100.0%) had a positive attitude, and there were no respondents in the negative attitude category.

Before conducting statistical analysis, a normality test was first performed using the Kolmogorov–Smirnov test. The results of the normality test showed that the data distributions differed across the groups. Data with a normal distribution were analyzed using a parametric test, namely the paired t-test, while data without a normal distribution were analyzed using a nonparametric test, namely the Wilcoxon Signed Ranks Test. Therefore, in this study, the intervention group was analyzed using the paired t-test, while the control group was analyzed using the Wilcoxon Signed Ranks Test, in accordance with the results of the normality test. **Table 3** shows that in the intervention group, the minimum attitude scores before and after the treatment using the pocketbook medium were 29 and 45, respectively, while the maximum score for both measurements was 60. In the control group, the minimum attitude score before and after the lecture intervention was 36, while the maximum scores before and after the intervention were 58 and 59, respectively. Based on the average scores, both groups showed an improvement in attitude after the intervention. In the intervention group, the average attitude score increased from 45.45 before the treatment to 52.55 after the treatment. Meanwhile, in the control group, attitude scores also increased, as indicated by the rise in the median score from 48.00 before the treatment to 50.00 after the treatment.

The results of statistical tests on the intervention group, using a paired t-test, showed a significance value of 0.000, while the control group, using the Wilcoxon Signed Ranks Test, yielded a significance value of 0.012. These results indicate that there was a significant difference in attitude scores before and after the intervention in each group. Thus, both the pocketbook and the lecture method were shown to improve respondents' attitudes. However, based on the magnitude of the increase in average scores, the pocketbook medium showed a greater improvement in attitudes compared to the lecture method.

The results of this study are consistent with a study by (Aula & Junaidi, 2022), which showed that education using pocket books as a medium has a significant effect on changes in respondents' attitudes and behaviors. After the intervention was administered, there was a shift toward more positive attitudes, as evidenced by an increase in the proportion of respondents with positive attitudes from 2.9% at the pre-test to 100.0% at the post-test. These results indicate that pocket booklets can serve as an effective educational tool in fostering positive attitudes among respondents. These findings are also supported by a study (Indriani, 2020), which reported that prior to the intervention, the majority of respondents of working age still had knowledge and attitudes in the negative category ($\leq 55\%$). After receiving education through the pocket book medium, the respondents' knowledge and attitudes improved to the positive category (76–100%). The results of the statistical analysis also showed a significant difference between the pre- and post-intervention periods, leading to the conclusion that education delivered via the pocket guide had a significant effect on improving the respondents' attitudes.

According to (Sunaryo, 2004), an attitude is an individual's readiness to respond consistently whether positively or negatively to a stimulus. Such responses involve both cognitive and affective aspects, so attitudes are viewed as fixed reactions to an object. This view is consistent with that of (Notoatmodjo, 2012), who states that an attitude is not an actual action but rather a person's tendency or predisposition to act toward a specific object. Therefore, attitudes serve as a foundation that can influence the emergence of behavior, even if they have not yet been manifested in the form of concrete actions.

The process of attitude formation is influenced by various factors that contribute to an individual's health behavior. One theory that explains this process is Lawrence Green's theory. According to Lawrence Green, the level of health is influenced by behavioral and non-behavioral factors. Health behavior is influenced by three main components: predisposing factors, enabling factors, and reinforcing factors. Predisposing factors are factors that encourage a person to engage in a particular behavior and are related to individual and group motivation. These factors include various internal aspects, such as knowledge, attitudes, perceptions, cultural values, and individual characteristics, including age, gender, educational level, and occupation (Pakpahan Martina et al., 2021).

According to Lawrence Green's theory, knowledge is one of the predisposing factors that plays a crucial role in shaping health attitudes and behaviors. The greater a person's knowledge, the better their ability to understand, assess, and respond to a health issue, thereby fostering the development of more positive attitudes. In this study, mental health education delivered through pocketbooks and lectures served as a stimulus that increased students' knowledge of mental health. This increase in knowledge subsequently contributed to the development of more positive attitudes regarding the importance of maintaining mental health. These positive attitudes then serve as the foundation for the development of more adaptive health behaviors, such as the ability to manage stress, control emotions, seek help when facing psychological problems, and avoid behaviors that can negatively impact mental health. Thus, the results of this study support Lawrence Green's theory, which states that knowledge, as a predisposing factor, plays a role in shaping attitudes and has the potential to promote better health behaviors.

Table 4
Mann-Whitney test

Category	Mean Rank	Sum Of Rank	Mean Rank Difference	P Value
Knowledge				
Intervention	80.32	5381.5	28.07	0.000
Control	52.25	3396.5		
Attitude				
Intervention	78.34	5249	24.05	0.000
Control	54.29	3259		

Before conducting the statistical analysis, a normality test was first performed using the Kolmogorov–Smirnov test. The results of the normality test indicated that the data were not normally distributed, as indicated by a significance value of less than 0.05. Therefore, the subsequent statistical analysis used a nonparametric test, namely the Mann–Whitney test. **Table 4** shows the results of the data analysis using the Mann–Whitney U test for the knowledge variable. A significance value of 0.000 (p -value < 0.05) was obtained, indicating a significant difference between the intervention group and the control group. The mean rank for knowledge in the intervention group was 80.32, which was higher than that of the control group, with a mean rank of 52.25. Furthermore, based on the results of the Mann-Whitney test for the attitude variable, a significance value of 0.000 (p -value < 0.05) was obtained, indicating a significant difference between the intervention and control groups. The mean rank for attitude in the intervention group was 78.34, which was higher than that of the control group, with a mean rank of 54.29.

The results of the analysis show that the use of pocketbooks is more effective in improving high school students' knowledge and attitudes regarding mental health than the lecture method. These findings are supported by a study (Putri, 2020), which reported a significant difference between the use of pocketbooks and conventional methods in terms of respondents' knowledge and attitudes. The study also showed that the average score increase in the group that received the pocketbook intervention was higher than that of the group that received the conventional method, both in terms of knowledge and attitudes. These results indicate that pocketbooks are an effective educational tool for improving knowledge while fostering more positive attitudes.

Similar findings were also reported by (Zein et al., 2023), who stated that pocketbooks are an effective medium for improving the knowledge and attitudes of adolescents at Wiradesa State High School 1 regarding risk factors for noncommunicable diseases. In line with this, an international study conducted by (Chairani, 2022) also showed that pocketbooks are an effective health education medium for adolescents. Following the intervention, the study reported a significant increase in both the respondents' knowledge and attitudes. The consistency between the results of previous studies and this study further strengthens the evidence that pocketbooks are an educational medium capable of improving adolescents' knowledge and attitudes.

However, not all studies indicate that pocketbooks are always superior to other educational media. (Faiqatul & Solikhin, 2026), who compared the effectiveness of pocketbooks with flip charts, found that both media were equally effective in increasing respondents' knowledge, with no significant difference in effectiveness. These findings suggest that the success of an educational intervention is influenced not only by the type of medium used but also by various other factors, such as the delivery method, the intensity of material presentation, the characteristics of the target audience, and the level of respondent participation during the learning process.

The effectiveness of the pocketbook medium in this study can be explained by its characteristics, which present information concisely, systematically, and in an easy-to-understand manner, thereby making it easier for students to absorb and retain the material presented. Additionally, this medium can be studied independently and read repeatedly as needed, so that the process of reviewing the information helps reinforce understanding. Unlike the lecture method, which tends to be one-way and relies on the presenter's ability to convey information in a single session, the pocketbook provides students with the flexibility to learn at their own pace and according to their individual abilities. These conditions allow for a more optimal process of information absorption, increase interest in learning, and strengthen the internalization of the material. The increase in knowledge gained through this medium subsequently contributes to the development of a more positive attitude toward the importance of maintaining mental health.

CONCLUSION

Education using a mental health pocketbook significantly improved high school students' knowledge and attitudes regarding mental health. Improvements were also observed in the control group that received conventional lecture-based education; however, the magnitude of change differed between the intervention and control groups following the educational intervention. These findings indicate that pocketbooks can serve as an effective school-based mental health promotion medium by providing concise, structured, portable, and reusable information that is appropriate for adolescent learners. Integrating pocketbook-based education into school health promotion activities may strengthen mental health literacy, support more positive attitudes, and complement existing lecture-based approaches. Schools, teachers, and health professionals should therefore consider incorporating adolescent-friendly pocketbooks into mental health education programs. Future studies should include larger and more diverse samples, longer follow-up periods, and multivariable or longitudinal analyses to determine whether improvements in knowledge and attitudes are sustained and translated into help-seeking behavior and other positive mental health outcomes.

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AUTHORS' CONTRIBUTION

Erina Widiyanti Azis conceived the study, developed the research methodology, conducted the data analysis, and prepared the original manuscript. Aswadi contributed to the study design, supervised the research process, and critically reviewed the manuscript. Yessy Kurniati contributed to data interpretation and manuscript review. Tri Addya Karini contributed to data analysis and critical revision of the manuscript. Rahmat contributed to the interpretation of the findings and reviewed the manuscript for important intellectual content. All authors read and approved the final version of the manuscript.

COMPETING INTEREST

The author(s) declare no potential conflict of interest with respect to the research, authorship, or publication

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