

RESEARCH ARTICLE

Influence of Adolescent Reproductive Health Promotion Media Booklet on Knowledge and Attitude of Adolescents Living in Work Area of Ibrahim Adjie Public Health Center in 2018

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Abstract

Adolescent period is a critical period that requires quality health services. The aim of this study was to analyze the effect of health education through booklet media on the knowledge and attitude towards reproductive health among adolescents. This was a quasi-experimental case control study with nonequivalent two group design conducted on 282 students of SMP Negeri 37, a public junior high school, in the work area of Ibrahim Adjie Public Health Center in Bandung city during December 2018–May 2019. Subjects were divided into two groups, intervention and control groups, with 141 subjects in each group. Data collected were tested for normality and homogeneity using Kolmogorov-Smirnov and Levene tests, respectively, followed by a bivariate analysis using Wilcoxon test to determine the difference. Knowledge of all students in both groups was poor during pre-test with an increase found in 135 subjects (95.7%) in the intervention group ($p=0.001$) and 63 subjects (44.7%) in the control group ($p=0.003$) based on the post-test results. Negative attitude was also seen in both groups during pre-test, with a shift towards positive attitude was evident in 134 students (95.0%) in the intervention group ($p=0.001$) and 117 students (83.0%) in the control group ($p=0.002$) based on post-test results. This presence that health information conveyed through booklet has a probability of giving 0.995 times stronger influence leaflet. Thus, the use of booklet can improve knowledge and attitude towards adolescent reproductive health.

Key words: Adolescent, attitude, knowledge, reproductive health booklet

Pengaruh *Booklet* Media Promosi Kesehatan Reproduksi Remaja terhadap Pengetahuan dan Sikap Remaja yang Bertempat Tinggal di Wilayah Kerja Puskesmas Ibrahim Adjie Tahun 2018

Abstrak

Masa remaja merupakan masa kritis yang membutuhkan pelayanan kesehatan yang berkualitas. Tujuan penelitian ini adalah menganalisis pengaruh pendidikan kesehatan melalui media *booklet* terhadap pengetahuan dan sikap remaja tentang kesehatan reproduksi. Penelitian ini merupakan penelitian *quasi-experimental case control* dengan rancangan *nonequivalent two group* yang dilaksanakan terhadap 282 siswa/i SMP Negeri 37 di wilayah kerja Puskesmas Ibrahim Adjie Kota Bandung selama Desember 2018–Mei 2019. Subjek dibagi menjadi dua kelompok, yaitu kelompok intervensi dan kontrol dengan 141 subjek di setiap kelompok. Data yang terkumpul diuji normalitas dan homogenitasnya masing-masing menggunakan Uji Kolmogorov-Smirnov dan Levene, dilanjutkan dengan analisis bivariat menggunakan Uji Wilcoxon untuk mengetahui perbedaannya. Pengetahuan semua siswa pada kedua kelompok kurang saat *pre-test* dengan peningkatan pengetahuan 135 subjek (95,7%) pada kelompok intervensi ($p=0,001$) dan 63 subjek (44,7%) pada kelompok kontrol ($p=0,003$) berdasar atas hasil *post-test*. Sikap negatif juga terlihat pada kedua kelompok selama *pre-test* dengan pergeseran ke arah sikap positif 134 siswa (95,0%) pada kelompok intervensi ($p=0,001$) dan 117 siswa (83,0%) pada kelompok kontrol ($p=0,002$) berdasar atas hasil *post-test*. Informasi kesehatan yang disampaikan melalui media *booklet* berpeluang memberikan pengaruh 0,995 kali lebih kuat daripada media *leaflet*. Dengan demikian, penggunaan *booklet* dapat meningkatkan pengetahuan dan sikap remaja terhadap kesehatan reproduksi. Simpulan, terdapat pengaruh pendidikan kesehatan melalui media *booklet* terhadap pengetahuan dan sikap remaja tentang kesehatan reproduksi.

Kata kunci: *Booklet* kesehatan reproduksi, pengetahuan, remaja, sikap

Received: 6 August 2019; Revised: 18 September 2019; Accepted: 2 March 2020; Published: 31 August 2020

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Introduction

Adolescent is a rapid growth and development period that involves physical, psychological, and intellectual growth and development. This period has unique characteristics including full of curiosity, love for adventures and challenges, and tendency to be involved in risk taking behaviors without good considerations. When adolescents decision making process during a conflict leads to a bad decision, they will be involved in risk behaviors that may have short term and long terms effects on physical and mental health.¹

A study in 2012 by the National Agency for Demography and Family Planning (*Badan Kependudukan dan Keluarga Berencana Nasional*, BKKBN) presented that most of the problems experienced during the transitional period of adolescents are problems related to the triad of adolescent reproductive health (sexuality, HIV/AIDS, and illicit drug use).² A survey conducted by health offices in West Java and Bali stated that 5–7% of adolescents have experienced unwanted pregnancy and 12.2% have gone through abortion.³

The Ministry of Health of the Republic of Indonesia has introduced an adolescent friendly health service under the name of *pelayanan kesehatan peduli remaja* (PKPR) in the public health center (*pusat kesehatan masyarakat, puskesmas*) in 2014, which is based on the WHO recommendations. The services provided in PKPR include information and education services, clinicomedical services including relevant supporting tests, counseling, healthy lifestyle skill development, peer counselor training, and sociomedical referral services.^{4,5} In its implementation, PKPR in *puskesmas* provides specific services that aim to meet the needs, wish, and preferences of adolescents.⁶

Currently, adolescents only receive information on reproductive health through education or as a part of a subject in their school. Nevertheless, an interview conducted to adolescents revealed that adolescents have never received reproductive health education through leaflet or booklet media both from school and *puskesmas*.^{7–9} Leaflet is one of education media that are often used by *puskesmas* educator to increase knowledge. Leaflet has several disadvantages, including short period of information retainment and very brief explanation. Another printed media that is able to improve the effectiveness of education is booklet.^{10–12} Booklet is one of printed media that

can help health care workers to convey health messages through a book that contains text and images.¹³ Booklet can increase knowledge adequately and the use of booklet has been shown to correlate with significant improvement of knowledge and attitude.^{10–12}

This study aimed to analyze the influence of booklet as an education media on adolescents' knowledge and attitude towards reproductive health.

Methods

This was a quasi-experimental study with nonequivalent two group design conducted on junior high school adolescents who went to a public junior high school, SMP Negeri 37, in the work area of Puskesmas Ibrahim Adjie Bandung during the period of December 2018 to May 2019. Non-probability sampling was performed to get adequate number of subjects and 282 students were recruited as subjects. The subjects of this study were students who met the inclusion criteria and expressed their willingness to participate in the study after receiving information by signing the informed consent form.

The instruments used for collecting data include questionnaires for knowledge and attitude. The knowledge questionnaire consisted of 20 questions. A score was assigned to each question and the total score was used to classify the knowledge level using the following category: 76–100%=good, 56–75%=fair, and ≤56%=poor. The attitude questionnaire consisted of 20 statements. A score was assigned to each question and the total score was used to classify the attitude using the following category: 51–80=positive and 20–50=negative. The inclusion criteria in this study were adolescents aged 14–16 years and active students in the 7th grade of junior high school. The exclusion criteria was 7th grade students who did not come for data collection session.

Ethical clearance for this study was obtained from the Health Ethics Committee of Applied Midwifery Master Study Program in STIKes Dharma Husada Bandung with the issuance of the ethical clearance No. 064/SDHB/SKet/PSKBS2/I/2019.

Results

The analysis of variance on the characteristics of the subjects resulted in $p > 0.05$. Hence, no

Table 1 Subject Characteristic Distribution

Characteristics	Intervention Group (Booklet) n=141	Control Group (Leaflet) n=141	p Value*
Gender			
Male	69	64	0.553
Female	72	77	
Living arrangement			
With parents	129	124	0.522
Other family member	5	8	
One of the parents	7	9	
Rent a room/in dormitory	0	0	
Information source			
Printed media	23	28	0.703
Electronic/internet media	10	14	
Peer	86	79	
Health worker	15	11	
Parents	7	9	

Note: descriptive analysis *t test

significant differences were found among the subjects.

Analysis using Wilcoxon test presented a difference between pre-test and post-test results of knowledge questionnaire ($p=0.001$) in the intervention group as well as a difference between the pre-test and post-test knowledge in the control group ($p=0.003$).

For the attitude component, a difference was also found between pre-test and post-test in the intervention group ($p=0.001$) and control group ($p=0.002$).

Analysis using multiple logistic regression showed that respondents who received health education through booklet has a possibility to get 0.995 times higher knowledge compared to those who received education through leaflet.

The $R^2=17.2\%$ was interpreted as showing that the influence produced by booklet in providing health education to subjects was 17.2%, while the remaining 82.8% was due to other factors that were not assessed in this study.

Discussion

Characteristics of the respondents observed in this study include gender, living arrangement, and information source. These are considered as confounding variables that may influence the results of the study. Based on the results from the Indonesian Adolescent Reproductive Health Survey (*Survei Kesehatan Reproduksi Remaja Indonesia*, SKKRI), risk behaviors relate to knowledge, attitude, age, gender, and access to

Table 2 Influence of Health Education Using Booklet Compared to Leaflet on Adolescent Knowledge and Attitude

Knowledge and Attitude	Intervention (Booklet)		Mean Rank (p Value*)	Control (Leaflet)		Mean Rank (p Value*)
	Pre-test	Post-test		Pre-test	Post-test	
Knowledge						
Good	0 (0%)	135 (95.5%)	71.00 (0.001)	0 (0%)	63 (44.7%)	71.00 (0.003)
Fair	0 (0%)	6 (4.3%)		0 (0%)	31 (21.0%)	
Poor	141 (100%)	0 (0%)		141 (100%)	47 (33.3%)	
Attitude						
Positive	0 (0%)	134 (95.0%)	0.001	0 (0%)	117 (83.0%)	71.00
Negative	141 (100%)	7 (45.0%)	(0.001)	141 (100%)	24 (17.0%)	(*0.002)

Note: Wilcoxon test

Table 3 Comparison of Influence between Use of Booklet and Leaflet as Health Education Media on Reproductive Health Knowledge Level and Attitude among Adolescents

Variables	Coef. B	SE	p Value*	OR Adjusted (95%CI)
Initial Model				
Knowledge	-0.005	0.001	0.000	0.995 (0.993–0.997)
Attitude	-0.003	0.002	0.240	0.997 (0.993–1.002)
End Model				
Knowledge	-0.005	0.001	0.000	0.995 (0.993–0.997)

Note: *multiple logistic regression test, R²=17.2%

information media.¹⁴

Health education through booklet media has been suggested to produce a mean knowledge score that is significantly different compared to before receiving health education through booklet media.^{10–12} The same is also true for the mean attitude score after receiving health education booklet in one day. This supports the assumption of Bhinnety¹⁵ that stated the ability of human being to retain newly gained information in the temporary memory bank is very limited and vulnerable to forgetfulness if there is no opportunity to repeat the information. In this study, adolescents had received inadequate health education before the study.

Adolescents have the right to receive health education to improve their knowledge and attitude in maintaining their reproductive health so that they can protect themselves from adolescent reproductive health problems. Health education to increase positive behaviors is influenced by various factors, including media used.^{16,17} Health education media is a vehicle and effort to present information in the form of printed and electronic media so that the knowledge of the target will improve and will eventually leads to positive health-related behaviors.¹⁸ Media has a strong influence in changing the health psychology and behaviors.¹⁹ Furthermore, Gold et al.²⁰ also concluded that the use of booklet in health education improves adolescents' knowledge and attitude towards reproductive health.

This current study showed that the difference in the knowledge and attitude gained through the use of booklet and leaflet before health education was significant ($p \leq 0.05$). The difference was also significant after health education was performed. This shows that there was a difference in respondents' knowledge and attitude between those who received health education through

booklet and those who received it through leaflet.^{21–24}

The higher increase in knowledge and attitude after receiving health education through booklet can be seen as an opportunity to achieve better health education results. Nurrasyidah et al.²⁴ stated that booklet is effective due to its broad use, easy-to-carry nature, and personal presentation of information. Booklet is already widely used as an effective health education media to provide information on reproductive and sexual health because it can change people's behavior as shown in Africa and Pakistan.²⁶ Different from communities in other countries, Indonesian people often considered reproductive health education for adolescents as teaching sex to adolescents that the majority still considers this as a taboo. This leads to inadequate information on reproductive health for adolescents. Booklet as a printed media has the advantages of durability, ability to be used by many people, inexpensive price, no requirement for electricity, easy to carry, and easy to understand.²⁷

Conclusion

Health education using booklet media influences adolescents' knowledge and attitude towards reproductive health.

Conflict of Interest

All authors stated that there no conflict of interest in this study.

Acknowledgment

We would like to thank the Principal of SMPN 37 Bandung city and 7th grade students of SMPN 37 for their participation in this study.

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