

The Effectiveness of Team Based Learning to Improve Adolescent Reproductive Health Promotion Behaviors in Islamic Boarding Schools, Aceh Besar District

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ABSTRAK

Team-Based Learning (TBL) merupakan metode pembelajaran aktif yang dapat digunakan untuk meningkatkan perilaku promosi kesehatan reproduksi remaja. Penelitian ini bertujuan mengidentifikasi efektivitas metode *Team-Based Learning* dalam meningkatkan determinan perilaku promosi kesehatan reproduksi remaja di pondok pesantren wilayah Kabupaten Aceh Besar. Penelitian ini menggunakan desain kuasi-eksperimen dengan pendekatan kuantitatif komparatif. Sampel terdiri atas 110 remaja putri berusia 15–19 tahun yang dibagi secara merata menjadi kelompok intervensi dan kontrol. Kelompok intervensi memperoleh empat sesi pembelajaran TBL selama dua minggu, sedangkan kelompok kontrol tidak memperoleh intervensi TBL selama periode penelitian. Data dikumpulkan menggunakan kuesioner

laporan mandiri dan dianalisis menggunakan uji Wilcoxon dengan program R. Hasil penelitian menunjukkan adanya peningkatan skor pada kelompok intervensi setelah diberikan TBL pada faktor personal, persepsi manfaat, persepsi hambatan, efikasi diri, apresiasi, pengaruh interpersonal, pengaruh situasional, minat, kesadaran untuk bertindak, kekuatan individu, pemberdayaan, partisipasi, kontrol, perawatan kebersihan genital, penanganan masalah menstruasi, serta deteksi penyakit genital, dengan nilai $p < 0,05$. Dengan demikian, TBL terbukti efektif meningkatkan determinan perilaku promosi kesehatan reproduksi remaja di pondok pesantren dan direkomendasikan sebagai metode pendidikan kesehatan bagi remaja.

ABSTRACT

Team-Based Learning (TBL) is an active learning method that can be used to enhance behaviors promoting adolescent reproductive health. This study aimed to determine the effectiveness of the *Team-Based Learning* method in improving the determinants of reproductive health-promoting behaviors among adolescents in Islamic boarding schools in the Aceh Besar Regency. A quasi-experimental design with a comparative quantitative approach was employed. The sample consisted of 110 female adolescents aged 15–19 years, evenly divided into intervention and control groups. The intervention group received four TBL sessions over two weeks, while the control group did not receive the TBL intervention during the study period. Data were collected using self-report questionnaires and analyzed using the Wilcoxon test via the R program. The results showed significant improvements ($p < 0.05$) in the intervention group's scores following the TBL intervention across

various factors: personal factors, perceived benefits, perceived barriers, self-efficacy, appreciation, interpersonal influences, situational influences, interest, commitment to a plan of action, individual strength, empowerment, participation, control, genital hygiene practices, management of menstrual issues, and detection of genital diseases. Thus, TBL proved effective in enhancing the determinants of reproductive health-promoting behaviors among adolescents in Islamic boarding schools and is recommended as a health education method for adolescents.

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INTRODUCTION

Since the beginning of the 2000s, in Europe, approximately 21% of adolescents aged 15 years were sexually active and at risk of becoming pregnant, while 20% had undergone unsafe abortions. In addition, HIV cases increased from 3.5% per 100,000 persons in 2000 to 6.7% in 2013. The rate of cervical cancer among women aged 15–44 years also increased considerably, with approximately 28,000 women dying from the disease (World Health Organization Regional Office for Europe [WHO Regional Office for Europe], 2017).

A study by Mairo et al. (2015) revealed that 68% of adolescent girls had reproductive health problems, including menstrual problems, abnormal vaginal discharge, and genital itching. Reproductive health problems among adolescents need to receive greater attention from relevant stakeholders, particularly in relation to access to health services, personal health-care behavior, and the environmental health conditions of adolescents in boarding schools, where they spend 24 hours with their peers (Mairo et al., 2015).

The survey results at two Modern Islamic Boarding Schools (pesantren) in Aceh Besar District in March 2019 indicated that the pesantren are educational institutions located far from urban areas and are attended by students from Aceh Besar, Banda Aceh, and other regions. Differences in the cultural backgrounds of students (santri) in pesantren may contribute to reproductive health problems, which can be triggered by humid dormitory conditions, inadequate lighting, overcrowded rooms, and insufficient reproductive health information.

Based on these data, the researchers used the Health Promotion Model proposed by Pender to determine factors influencing adolescent reproductive health promotion. The Health Promotion Model emphasizes individual characteristics and experiences, behavior-specific cognitions and affect, and behavioral outcomes as important components influencing health-promoting behavior (Srof & Velsor-Friedrich, 2006). Previous research has also demonstrated the importance of factors related to health promotion behavior in adolescent reproductive health (Kholifah et al., 2017).

This research is essential because threats to adolescent health are concerning and require greater attention. The fact that many adolescents do not pay sufficient attention to their reproductive health because of a lack of knowledge and self-awareness is one of the major problems. Therefore, one effort to promote adolescent reproductive health is through a learning intervention method called Team-Based Learning (TBL). This intervention aims to improve adolescents' understanding of reproductive health.

Team-Based Learning (TBL) is an active learning strategy implemented in small groups in which students play a vital role and are responsible for individual and group learning, while teachers facilitate the learning process and provide feedback on student activities (Johnson, 2009). TBL is also a team-based learning method with clear objectives and procedures. Student groups are actively involved in assignments and focus on problems presented during the learning process (Sisk, 2011). Evidence from previous studies also indicates that TBL can improve perceived teamwork and academic performance among students in health-related education (Park et al., 2015).

RESEARCH METHODOLOGY

The quasi-experimental design was used to identify samples, generalize the population, and examine the impact of Team-Based Learning on a study controlled by extraneous factors that may influence the results of the study 11. The population of this study was all Madrasah Aliyah (senior high) students in two Modern Islamic Boarding Schools, Aceh Besar District, 1,042 students in total. The sampling method used was the stratified random sampling using Cohen's 1 table with a sample size of 99 students with a power of 0.80, medium effect size 0,40 and $\alpha = 0,05$ 1. In order to avoid drop out, the sample was added by 10% and ended up with $108,9 = 110$ students as respondents. The respondents divided into two groups, 55 students in the intervention group and other 55 in the control group. The inclusion criteria were female adolescent, majoring in science and aged 15-19 years.

The data collection tool used was a standardized questionnaire adopted from a research on adolescent reproductive health by 5. The questionnaire consists of eight sections of questions; A, B, C, D, E, F, G, and H. The research was conducted on 17 to 29 February 2020 at two Modern Islamic Boarding Schools in Aceh Besar. After the CVI (Content Validity Index) was processed, the researchers distributed informed consent to the respondents. If they were willing to participate in the study, the informed consent would be signed by the parents. Furthermore, the respondents of both groups answered the pretest

questions and only the intervention group had four sessions of TBL intervention in two weeks and had the posttest at the end of the session. The control group was only given reproductive health education after the posttest. All data were entered into the Ms. Excel work sheet. Socio-demographic data were collecting using descriptively analysed. The data were collected using self-reported questionnaires, and were analyzed using R program.

RESEARCH RESULTS AND DISCUSSION

In this study, demographic data are age, race, parents income, menarche timing, has access to reproductive health information, Sources of information, and The educator. **Table 1** reports the age of the majority of respondents in this study for the control group was 16 years while the intervention group was 15 years. The table indicates that the majority of respondents in the control group aged 16 years , while, those in the intervention group was 15 years old. All of respondents living in pesantren and had experienced menarche and most of the students in control group have had menarche since they were in elementary school years while those in the intervention group have had menarche since junior high school years.

Table 1. Demographic data of adolescents of islamic boarding schools

Adolescents demographic	Control group		Intervention group	
	n	%	n	%
Age				
15 years	10	18	28	51
16 years	35	64	22	40
17 years	10	18	5	9
Race				
Aceh	53	96	54	98
Non-Aceh	2	4	1	2
Parents' income				
> 5,000,000 (high)	13	24	20	36
2,500,000–5,000,000 (medium)	27	49	32	58
< 2,500,000 (low)	15	27	3	5
Menarche timing				
In elementary school	35	64	25	45
In junior high school years	20	36	30	55
Has access to reproductive health information				
Yes	36	65	41	75
Never	19	36	14	25
Sources of information				
None	19	35	14	25
School	31	56	30	55
Home	3	5	0	0
Public health center	1	2	5	9
Internet	1	2	6	11

The educator				
None	19	35	14	25
Teacher	28	51	24	44
Parents	3	5	0	0
Health worker	5	9	17	31

In this study, wilcoxon test using R program. This result indicates that there is a significant difference between control group and intervention group (p value < 0.05) of adolescents before and after the Team Based Learning intervention in the Modern Islamic Boarding School.

Table 2. Difference test scores

Variables	Measurement	Mean	SD	P Value
Personal Factor Personal Factor				
Control group	Pretest	2.43	0.50	0.510
	Posttest	2.49	0.54	
Intervention group	Pretest	2.36	0.49	0.000
	Posttest	2.63	0.49	
Perceived Benefit				
Control group	Pretest	2.47	0.60	0.860
	Posttest	2.50	0.54	
Intervention group	Pretest	2.38	0.53	0.000
	Posttest	2.90	0.35	
Perceived Barriers				
Control group	Pretest	1.76	0.74	0.660
	Posttest	1.81	0.72	
Intervention group	Pretest	2.05	0.70	0.000
	Posttest	2.76	0.43	
Self-Efficacy				
Control group	Pretest	2.54	0.50	0.860
	Posttest	2.50	0.57	
Intervention group	Pretest	2.38	0.59	0.000
	Posttest	2.76	0.43	
Appreciations				
Control group	Pretest	2.65	0.48	0.940
	Posttest	2.63	0.52	
Intervention group	Pretest	2.38	0.53	0.000
	Posttest	2.86	0.31	
Interpersonal Influence				
Control group	Pretest	2.56	0.50	0.850
	Posttest	2.58	0.50	
Intervention group	Pretest	2.45	0.50	0.000
	Posttest	2.90	0.29	
Situational Influences				
Control group	Pretest	1.69	0.60	1.000
	Posttest	2.80	0.40	
Intervention group	Pretest	1.83	0.57	0.000
	Posttest	2.58	0.50	
Interest				

Control group	Pretest	2.80	0.40	1.000
	Posttest	2.80	0.40	
Intervention group	Pretest	2.47	0.50	0.000
	Posttest	2.92	0.26	
Awareness to Act				
Control group	Pretest	2.25	0.82	0.710
	Posttest	2.18	0.88	
Intervention group	Pretest	2.27	0.68	0.000
	Posttest	2.90	0.29	
Individual Strength				
Control group	Pretest	2.41	0.74	0.530
	Posttest	2.32	0.77	
Intervention group	Pretest	2.40	0.56	0.000
	Posttest	2.72	0.53	
Empowerment				
Control group	Pretest	1.96	0.74	0.250
	Posttest	2.12	0.77	
Intervention group	Pretest	2.05	0.73	0.000
	Posttest	2.41	0.66	
Participation				
Control group	Pretest	2.05	0.78	0.270
	Posttest	2.21	0.74	
Intervention group	Pretest	2.05	0.70	0.000
	Posttest	2.40	0.78	
Control				
Control group	Pretest	1.96	0.77	0.130
	Posttest	2.18	0.75	
Intervention group	Pretest	2.27	0.72	0.000
	Posttest	2.43	0.69	
Genital Hygiene Care				
Control group	Pretest	2.52	0.60	0.980
	Posttest	2.50	0.66	
Intervention group	Pretest	2.23	0.69	0.000
	Posttest	2.67	0.51	
Menstruation Problems Management				
Control group	Pretest	2.65	0.52	0.640
	Posttest	2.70	0.46	
Intervention group	Pretest	2.27	0.68	0.000
	Posttest	2.78	0.42	
Detecting Genital Disease				
Control group	Pretest	1.98	0.97	1.000
	Posttest	1.98	0.97	
Intervention group	Pretest	1.90	0.84	0.000
	Posttest	2.54	0.79	

The study results revealed that the mean scores of personal factors, perceived benefits, perceived barriers, self-efficacy, appreciation, interpersonal influences, situational influences, interest, awareness to act, individual strength, empowerment, participation, control, genital hygiene care, menstrual problem management, and detection of sexually

transmitted diseases (STDs)/genital diseases increased in the intervention group after the respondents received reproductive health education using the Team-Based Learning (TBL) method.

Adolescent personal factors include knowledge, self-esteem, self-efficacy, self-regulation, self-belief, and enthusiasm, which can influence sexual behavior related to adolescent health. Dasuki and Waluyo (2014) reported that personal factors, including knowledge of sexual and reproductive health, attitudes toward sexuality, self-esteem, and self-efficacy, are associated with premarital sexual behavior among adolescents. The study indicated that adolescents with lower levels of reproductive health knowledge and self-efficacy were more likely to engage in risky premarital sexual behavior than those with higher levels of knowledge and self-efficacy. In the present study, adolescents who received reproductive health education demonstrated improved personal factors, including beliefs and attitudes toward avoiding dating before marriage.

Srof and Velsor-Friedrich (2006) explained that perceived benefits and perceived barriers are important components of Pender's Health Promotion Model and can influence health-promoting behavior among adolescents. The perception of greater benefits from reproductive health services may encourage adolescents to recognize the importance of such services and support healthier decisions. In addition, the availability of accurate and accessible reproductive health information can improve adolescents' knowledge and understanding of how to maintain their reproductive health.

According to Srof and Velsor-Friedrich (2006), information and individual perceptions of benefits, barriers, and self-efficacy are important components in the process of health-promoting behavior. Therefore, learning through the Team-Based Learning method may help adolescents gain a better understanding of reproductive health. In this study, reproductive health learning through TBL improved adolescents' knowledge, as demonstrated by the increase in scores obtained before and after the learning intervention.

The findings indicate that Team-Based Learning can be an important method for improving adolescents' learning experiences and knowledge related to reproductive health. Sisk (2011) reported that TBL is an active learning method designed to help students achieve learning objectives while developing their ability to function effectively in teams. Previous research has also indicated that TBL can increase student engagement and may contribute to improved learning outcomes.

Although Team-Based Learning has previously been applied in various educational settings, relatively few studies have specifically examined its application to adolescent

reproductive health. This is important because reproductive health problems frequently occur during adolescence. Therefore, the researchers applied TBL to reproductive health education and found a positive effect on adolescents' reproductive health knowledge.

Huriah (2018) stated that student-centered learning is an important approach in health professional education, including nursing education. Team-Based Learning is consistent with this approach because students are actively involved in the learning process and are encouraged to participate in individual and group activities. In the present study, the application of TBL encouraged adolescents to become more active and confident when sharing their opinions with peers.

Similar research conducted by Park et al. (2015) found that Team-Based Learning is a learner-centered, group-based learning strategy that emphasizes preparation before class, individual and group readiness, and application of knowledge through cases or problems. TBL allows students to play an active role in the learning process and to develop teamwork and academic performance. Through TBL, adolescents can develop their abilities and skills because they have a significant role in the learning process, particularly in solving problems collaboratively with their team. This finding is consistent with the present study, although the previous study focused on health assessment, whereas the present study focused specifically on adolescent reproductive health.

CONCLUSIONS AND SUGGESTIONS

the effectiveness of Team Based Learning method has been proven to have positive impact on adolescent reproductive health determinants including personal factors, perceived benefits, perceived barriers, self-efficacy, appreciations, interpersonal influences, situational influences, interest, awareness to act, individual strength, empowerment, participation, control, genital hygiene care, menstrual problems management, and detecting STDs/venereal diseases. Therefore it is recommended for Islamic Boarding Schools to implement Team Based Learning as a health educational method to improve adolescent reproductive health behaviors.

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