



Differences Between Think Pair Share and Stratagem Learning Models in Improving Knowledge of Premature Sex Prevention in Students at SMA Samarinda

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A B S T R A C T

Adolescent growth and development causes physical, cognitive and psychosocial changes, which are followed by sexual maturity, followed by attraction to the opposite sex, thereby triggering the potential for premarital sexual behavior. This problem requires preventive treatment efforts in the form of health education. Health education models that are suitable for upper secondary students are think-pair-share (TPS) and stratagem. This research aims to see the differences in the effectiveness of the think-pair-share and stratagem health education methods on knowledge of premarital sex prevention. This research design uses a quasi-experimental pre- and post-test with a control group design. The population in this study was 120 class X students at SMA 11 Samarinda. The sampling technique used was random sampling with a total of 42 samples each. Adolescent students' prevention knowledge was measured with a questionnaire consisting of 16 items. The research results show a change in knowledge score of 4, given the TPR model education, while the Stratagem model increases by 6. The results of the Mann-Whitney test show a p-value of 0.000 (<0.05), where there is a difference between the TPS and Stratagem models. The stratagem model is suitable for teenagers because of the teenager's character who likes relaxed and fun learning.

INTRODUCTION

Adolescence is a transitional stage from childhood to adulthood, where significant growth and development occur (Handayani, 2020). Adolescent problems in the developmental stage with sexual maturity are followed by an interest in the opposite sex. Lack of sex education from an early age is a risk of premarital sexual behavior. Sex education can help reduce the risk of premarital sex in adolescents (Ekasari et al., 2020).

WHO data in 2018 stated that premarital sexual behavior of adolescents after 18 years of age was 40-80% in most countries in Africa and Asia. The results of the East Kalimantan Indonesian Family Planning Association (PKBI) Survey showed that 300 adolescents (12%) aged 12-21 years had had sex, where 56% of adolescents at the high school/vocational school level had routinely had sexual relations like married couples (Ilmy & Safrudin, 2021).

This tendency for premarital sexual behavior cannot be separated from the character of adolescents, who tend to have a desire to try new things, a high curiosity, so that if it is not balanced with knowledge, a strong religious foundation will lead to premarital sexual behavior (Safrudin & Wibowo, 2021). Lack of knowledge, curiosity, and lack of wisdom in making decisions are triggers for the high incidence of premarital sex among adolescents (Pardede et al., 2021). Lack of information is caused by cultural factors, where sex education is considered taboo for children or adolescents (Safitri & Safrudin, 2020).

The implementation of sex education in Indonesia is still considered taboo, so it has not been implemented optimally (Faisal et al., 2021). The impact of inadequate sex education is the existence of cases due to premarital sex, such as premarital pregnancy, sexually transmitted diseases, such as HIV/AIDS (Asshiddiq, 2020). Knowledge is strengthened by health education efforts, where sex health education will shape attitudes and stimulate positive behavior.

The Health Education Model that can be carried out by looking at the characteristics of adolescents is the think-pair-share (TPS) and the stratagem models. The TPS model includes aspects of critical thinking (think), conveying ideas in pairs (pair) and conveying discussion results (share) within the scope of group discussions (Ugwu, 2019). TSP provides opportunities to optimise learning outcomes, increase the understanding and activeness of adolescents in discussions (Astuti & Kusumawardhani, 2023; Mbana, 2024).

The stratagem model of learning involving games in health education is suitable for adolescents, considering their cognitive maturity (Pragita et al., 2018). The stratagem education model was carried out in a study Purniasari et al. (2021), explaining that the stratagem method is effective in increasing knowledge from an average of 53.6% to almost entirely good at 96.4% with a p-value of $0.000 < 0.05$, meaning that the stratagem method affects increasing knowledge about sexuality in adolescents.

From the results of a preliminary study conducted at SMA 11 Samarinda on August 22, 2024, it was found that there was no sexual health education program specifically provided by the school or health workers. After interviewing 10 students, 8 of whom said they had dated and were dating, they also did not understand the impact of premarital sexual behavior. The TPR and stratagem models are effective in increasing adolescent knowledge. So, researchers are interested in seeing the differences in the influence of the two learning models in increasing knowledge about premarital sex in adolescents.

METHOD

This type of research is quantitative research with a Quasi-Experimental pre- and post-design with a control group design (Notoatmodjo, 2018). The population in the study were 120 grade X students at SMA 11 Samarinda. The side technique with stratified random sampling obtained 84 samples for the intervention and control groups. This study was conducted from 12-29 December 2024. Data collection was carried out by dividing into TPR and stratagem groups. Furthermore, a pretest was carried out related to premarital sex knowledge, followed by providing intervention for 2 days with the topic of introducing sexuality; premarital sex and its impacts were carried out in both learning models. On the third day, a posttest was carried out. The measuring instrument used a premarital sex knowledge questionnaire using a Guttman scale of 16 question items adopted from Junita's research in 2018. The results of the validity

test with a range of 0.489-0.851, and a reliability test of 0.766 (Junita, 2018). This research has also gone through licensing and passed ethics conducted at Mulawarman University with number: 350/KEPK/FK/XII/2024. Data analysis using the Mann-Whitney test.

RESULT

Respondents' Age and Gender Characteristics

Table 1. Frequency Distribution of Respondent Characteristics

Respondent Characteristics	TPR Model Health Education Group		Stratagem Model Health Education Group	
	Frequency	Percentage (%)	Frequency	Percentage (%)
Gender				
Male	20	47.6	19	45.2
Female	22	52.4	23	54.8
Age				
14 years	3	7.1	3	7.1
15 years	15	35.7	14	33.3
16 years	22	52.4	24	57.1
17 years	2	4.8	1	2.4
Total	42	100	42	100

Primary Data Source 2024

The characteristics of the gender of students in the TPR model education group are mostly female, as many as 22 people (52.4%), most of the respondents are 16 years old, as many as 22 people (52.4%). Strategy model learning is almost all female, as many as 23 people (42%) and 16 years old, as many as 24 people (57.1%).

Results of Normality and Homogeneity Tests

Table 2: Normality Test Results

<i>Shapiro-Wilk</i>	Asymp.sig	Criteria	Conclusion
Pretest model TPR	0.004	< 0.05	Data is not normally distributed
Posttest model TPR	0.000	< 0.05	Data is not normally distributed
Pretest model stratagem	0.003	< 0.05	Data is not normally distributed
Posttest model stratagem	0.000	< 0.05	Data is not normally distributed

Primary Data Source 2024

The results of the normality test show that all data have a value <0.05, meaning that the data is not normally distributed, so that parametric test requirements cannot be carried out.

Table 3: Results of Homogeneity Test

Variable	Sig.	Kriteria	Keterangan
Knowledge	0.002	< 0.05	Data homogen

Primary Data Source 2024

The results of the homogeneity test obtained a p-value of $0.001 < 0.05$, meaning that the data has different or non-homogeneous variables.

Univariate Results of Premarital Sex Knowledge

Table 4: Univariate Analysis of Premarital Sex Knowledge

knowledge	Median	Standard Deviation	95% CI	
			Minimum	Maximum
Pretest Model TPR	20	3.057	19.19	21.10
Posttest Model TPR	24	3.052	22.67	24.57
Pretest Model Stratagem	20	1.819	19.53	20.66
Posttest Model Stratagem	26	1.843	25.76	26.91

Primary Data Source 2024

The average score of premarital sex knowledge before receiving TPR model education was 20, increasing to 24. Meanwhile, the average before being given the stratagem model education was 20 and increasing to 26.

Mann-Whitney Test

Table 6: Results of the Mann-Whitney Test on Premarital Sex Knowledge

Variable	Mean	Z	p-value
Knowledge about Premarital Sex TPR model	32.36	-3.862	0.000
Knowledge about the Premarital Sex Stratagem model	52.64		

Primary Data Source 2024

The difference in knowledge after being given health education using the TPR and stratagem models obtained a p-value of 0.000 <0.05, so it can be concluded that there is a difference between the experimental and control groups after being given health education related to premarital sex at SMA 11 Samarinda.

DISCUSSION

The results of the study revealed that females gender dominated the study. In line with research (Berek et al., 2019). Premarital sex in women is lower than in men, related to moral aspects, where these results are reinforced by the difference test obtained p-value <0.05. Other references explain that sexual behavior does not see absolute gender; it does not mean that women do not have the potential to have free sex, but men and women have the same potential (Cooper et al., 2020; Derbyshire & Grant, 2015).

When looking at growth factors in hormonal changes in men, where increased testosterone will arouse a high interest in things related to sex (Markovic, 2019). In contrast to women, if the estrogen hormone increases, it does not have a significant impact. In addition, psychologically, men are generally more aggressive, very active, very frank and not ashamed to talk about sex problems, unlike women (Cooper et al., 2020).

Research shows that women have better knowledge about premarital sex even though they tend to engage in the same behavior (Putri et al., 2021). According to Rothman et al. (2021), women's age has a positive

correlation with sexual behavior compared to younger women. While for men, it has a more positive tendency for both younger and older ages. This proves that the more mature the reproductive age of adolescents, the higher the tendency of adolescents to engage in sexual behavior (Irwin & Shafer, 2021)

The results of the study on the age characteristics of the TPR group and the stratagem group showed that almost half of the respondents were 16 years old. The Ministry of Health in 2024 explained that in early adolescence, there are significant physical, psychological and social changes. Research states that adolescents have low social self-efficacy so that they are at higher risk of engaging in promiscuous sex. Low social self-efficacy of adolescents means that adolescents will have difficulty in socializing and are less good at carrying themselves so that they are influenced by the surrounding environment, especially their peers (Sartika, 2024).

The results of the study showed that the average score of premarital sex knowledge before receiving TPR model education was 20, increasing to 24. While the average before being given stratagem model education was 20 and increasing to 26. These results show a difference in scores between the TPR model and the stratagem model. These results indicate that the stratagem model is better than the TPS model in increasing the score of premarital sex prevention knowledge.

The stratagem model provides a higher score change because the stratagem model is very suitable for adolescent students. Adolescents tend to like learning models that involve game aspects (Sidiq & Simamora, 2022). In the implementation of the stratagem model, it is carried out by combining discussions about premarital sex with games so that students are not burdened, have fun and increase their competitive spirit (Mubarak et al., 2017). This learning model involves two-way communication, students discuss, and work together in heterogeneous groups to solve problems. Learning with the stratagem method involves two-way communication. The game played will increase competition between groups to excel in winning the game, so that it creates strong motivation to be able to win the game (Pragita et al., 2018). The results of the study Purniasari et al. (2021), show that the stratagem model has an influence on increasing the dangers of sexual behavior in adolescent girls.

Meanwhile, the TPS learning model increases knowledge by opening up new perspectives in more interesting adolescent learning with discussions, pairings that make a teenager's competent soul want to be seen compared to other friends (Sugiarto & Sumarsono, 2024). In addition, the next stage of learning is sharing information with other friends, which strengthens students' understanding in digesting learning outcomes (Kaddoura, 2020). Research conducted by Lianawati et al. (2022), shows the effectiveness of the TPS learning model in strengthening students' understanding of reproductive organ disorders.

These two learning models have differences with the results of the Mann-Whitney test showing a p-value of 0.000 (<0.05). This means that there is a difference between the TPS learning model and the Stratagem

model regarding premarital sex in students at SMA 11 Samarinda. The researcher assumes that the Stratagem learning model is better used in adolescent groups because of the character of adolescents who like games so that learning is more relaxed and enjoyable with maximum learning outcomes.

CONCLUSION

The TPS and Stratagem learning models are different and still provide changes in premarital sex knowledge scores. However, higher score changes occur in the stratagem learning model. The tendency of adolescents to like games in learning so that this model suitable for adolescents. Further research can use the stratagem model educational intervention with other risks and problems in adolescent groups, such as drug abuse.

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