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Education model of principles on the relationship (PRIOR) for native youth organizations of sekaa teruna teruni improving reproductive health behavior of teenagers in Denpasar city

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Abstract

Reproductive health problems in teenagers become an important issue in Indonesia. A program has been done in national scale, but that's program have many obstacles, the service time is during working hours, so there are difficult to access, they also have limited resources, Only 12% of teenagers know about that's a program and only 2% access that services. This is a community trial, involve 241 teenagers. The results showed that there is a significant effect in knowledge 95% CI (14,627-21,952), attitudes 95% CI (6,000-9,001) and practices 95% CI (0.380-2.46), while in negotiation skills there is no effect (P>0.05). Conclusion: The educational intervention model of PRIOR has been proven to improve knowledge, attitudes, and practices. Research suggestions: It is necessary to provide a negotiation strategy topic in an education program for reproductive health to improve the achievement of knowledge, attitudes, and practices into the negotiation skills.

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1 Introduction

Reproductive health problems and diseases caused by infection through sexual contact become important issues in Indonesia. In 2018 640,000 people were living with HIV and there were 46,000 new infections, the incidence rate per 1000 population was 0.17, the prevalence rate in the 15-49 age group was 0.4%. Population mortality due to AIDS since 2010 has increased by 60%. Only 11.37% of the total population aged 15-24 years have good knowledge about preventing HIV transmission through sexual contact (UNAIDS, 2018). Bali is the 5th province with the highest number of AIDS cases nationally (Ministry of Health, 2017), the highest proportion of HIV/AIDS infections in the Province of Bali is due to sexual behavior (Departement of Health Bali Province, 2016). Education about reproductive health in adolescents in Bali tends to get permissive responses, the substance of reproductive health promotion is seen to contain controversy among the people because there are any differences in perspective and community beliefs. So that it inhibits the promotion of adolescent reproductive health (Foreit & Foreit, 2003; Kamiya, 2011; Keygnaert *et al*., 2014).

Bali has a local culture called the Sekaa Teruna Teruna group. Sekaa Teruna Teruni membership is mandatory for Balinese youth. Sekaa Teruna Teruni members are bound to the local subjective norm, teenagers in Sekaa Teruna Teruni group are conditioned in social pressure from people around them (significant others). The education model of PRIOR is a reproductive health education service for teenagers in Sekaa Teruna Teruni youth group. The purpose of the education model of PRIOR are to improve reproductive health behaviors in knowledge, attitudes, practices and negotiation skills of teenagers positive behaviors (Plant & Foster, 1991; Hornby & Collins, 1981; Chacko *et al*., 1989).

Vygotsky's theory explained that's behaviors human development are consists of the two-way learning procedure, the first is based on the biological maturity process and the second is come on learning culture. Vygotsky emphasizes that the social, historical, and cultural determinant in social interaction were lead the development in teenagers to respond to the problem around them (Masutov, 2015).

Theory of Reasoned Action (TRA) by Fishbein and Ajzen explained that's a logical consideration based on norm, belief, attitude, intention, and the social pressure, are the principal concept to forming the behaviors (Francis *et al.*, 2004), in the other theory Kurt Lewin explained that's the imbalance between the driving force and restraining force at individual behaviors can reconstruct the behavior. Driving forces such as the intention, perception, ability, etc. are a factor to driving someone to something, and then the restraining force such as the risk, the fear, social punishment, etc. become the hold back factor to do something, Based in that's theory above are assumed that's the interventions by educating teenagers at the cultural and social interaction through the native group can improve their reproductive health behaviors (Card, 1999; Psacharopoulos, 1994).

2 Materials and Methods

This is a community trials study with a randomized pretest-posttest control group design. The population is Sekaa Teruna Teruni members in the City of Denpasar, Bali Province. The sampling procedure is done by randomizing multistage, the respondents were 241 teenagers. Model education of the PRIOR instrument was developed by involving the teachers from the educational qualifications of Counseling. The interventions are consist of five meetings topics and then followed by filling in the activity calendar in 14 days. The topics are adolescent growth and puberty, healthy eating, the risk of reproductive health and abortion (Aryani *et al.*, 2017). The questionnaire was adapted from the PKPR program established by the Ministry of Health. All questionnaires have been tested for validity and reliability for the equivalent trial group. The data collection process includes filling the pre-test questionnaires, interventions education of PRIOR to and then the sessions of post-test questionnaires. The data were analyzed statistically using SPSS.

3 Results and Discussions

Table 1
Characteristics between at treatment and control groups in sociodemography

Characteristic	Intervention groups n (%)	Control groups n (%)	p
Location			

Sub Urban	76 (57.6)	46 (42.2)	0.97
Urban	56 (42.4)	63 (57.7)	
Gender			
Male	76 (57.6)	71 (65.1)	0.23
Female	44 (42.4)	38 (34.9)	
Age			
12-15	9 (6.8)	4 (3.7)	0.21
16-19	79 (59.8)	58 (53.2)	
20+	44 (33.3)	47 (43.1)	
Residence			
Live with parent	131 (99.2)	106 (97.2)	0.22
Do no live with parent	1 (0.8)	1 (2.8)	
Activity			
School	97 (73.5)	75 (68.8)	0,.42
Work	35 (26.5)	34 (31.2)	
Information on health reproduction			
Exposure	108 (81.8)	93 (85.3)	0.46
Non exposure	24 (18.2)	16 (14.7)	

Table 2
Proportions of knowledge, attitudes and practices and skills of negotiation in the intervention groups

Variable	Pre test		Post test		p
	n	%	n	%	
Knowledge					
Excellent	22	16.7	88 66.7	66.7	0.00*
Good	56	42.4	17 12.9	12.9	
Average	19	14.4	7 5.3	5.3	
Fair	24	18.2	13 9.8	9.8	
Poor	11	8.3	7 5.3	5.3	
Total	132	100.0	132	100.0	
Attitude					
Excellent	34	25.76	69	52.27	0.00*
Good	47	35.61	35	26.52	
Average	39	29.55	23	17.42	
Fair	10	7.58	4	3.03	
Poor	2	1.52	1	0.76	
Total	132	100.0	132	100.0	
Practice					
Excellent	16	12.12	20	15.15	0.03*
Good	20	15.15	26	19.7	
Average	47	35.61	54	40.91	
Fair	14	10.61	15	11.36	
Poor	35	26.52	17	12.88	
Total	132	100.0	132	100.0	
Skills of negotiation					
Excellent	2	1.52	1	0.76	0.28
Good	30	22.73	30	22.73	
Average	71	53.79	57	43.18	
Fair	25	18.94	41	31.06	
Poor	4	3.03	3	2.27	
Total	132	100.0	132	100.0	

Table 2. showed that's there are significant differences in the proportions of knowledge, attitudes, and practices, (p <0.05), whereas in negotiation skills known to be no significant difference.

Table 3
Comparison of mean rank in knowledge, attitudes, practices, and skills of negotiation before and after intervention in intervention and control groups

Variable	Intervention		Control		p	95% CI	
	n	Mean Rank	n	Mean Rank		Min	Max
Knowledge							
Pre test	132	117.03	109	125.8	0.33	-7.31	2.43
Post test	132	149.35	109	86.5	0.00	14,627	21,952
Post test-Pre test	132	147.17	109	89.31	0.00	14.63	26.82
Attitude							
Pre test	132	138.03	109	100.83	0.00	1.99	6.99
Post test	132	150.62	109	85.12	0.00	6,000	9,001
Post test-Pre test	132	137.67	109	100.81	0.00	1.62	4.15
Practice							
Pre test	132	112.24	109	131.48	0.34	-2.07	-0.08
Post test	132	132.24	109	107.39	0.00	0.380	2.46
Post test-Pre test	132	133.05	109	166.41	0.00	0.78	2.46
Skills of Negotiations							
Pre test	132	120.74	109	121.31	0.95	-0.13	0.12
Post test	132	113.65	109	129.9	0.07	-0.25	- 0.00
Post test-Pre test	132	-0.05[a]	109	-0.01 [a]	0.69 [b]	-0.24[b]	0.16[b]

[a] = *mean*, [b] = = *T test*

According to the data in Table 1. It was showed that's there are no different characteristics in statistical between at treatment and control groups in sociodemography (p> 0.05). the meaning that's at treatment and control group are in the equal.

According to the data in Table 2, it was found that the proportion of knowledge in the treatment group had increased. Before the intervention, the majority of the knowledge of the treatment group was in the "Good" category (42.4%), and after the intervention, it was found that the majority of the proportion of the level of knowledge was in the "Excellent" category (66.7%). This intervention has also increased the proportion in attitudes before interventions known that's the majority attitudes in the treatment group were in the "Good" category (35.61%), then after the intervention, it was found that the majority of the respondents' attitudes were in the "Excellent" category (52.27%). In the variable of practice, it's found that's this intervention increase the proportion of practice, the "Excellent" was an increase from 12.12% to 15.15%, in the "Good" category also had increased from 15.15% to 19.70%, and for the "average" category it increase from 35.61% to 40.91%. Changes in the proportion of knowledge, attitude and practice can also be seen from the significance of the p-value between pre-test and post-test practice in the intervention group p <0.05, whereas in the control group there was no statistically significant difference (p>0.05). Meaning that the increase in the proportion of respondents regarding reproductive health behavior because of interventions is statistically significant. The effect of the intervention into the proportion of negotiation skills statistically did not affect (p> 0.05). According to the data, could be seen that's there is no pattern was found on the effect of the intervention to the negotiation skills.

Table 3 showed that there were significant differences (P <0.05) in knowledge 95% CI (14,627-21,952), in attitude 95% CI (6,000-9,001) and in practice 95% CI (0.380-2.46). There is no effect interventions in skills of negotiation (P> 0.05), 95% CI value (-0.25) - (- 0.00). According to Table 3. Based on p-value and 95%CI in post-test known that's this intervention give a positive effect on knowledge, attitude and practice. Laswell Theory in Kurniawan (2018), describe that an intervention education effect for knowledge is determined by five elements of communication (Who, Say Whats, In which channel, To whom, and With what effect), based on that's a theory, its can be explained that's the effect of education model of PRIOR may follow that theory. The intervention was delivered by the youth facilitator, the material was compiled based on a study of adolescent reproductive health behaviors, furthermore, the material is

conveyed through the media of the native organization Sekka Teruna Teruni which has subjective norms and is conditioned in the monitoring of social pressure (significant others). Based on that's a description, researchers concluded that the intervention has fulfilled the five communication element so that the impact of the intervention has increased respondents' knowledge.

Based on the theory of model *Probabilogical Model* we can describe the attitude in adolescents are forming in two ways, *Bayes's Theorem* and *Socratic Effect*. Bayes's theorem state that persuasive communication can change the logical attitude and then the *Socratic Effect* said that individual belief can form by sequence, repetition, and consistency of information and the communication (Ramdhani 2008). The education model of PRIOR was stimulating the ability of teenagers to take the idea and understanding from that education, and directing them to make logical considerations in reproductive health behavior based on norm values, awareness, self-control, empathy and self-esteem, and emphasizing to the self-habituation and willingness to change (Taylor *et al.*, 1984; Rovee & Rovee, 1969). Based on that's description above, it can be concluded that the logical awareness about the advantages and disadvantages of doing or not do something and the consequences have an impact on changes in respondents' attitudes about the reproductive of health.

The practice of reproduction health in teenagers could be change, theory from Kurt Lewin, He explained human behavior is a balanced state between driving forces and restraining forces, furthermore, the behavior can be changed if there is an imbalance between the two forces within a person (Kintoko Rochadi & Chahaya, 2008). Driving forces is increased, this happens because there is a stimulus by the education model of PRIOR, that's were encourages behavior changes, on the other side the restraining forces decrease due to stimuli.

According to the data, it was explained that there is no effect on the intervention into negotiation skills. Theoretically, changing the ability of negotiation skills in adolescents is a more complex process than forming knowledge, attitudes, and practices. Based on the theory of ambivalent abstract cognition, we know that's in teenagers occur the ambivalent consideration phenomenon when they were negotiating about reproductive health behavior. On the one side, teenagers want to be free on reproductive behavior, but on the other side, they also afraid about the consequences and for losing the bounding love and support from their parents if they breaking up the rules in the norm (Soeroso, 2001). The cognition bias theory from Thomson also explained that at the negotiations there is could be a bias, because of different perceptions in teenagers and mistaken attribution (bias) in interactions, so that it could affect the expected outcome of negotiations (Tamba, 2005). The education model of PRIOR is designed for encouraging the negotiation skills by forming knowledge, attitude, and practice, but there was not consider yet about the phenomenon of ambivalent abstract cognition and the cognition bias at the negotiations.

4 Conclusion

Education Model of Principles on Relationship (PRIOR) has increased the knowledge, attitudes, and practices in reproductive health, these interventions also increase the proportion in the intervention group compared to controls. There is no influence on the skills of negotiating. Suggestions: It is necessary to provide a negotiation strategy topic in an education program for reproductive health to improve the achievement of knowledge, attitudes, and practices into the negotiation skills.

Conflict of interest statement
The authors declared that they have no competing interests.

Statement of authorship
The authors have a responsibility for the conception and design of the study. The authors have approved the final article.

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