

Class model of family planning based on predisposing, enabling and reinforcing factors in improving knowledge, attitude, family support and use of long-term contraception methods in fertile age pair of high risk



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ABSTRACT

Introduction: This study aims to prove the model of family planning classes based on predisposing, enabling and reinforcing factors to increase knowledge, attitudes, family support, and the use of long-term contraception methods in high risk fertile age pairs.

Method: The design used for this study is the Community Trial with the Randomized Pretest-Posttest Control Group Design approach. The sample in this study were couples of childbearing age who had one or more high risk criteria (age <20 years, age > 35 years, number of children > 3 and birth distance <2 years) as many as 150 respondents as an intervention group (family planning class model based on predisposing, enabling and reinforcing factor) and 150 respondents as a Control group (Conventional Family Planning

Class Model). This intervention was carried out for 6 months. Data collected includes data on knowledge, attitudes, family support, and use of contraception methods. Data were analyzed using Chi-Square test.

Result: The family planning class model based on predisposing, enabling and reinforcing factors effectively increases knowledge (p=0.000), attitudes (p=0.000), family support (p=0.037), and long-term contraception method use (p=0.000).

Conclusion: The family planning class model based on predisposing, enabling and reinforcing factors effectively increases knowledge, attitudes, family support, and the use of long-term contraception methods in high risk fertile age couples

Keywords: family planning class model, knowledge, attitude, family support, long-term contraception method.

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INTRODUCTION

The use of contraceptive methods is an effective way to reduce maternal mortality. The Indonesian Health Demographic Survey shows a maternal mortality rate of 347 per 100,000.¹ Data from the National Family Planning Population Agency shows a Total Fertility Rate (TFR) of 2.38 and in West Nusa Tenggara Province of 2.65 meaning that each woman gives birth to 2-3 children on average. Fertile age couples (PUS) who do not utilize the Unmet Need Family Planning program are 12.4% and in West Nusa Tenggara Province 12.1%. The incidence of unwanted pregnancies (KTD) was 19.7% and in West Nusa Tenggara Province was 12%.² Factors that hindered the use of contraceptive methods in EFA in Indonesia included reasons for being prohibited by husbands or families in West Kalimantan (2.4%), reasons for lack of knowledge in West Nusa Tenggara (5.9%) and in Papua (1.9%). Reasons for side effects in Yogyakarta (26.0%) were reasons for problems with access to family planning

in West Papua and Maluku (4.3%) and reasons for discomfort were highest in North Sumatra (21.8%).³

High risk fertile couples are too young (age <20 years), too old (age > 35 years), too many children (> 3 people) and too close for labor (<2 years). High-risk infertile couples who do not use contraceptive methods can result in subsequent pregnancies that are too close and cause too many births, resulting in too many children, who are at risk of maternal death both during pregnancy, childbirth and the puerperium.⁴

Some research in developing countries such as India, Iran, Ethiopia, Shire, Bangladesh, Cambodia and Pakistan shows that the factors that influence the use of contraception in couples of childbearing age are age, religion, education, work, husband's role, family's role, access to health workers, service providers, communication between partners, beliefs and norms, policy makers who pay attention to the socioeconomic factors of the community.^{5,6}

The conventional form of health promotion currently being carried out is conducting counseling on family planning and reproductive health carried out by cadres, health workers and family planning counselors by providing counseling both at posyandu and in cadre homes and conducting IEC and counseling to prospective acceptors individually or individually group, but the activities carried out are still not maximal as indicated by the high number of unmet need in fertile age couples especially in high risk fertile couples. A strategy is needed in an effort to model the *eren-cana* Family Class in the Family Planning Program by combining these three factors, namely predisposing factors, enabling factors and reinforcing factors (PER factors) so that the expected results can be achieved optimally. Predisposing factors are outlined in the form of providing information about family planning to high risk fertile couples. Enabling factors are outlined in the form of providing the facilities and infrastructure needed such as promotional media and the availability of contraceptives. Reinforcing factors are outlined in the form of involving other related parties such as family or husband in the class to get support.

Based on this background, researchers are interested in scientifically proving whether the Family Planning Class Model based on Predisposing, Enabling and Reinforcing Factors can improve Knowledge, Attitudes, Family Support, and Use of Long-Term Contraception Methods in High Risk Fertile Age Pairs in Mataram City and West Lombok Regency 2019.

METHOD

The design used for this study was the Community Trial with the Randomized Pretest-Posttest Control Group Design approach to the intervention group and the control group. Intervention group is high risk fertile age couples given the Family Planning Class Model based on Predisposing, Enabling and Reinforcing Factor, while in the control group high risk fertile age couples are given the Conventional Family Planning Class Model.

The sample in this study were couples of child-bearing age who had one or more high risk criteria (age <20 years, age > 35 years, number of children > 3 and birth distance <2 years) as many as 150 respondents as an intervention group (Family Planning Class Model based on Predisposing, Enabling and Reinforcing Factor) and 150 respondents as a control group (Elas Model of a conventional family planning program). This intervention was carried out for 6 months. Data collected includes data on Knowledge, Attitudes, Family Support, and Use of Contraception Methods.

The study was conducted in the working area of Mataram City Health Center and Kediri West Lombok Health Center, West Nusa Tenggara Province with inclusion criteria, namely fertile age couples who have one or more high risk criteria (age <20 years, age >35 years, number of children > 3, distance labor <2 years) and have not used a contraceptive method. Exclusion Criteria are those who are not available to be research respondents.

Calculation of sample size using the WHO sample size application by selecting the Hypothesis test for two population proportions (two-sided test) and based on the proportion of adolescent knowledge of the behavior of taking blood-added tablets the proportion of the comparison group by 67% and the proportion of the intervention group by 85%, the level confidence used 95% ($Z_a = 2.57$) with a strength of 80% ($Z_b = 0.84$) according to the results of the study. Based on the data above, the size of the research sample with the above formula is 144 PUS 4T. Anticipating the possibility of a drop out, the total sample size was added by 5% so that the total sample was 300 for the intervention and control groups.

The process of implementing the Family Planning class model both in the intervention and control groups was carried out 3 (three) meetings each meeting was held every week, the place and time of the implementation was carried out at the respondent's house, place of worship, cadre house, posyandu place or in accordance with the agreement with respondent. If the respondent has followed the Family Planning class according to the research procedure, but has not been able to decide on the contraceptive method to be used, the researcher is monitoring the respondent for up to 3 (three) months to determine what contraceptive method will be used in accordance with the agreement with her partner.

Data analysis was performed by displaying descriptive data by explaining the validity of the data in the two groups with the mean values. Homogeneity test was performed using the F-Levens's statistical test with a significance value (p) > 0.05, then the variance between homogeneous groups. Bivariate analysis was performed to see the difference between pretest and posttest in each group using Wilcoxon Test with significance level $\alpha = 0.05$. To find out the effect of the PER Factor-based Family Planning Class Model in the two groups, a different test was performed with the Mann Whitney Test with a significance level of 5%.

RESULTS

The study was conducted in the working area of Mataram City Health Center and Kediri Health

Center in West Lombok Regency of West Nusa Tenggara Province on 300 respondents of high risk fertile age couples who met the inclusion criteria. Respondents were randomly divided into two groups: the intervention group was given a Family Planning Class Model based on Predisposing, Enabling and Reinforcing Factor and the control group conducted a Conventional Family Planning Class Model activity, with meetings every 1 (one) time a week for 3 times a meeting (3 weeks). Measurement of family knowledge, attitudes and

support was carried out before and after the intervention using a questionnaire.

Knowledge

Table 1 shows that the average value of knowledge in the previous intervention group was 25.39 ± 7.93 and thereafter to 33.08 ± 1.97 , an average increase of 7.68, from the results of statistical analysis using the Wilcoxon Test showed a significant increase $p = 0,000$ ($p < 0.05$), whereas in the previous control group it was 25.23 ± 7.67 and thereafter

Table 1 Statistical Analysis of the Average Value of Knowledge, Attitudes, Family Support Before and After the Intervention and Control Groups

Research Variable	Parameters	Intervention Group			Control Groups		
		Before	After	Difference	Before	After	Difference
Knowledge	Average	25.39±7.93	33.08±1.97	7.68	25.23±7.67	33.01±1.99	7.78
	Minimum	10.00	27.00		10.00	27.00	
	Maximum	36.00	35.00		35.00	35.00	
	Normality	0.00	0.00		0.00	0.000	
	Wilcoxon Test	0.000			0.000		
	Mann Whitney Test			0.794			
Attitude	Rata-rata	132.99±14.82	138.37±10.90	5.37	133.60±13.92	138.19±11.69	4.58
	Minimum	77.00	99.00		84.00	94.00	
	Maximum	175.00	175.00		175.00	175.00	
	Normalitas	0.000	0.000		0.000	0.000	
	Wilcoxon Test	0.000			0.000		
	Mann Whitney Test			0.883			
Family Support	Average	19.86±2.76	20.23±2.09	0,37	19.87±2.44	20.19±2.14	0.32
	Minimum	5.00	14.00		8.00	14.00	
	Maximum	25.00	25.00		25.00	25.00	
	Normality	0.000	0.000		0.000	0.000	
	Wilcoxon Test	0.037			0.027		
	Mann Whitney Test			0.786			

Table 2 Results of Analysis of Increased Knowledge, Attitudes, and Family Support Before and After Intervention in the Intervention Group

Variable Research	Brfore	After						p-value
		Less		Good		Ammount		
		n	%	n	%	n	%	
Knowledge	Less	41	51.2	39	48.8	80	100	0.000
	Good	34	48.6	36	51.4	70	100	
	Total	75	50.0	75	50.0	150	100	
Attitude	Less	40	75.5	13	24.5	53	100	0.000
	Good	17	17.5	80	82.5	97	100	
	Total	57	38.0	93	62.0	150	100	
Family Support	Less	48	94.1	3	5.9	51	100	0.037
	Good	46	46.5	53	53.5	99	100	
	Total	94	62.7	62.7	37.3	150	100	

Table 3 Results of Analysis of Knowledge Enhancement, Preparedness, and Family Support Before and After Intervention in Control Group

Research Variables	Before	After						p-value
		Less		Good		Amount		
		n	%	n	%	n	%	
Knowledge	Less	40	53.3	35	46.7	75	100	0.000
	Good	39	52.0	36	48.0	75	100	
	Total	79	52.7	71	47.3	150	100	
Attitude	Less	46	80.7	11	19.3	57	100	0.000
	Good	11	11.8	82	88.2	93	100	
	Total	57	38.0	93	62.0	150	100	
Family Support	Less	48	94.1	3	5.9	51	100	0.027
	Good	46	46.5	53	53.5	99	100	
	Total	94	62.7	56	37.3	150	100	

Table 4 Results of Analysis of the use of Long-Term Contraception Method (MKJP) in Intervention and Control Groups

The Use of Family Planning	Groups				Amount		p-value
	Interventions		Control		n	%	
	n	%	n	%			
NON MKJP	61	40.7	108	72.0	169	56.3	0.000
MKJP	89	59.3	42	28.0	131	43.7	
Total	150	100	150	100	300	100	

33.01 ± 1.99 an increase of 7.78. From the results of the same statistical analysis showed a significant increase $p = 0,000$ ($p < 0.05$). Between the intervention group and the control group the increase in the mean value of knowledge using the Mann Whitney Test did not show a significant difference $p = 0.794$ ($p > 0.05$).

Table 2 shows the intervention group of respondents whose knowledge was initially lacking (51.2%), which turned into good knowledge of (48.8%), and table 1.3. shows that in the control group that initially lacked knowledge (53.3%), it turned into good knowledge (46.7%). The results of statistical analysis using the Wilcoxon Test showed that this increase in knowledge increased significantly with a value of $p=0.000$ ($p < 0.05$) in both the Intervention and Control groups.

Attitude

Table 1 shows the average value of attitude in the previous intervention group is 132.99 ± 14.82 and thereafter becomes 138.37 ± 10.90 , an average increase of 5.37, from the results of statistical analysis using the Wilcoxon Test shows an increase significant $p = 0,000$ ($p < 0.05$), whereas in the previous control group was 133.60 ± 13.92 and thereafter 138.19 ± 11.69 an increase of 4.58. The same statistical analysis results showed a significant increase $p = 0,000$ ($p < 0.05$). The intervention group

and the control group increased the average value of knowledge using the Mann Whitney Test did not show a significant difference $p = 0.883$ ($p > 0.05$). Table 2 shows the intervention group of respondents who initially had a less supportive attitude of (75.5%), which turned into a supportive attitude of (24.5%) and table 1.3. showed in the control group that initially less supportive attitude (80.7%), turned into a supportive attitude of (19.3%), the results of statistical analysis using the Wilcoxon test significantly improved attitude with a value of $p=0.000$ ($p < 0.05$) both in the intervention group and the control group.

Family support

Table 1 shows the average value of Family Support in the previous intervention group was 19.86 ± 2.76 and there after to 20.23 ± 2.09 , an average increase of 0.37, from the results of statistical analysis using the Wilcoxon Test showed an increase a significant $p = 0,000$ ($p < 0.05$), whereas in the previous Control group it was 19.87 ± 2.44 and there after 20.19 ± 2.14 an increase of 0.32. The same statistical analysis results showed a significant increase in family support $p = 0,000$ ($p < 0.05$). The intervention group and the control group increased the mean value of Family Support by using the Mann Whitney Test not showing a significant difference $p = 0.786$ ($p > 0.05$).

Table 2 shows the intervention group of respondents who initially had less supportive Family Support by (94.1%) which turned into a supportive attitude of (5.9%) and table 3. showed that in the control group that was initially less supportive of Family Support (94.1%) turned into supportive family support (5.9%), the results of statistical analysis using the Wilcoxon Test showed a significant increase in Family Support in the intervention group with a p value = 0.037 ($p < 0.05$) and in the control group showed a significant increase in family support with a value of $p = 0.027$ ($p < 0.05$).

Use of the long-term contraception method (MKJP)

Based on table 4, it shows that out of 169 samples that use non MKJP, there are mostly found in the Control group which is 108 samples (72.0%) whereas those who use MKJP are more found in the Intervention group which is 89 samples (59.3%) and statistically using the test Chi Square obtained a significant value. This means that there are significant differences in the use of long-term contraceptive methods from the Intervention and Control group with a value of $p = 0.000$ ($p < 0.05$).

DISCUSSION

The results of the analysis show that the Family Planning Class Model based on Predisposing, Enabling and Reinforcing Factor as a free variable can significantly increase the use of the Long-Term Contraception Method (MKJP). The proportion of respondents using MKJP was higher than the Conventional Family Planning Class Model. Predisposing is stated in the provision of information about contraceptive methods to increase the knowledge and attitudes of respondents towards the use of contraceptive methods. Enabling is poured through varied learning media with adult learning principles and the availability of contraception used, Reinforcing is poured through the involvement of the husband in the learning process at each class meeting session. Conventional Family Planning classes are only given counseling, IEC and counseling and do not involve the husband in the class.

Good knowledge will determine the husband and wife couple to use the method of contraception. This research shows a significant increase in knowledge due to the learning process in each session using the principles of adult learning by using a variety of fun learning methods and processes, as well as using a variety of learning media such as teaching aids, contraception methods, video, back width, role playing and conduct IEC and counseling. The study showed significant

results on increasing knowledge and use of the IUD contraceptive method among respondents using 12 minutes of video media containing evidence based contraceptive methods and their effectiveness.⁸ The use of media through the traditional music art of Gendang Beleg conducted in Lombok has also proven to be effective in increasing knowledge, attitudes and use of long-term contraceptive methods, and good knowledge is a factor that someone wants to use contraceptive methods at the community level.^{9,10} After obtaining information on long-term contraceptive methods, most want to use these contraceptive methods.¹¹

A positive or supportive attitude towards the use of contraceptive methods is influenced by affective and conative. Feelings of pleasure or displeasure with contraception related to one's experience with contraceptive methods. A less supportive attitude affects the use of low contraceptive methods.¹² Counseling can increase a positive attitude towards the use of contraceptive methods.^{13,14}

Family support greatly influences the use of contraception methods especially the Long-Term Contraception Method. This research shows the involvement of the husband has a significant relationship to the use of contraceptive methods compared to husbands who are not involved in it. The form of husband's involvement is to give advice, costs, discussion related to side effects and contraceptive methods to be used. Research conducted in Pakistan shows male knowledge related to contraceptive methods is still low where 89% of men say vasectomy decreases men's desires. According to them the ideal marriage age for a woman is 18-20 years and the number of children in Pakistan averages 4-5 people.¹⁵ Research shows that husbands involved in discussions about contraceptive methods have a much higher willingness to engage in action in using contraceptive methods.¹⁶

CONCLUSION

The Family Planning Class Model Based on Predisposing, Enabling and Reinforcing Factors effectively increases Knowledge, Attitudes, Family Support, and the Use of Long-Term Contraception Methods in High Risk Fertile Age Couples. It is recommended for Health Workers to be able to apply the Predisposing, Enabling and Reinforcing Factor Based Family Planning Class Model as an effort to increase the use of the Long-Term Contraception Method in high-risk fertile couples.

CONFLICT OF INTEREST

The author has no interests related to the material presented in this paper.

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ETHICAL ASPECT

All respondents in this study had signed informed consent. This study has received a statement of Ethical Worthiness from the Research Ethics Commission of the Faculty of Medicine, Udayana University / Sanglah Central General Hospital, Denpasar Number 1332 / UN 14.2.2.VII.14/LP/2019, dated May 7, 2019.

REFERENCES

1. Indonesian Health Demographic Survey. Jakarta; 2017.
2. Prihyugianto TY, Winarni E, Anggraeni M, Juliaan F, Kasmiyati, Asih L, Kistiana, Nasution SL, Ekoriano M, Oktriyanto, Rahmadhony A PL. Work surveillance and accountability program for family planning 2018. 2018;(SKAP 2018):33.
3. Indonesian Ministry of Health. Basic Health Research. Jakarta; 2013.
4. Indonesian Center for Statistical Count. Delayed Progress: Analysis of Marriage Age in Indonesia; 2015.
5. Taghizadeh Z, Vedadhir A, Behmanesh F, Ebadi A, Pourreza A, Abbasi-Shavazi MJ. Reproductive practices by patterns of marriage among Iranian women: study protocol for an explanatory sequential mixed methods design. *Reprod Health*. 2015;12:89.
6. Gebre G, Birhan N, Gebreslasie K. Prevalence and factors associated with unmet need for family planning among the currently married reproductive age women in shire-Enda-Slassie, northern west of Tigray, Ethiopia 2015: A community based cross-sectional study. *Pan Afr Med J*. 2016;23:1–9.
7. Dunne A, McIntosh J, Mallory D. Adolescents, Sexually Transmitted Infections, and Education Using Social Media: A Review of the Literature. *J Nurse Pract*. 2014;10(6):401-408.e2.
8. Dineley B, Patel T, Black M, Koziarski R, Lamarche L, Costescu D. Video Media in Clinic Waiting Areas Increases Interest in Most Effective Contraceptive Methods. *J Obstet Gynaecol Canada*. 2018;40(10):1302–8.
9. Dramawan A, Emilyani D. KelPUS-Gendang Beleg Model as A Strategy to Improve Knowledge and Attitudes of Couples of Childbearing Age against Long Term Contraception Method. *Humanistic Network for Science*. 2018;2(2):159–62.
10. Silumbwe A, Nkole T, Munakampe MN, Milford C, Cordero JP, Kriel Y, et al. Community and health systems barriers and enablers to family planning and contraceptive services provision and use in Kabwe District, Zambia. *BMC Health Serv Res*. 2018;31:18.
11. Gupta N, Sinha R, Mangal A. Knowledge, attitude and practice study on immediate postpartum intrauterine contraceptive device method of family planning. *Int J Community Med Public Heal*. 2017;4(8):2981.
12. Kasa AS, Tarekegn M, Embiale N. Knowledge, attitude and practice towards family planning among reproductive age women in a resource limited settings of Northwest Ethiopia. 2018;12:7–12.
13. Simanjuntak H, Lestari BW, Anwar AD. The effect of structured counseling towards knowledge, attitude, and participation of modern contraceptive among unmet need couples. *Kesmas*. 2016;10(4):184–90.
14. Mohammed E. Acceptance of Long Acting Reversible Contraceptive Methods and Associated Factors Among Reproductive Age Women in Adama Town, Oromia Regional State, Ethiopia. *Clin Med Res*. 2017;6(2):53.
15. Sumera Naz MANS. An Assessment of the Knowledge and Attitude Towards Family Planning among Educated Married Men of Urban Islamabad, Pakistan *Journal Medical Research*. 2017;56(3):73-77.
16. Tilahun T, Coene G, Temmerman M, Degomme O. Couple based family planning education: Changes in male involvement and contraceptive use among married couples in Jimma Zone, Ethiopia. *BMC Public Health*. 2015;15(1):1–8.



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