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The Influence of Health Education Regarding the Side Effects of Using Hormonal Contraceptives on Knowledge of Couples of Reproductive Age

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ABSTRACT

The high population growth rate is an urgent problem that needs to be addressed immediately. The government's efforts that have been made to overcome this population problem include birth control through the Family Planning program. Hormonal contraception is a contraceptive device or drug that aims to prevent pregnancy which will change the production of hormones in a woman's body during conception. This study aims to determine the effect of health education on the side effects of hormonal contraception on the knowledge of couples of childbearing age in the working area of Kuamang Kuning X Bungo Health Center.

This research is a pre-experimental study with The One Group Pre-test and Post-test Design. The sample in this study was 101 couples of childbearing age (PUS) in the working area of the Kuamang Kuning X Health Center, which was carried out in March-June 2022. Data analysis used was the Paired t-test.

The results showed that before the intervention, there were 52 respondents with good knowledge, and after the intervention, there were 92 respondents with good knowledge. The mean value of knowledge before health education was 10.52; after health education, it increased to 14.13. The results of the Paired t-test were P-value 0.0001 <0.05, meaning that there was an influence of health education regarding the side effects of using hormonal contraception on the knowledge of couples of childbearing age (PUS).

The conclusion of the study is that health education about the side effects of using hormonal contraception can increase knowledge of PUS.

Keywords: Contraception, Couples of Reproductive Age, Knowledge, Health Education

INTRODUCTION

The Family Planning Program (KB) is a government program designed to balance needs and population, aiming to control population numbers, delay pregnancy or prevent pregnancy, reduce pregnancy and stop or end fertility to realize Small, Prosperous Family Norms [1,2].

In this program, the government recommends contraceptive methods for couples of childbearing age [3,4]. The contraceptive method is an effort to prevent pregnancy, which is temporary or even permanent, by preventing the fertilization of an egg by sperm (conception) or the attachment of a fertilized egg to the uterine wall [4–6].

The number of Couples of Reproductive Age (CCA) in Indonesia in 2018 was 38,343,931 people, and those who were using family planning (active family planning) totaled 24,258,532 people or 63.27%, almost the same as the previous year, which was 63.22% [7]. Meanwhile, the target of the National Medium-Term Development Plan (RPJMN) in 2019 is 66%, which means an increase in the

percentage of contraceptive use for all methods [8].

Generally, two methods of contraception are commonly used in Indonesia, including hormonal and Non-hormonal Contraception methods [5,6]. Hormonal contraceptive methods are contraception in which estrogen and progesterone provide feedback to the pituitary gland through the hypothalamus so that there are obstacles to the follicles and the ovulation process, which aims to prevent pregnancy by inhibiting ovulation, thickening cervical mucus, and preventing implantation. Types of hormonal contraception consist of implants or implants, KB injections, and KB pills [5,9].

Based on the pattern of choosing contraceptives, more Active Family Planning participants chose injections and pills as contraceptives (more than 80%) than other methods, where injections were 63.71%, and pills were 17.24%. Almost all couples of childbearing age, out of 8,500,247 couples, use hormonal contraception consisting of injectable contraception (48.56%), pills (26.60%), and implants (9.23%) [8].

The number of enthusiasts of hormonal contraception is directly proportional to the complaints felt due to the side effects that arise [10,11]. The side effects of hormonal contraception include nausea, headache, weight gain, erratic emotional changes, vaginal discharge, fatigue, depression, reduced libido, menstrual disorders, and spotting. Some of the harmful side effects include disorders of the cardiovascular system, hepatobiliary, and hypertension. Oral contraceptives have also increased the risk of stage 4 breast and cervical cancer [12–16].

Many women have to face difficult contraceptive choices. The difficulty is not only due to the limited number of available methods but also their ignorance of the requirements and safety of these contraceptive methods. The available methods may not be accepted due to national family planning policies, individual health, female sexuality, or the cost of contraception. In a method, women must weigh various factors, including their health status, potential side effects of a method, the consequences of unwanted pregnancy, desired family size, partner cooperation, and cultural norms regarding childbearing ability [11,15,17].

Considering the side effects of hormonal contraception, it is necessary to have a good understanding of CCA because the results of previous studies reported that one of the reasons CCA dropped out using hormonal contraception was due to a lack of knowledge.

For this reason, this study was conducted to analyze the effect of health education on the side effects of using hormonal contraception on CCA knowledge in the working area of the Kuamang Kuning X Bungo Health Center, Indonesia.

METHOD

Study design

The current study utilized quasi-experimental design with one group design pretest-posttest approach.

Participants

This study involved women of childbearing age in the working area of the Kuamang Kuning X Health Center, Jambi City, Indonesia, in March-July 2022. Participants were randomly selected with inclusion criteria, including women of childbearing age, using hormonal contraception, and having never attended hormonal contraception counseling.

Intervention

The research variables are fertile age couples' knowledge. Before the intervention was given, the researcher first measured the level of knowledge and behavior of the participants (pre-test). After being given the intervention, the researcher again measured the level of knowledge of the participants (post-test). In this study, the intervention model given is the health education which is carried out once with a duration of 1 hour,

which is 45 minutes of material delivery and 15 minutes of discussion). In this study, the researchers provided an explanation of non-communicable diseases to participants, accompanied by games about pictures and stickers of contraception. The next step is for participants to try to explain about the pictures and stickers they get.

The knowledge and behaviors questionnaire consists of 20 questions with right and wrong answer choices. If the student answers correctly, he is given a score of 1, and if the answer is wrong, he is given a score of 0. The range of scores obtained is between 0-20.

The Guttman scale has an important characteristic, which is that it is a cumulative scale and measures only one dimension of a multi-dimensional variable, so that this scale has an undimensional nature. The data obtained are in the form of interval data or dichotomy ratios (two alternatives) [18].

Researchers have worked as lecturers and researchers between 10-15 years and have academic degrees Masteral Degree and Doctorate. Researchers have done much research in the health sector and have compiled many questionnaires, so the researchers have prepared the questionnaires in this study. Before the research was conducted, the questionnaire was piloted on ten fertile age couples, and the results showed that two questions had to be replaced because they were invalid. The knowledge questionnaire contains the respondent's understanding of contraception ranging from understanding, to overcoming them.

Outcomes

This study compares the knowledge and behavior of students in preventing the incidence of non-communicable diseases (smoking) after being given an intervention in the form of an emo demo.

Sample size

This study involved 101 participants who were taken randomly using simple random sampling technique.

Ethical Consideration

No economic incentives were offered or provided for participation in this study. In this study, because the subject was still a minor so the researcher had asked for and obtained parental consent so that their child could participate in the study. The study was performed in accordance with the ethical considerations of the Helsinki Declaration. This study obtained ethical feasibility under the Health Research Ethics Commission of the Ministry of Health, Jambi, and registration number: LB.02.06/2/292/2022.

STATISTICAL ANALYSIS

Data are presented as numbers and percentages for categorical variables. Continuous data were expressed as mean ± standard deviation (SD) or median with Interquartile Range (IQR). Then proceed with bivariate analysis using the paired t-test. The Paired t-test was used to determine the effect of the health education intervention on knowledge. All tests with p-value (p)<0.05 were considered significant. Statistical analysis was performed using the SPSS version 16.0 application.

RESULTS

The characteristics of respondents in this study include age, education, employment status and parity. The following is the frequency distribution of the respondents' characteristics in this study:

Characteristics	N	%
Age		
<20 and >35	57	56.4
20 – 35	44	43.6
Education		
Basic	12	11.9
Junior school	15	14.9
High school	38	37.6
Associate degree	20	19.8
Bachelor	16	15.8
Employment		
Working	62	61.4
Not working	41	40.6
Parity		
1 kali	61	60.4
> 1 kali	40	39.6

Table 1. ***Frequency Distribution of Respondents Characteristics***

Table 1 shows that most of the mothers aged <20-35> years were 57 mothers (56.4%). The respondents' education is mostly High school as many as 38 respondents (37.6%). Most respondents did work as many as 41 (61.4%), and one time parity as many as 61 respondents (60.4%).

Knowledge	Pre	Post
Less	49 (48.5%)	9 (89.1%)
Good	52 (49.5%)	92 (91.9%)

Table 2. ***Distribution of depression incidence before and after interventions***

Table 2 shows that before the intervention there were 52 respondents who had good knowledge then after the intervention there were 92 respondents.

Knowledge	Kolmogorov smirnov	Sig.
Pretest-posttest	1.027	0.243

Exp. *) Significant value> 0.05.
Table 3. ***Normality Test Results of Knowledge Pretest and Posttest Health Education***

Table 3 shows that the Kolmogorov Smirnov statistical test results obtained a significant value of knowledge at the pretest and posttest health education, each bigger than 0.05. The knowledge data at the pretest and posttest health education normally distributed. Therefore, the statistical difference test was tested using paired t-test.

Knowledge	Mean±SD	Median IQR (Q1-Q3)	P-value
Pretest	10.52±4.241	11 (7-13)	0.0001
Posttest	14.13±3.236	14 (12-15)	

Table 4. ***Averages knowledge Pretest and Posttest Health Education***

Table 4 shows that knowledge before giving health education has a mean value = 10.52, while after giving health education, it increases to 14.13, with P-value <0.05.

DISCUSSION

This study is based on the assumption that health education can improve acceptors' understanding of CCA in using contraceptives, especially after knowing and understanding the side effects of using hormonal contraception. It is proven that providing health education for approximately one hour can increase participants' knowledge. Before the health education intervention, the mean value of knowledge was 10.52, and then it increased after the health education intervention to 14.13.

Descriptively, it can be reported that 52 respondents had good knowledge then after the intervention, there were 92 respondents. These results support previous research on the effect of health education on increasing CCA knowledge. The average value of respondents' knowledge before being given health education was 13.43, which means poor knowledge. After the intervention, the average value of respondents increased to 21.04, indicating that CCA knowledge about implant contraceptives is improving **[1].** Health education and health counseling can both influence knowledge [5,6,9,19]. Health education is part of health promotion; a process deliberately planned to create opportunities for individuals to learn, improve awareness, and increase their knowledge and skills to benefit their health [3,20]. Another opinion states that health education is a dynamic process of behavior change. Change is not just transferring material or theory from one person to another. However, changes also occur because of the awareness of individuals or community groups [1,4].

The results of the Paired t-test analysis for knowledge about hormonal contraception is $P = 0.0001 < \alpha = 0.05$, indicating that health education affects CCA knowledge about hormonal contraceptives in the work area of Kuamang Kuning X Bungo Health Center. Thus, the hypothesis (Ha) states that health education affects CCA knowledge about hormonal contraceptives in the working area of Kuamang Kuning X Bungo Health Center.

In agreement with previous research by Wahyuni et al. [21] in Tasikmalaya District, the study's results using a two-mean dependent difference test showed an increase in knowledge. The number of respondents who had high knowledge before and after health education was from 48.4% to 58.1%, with P-value = 0.000.

Therefore, it can be concluded that there is an effect of health education on the knowledge of couples of childbearing age about implanted contraceptives.

Health education conveys messages and instills confidence so that people are aware, know, understand, and can carry out recommendations related to health [19]. Health education has specific goals, including changing knowledge (cognitive), attitudes (understanding and motivation), or practical (access to information and using information) to maintain health [22].

In this study, the authors also argue that CCA's ignorance of hormonal contraception is due to a lack of information, and most have junior and senior high school education. The theory says, the higher a person's education, the easier it is to receive information. Some factors causing the low number of implanted birth control acceptors include a lack of knowledge about contraception and a lack of information from health workers. When providing family planning services, they were only given information orally; therefore, the information obtained could have been more effective.

Some respondents feared using hormonal contraceptives because of inadequate information about their side effects. Therefore, educating CCA about hormonal contraceptives is essential to increase their knowledge, and the coverage of contraceptive use can be increased.

CONCLUSION

The provision of health education on the side effects of hormonal contraception is proven to increase knowledge of couples of childbearing age (CCA).

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Declaration by Authors

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