ISSN. 2338-7475
E-ISSN. 2620-7869
Hearty
Jurnal Kesehatan Masyarakat
Beriman, Tulus, Sepenuh Hati,Berbesar Hati, Jujur, Sehat dan Kuat
Vol. 14 No. 4, Agustus 2026, Hal. 967-974

THE EFFECT OF EDUCATION ON THE LEVEL OF ANXIETY AND KNOWLEDGE ABOUT THE SIDE EFFECTS OF 3-MONTH INJECTABLE CONTRACEPTION IN 3-MONTH INJECTABLE CONTRACEPTIVE ACCEPTORS AT TPMB EVI MULYOREJO, MALANG CITY

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Abstract

The 3-month injectable contraceptive contains 150 mg DMPA which is given every 3 months by IM injection. The high interest in DMPA at TPMB Evi Mulyorejo, Malang City goes hand in hand with acceptor complaints regarding increased body weight and menstrual cycles. The aim is to determine the level of anxiety and level of knowledge about the side effects of 3-month injectable contraception in 3-month injectable contraceptive acceptors before and after being given education at TPMB Evi Mulyorejo, Malang City. This research uses a quasi-experimental design with a pre-post test method. The population in this study was 100 3-month injectable contraceptive acceptors and the sample taken using a purposive sampling technique was 32 acceptors. The data collection method was using a questionnaire instrument. The data analysis used was using the paired t-test and bivariate using the independent t-test. The results showed that there was an influence of knowledge (sig-p 0.001) and anxiety (sig-p 0.001). There is an influence of providing education on the level of knowledge about 3-month injection contraception and the level of anxiety of 3-month injection contraceptive acceptors. Therefore, it is hoped that the 3-month injection contraceptive acceptors who are given education can increase their level of knowledge about the side effects of 3-month injection contraception so that they can reduce the level of anxiety regarding the side effects of 3-month injection contraception.

Keywords: Anxiety, 3-Month Injectable Contraception, Knowledge

Introduction

Knowledge is a process to assemble an object or subject that occurs in a person consciously and the person themselves know (Nunu, 2018). According to Nunu (2018) knowledge is the result of human effort in finding out by understanding, realizing, recognizing, being skilled or aware. In addition, knowledge plays an important role in shaping attitudes and behavior, especially in making decisions related to health. A person's level of knowledge can influence how they perceive information, respond to certain conditions, and determine appropriate actions in maintaining their health status (Lalazaryan & Zare-Farashbandi, 2014). Therefore, knowledge becomes a fundamental aspect in health education programs, as it can support individuals in understanding health-related information more effectively and reducing the risk of misconceptions.

Contraception is an effort to prevent pregnancy and is one of the variables that influence fertility. This effort can be temporary or permanent (Saragih, 2018). One effective contraception method is 3-month injectable contraception. The 3-month injectable contraception uses Depo Medroxy Progesterone Acetate (DMPA) containing 150 mg DMPA that administered every 3 months

Submitted: April-2026 Received: June-2026 Available Online: August-2026

by injection IntraMuscular (Veisi & Zangeneh, 2013; Ahmaad & Henukh, 2020). 3-month injectable contraception has the effect side effects such as menstrual disturbances, weight gain, delayed recovery of fertility, causing vaginal dryness, a little reducing bone density, hypertension (Ambriani, 2019).

Based on health profile data 5 (five) In the last five-year health profile data, in Malang city the number of women of reproductive age in 2021 was 148,730 with 99,383 active contraception participants. Of that number, the majority used injectable contraception, with 55,694 users (56%). In addition to injectable contraception, other methods used by the community include condoms (2.5%), pills (18.4%), IUD (15%) (Intrauterine Device), MOP (Male Sterilization), MOW (3.8%) (Female Sterilization) and implant contraception (4.3%) (Profilkes, 2021).

High interest in contraception Depo Medroxy Progesterone Acetate (DMPA) proceeding in line with the complaints of users regarding weight gain and cycle disturbances menstruation (Sims et al., 2020). The most common side effects of injectable contraception are weight gain and menstrual cycle disturbances. Experts hypothesize that DMPA stimulates the hunger control center in the hypothalamus, causing the acceptor to eat more than usual (Subiyatin et al., 2024). The use of 3-month injectable birth control is significantly related, where the longer the use of 3-month injectable birth control, the shorter the duration of menstruation for users of 3-month injectable birth control, sometimes resulting in no menstruation at all; this change in duration is caused by gestagen components contained in DMPA (Sandra et al., 2023). This change aligns with a reduction in menstrual blood in users of 3-month injectable contraception. After long-term use, the amount of menstrual blood decreases further and amenorrhea can occur.

According to Jujuren & Anwar (2022) There is an influence between side effects and the level of anxiety of 3-month injectable contraception users. From the study results, it can be explained that the dominant group is mothers who do not have side effects and whose anxiety level is categorized as mild. The mild anxiety among 3-month injectable contraception users is caused by most users already knowing about the side effects of the injectable contraception from various sources, one of which is health education in the area. When linked to anxiety, when someone experiences obstacles in their desire, in this case the use of contraception, it will raise depressing feelings that arise in awareness.

The purpose of this education is to to reduce anxiety levels among users of 3-month injectable contraception, especially those with side effects from the 3-month injectable such as weight gain and menstrual cycle disturbances. Based on a preliminary study conducted at TPMB Evi from September 2023 to November 2023, there were +300 3-month injectable users. From the above background, the author interested in conducting research entitled “The Influence of Education Provision on Anxiety Levels and Knowledge Levels About Side Effects of 3-Month Injectable Contraceptives Among 3-Month Injectable Contraceptive Acceptors at TPMB Evi Mulyorejo, Malang City.”

Method

The research design used is quasi experimental with the pre-posttest method. In this study, the independent variable is level of knowledge and the dependent variable is the anxiety level. The population is 100 users of 3-month injectable contraception at TPMB Evi Mulyorejo, Malang City from September to November 2023. Sampling technique in this study uses purposive sampling. The data analysis used is and independent t test.

Results

1. General Data

Table 1. Respondent Frequency Distribution

Variable	Experimental Group		Control Group	
	Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)
Education				
Junior High School	7	44	10	62
Senior High School	9	56	6	38
Total	**16**	**100**	**16**	**100**
Occupation				
Housewife	10	62	8	50
Private Employee	6	38	8	50
Total	**16**	**100**	**16**	**100**

Based on the tabke 1, it can be seen respondent characteristics by education show that the highest education in the experimental group is high school 56% and the lowest is junior high school 44%, while education in the largest control group is junior high school at 62% and the lowest is high school at 38%. Based on occupation, the most common job in the experimental group is housewife at 62% and the lowest is private employee at 38%, while the jobs in the control group are housewife and private employee at 50%.

2. Specific Data

Table 2. Distribution of Acceptors' Knowledge Levels Before and After Education in the Experimental Group

Knowledge Level	Pre-Test		Post-Test	
	f	%	f	%
Good	2	12.5	12	75
Fair	14	87.5	4	25
Poor	0	0	0	0
Total	**16**	**100**	**16**	**100**

According to Table 2 it shows that most acceptors had a fairly adequate level of knowledge about the side effects of three-month injectable contraception before education, namely 14 people with a percentage of 87.5%. Meanwhile, the knowledge level of acceptors about the side effects of three-month injectable contraception after education increased to the good category, namely 12 people with a percentage of 75%.

Table 3. Distribution of Respondents' Knowledge Levels Before and After Education in the Control Group

Knowledge Level	Pre-Test		Post-Test	
	f	%	f	%
Good	2	12.5	3	18.75
Fair	9	56.25	10	62.5
Poor	5	31.25	3	18.75
Total	**16**	**100**	**16**	**100**

Based on table 3, shows that some of the of the accepters have a sufficient level of knowledge. about the side effects of 3-month injectable contraceptives, namely 9 people with a percentage of 56.25%. Meanwhile, after giving the questionnaire again but without education, the knowledge level of acceptors about the side effects of 3-month injectable contraceptives did not increase, in the good category consisting of 10 people with a percentage of 62.5%.

Table 4. Distribution of Anxiety Levels Before and After Education in the Experimental Group

Anxiety Level	Pre-Test		Post-Test	
	f	%	f	%
Mild	5	31.25	16	100
Moderate	11	68.75	0	0
Severe	0	0	0	0
Total	**16**	**100**	**16**	**100**

Based on table 4 show that the majority of acceptors had a moderate level of anxiety before being educated about the side effects of 3-month injectable contraception, namely 11 people (68.75%). Meanwhile, the anxiety level of acceptors regarding side effects after education showed a decrease to the light category, with 16 people (75%).

Table 5. Distribution of Anxiety Levels Before and After Education in the Control Group

Anxiety Level	Pre-Test		Post-Test	
	f	%	f	%
Mild	16	100	16	100
Moderate	0	0	0	0
Severe	0	0	0	0
Total	**16**	**100**	**16**	**100**

Based on table 5 show some the majority have a mild level of anxiety about the side effect of 3-month injectable contraception namely 16 people with a percentage of 100%. Meanwhile, after giving the questionnaire again but without education, the acceptor's anxiety level about the side effects of 3-month injectable contraception did not decrease nor increase, in the light category consisting of 16 people with a percentage of 100%.

Table 6. Cross-Tabulation of Knowledge Levels Regarding the Side Effects of 3-Month Injectable Contraceptives

Variable	Minimum	Maximum	Mean ± SD	Significance (p-value)
Pre-Test	5	8	6.06 ± 0.928	0.001
Post-Test	6	9	8.00 ± 1.032	

Based on table 6 it is found that the level of knowledge of acceptors regarding side effects of 3-month injectable contraception before and after education using the back sheet shows an increase as seen from the pre-education mean of 6.06 increase after being educated using the back sheet becomes 8.00. After a test was performed paired t test obtained value significance 0.001 (p value < 0.05) which means there is a significant effect between the pretest and posttest values with the back sheet. Thus, it can be concluded that education about the side effects of 3-month injectable contraception causes an increase in mothers' knowledge.

Table 7. Cross-Tabulation of Anxiety Levels Regarding the Side Effects of 3-Month Injectable Contraceptives

Variable	Minimum	Maximum	Mean ± SD	Significance (p-value)
Pre-Test	37	44	40.1 ± 2.473	0.001
Post-Test	28	30	28.3 ± 0.602	

Based on Table 7 it is found that the anxiety level of acceptors regarding the side effects of three-month injectable contraception before and after education using a flip sheet shows a decrease, as seen by the pre-education mean of 40.1 decreasing to 28.3 after the education using the flip sheet. After performing an independent t test, a significance value of 0.001 (p value < 0.05) was obtained, which means there is an influence that significant between the values pretest and posttest with the flip sheet. Thus, it can be concluded that providing education about the side effects of three-month injectable contraception causes a reduction in maternal anxiety.

Discussion

1. Knowledge Level of Acceptors Before and After Education in the Experimental Group

The study results show that only There are 2 respondents (12.5%) who were deemed good in knowledge of acceptors in the pretest, and 14 others (87.5%) were deemed sufficient. This shows that many people still do not know precisely about three-month injectable contraception. The number of respondents increased after education by the researcher, where the number in the good category became 12 (75%) and only 4 respondents (25%) were in the sufficient category. Research by Susanti (2023) indicates that women with higher education levels tend to have better knowledge about side effects and benefits of injectable contraception. In addition, direct experience with this contraception can also enhance knowledge and understanding of side effects.

2. Knowledge Level of Acceptors Not Given Education in the Control Group

Result of the control group study on pretest test results also resemble the control group, as seen in table 3, where only 2 respondents (12.5%) can be stated to have good knowledge, while 9 respondents (56.25%) were classified as sufficient and 5 other respondents (31.25%) were classified as poor. After conducting the posttest, there was no increase in the number of respondents in the good

category, namely only 3 respondents (18.75%) were deemed good, while 10 respondents (62.5%) were sufficient and 3 respondents (18.75%) were poor.

3. Anxiety Level of Acceptors Before and After Education in the Experimental Group

Anxiety level of the experimental group in the pretest, results showed 5 respondents (31.25%) with mild anxiety, while 11 respondents experienced moderate anxiety. Ignorance about something makes a person more prone to anxiety. The number of respondents with mild anxiety increased, where all respondents or 16 respondents (100%) fell into the mild category. This increase occurred after education about three-month injectable contraception. A study by Wijaya & Sari (2023) showed that acceptors with good knowledge about side effects tend to have lower anxiety levels because they are more prepared to face potential changes.

4. Anxiety Level of Acceptors Not Given Education in the Control Group

Observation results of group anxiety control yielded 16 respondents (100%) in the mild category. Similar results were obtained in the posttest. The anxiety experienced by acceptors is often related to worry about side effects and their impact on their health. Research by Hadi (2022) shows that around 40% of acceptors reported moderate to high levels of anxiety, caused by uncertainty and lack of understanding about the long-term effects of injectable contraceptive use. One of the factors is knowledge about contraception. Limited knowledge about how injectable contraceptives work and their side effects can increase anxiety. Acceptors who have clear and comprehensive information tend to feel more comfortable and less anxious (Wijaya & Sari, 2023).

5. The Effect of Providing Education on the Knowledge Level of 3-Month Injectable Contraceptive Acceptors

Providing education has a significant effect on the knowledge of 3-month injectable contraceptive acceptors. This result was obtained from the paired t-test. The increase in respondents' knowledge from only 2 respondents in the pretest to 12, is in line with the research results of Prasetyo & Wijayanti (2018), which stated that acceptors who received education about side effects showed a significant decrease in anxiety levels compared to the control group who did not receive education. The education provided includes information about the types of possible side effects, how to manage those side effects, and when to seek medical help.

6. The Effect of Providing Education on the Anxiety Level of 3-Month Injectable Contraceptive Acceptors

The results of this study show that providing education has a significant effect on the anxiety of 3-month injectable contraceptive acceptors. The increase in the number of respondents experiencing mild anxiety from 5 respondents (31.25%) to 16 respondents (100%), results This is in line with research conducted by Handayani et al. (2018) who also found that health education plays an important role in reducing anxiety among contraceptive acceptors. Fauziah (2021) explained that the education provided can significantly reduce acceptors' anxiety. The education given includes detailed information about side effects and steps that can be taken to address any symptoms that arise.

Conclusion

Based on the results of the research that has been conducted, it can be concluded that there is an effect on the knowledge level and anxiety level of acceptors regarding the side effects of 3-month injectable contraceptives before and after education is given in the experimental group, while in the control group there is no decrease or increase in knowledge and anxiety of acceptors regarding the side effects of 3-month injectable contraceptives.

Suggestion

It is recommended that future researchers can improve and anticipate all the weaknesses in this research and are expected to develop the research to be better.

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