

## Relationship between Implant Contraceptive Use and Acceptor Body Weight Changes

Eka Jarmiati<sup>1</sup>, Sunanto<sup>2</sup>, Iis Hanifah<sup>1</sup>

<sup>1</sup>Bachelor of Midwifery Study Program, Stikes Hafshawaty  
Zainul Hasan, Probolinggo, Indonesia

<sup>2</sup>Diploma of Midwifery Study Program, Stikes Hafshawaty Zainul  
Hasan, Probolinggo, Indonesia

Correspondence should be addressed to:  
Sunanto

[sunanto1710@gmail.com](mailto:sunanto1710@gmail.com)

### Abstract:

Family planning is one of the most effective ways to increase family resilience, health, and safety for mothers, children, and women. This study aimed to analyze the relationship between implant contraceptive use and acceptor weight changes. The research design in research is correlational analytic research. The population in this study were mothers who used implant contraception in the working area of Pustu Blado Kulon, Probolinggo Regency, in January 2022, with as many as 69 people. The number of samples is 69 people with a total sampling technique. Collecting data using a questionnaire, then the data is processed using SPSS using chi-square. In body weight, implant changes acceptor's weight obtained a p-value of 0.015 (smaller than  $\alpha=0.05$ ) so there is a significant relationship between the variable use of implants and changes in body weight in acceptors. maternal weight gain while using hormonal contraceptives between 1-2 kg at the start of using contraceptives. This weight gain is still considered normal because weight gain is caused by fluid retention, increased body fat, and increased appetite. Attention is needed if the acceptor's weight gain exceeds 2 kg while using hormonal contraception.

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## INTRODUCTION

Family planning is one of the most effective ways to increase family resilience, health, and safety for mothers, children, and women. The Family Planning Program is carried out to regulate the number of births or to space births (Larasati, 2017). One of the government's efforts to control the population is by implementing the Family Planning program for Couples of Reproductive Age (PUS). In addition to controlling the population, the family planning program is also useful for realizing access to reproductive health for all as stated in the Sustainable Development Goals (SDGs) Goal 3, namely ensuring a healthy life, and increasing the welfare of the population at all ages with indicators of increasing the Contraceptive Prevalence Rate (CPR). Hormonal birth control methods are the most dominantly used by family planning participants, while the use of Long-Term Contraceptive Methods (MKJP) is still relatively low among women of childbearing age (Misrina & Putri, 2020).

In Indonesia, there were 35,845,289 participants, consisting of 11.53% IUD (Intra Uterine Device) participants, 3.49% of MOW (Women's Medical Operation) participants, 3.49% of Men's MOP (Men's Medical Operation) participants (0.7%), Implant participants (9.17%), Injection participants (46.84%), Pill participants (25.14%), Condom participants (3.14%). The data above shows the highest achievement for the family planning program by injection (46.84%) and the

lowest at MOP (0.7%) (BKKBN, 2018). Contraception consists of hormonal and non-hormonal. Most couples of childbearing-ages decide to use hormonal contraception because it is easier, cheaper, and more effective. Studies show that there are more users of hormonal contraception among women of childbearing age (Rahmawati et al., 2021).

Using contraceptive implants for a long time can cause weight gain (Rambe, 2020). Increased body weight in acceptors of family planning Implants can have several negative impacts, such as degenerative diseases such as heart disease and high blood pressure, which also affect daily activities (Misrina & Putri, 2020). Effects and health problems must be a concern because nurses must be competent in their knowledge (Putri et al., 2022). The emergence of several side effects and health problems that allow Implant contraceptive acceptors to drop out include increased body weight, increased blood pressure, changes in the menstrual cycle, spotting bleeding, and headaches (Misrina & Putri, RA. 2020). To prevent dropouts, health workers can carry out mobile family planning programs so that services are closer to *Posyandu* or door-to-door. Health workers such as doctors, nurses, and midwives can increase promotion and create family planning programs regarding family planning used (Rifiana & Sari, 2021).

Side Effects of Implant contraception according to Rambe (2020), It is further said that generally, weight gain in women who use Implant contraception is the most common thing that acceptors of Implant contraception complain about. Increased excess body weight or obesity increases the relative risk of a woman suffering from diabetes mellitus and the relative risk of developing cardiovascular diseases such as high blood pressure, which can further increase the risk factors for coronary heart disease (Hadi & Yuliawati, 2013). Hypertension will increase when accompanied by work stress and a high workload (Kurniyawan et al., 2023). Obesity can also increase the risk of diseases such as reduced brain capacity, skin irritation, dyspnea, and diabetes (Lutfian et al., 2021). This study aimed to analyze the relationship between implant contraceptive use and acceptor weight changes.

## METHOD

The research design used in this study is correlational analytic, namely research that explains a relationship, estimates, and tests based on existing theory and reveals the correlation between variables which aims to analyze the relationship between variables using a cross-sectional. Data on respondent characteristics are presented in a tabular form consisting of frequency and mean. The research design is measured using Chi-square. Assessment of the homogeneity of the characteristics of the respondents can be known as Chi Square because the data is ordinal. The population in this study were mothers who used contraceptive implants in the working area of Pustu Blado Kulon, Probolinggo Regency, in January 2022, as many as 69 people. As for this study, researchers used the Total Sampling technique in which all population members are sampled. The data is grouped by occupation, education, ethnicity, and a number of children. Research conducted on populations under 100 should be carried out using a census so that all population members are sampled as subjects studied or as respondents who provide information. The number of samples to be studied were 69 people. This research was conducted between July 28-August 6, 2022, in the Working Area of Pustu Blado Kulon, Probolinggo Regency. Initial observations were carried out in January 2021.

## RESULT

### Respondents' Characteristics

Table 1. Respondents' Characteristics based on Occupation, Tribute, Education, and Number of Children (n=69)

Variables	Frequency	Percentage
<b>Occupation</b>		
Civil Worker	4	5.8
Private worker	6	8.7
Housewife	56	81.2
Farmer	3	4.3
<b>Tribute</b>		
Madurese	69	100.0
<b>Educational background</b>		
University	7	10.1
Senior High School	2	2.9
Junior High School	19	27.5
Elementary School	41	59.4
<b>Children</b>		
1	8	11.6
2	51	73.9
>2	10	14.5

Based on the table above shows that the average respondent's occupation is housewife, namely 56 people (81.2%), junior high school education, namely 19 people (27.5%), Madurese as many as 69 people (100%), and have 2 children of 51 people (73.9%).

### Bivariate Analysis Results

Table 2. The Relationship between Implant Contraceptive Use and Acceptor Weight Changes

Implant Contraceptive Use	Body Weight Changes				Total		p-value
	Yes		No		n	%	
	n	%	n	%			
Long-time acceptor	23	33.3	11	15.9	34	49.3	0.015
New acceptor	30	43.5	5	7.2	35	50.7	
Total	53	76.8	16	23.2	69	100	

From the results of the crosstab, researchers showed that respondents who had used contraceptive implants for a long-time experienced changes in body weight, namely as many as 23 people (33.3%), while those who did not experience changes in body weight were as many as 11 people (15.9%). As for respondents using new implants who experienced changes in body weight, there were as many as 30 people (43.5%), and those who did not experience weight changes were five people (23.2%). Based on the results of statistical tests using the Chi-square stated that there was a significant relationship between the duration of implant use and changes in body weight with a  $p=0.015$  ( $p<0.05$ ).

## DISCUSSION

There was a significant relationship between implant use duration and body weight changes. According to Larasati's research (2017), 23 respondents (63.9%) experienced weight gain during the use of implant contraception compared to 13 respondents (36.1%) who did not experience weight gain. Meanwhile, according to Misrina & Putri (2020) an increase in body weight in 61 respondents. Most respondents who used old implants experienced an increase in weight 25 respondents (41%), and did not experience an increase in weight, 19 respondents (31%). Meanwhile, three respondents (5%) who had just used family planning implants experienced weight gain, and 14 (23%) did not gain weight.

Based on the results of the research, there were 41 respondents, or 59.4%, with elementary school education; 19 respondents, or 27.5%, had junior high school education; 7 respondents, or 10.0%, had a bachelor's degree; two respondents or 2.9% had high school education. The level of one's education will affect the response to something that comes from outside. Highly educated people will respond more rationally in receiving information that comes and will then think about the advantages of having higher education (Yuliasri, 2022). Health education is an effort a person or community makes to achieve certain abilities for a better direction in everyday life (Setioputro, 2022).

Based on research conducted by Lontaan et al. (2014) showed that there was not always a relationship between education and the choice of contraception; this was influenced by the number of respondents and the characteristics of each study conducted, the relationship between education and the mindset, perception, and behavior of society is the thing that plays a role where the higher a person's education, the more rational in making various decisions, in this case, the decision in choosing contraception to be used according to the wishes and needs of each.

According to Wirda (2021), the importance of knowledge regarding the side effects of implanted contraceptives for KB Implant acceptors, then as one of the efforts that can be made to increase the knowledge of KB implant acceptors is to provide knowledge about side effects through various methods, for example through print, electronic media, Health education, family planning counseling, so that KB Implant acceptors can increase their knowledge about the side effects of using KB Implants.

The results of the research by researchers based on work were as many as 56 respondents (81.3%) with jobs as a housewife, six respondents (8.7%) with private employee jobs, four respondents with civil servant jobs, and three respondents (4.3%) with jobs as farmers. Meanwhile, research conducted by Kadir (2012) showed that most of the research respondents were working women because they preferred long-term contraception, so they did not have to return for repeated visits to family planning services. Then Implant users who don't work choose to use the Implant as long-term contraception because their number of children is sufficient according to their wishes and needs so the Implant is used to limit the number of births.

The most common side effects from using family planning implants are weight gain or loss, spotting bleeding (spotting), and amenorrhea (no menstruation) after using KB implants. Meanwhile, side effects that rarely occur are expulsion (detachment of the capsule from its place) and infection in the insertion area (wound area). The theory also shows that continuous weight gain has side effects that can cause obesity. Being overweight or obese, the relative risk of a woman suffering from diabetes mellitus, and the risk of developing cardiovascular diseases such as high blood pressure can further increase the risk factors for coronary heart disease (Hadi & Yuliawati, 2013). For implant acceptors, for example, once a month, they weigh themselves which can be done in conjunction with Posyandu activities to emphasize more things to detect early

weight gain. Acceptors who experience weight gain need to be given an understanding of the importance of carrying out various adequate physical activities and doing regular exercise so that this weight gain does not continue into obesity, which can have an impact on the occurrence of health problems (Hadi & Yuliawati, 2013)

Based on the results of the research and existing theory, the researchers argue that weight changes also do not always result from the use of birth control depending on the reaction of the woman's body to the metabolism of progesterone. Weight should always be evaluated in the context of a weight history that includes lifestyle and recent weight status. The mother's weight gain while using hormonal contraception is between 1-2 kg at the start of using contraception. This weight gain is still considered normal because it is caused by fluid retention, increased body fat, and increased appetite. while using hormonal contraception, it is necessary to get attention.

### CONCLUSION

Based on the results, it can be concluded that the use of implant most of them are new users, most experience changes in body weight, and there is a relationship between the use of Implant contraception and changes in acceptors' weight in the work area of public health Blado Kulon, Probolinggo Regency. Changes in body weight also do not always result from birth control, depending on the woman's reaction to progesterone metabolism. The weight of the body should always be evaluated in the context of a weight history which includes both lifestyle and recent weight status

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