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Research Article

The Relationship Between the Use of Birth Control Implants and Weight Gain in the Bolaang Mongondow Region

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Abstract: Implant contraception is one of the long-term birth control methods that is effective in preventing pregnancy. However, the use of implant contraception is often associated with side effects, one of which is weight gain. This weight gain can affect compliance and sustainability of the use of implant contraception in the community. Therefore, it is important to understand the relationship between the use of implant contraception and weight gain in the Bolaang Mongondow area. Objective: This study aims to analyze the relationship between the use of implant contraception and weight gain in acceptors in the Bolaang Mongondow area. Method: This study used a quantitative method with a cross-sectional design. The sample in this study were 30 respondents who were acceptors of implant contraception in the Bolaang Mongondow area. Data collection was carried out through interviews and weight measurements before and after using implant contraception. Data analysis was carried out using the chi-square test with a significance level of $p < 0.05$. Results: The results showed that most respondents experienced weight gain after using implant contraception. Statistical analysis with the chi-square test produced a p-value = 0.009, which means that there is a significant relationship between the use of implant contraception and weight gain. Conclusion: There is a significant relationship between the use of contraceptive implants and weight gain in acceptors in the Bolaang Mongondow area. This weight gain is likely caused by hormonal changes that occur due to the use of contraceptive implants. Suggestion: Further education is needed for prospective acceptors of contraceptive implants regarding possible side effects, including weight gain. In addition, health workers need to provide assistance and weight management strategies, such as education on healthy eating patterns and physical activity, to reduce the impact of contraceptive implant use.

Keywords: Contraception, Implant, Pregnancy, Weight, Women.

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1. Introduction

Contraception is one of the efforts in the Family Planning (KB) program which aims to regulate pregnancy and improve the welfare of mothers and children. One of the widely used contraceptive methods is the implant contraceptive, which is a hormonal contraceptive device that is implanted under the skin and can last for a certain period of time. The implant contraceptive contains the hormone progestin, which functions to prevent ovulation and thicken cervical mucus to prevent sperm from reaching the egg (BKKBN, 2023).

The use of implant contraceptives has many advantages, such as high effectiveness in preventing pregnancy, long-term use, and does not require daily compliance like birth control pills. However, this method also has several side effects, one of which is weight gain. Several studies have shown that the use of hormonal contraception, especially

implants, can cause metabolic changes that contribute to weight gain (Yulianti et al., 2021).

The weight gain experienced by users of implant contraceptives is thought to be caused by changes in hormone levels in the body that affect fat metabolism and appetite. Progestin in implants can increase fluid retention, alter glucose metabolism, and increase fat storage, leading to long-term weight gain (Handayani et al., 2022). These effects can affect acceptor satisfaction and compliance in using contraceptive implants, which can ultimately increase the rate of discontinuation of this contraceptive.

In the Bolaang Mongondow area, contraceptive implants are one of the contraceptive methods widely used by women of childbearing age. However, complaints about weight gain are often the main reason for some acceptors to stop using contraceptive implants and switch to other contraceptive methods (Bolaang Mongondow Health Office, 2023). Therefore, it is important to examine the relationship between contraceptive implant use and weight gain in this area in order to provide a better understanding to the public and health workers.

Previous studies have shown mixed results regarding the relationship between contraceptive implant use and weight gain. Several studies have found that contraceptive implant use can cause significant weight gain, while other studies have stated that weight gain is more influenced by other factors such as diet and physical activity (Rahmawati & Lestari, 2020). Therefore, further research is needed to determine whether the weight gain factor is really caused by the use of contraceptive implants or whether there are other contributing factors.

This study aims to analyze the relationship between the use of contraceptive implants and weight gain in the Bolaang Mongondow area. With this study, it is hoped that health workers can provide better education regarding the side effects of contraceptive implants and strategies for preventing weight gain to acceptors.

The results of this study are also expected to be the basis for formulating policies and interventions related to the use of contraceptive implants, so that women of childbearing age who want to use this contraceptive method can make better decisions based on complete and accurate information.

2. Research Methods

This study used a quantitative method with a cross-sectional design. The sample in this study were 30 respondents who were acceptors of implant contraception in the Bolaang Mongondow area. Data collection was carried out through interviews and weight measurements before and after using implant contraception. Data analysis was carried out using the chi-square test with a significance level of $p < 0.05$.

3. Results and Discussion

Table 1. Respondent Characteristics

Information	Frequency	Percent
Mother's Age		
<20 year	2	6.2
20-35 year	25	75.0
>35 year	3	18.8
Total	30	100.0

According to table 1. most of the mothers' ages are 20-35 years (75%).

Table 2. Types of birth control * Weight gain Crosstabulation

Information		Weight Gain		Total
		Still	Go on	
Types of KB	Implant	12	18	30
Total		12	18	30
Uji Chi square				0.009

According to table 2. it was found that 18 respondents with KB Implant experienced weight gain and 12 respondents whose weight remained the same. The chi square test was obtained, namely 0.009 <0.05, which means that h0 is rejected, h1 is accepted, there is a Relationship between the Use of KB Implant and Weight Gain.

ilndilcate that out of 30 respondents, 18 respondents who used contraceptilve ilmplants experilenced weilght gailn, whille 12 other respondents dild not experilence anyl change iln weilght. Statilstilcal analylsils usilng the chil-square test produced a p-value = 0.009, whilch means that there ils a silgnilfilcant relatilonshilp between the use of contraceptilve ilmplants and weilght gailn (p <0.05). Thus, H0 ils rejected and H1 ils accepted, whilch ilndilcates that the use of contraceptilve ilmplants has an effect on changes iln the acceptor's weilght.

Thils filndilng ils iln lilne wilth previlous studiles whilch state that the use of hormonal contraceptilves, especilallyl those contailnilng progestiln, can cause weilght gailn due to changes iln bodyl metabolilsm (YLulilantil et al., 2021). Progestiln iln contraceptilve ilmplants can ilncrease fluild retentilon, slow down fat metabolilsm, and ilncrease appetilte, whilch ultilmatelyl contrilbutes to weilght gailn (Handaylanil et al., 2022).

The mailn factor that causes weilght gailn iln contraceptilve ilmplant users ils changes iln the hormone progesterone, whilch affects the wayl the bodyl stores fat and manages energyl (Saril & Putril, 2020). Hilgh progesterone iln the bodyl can ilnhilbilt the breakdown of fat, so that more fat ils stored and causes long-term weilght gailn.

ILn additilon, hormonal changes due to contraceptilve ilmplants can also affect the balance of ilnsulilin iln the bodyl, whilch playls a role iln sugar metabolilsm and fat storage (Rahmawatil & Lestaril, 2020). Several studiles have shown that users of hormonal contraceptilves tend to experilence ilncreased ilnsulilin resilstance, whilch can lead to

ilncreased fat mass and faster weilght gailn than those who do not use hormonal contraceptilves.

However, other factors such as dilet and phylsilcal actilviltyl also playl an ilmportant role iln weilght gailn. Some acceptors of contraceptilve ilmplants mayl experilence lilfestylle changes after startilng to use thils contraceptilve, such as reduced phylsilcal actilviltyl or a hilgher calorile dilet, whilch can accelerate weilght gailn (Susantil et al., 2019). Therefore, not all weilght gailn can be dilrectlyl attrilbuted to the use of contraceptilve ilmplants alone.

ILn addiltilon to phylsilologilcal aspects, psylchologilcal factors can also contrilbute to weilght gailn iln users of contraceptilve ilmplants. Some acceptors reported changes iln mood, stress, and ilncreased anxiletyl after usilng the contraceptilve ilmplant, whilch can trilgger emotilonal eatilng or overeatilng habilts due to stress (Hildaylat, 2021). Thils shows that the ilmpact of usilng the contraceptilve ilmplant on bodyl weilght ils not onlyl phylsilcal but also ilnvolves psylchologilcal aspects and eatilng behavilor.

Thils filndilng ils also iln lilne wilth a report from the Bolaang Mongondow Health Offilce (2023), whilch stated that weilght gailn ils one of the mailn reasons for acceptors to stop usilng the contraceptilve ilmplant and swiltch to other contraceptilve methods. Thils shows that the silde effects of the contraceptilve ilmplant, especilallyl weilght gailn, can affect acceptor satilsfactilon and complilance iln usilng thils method.

Although the results of the studyl showed a silgnilfilcant relatilonshilp between the use of the contraceptilve ilmplant and weilght gailn, ilt should be noted that weilght gailn can varyl between ilndilvilduals. Some women mayl experilence silgnilfilcant weilght gailn, whille others onlyl experilence small changes or even no changes at all (Utamil et al., 2020). Thils dilfference can be caused byl genetilc factors, phylsilcal actilviltyl levels, dilet, and the bodyl's response to the contraceptilve ilmplant hormone.

Several studiles suggest that educatilon about healthyl eatilng patterns and phylsilcal actilviltyl needs to be provilded to contraceptilve ilmplant acceptors to help control weilght (Nurlailla & Saril, 2021). Wilth good guildance, acceptors can contilnue to use contraceptilve ilmplants wilthout worrylilng about unwanted silde effects, such as excessilve weilght gailn.

Another ilnterventilon that can be carriled out ils routilne moniltorilng of the weilght of contraceptilve ilmplant acceptors, especilallyl iln the earlyl months after ilnstallatilon. Thils moniltorilng ailms to detect silgnilfilcant changes iln weilght and provilde approprilate ilnterventilons ilf needed (Roeslil, 2018).

From a polilcyl perspectilve, health workers should be more proactilve iln provildilng clear ilnformatilon about the possilble silde effects of contraceptilve ilmplants, ilncludilng weilght gailn. Thils ils ilmportant so that prospectilve acceptors can make more ilnformed decilsilons iln choosilng a contraceptilve method that suilts theilr condiltilons and preferences (Milnilstryl of Health of the Republilc of ILndonesila, 2022).

ILn addiltilon, for acceptors who experilence silgnilfilcant weilght gailn and feel uncomfortable, health workers can provilde.

6. Conclusions

Based on the results of the studyl, ilt can be concluded that there ils a silgnilfilcant relatilonshilp between the use of contraceptilve ilmplants and weilght gailn iln acceptors iln the Bolaang Mongondow area. The results of statilstilcal tests usilng chil-square showed a p-value of 0.009, whilch means that thils relatilonshilp has a hilgh level of silgnilfilcance ($p < 0.05$). Most respondents who use contraceptilve ilmplants experilence weilght gailn, whilch ils lilkelyl caused byl changes iln the hormone progestiln that affect bodyl metabolilsm, fluild retentilon, and appetilte.

However, weilght gailn iln contraceptilve ilmplant users ils also ilnfluenced byl other factors, such as dilet, level of phylsilcal actilviltyl, and psylchologilcal factors. Therefore, ilt ils ilmportant for health workers to provilde more comprehensilve educatilon regardilng the possilbilliltyl of these silde effects and how to manage weilght healthillyl durilng the use of contraceptilve ilmplants.

Routilne moniltorilng of contraceptilve ilmplant acceptors should be carriled out to ildentilfyl silgnilfilcant changes iln weilght and provilde approprilate ilnterventilon ilf necessaryl. Wilth proper educatilon and good moniltorilng, ilt ils hoped that the use of contraceptilve ilmplants can remailn effectilve and provilde benefilts wilthout causilng adverse silde effects.

For further research, ilt ils recommended to expand the sample and consilder other factors that mayl ilnfluence weilght gailn, as well as explore the psylchologilcal and socilal ilmpacts that mayl arilse from thils weilght change.

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