STIKep PPNI Jawa Barat, Bandung - INDONESIA
National Cheng Kung University Hospital - TAIWAN
Bandung, 16th – 17th July, 2018

Conference Book
International Conference on Health Care and Management

“Evidence to inform action on supporting and implementation of SDGs”

Secretary Office :
STIKep PPNI Jawa Barat (Institute of Nursing Science PPNI West Java)
Jalan Ahmad IV No. 32 Cicendo, Bandung 40173
West Java – Indonesia
Phone: +62 22 6121914
E-mail: info@icon-stikeppni.org
Website: www.icon-stikeppni.org

National Cheng Kung University Hospital
No.138, Sheng Li Road, Tainan, Taiwan 704, R.O.C.
Tel : 886-6-2353535
E-mail : hospital@mail.hosp.ncku.edu.tw
Conference Book International Conference on Health Care and Management:
“Evidence to inform action on supporting and implementation of SDGs”
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Phone.: +62 22 6121914
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Website: www.icon-stikepppni.org

National Cheng Kung University Hospital (NCKUH)
No.138,Sheng Li Road,Tainan, Taiwan 704, R.O.C.
Tel : 886-6-2353535
E-mail : hospital@mail.hosp.ncku.edu.tw

Chief Editor:
Linlin Lindayani, Ph.D

Member:
Heni Purnama, MNS
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International Conference on Health Care and Management-2018

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Welcome Message

Assalamualaikum Warahmatullahi Wabarakatuh

Dear honorable guests,
Sustainable Development Goals (SDGs) as an agreement of sustainable development objectives agreed by all countries at the 2015 UN sessions. Each country including Indonesia has an obligation to implement this joint development plan by applying universal, integration and inclusive principles by ensuring that no one missed or “No-one Left Behind” Indonesia has Nawa Cita or 9 priority agenda which should synergize with SDGs and can be used as health program application in Indonesia to also achieve SDGs.

On behalf of the organizing committee and the Nursing Society of Indonesia, I am glad to invite you to join ICHM 2018 (International Conference on Health Care and Management) in Bandung, Indonesia on July 16-17, 2018.

The conference is expected to reveal some solutions for evidence-based health care and scientific facts to be discussed by various viewpoints from diverse speakers from around the world with the title “Evidence to inform action on supporting and implementation of SDGs. Through the International Conference is expected to improve health services, especially in the field of nursing in Indonesia to improve the human development index.

We hope all participant could benefit from the exciting program and will surpass your expectation and that will be an inspiring event.

Warm regards,

Dhika Dharmansyah
Conference chair
Assalamu'alaykum Wr.Wrb
Good morning and best wishes for all of us.

Ladies and gentlemen, in such a great and happy day, let’s praise and thank to Allah Swt who has given us grace and mercy to all of us to gather in this International Conference on Health Care Management event today.

First of all, we would like to gratitude and appreciate highly to national Cheng Kung University Hospital has given the opportunity and confidence to our institution STIKep PPNI Jabar for the second time in collaboration to organize International Conference on Health Care Management with theme: “Evidence to inform action on supporting and implementation of SDGs”. This event is one of follow up The memorandum of Understanding between NCKUH with STIKep PPNI Jabar.

STIKep PPNI Jabar is as a nursing education institution carry out the mandate to create professional nurse, we must implement all TRIDHARMA University activities in academic atmosphere that aims to broaden and improve nursing and existence of nurse profession capacity in nation developing continually.

As we know the university academic quality is determined by its researches and graduates result quality. The research work results may be either a right against managing intellectual wealth equity as well as scientific work which is able to be publicized through scientific journals and scientific gathering forums of the same scientist background both in national and international level.

Nevertheless, the publishing of journal researches is published by its university. Nowadays, it is irregular because there are both financial and scientific manuscript availability drawbacks. Scientific regular manuscripts are very limited because manuscript contributor is only from its university as well.

The high education Research and technology ministry data in 2017, it stated that there were an increase of research work publishing done by practitioners, academicians and researchers of Indonesian. The amount of Indonesian research publishing on international journal certifiable indexed Scopus tended to increase. The high education Research and technology ministry data on December 1st 2017 noted that Indonesia scientific research publishing reached 14.100 journals. Meanwhile, on October 1st 2017 there were as many as 12.098 journals.

However, internally nurse profession scientific research journals are still less of publishing. It is alleged to the low of quantity and quality publishing about nursing. One of the drawbacks is rarely the interaction between nursing scientists and experts in scientific conferences. Some efforts are carried out by STIKep PPNI to encourage and to accelerate sharing knowledge amongst the nursing experts. Accordance to the goals, National Cheng Kung University Hospital Taiwan and STIKep PPNI have made MoU and held as this International conferences organizer. Hopefully, it is able to bridge all stakeholders, practitioners, and academicians in supporting the quality of the human resources especially, nurses and health workers as well.
The honourable ladies and gentlemen,

Nowadays, in the global era, the transformation runs rapidly and consequently it makes the knowledge based society. Information and communication technology development are very important in on its role in manifesting society development based on the knowledge. The higher education of society will be higher of health service quality demands specially nurse.

According to the effort, this International conference aims to,

1. Facilitate the knowledge sharing between health experts and nurses to encourage the goal of health human resource quality.
2. Produce health scientific and nursing articles deserve to be published on international scopus indexed journal.
3. Make communication networking amongst Universities, research institution, nurse practitioners, and other stakeholders.

I truly believe that all participants through the 2 days in international conference, our goals above are able to be manifested well.

Finally, I would like to thank to all of participants diligently and with spirit of attending this international conference on health care management.

Wish the conference is able to be knowledge sharing event and delightful and successful as well, the conference will be enlightened and interchange will do great help for us after attending this conference, especially STIKep PPNI Jabar and generally for all profession nurses to provide health services to communities, aamiin ya robbal alamin.

Wassalamu'alaykum Wr.wb.

Kindest regards,

The Dean of STIKep PPNI Jabar
Excellencies, Distinguished Delegates, Ladies and Gentlemen,

Selamat Siang,

I'm ChyunYu Yang, the superintendent of National Cheng Kung University Hospital in Tainan, Taiwan. On behalf of our hospital, it is my pleasure and privilege to welcome all of you to participate in the international conference on health care and management 2018. To our eminent speakers and delegates who have come from UK, Netherland, Korea, Japan, Thailand, Singapore, Taiwan, and Indonesia, I bid you a very warm welcome to Bandung. We are indeed honoured to have you here with us. We have about 1,000 participants from different place in Indonesia and countries gathered here today, making our conference a truly meaningful one.

This is our second time collaborate with STIKEP PPNI Jawa Barat to hold an international conference. Last year, we have very successful conference with the theme focus on infection control and disaster management. And this year, our conference theme is “evidence to inform action on supporting and implementation of SDGs”.

The Sustainable Development Goals (SDGs) known as the global goals, are a universal call to action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity. Goal 3 addresses all major health priorities and calls for improving reproductive, maternal and child health; ending communicable diseases; reducing non-communicable diseases and other health hazards; and ensuring universal access to safe, effective, quality and affordable medicines and vaccines as well as health coverage. However, the world seems still far from ending maternal mortality, with more than 303,000 deaths in pregnancy or childbirth occurring annually. NCDs are also a growing problem, causing 40 million deaths in 2015. But, All in all, we can take comfort in the fact that SGDs indicators are moving in the right direction. Yet we still have plenty of work to do.

I wish in the next two day and a half, we have the opportunity - and indeed the responsibility - to prepare and add knowledge related the current situation and progress reflection of SDGs. In closing, I encourage delegates to participate actively in the interesting discussions over the next two days. I wish everyone a successful and fruitful conference.

Thank you.
## Conference Committee

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Masdum Ibrahim., S.Kep., Ners  
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*July 16th - 17th*  
Bandung - West Java - Indonesia  
2018

"Evidence to inform action on supporting and implementation of SDGs"
Accomodation, Logistik, and Documentation

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: Dahlan
: Edi

: Asep Supriyadi
: Diki
: Uu
: Siswo
THE EFFECT OF PROLONGED USE OF DEPO PROVERA CONTRACEPTION TO THE CHANGES OF MENSTRUAL PATTERN ON FERTILE AGE WOMEN IN KENDARI

1 Arini, 2Djusiana Eka Cesarria, 3Haryati
1Student of Medicine Faculty of Halu Oleo University, Kendari, South East of Sulawesi, Indonesia
2Medicine Faculty of Halu Oleo University, Kendari, South East of Sulawesi, Indonesia
3Medicine Faculty of Halu Oleo University, Kendari, South East of Sulawesi, Indonesia
Corresponding Email: haryati.aeta2017@gmail.com

ABSTRACT

Background: Depo Provera is the most used injecting contraception in Indonesia and it given every 3 months. Injectable contraception of Depo Provera has a high effectiveness, but there are some side effects that caused by prolonged use, one of which is a disturbed pattern of menstruation. Objectives: The aimed of this research was to analyze the effect of prolonged use of Depo Provera contraception to menstrual pattern changes on fertile age women in Kendari City. Methods: The type of this research was an analytic survey by using cross sectional design. The study was conducted in August 2017 until January 2018 at all community health centers in Kendari. The instrument that used in this research was a questionnaire about the menstrual pattern. The sampling technique used was purposive sampling and the total samples were 380 respondents. Data analysis used by univariate analysis and bivariate analysis with chi square statistic test. Results: The results showed that the use of Depo Provera contraception old and new categories by respondents of fertile age women who experienced menstrual pattern changes amounted to 351 respondents (92.37%), with chi square statistical test obtained p value = 0.047, then statistically showed that there was an effect of prolonged use of Depo Provera contraception to the change of menstrual patterns, including menstrual cycle changes as much as 351 respondents (p value = 0.047), menstrual duration changes as much as 287 respondents (p value = 0.038), and abnormal menstrual blood count as much 297 respondents (p value = 0.043). Hormon progesterone that contained in Depo Provera concentrations will lead histologic changes of the endometrium to endometrial atrophy that will affect the pattern of menstruation. Conclusions: The conclusion of this study that there was a significant effect of prolonged use of Depo Provera contraception to the menstrual pattern changes on fertile age women in Kendari City.

Key Words: Depo Provera, Fertile Age Women, Menstrual Pattern, Prolonged Use

INTRODUCTION

The increasing number of people is a big problem for countries in the world, especially in developing countries like Indonesia. Data of population growth rate of Indonesia in 2000 to 2010 amounted to 1.49% per year. The rate of population growth put Indonesia as the fourth most populous country in the world (Badan Pusat Statistik, 2010). To control population growth rates, the Indonesian government implemented the family planning program. The target of the family planning program is the fertile age couples who are focused on the group of fertile age women who are married and are in the age range of 15 to 49 years (Kemenkes RI, 2016).
Data from National Population and Family Planning Agency (BKKBN) in 2015 shows that the proportion of the most use of contraceptives in Indonesia is an injection of 47.54% (Badan Pusat Statistik Provinsi Sultra, 2015). Based on data in Southeast Sulawesi Province, injecting contraception is also the most common type of contraception used by women fertile age to prevent pregnancy (Dinas Kesehatan Provinsi Sultra, 2016). The data is supported by data from Health Office of Kendari City which shows that the most use of contraception in Kendari city from 2015 until 2016 is injectable contraception. This is indicated by the increased proportion of injection contraceptive users from 42.9% in 2015 to 54.2% in 2016. The most common type of injectable contraception used is Depo Medrol Progesterone Acetate (DMPA) or Depo Provera (Dinas Kesehatan Kota Kendari, 2016).

DMPA or Depo Provera is a method that has a relatively high survival rate to prevent pregnancy. But there are some side effects caused by the use of contraceptive Depo Provera. One of the most common side effects is disturbed menstrual pattern such as amenorrhea (74.4%) (Veisi & Zangeneh, 2013). Based on data in Indonesia, found 25 to 50% Depo Provera acceptors stopped after using it for one year. Abnormal menstrual complaints during contraceptive use are the main cause of termination of use by the acceptor (Stacey, 2010). Results of research found that 1.4% of women choose to stop using DMPA contraception due to changes in menstruating patterns, such as amenorrhea or no menstruation for three consecutive months which is considered to cause persistent infertility. Changes in menstrual patterns such as amenorrhea are the main reasons for dissatisfaction of acceptors in using DMPA contraception because of the public's assumption that amenorrhea can cause accumulation of blood in the body. The most frequent menstruation pattern changes are expressed such as shortened menstrual cycles (polymenorrhea) or elongated (oligomenorrhea), a lot or a little bleeding (hypermenorrhea or hypomenorrhea), irregular bleeding or spotting bleeding, and no menstrual periods for three months consecutive (amenorrhea) (Marmi, 2015).

Because the changes of menstruation pattern is still the main side effect that is often complained about by Depo Provera acceptors, and there is no analytical research related to it on Depo Provera acceptor in Kendari City, so researchers interested to know "The effect of prolonged use of Depo Provera contraception to the changes of menstrual pattern on fertile age women in Kendari City".

METHODS
This research was analytic survey research using cross-sectional design. This research was conducted in 15 working areas of Community Health Center in Kendari City from August 2017 until January 2018.

The sampling technique used was purposive sampling with total sample were 380 respondents. Primary data collection was obtained by conducting direct interviews with the respondents by using questionnaires.

The data were analyzed by univariate analysis and bivariate analysis using chi-square test with p-value < 0.05 which was processed by SPSS version 22.

This research has been approved by the Research Ethics Committee of the Research and Community Service Research Institute of Halu Oleo University.

RESULTS
Univariate Analysis
a. Characteristics of Respondents by Age, Education, and Occupation
Based on table 1 shows that of 380 respondents of fertile age women who become Depo Provera acceptor, the most was the age group of 20 to 29 years amounted to 170 people (44.74%), followed by age group 30 to 39 years amounted to 138 people (36.31 %) and the lowest number were the age group of 40 to 49 years amounted to 72 people (18.95%). The last education of the respondents was senior high school 170 people (44.74%), followed by undergraduates 78 people (20.53%), junior high school 69 people (18.15%) and elementary school as many as 63 people
(16.9%). Most of the respondents did not work or as housewife amounted to 299 people (78.69%), a respondent who work as civil servants amounted to 42 people (11.06%) and entrepreneurs amounted to 39 people (10.26%).

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Amount (n)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20 – 29</td>
<td>170</td>
<td>44.74</td>
</tr>
<tr>
<td>30 – 39</td>
<td>138</td>
<td>36.31</td>
</tr>
<tr>
<td>40 – 49</td>
<td>72</td>
<td>18.95</td>
</tr>
<tr>
<td>Total</td>
<td>380</td>
<td>100</td>
</tr>
<tr>
<td>Last Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elementary School</td>
<td>63</td>
<td>16.58</td>
</tr>
<tr>
<td>Junior High School</td>
<td>69</td>
<td>18.15</td>
</tr>
<tr>
<td>Senior High School</td>
<td>170</td>
<td>44.74</td>
</tr>
<tr>
<td>Undergraduate</td>
<td>78</td>
<td>20.53</td>
</tr>
<tr>
<td>Total</td>
<td>380</td>
<td>100</td>
</tr>
<tr>
<td>Occupation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Civil Servant</td>
<td>42</td>
<td>11.05</td>
</tr>
<tr>
<td>Entrepreneur</td>
<td>39</td>
<td>10.26</td>
</tr>
<tr>
<td>Not working (Housewife)</td>
<td>299</td>
<td>78.69</td>
</tr>
<tr>
<td>Total</td>
<td>380</td>
<td>100</td>
</tr>
</tbody>
</table>

b. Distribution of Respondents Based on the Length of Depo Provera Usage

This research divides the length of Depo Provera contraception usage into two categories that are a new and old category. New category if Depo Provera used ≤ six months or 1 to 2 injection times and for the old category if Depo Provera used > 6 months or more than twice injections. The results of the study in table 2 showed that use contraceptive Depo Provera new categories amounted to 169 people (44.47%) and the old category were 211 people (55.53%).

<table>
<thead>
<tr>
<th>Lenght of Depo Provera Usage</th>
<th>Amount (n)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Category</td>
<td>169</td>
<td>44.47</td>
</tr>
<tr>
<td>Old Category</td>
<td>211</td>
<td>55.53</td>
</tr>
<tr>
<td>Total</td>
<td>380</td>
<td>100</td>
</tr>
</tbody>
</table>

c. Distribution of Respondents Based on Changes in Menstrual Patterns

Changes in a menstrual pattern determined by three indicators of the menstrual cycle, menstrual duration, and menstrual blood volume. The results of the research in table 3 showed that based on the menstrual cycles indicator of 380 fertile women age as Depo Provera acceptors, there were 351 people (92.37%) who experienced menstrual pattern changes and 29 people (7.63%) who did not change. There were 287 people (75.53%) who experienced menstruation pattern change based on menstrual duration indicator and 93 people (24.47%) who did not change. There were 83 people (21.84%) who experienced menstruation pattern change based on indicator of menstrual blood volume and 297 people (78.16%) who did not change.
### Table 3. Distribution of Respondents Based on Changes in Menstrual Patterns on Fertile Age Women in Kendari City in 2017

<table>
<thead>
<tr>
<th>Menstrual Pattern</th>
<th>Amount (n)</th>
<th>Percentage %</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Menstrual Cycle</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Normal</td>
<td>29</td>
<td>7.63</td>
</tr>
<tr>
<td>Abnormal</td>
<td>351</td>
<td>92.37</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>380</strong></td>
<td><strong>100</strong></td>
</tr>
<tr>
<td><strong>Menstrual Duration</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Normal</td>
<td>93</td>
<td>24.47</td>
</tr>
<tr>
<td>Abnormal</td>
<td>287</td>
<td>75.53</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>380</strong></td>
<td><strong>100</strong></td>
</tr>
<tr>
<td><strong>Menstrual Blood Count</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Normal</td>
<td>83</td>
<td>21.84</td>
</tr>
<tr>
<td>Abnormal</td>
<td>297</td>
<td>78.16</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>380</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

### Bivariate Analysis

**The effect of Prolonged Use of Depo Provera Contraception to the Changes of Menstrual Pattern**

Based on the data in table 4, respondents using contraception Depo Provera with new category (usage ≤ six months or 1-2 times injection) that experience change menstrual pattern as many as 151 people (39.74%) and there were 18 people (4.74%) who did not change. For the old category (usage > 6 months or > 2 injections), the number of respondents who experienced menstrual changes were 200 people (52.63%) and 11 people (2.89%) who did not change. Statistical test using chi-square test obtained p-value = 0.047 (p-value < 0.05) then Ho is rejected, so it can be concluded that there was an effect of prolonged use of Depo Provera to the changes of the menstrual pattern.

Based on the data in table 5, respondents using contraception Depo Provera with a new category that experience change menstrual pattern based on menstrual cycle as many as 151 people (39.74%) and there were 18 people (4.74%) who did not change. For the old category, the number of respondents who experienced menstrual changes based on menstrual cycle were 200 people (52.63%) and 11 people (2.89%) who did not change. Statistical test using chi-square test obtained p-value = 0.047.

### Table 4. The effect of Prolonged Use of Depo Provera Contraception to the Changes of Menstrual Pattern on Fertile Age Women in Kendari City in 2017

<table>
<thead>
<tr>
<th>Length of Usage (months)</th>
<th>Menstrual pattern changes</th>
<th>Normal</th>
<th>Abnormal</th>
<th>Total</th>
<th>P-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>n</td>
<td>n</td>
<td>n</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Normal</td>
<td>18</td>
<td>151</td>
<td>4.74</td>
<td>151</td>
</tr>
<tr>
<td></td>
<td>Abnormal</td>
<td>11</td>
<td>200</td>
<td>2.89</td>
<td>200</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>29</td>
<td>351</td>
<td>7.63</td>
<td>351</td>
</tr>
</tbody>
</table>

### Table 5. The effect of Prolonged Use of Depo Provera Contraception to the Changes of Menstrual Pattern Based on Menstrual Cycle Indicator on Fertile Age Women in Kendari City in 2017
Based on the data in table 6, respondents using contraception Depo Provera with a new category that experience change menstrual pattern based on menstrual duration as many as 121 people (31.84%) and there were 48 people (12.63%) who did not change. For the old category, the number of respondents who experienced menstrual changes based on menstrual duration were 158 people (41.58%) and 52 people (13.68%) who did not change. Statistical test using chi-square test obtained p-value = 0.038.

Based on the data in table 7, respondents using contraception Depo Provera with a new category that experience change menstrual pattern based on menstrual blood volume as many as 130 people (34.21%) and there were 39 people (10.26%) who did not change. For the old category, the number of respondents who experienced menstrual changes based on menstrual blood volume were 176 people (46.05%) and 36 people (9.47%) who did not change. Statistical test using chi-square test obtained p-value = 0.043.

DISCUSSION

a. Characteristics of Respondents by Age, Education, and Employment

1. Age

According to the data in table 1 shows that the most age group category of respondents was between 20 to 29 years as many as 170 people (51%). The age is categorized as age with a higher fertility rate than age less than 20 years or over 35 years. Also, a safe age for pregnancy and childbirth is 20 to 30 years of age.
Oral Presentation

ICHM 2018

(Prawirohardjo, 2014) States that one of the causes of maternal death from reproductive factors is the maternal age. Maternal deaths in pregnancy and childbirth at under 20 years are 2 to 5 times higher than maternal deaths that occur between the ages of 20 and 29 years. Maternal deaths will increase again after the age of 30 to 35 years, so it is necessary to arrange pregnancy at that age by using contraceptives to reduce maternal and infant deaths.

Age is the length of time a person's life from birth until now. Humans will experience growth and development both physically and psychologically. Normally, the average physical growth and development of human beings will run optimally until the individual reaches the age of 18 to 20 years. This maximum condition will continue to survive until the age of about 30 years. After the age of 30 years, the function of organs will decrease or undergo physiological changes with age. These changes usually occur in the aging process. However, these conditions may differ for each (Proverawati 2010 in (Suryati, 2013).

Changes in menstrual patterns are more common at the end of the reproductive period, which is over the age of 35 to 39 years. Changes in menstrual patterns are related to the length of the menstrual cycle or the number and duration of menstruation. Women who face premenopause is between the age of 40-50 years; there is a tendency to menstrual disorders. Disorders in the menstrual cycle that occurs are often affected by disruption of hormonal function, systemic abnormalities, and psychological disorders.

2. Last Education

The last education of most respondents was high school education amounted to 170 people (44.74%). It had shown that the majority of respondents have medium education, so it was considered able to receive information related to the ways of workings, benefits and side effects of contraceptives used. Formal education has a great influence on one's knowledge. If someone has a higher education, then he will have a high knowledge, and this will affect in understanding something (Budiman and Riyanto, 2013, in Ragil 2015). However, it should be considered that a person with low education is not absolutely inferior, because knowledge or information can be obtained not only formally but also informally.

3. Occupation

The most respondents did not work or work as a housewife that were as many as 299 people (78.69%). Occupation is everything that is done for a living that aims to meet the needs of life. Occupation of the acceptor and her husband will affect the income and economic status of the family. This indicates if the work is closely related to income. This is in line with research conducted by (Panuntun, Wilopo, & Kurniawati, 2009) that there was a relationship between the occupation with the choice of contraceptives. Injectable contraceptives Depo Provera type is preferred by low-income and non-working respondents. This is due to the support of government and family planning services that provide free services or relatively low prices so that low-income mothers get the same opportunity to choose contraceptives.

b. Distribution of Respondents Based on Length of Depo Provera Usage

The results of the study in table 2 showed that of 380 respondents of fertile age women who use contraceptive Depo Provera, the most was the old category (use over six months) was 211 people (55.53%). The high rates of prolonged use of contraceptive Depo Provera by fertile age women prove that Depo Provera contraception is in great demand by the candidate of acceptors and acceptors. This is also because injectable contraception Depo Provera is more effective in use because it is given only once every three months, has a relatively low price even free, and can prevent pregnancy for a relatively long time compared to other injectable contraceptives. This is by Prawiraharjo's opinion that contraceptive Depo Provera has high effectiveness with an average of 0.3 pregnancies per 100 women per year if the injection is done regularly according to a predetermined schedule. Another advantage of the use of injectable contraception Depo Provera is the risk of small mistakes, no effect on intercourse between husband and wife, no examination in the long term, minimal side effects,
acceptor no need to store inject drugs, reduce the number of bleeding, and prevent anemia (Prawirohardjo, 2014).

c. Distribution of Respondents Based on Changes in Menstrual Patterns

In table 3 showed that changes in the menstrual pattern were assessed from 3 indicators of the menstrual cycle, menstrual duration, and menstrual blood volume. Menstrual pattern changes based on menstrual cycle indicator that amounted to 351 people (92.37%), menstrual pattern changes in menstrual period indicator amounted to 287 people (75.53%), and on indicator of menstrual blood volume with the number of respondents as much as 297 people (78.16%). Changes in menstrual patterns found in respondents in the form of amenorrhea amounted to 279 people; oligomenorrhea amounted to 72 people, hypomenorrhea in the form of menstrual bleeding with less blood or spotting bleeding (spotting) 280 people and the duration is shorter than normal amounted to 200 people.

Depo Provera contraceptive use will affect the menstrual cycle; this is because injections Depo Provera is one type of hormonal contraceptives, so the hormones that enter the body will affect the menstrual cycle of Depo Provera acceptor. Changes in menstrual patterns can occur due to hormonal changes. The progesterone hormone contained in Depo Provera concentrations leads to histologic changes of the endometrium to endometrial atrophy. (Prawirohardjo, 2014) Mentioned that some Depo Provera acceptor receive no menstruation every month after the injection in the first year. Menstrual changes experienced by women who use Depo Provera begin in the form of unpredictable irregular bleeding, blood spots lasting for seven days or more, severe bleeding during the first few months of Depo Provera use, and result in decreased bleeding within each menstrual cycle. If it continues to be used for more than two years, then menstruation will stop (amenorrhea).

However, the side effects of Depo Provera are very subjective so that the person's complaints are different from each other. Every woman has their hormonal formation and hormonal mechanisms, so injectable contraception or other hormonal contraceptives can cause hormone deficiency in one woman and do not cause deficiency in another woman.

The results of this study are in accordance with the results of research conducted by (Arantriwardhani, 2010) which concluded that the use of contraceptive Depo Provera increases the risk of menstruation abnormalities with the percentage of menstruation abnormalities in Depo Provera acceptor who studied as much as 100% and menstrual disorders are most commonly found amenorrhea (50.7%), subsequent spotting bleeding (26.0%), menorrhagia (15.1%), and the least of which was dysmenorrhea (8.2%).

d. The effect of Prolonged Use of Depo Provera Contraception to the Changes of Menstrual Pattern

Changes in a menstrual pattern in this study were observed based on new usage categories (≤ six months of use) and prolonged use (> 6 months of use) of Depo Provera contraceptives. Respondents using Depo Provera contraception with new usage category (≤ six months or 1-2 times injection) experienced menstrual pattern changes as many as 151 people (39.74%), and there were 18 people (4.74%) who did not change. While for the old usage category (> 6 months usage or > 2 times injection), the number of respondents who experienced menstruation pattern changes amounted to 200 people (52.63%) and 11 people (2.89%) who did not change. Based on the statistical test results obtained p-value = 0.047, this explains that the p-value is smaller than α = 0.05, and concluded that there was the effect of prolonged use of Depo Provera contraception to the changes of the menstrual pattern.

This explains that the menstrual pattern that includes the menstrual cycle, the duration of menstruation and the amount of menstrual blood, changes in fertile age women who use contraceptive Depo Provera in Kendari City that is influenced by the length of use of the contraceptive. The most abnormal menstrual cycle found in this study was amenorrhea (27.9%), oligomenorrhoea (72.95%)
and hypomenorrhea in the form of menstrual bleeding with less blood or bleeding spotting of 297 people (78.16%) and or duration shorter than normal was 287 people (75.53%).

The results of this study are consistent with the opinion of Nash (2008), that menstrual abnormalities experienced by Depo Provera acceptor are the most common complaints. These menstrual abnormalities are caused by the mechanism of the hormone progesterone in this contraception. Excessive hormone progesterone in the bloodstream will inhibit the development of follicles (Hartanto, 2004). Other research results from (David et al., 2006) showed that 56.5% of Depo Provera acceptor would have amenorrhoea. Amenorrhea is caused by atrophy of the endometrium, so the endometrium is not functioning normally (Hartanto, 2004).

Amenorrhoea occurring in the subjects of this study was secondary amenorrhoea. Secondary amenorrhoea is defined as the absence of menstruation for three consecutive months in women with a previous normal menstrual history. Contraceptives containing high doses of progesterone such as Depo Provera may induce secondary amenorrhoea. In secondary amenorrhoea, a disturbance occurs in the hypothalamic-pituitary-ovarian axis, i.e. production insufficiency, release, or regulation in an increase in Follicle Stimulating Hormone (FSH) causing a Luteinizing Hormone (LH) surge not to occur. Without the occurrence of LH surge, ovulation will not occur, the corpus luteum will not develop, progesterone is not in production by the ovaries, proliferation occurs continuously, so menstruation will not happen.

The hormone used in injectable contraception has a longer half-life in the body so that the body will experience hormone imbalance (sex hormone steroids and gonadotropin) in the long term compared with other contraceptives. The use of long-term injectable contraceptives may cause a change in the secretory absorptive transformation of the endometrium that will gradually become atrophy.

According to Wulansari (2007 in (Irmawati, 2012), side effects after using injectable Depo Provera injection, not all can be perceived by acceptors. Side effects are very subjective so that the person's complaints are different from each other. Every woman has their formation mechanism and hormonal balance. Thus injectable contraception or other hormonal contraceptives can cause hormone deficiency in one woman and do not cause deficiency in other women. Both groups will experience side effects, but the side effects are different because the underlying hormone pattern is also different (Varney et al., 2007 in (Suryati, 2013).

CONCLUSION

The conclusion of this study that there was a significant effect of prolonged use of Depo Provera contraception to the menstrual pattern changes, including menstrual cycle changes, menstrual duration changes, and menstrual blood volume changes on fertile age women in Kendari City.

REFERENCES


Irmawati. (2012). Factors that Influences the Use of Hormonal Contraceptives on Family Planning
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