JNK

JURNAL NERS DAN KEBIDANAN
(JOURNAL OF NERS AND MIDWIFERY)
http://jnk.phb.ac.id/index.php/jnk

Contraception History and Nutritional Status Affected the Menopause Incidents on Women

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Article Information

History Article:
Received, 06/11/2023
Accepted, 10/12/2023
Published, 30/12/2023

Keywords:
menopause, history of contraception, nutritional status

Abstract

Menopause is a natural process that every woman will experience. Menopause is the end of a woman's reproductive period or the time her last menstrual cycle occurs. The active reproductive period is marked by the first menstruation or what is usually called menarche. The diagnosis of menopause is made after amenorrhea for at least one year. Cessation of menstruation may be preceded by a longer menstrual cycle with less bleeding. The type of research was analytical observational or analytical survey with a retrospective cohort approach. This research was conducted at the Bara-Baraya Community Health Center, Makassar City, South Sulawesi The samples in this study were women who had gone through menopause, were able to speak Indonesian, were not seriously ill (such as a stroke) and were not impaired by their sense of sight and hearing (such as blindness or deafness). This research used 47 respondents taken by purposive sampling technique. The data analysis used the multiple linear regression test. The results of this study showed there was an effect of contraceptive history and nutritional status on the incidence of menopause in women. Therefore, it is hoped that there will be a program for health workers around menopause for women.

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P-ISSN : 2355-052X
E-ISSN : 2548-3811
DOI: https://doi.org/10.26699/jnk.v10i3.ART.p380-385

INTRODUCTION

Menopause is the end of a woman's reproductive period or the time her last menstrual cycle occurs. The active reproductive period is marked by the first menstruation or what is usually called menarche. The diagnosis of menopause is made after amenorrhea for at least one year. Cessation of menstruation may begin with a longer menstrual cycle with less bleeding (Irwan, 2022; Proverawati, 2010). Menopause is a natural process that every woman will experience (Safitri, 2009). This phase occurs gradually, with day by day the decline in the function of the ovarian glands (Larasati, 2012). When menopause occurs, the ovaries no longer respond to the gonadotropin hormone so that the menstrual cycle disappears or becomes a process where ovulation (release of eggs) in the ovaries stops or burns out (Malawat, 2010).

Epidemiological studies reveal a phenomenon that shows the fact that the age of menopause in women in various parts of the world has recently accelerated. Before 2000, the average age at menopause for women was 51.3 years. In 2010, it was found that the average age of menopause for women in countries such as Paraguay, Colombia, Italy and countries in Asia such as Korea, Japan, Malaysia, the average age of women's menopause was earlier, namely around 46.9 In developed countries such as the United States, the age of menopause is from 53.2 years to 47.5 years. In Indonesia, the average age of menopause was 47 years before 2000, in 2010 the average age of menopause was 45 years (Herawati, 2014).

According to the World Health Organization (WHO), the number of menopausal women in Asia in 2025 is expected to jump from 107 million to 373 million. Data from WHO in 2030 estimates that women aged 50 years and over will reach 1.2 billion people. The prevalence of menopause in the world currently reaches around 50 million people. Meanwhile, menopause occurs naturally in women on average at the age of 49-52 years. There are 6% of women experiencing menopause at the age of 35 years, 25% at the age of 44 years, and 75% at the age of 50 years, and 94% at the age of 55 years (Mikkelsen, 2007).

Late menopause is menopause that occurs at the age of >55 years or at the age of 55 years a woman is still menstruating. The menopause period for all women in the world is different. Each person has a different time of menopause, namely some come early and some come late (Sartono, 2013). It is said to be early if menopause appears at the age of 20-40 years. Late menopause usually occurs at ages above 55 years (Mikkelsen, 2007). There are several factors that influence the age of menopause in women, namely age at first menstruation (menarche), number of children, age at birth of last child, use of hormonal (oral) contraception, smoking, history of illness, employment status, income and alcohol consumption. The use of contraception, especially hormonal contraception (oral/pill), in women who use it takes longer or is older when they enter menopause. This can happen because the way contraceptives work suppresses the function of the ovaries so they do not produce egg cells. Using oral contraceptives (pills) is one way to avoid premature menopause in women. The way contraception works is to suppress the function of the ovaries so that they do not produce egg cells (Safitri, 2009).

Apart from that, the occurrence of menopause is influenced by genetic factors, socio-economic factors and nutritional status. In women who have dizygotic twins, women with shortened menstrual cycles, nulliparous women, women with diabetes mellitus, women who smoke heavily, malnourished women, vegetarian women and women who live at an altitude of > 4000 m will experience menopause earlier (Baziad, 2003).

Nutritional status is health resulting from a balance between nutrient needs and input. Readiness to face menopause according to Dini in Khomsan (2004) is consuming nutritious food, namely consuming food with balanced nutrition. Fulfilling adequate nutrition really helps prevent the various negative impacts of menopause on brain performance, prevent dry skin and various other diseases, and prevent menopause from coming early. Apart from nutritional status and physical changes that need to be considered during menopause, the level of knowledge is also important because knowledge is the result of knowing, and this occurs after people sense an object (Notoatmodjo, 2003).

Based on the background of the problem, the researcher determined the aim of this research, namely to examine the influence of conception and nutritional status on the incidence of menopause in women.

METHODS

The type of research was analytical observational or analytical survey with a

retrospective cohort approach design, where a cohort study tries to look backwards, meaning that data collection starts from the effects or consequences that have occurred, then these effects are traced. the cause that influences the effect or consequence (Notoatmodjo, 2012). In this study, researchers examined respondents who experienced menopause and examined in more depth the determinants of menopausesuch as the history of contraception and the nutritional status of the respondents.

This research was conducted at the Bara-Baraya Community Health Center, Makassar City, South Sulawesi. This research was carried out from May to July 2023. The population used in this study was menopausal women who lived in the working area of the Bara-Baraya Health Center, Makassar City, South Sulawesi. The samples in this study were women who had gone through menopause, were able to speak Indonesian, were not seriously ill (such as a stroke) and were not impaired by their sense of sight and hearing (such as blindness or deafness). This research used 47 respondents using purposive sampling technique.

The variables in this study are the dependent variable, namely menopause, and the independent variables, namely contraceptive history and nutritional status. The instrument used is a questionnaire sheet which is filled in directly by the respondent and accompanied by the researcher if there is anything that is not understood in the questionnaire given.

The collected data was analyzed through two stages. The first stage is univariate analysis, where the data will be analyzed in the form of frequency variables. The second stage, a multivariate analysis is carried out to determine or test the influence between the independent variable and the dependent variable. Multivariate analysis in this study used multiple linear regression tests with SPSS version 23.

RESULTS

Table 1: Frequency Distribution of Respondent Characteristics (n=47)

Variable	Frequency	Percent (%)
Age		
40 years old	1	2
49 years old	1	2
50 years old	5	11
51 years old	2	4
52 years old	1	2
53 years old	6	13
54 years old	5	11
55 years old	16	34
56 years old	4	9
56 years old	2	4
59 years old	1	2
60 years old	1	2
62 years old	1	2
65 years old	1	2
Work		
Work	6	13
Not Working	41	87
Education		
High (D3 dan S1)	6	13
Low (SD – SMA)	41	87
Contraceptive History		
Hormonal	22	47
Non Hormonal	25	53
Nutrional Status		
Normal	21	45
Fat	26	55

Source: *Primary Data*

Table 2: Multivariate analysis

Variable	B	S.E	Wald	df	Sig	Exp(B)	95% C.I for EXP(B)	
							Lower	Upper
Age	0,114	0,179	0,401	1	0,526	1,120	0,788	1,592
Work	-1,637	2,894	0,320	1	0,572	0,195	0,001	56,549
Education	0,084	2,562	0,001	1	0,974	0,920	0,006	139,408
Contraceptive History	3,938	1,207	10,633	1	0,001	51,291	4,811	546,840
Nutrional Status	-3,274	1,249	6,868	1	0,009	0,038	0,003	0,438

Source: *Primary Data*

DISCUSSION

Based on table 1, the characteristics of respondents show that there were 16 respondents aged 55 years (34%) with the youngest being 40 years old, 1 person (2%) and the oldest, namely 65 years old, 1 respondent (2%). In this study, the majority of respondents did not have jobs, namely 41 people (87%), as well as educational status, the majority of respondents had low education, namely 41 people (87%). Regarding the history of contraceptive use, the majority of respondents used non-hormonal birth control, namely 25 people (53%) and the majority of respondents had a nutritional status in the obese category, 26 people (55%).

Based on table 2 in the multivariate analysis using multiple linear regression tests, the results obtained are that the ρ-value for the age variable is 0.526, the job variable is 0.572 and the education variable is 0.974 which is greater than the α value of 0.05, so it can be concluded that the characteristics of the respondents in this study do not have the influence on the incidence of menopause in women or in other words the characteristics of the respondents do not influence the results of this study (confounding factors).

The Influence of Contraceptive History on the Occurrence of Menopause in Women

Based on table 2, the contraceptive history variable has a ρ-value of 0.001 < α 0.05. So it can be concluded that there is an influence of contraceptive history on the incidence of menopause in women. In table 2 you can also see the Exp(B) = OR value, where if the Exp(B) value is > 1 and the 95% CI value is more than 1, it is a risk factor with a significant OR, if you look at the contraceptive history variable, the OR value is 51.291. It can be concluded that a history of contraception is a risk factor for early menopause in women. Women who use non-hormonal contraception or who do not use contraception have 51,291 times the risk of premature menopause compared to women who use hormonal contraception.

This research is in line with research conducted by Ismail et al., (2023) which states that there is a relationship between the use of hormonal contraception and the age of menopause, where the use of hormonal contraception plays a role in suppressing ovarian function for ovulation so that it can slow down menopause. However, research conducted by Fitriyani & Djuwita, (2013) with the aim of looking at the relationship between pill contraceptive use and age at menopause concluded that there was no relationship between length of use of pill contraception and age at menopause after controlling for covariate variables, namely education. Use of contraceptive pills for more than 5 years and less than 5 years does not increase or prolong a woman's age at menopause.

The age of menopause is influenced by the level of follicles experiencing atresistance (Whelan, 2010). It is estimated that 99.9% of the 500,000 oocytes present in human ovaries at birth will be lost due to atresia at certain stages of development. This atresia can reduce estrogen production and accelerate menopause.{Bibliography} Follicles that experience atresia are thought to be influenced by a person's hormonal status which is regulated by the neuroendocrine system, namely the pituitary gland (Whelan, 2010).

Hormonal contraception based on the development of hormonal science and technology has been studied that estrogen and progesterone provide feedback to the pituitary gland through the hypothalamus so that there is an obstacle to the development of follicles and the ovulation process, through the hypothalamus and pituitary, estrogen can inhibit the release of FSH so that the development and

maturity of de graafian follicles ovulation does not occur (Armean, 2020; Manuaba, 2010).

The age of menopause is related to the number of follicular reserves remaining in the ovaries (Sari, 2013). The author believes that the longer a person uses hormonal contraception, the older the age of menopause will be because the suppression of ovulation due to the use of hormonal contraception will cause the ovum to lose all of its follicular reserves. Therefore, it is in accordance with the theory that women who have a history of using hormonal contraceptives will experience menopause later or later because they are exposed to the hormones estrogen and progesterone (Metia, 2016).

The Influence of Nutritional Status on the Occurrence of Menopause in Women

In table 2, it can be seen that the contraceptive nutritional status variable has a ρ-value of 0.009 < α 0.05, so it can be concluded that there is an influence of nutritional status on the incidence of menopause in women. In table 2, the value of Exp(B) = OR for the nutritional status variable is 0.038 < 1, so that nutritional status is not a risk factor for early menopause or late menopause in women.m Nutritional status can influence how quickly or slowly menopause occurs. Women with poor nutritional status may experience premature menopause, namely menopause that occurs under the age of 50 years, usually at the age of 35-40 years (Widjayanti, 2021). Mothers who are malnourished can experience premature or premature menopause. Premature menopause is caused by the food consumed lacking or not containing nutrients that can form the hormone estrogen which is very important in a woman's life, especially for maintaining reproductive health. Mothers who experience a lack of the hormone estrogen will experience premature menopause more quickly or what is often called premature menopause (Grisotto et al., 2022). According to theory, energy stored in the form of fat is a much needed ingredient in hormonal processes. Fat is the raw material for synthesizing steroid hormones, so a lack of calories and protein which is stored in the form of fat greatly affects the time or length of time the reproductive process takes place(Elliana & Murniwati, 2017).

To prevent premature menopause, it is necessary to arrange the right food menu as early as possible to overcome the lack of the hormone estrogen in the body. This is a natural alternative, namely by consuming extra estrogen which is contained in many foods. Food ingredients that are rich in phytoestrogens are nuts, milk, and can be found in almost all types of vegetable cereals, papaya, and other plants that are rich in calcium (Dorjgichoo, 2009).

CONCLUSION

In this study it can be concluded that there was an effect of contraceptive history on the incidence of menopause in women and there was an effect of nutritional status on the incidence of menopause in women. Apart from that, the variable history of contraception is a risk factor for menopause in women with an Exp(B)/OR value of 51.291.

SUGGESTION

Based on the results of this research, it is hoped that there will be a program for health workers around menopause for women. For education, it is hoped that there will be further research on contraceptive history variables in more detail on the length of contraceptive use on the age of menopause in women.

ACKNOWLEDGEMENT

I would like to thank the Head of the Makassar City Health Service and the Head of the Makassar City Bara-Baraya Health Center for providing permission and the opportunity to conduct research in their work area.

FUNDING

This research was funded by the authors' personal funded.

CONFLICTS OF INTEREST

The authors state that there are no conflicts of interest in this research.

AUTHOR CONTRIBUTIONS

The research team was divided into two people, namely Indah and Mutmainna, who together played a role in this research starting from data collection, data analysis, research results and discussions.

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