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PREGNANCY PLANNING THROUGH PRECONCEPTION CARE BEHAVIOR

Edita Pusparatri*, Fitriana Kartikasari, Noor Hidayah, Siti Marisa
Nursing Department, Health Sciences Faculty, Universitas Muhammadiyah Kudus, Indonesia
*Corresponding author: editapusparatri@umkudus.ac.id

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Abstract

Preconception care behaviors have a significant impact on maternal and infant health. By optimally preparing the body before conception occurs, the risk of complications during pregnancy and childbirth can be reduced, thereby improving the well-being of mothers and babies. This study aims to determine the relationship of pregnancy planning through pre-conception care behavior. This type of research is correlational analytic research analytic survey method with a cross sectional approach. The sampling technique used was purposive sampling with a sample size of 97 respondents. Bivariate analysis using Chi square test. Pregnancy planning questionnaire and preconception care behavior questionnaire were the instruments used in this study. The results showed that there was a relationship between pregnancy planning and preconception care behavior obtained a value of p value 0.003 with OR value 11.693. There is a relationship of pregnancy planning through preconception care behavior. Future researchers can expand the scope of research by considering factors that influence the success of pregnancy planning. Researchers can consider psychological, social, economic, cultural, and environmental aspects that influence preconception care behavior.

I. INTRODUCTION

The Maternal Perinatal Death Notification (MPDN) explains that the number of maternal deaths in 2022 reached 4,005 and in 2023 increased to 4,129. Meanwhile, infant deaths in 2022 amounted to 20,882 and in 2023 there were 29,945. Infant deaths are mostly caused by low birth weight babies, prematurity, and asphyxia. As for the causes of death of pregnant women, they are generally bleeding and hypertension in pregnancy, which can actually be prevented. Reducing maternal and infant mortality is one of the priority programs run by the Ministry of Health. One of the programs carried out by the Ministry of Health is the pre-conception program (Daisy, 2024). Although pre-conception care services are not yet a routine service in Indonesia or even in the world because the implementation of pre-conception services is difficult (Sainafat et al., 2020).

Women who are within the age range of 15 to 49 years, regardless of their marital status, are considered women of childbearing age (WUS). Expectant mothers who are Women of Childbearing Age (WUS) are a vulnerable population whose health needs attention because their health will affect the next generation from the beginning of pregnancy and during pregnancy (Kemenkes RI, 2018). Because women of childbearing age are a productive group, it is necessary to plan well things such as physical, mental and knowledge preparation so that during pregnancy (conception) to childbirth can give birth to healthy babies who will become a superior generation (Rohmawati et al., 2023).

Every year, 41% of the world's 208 million pregnancies are unplanned and 4 out

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of 10 women in the world report that their pregnancy was unplanned (Rahmah et al., 2021). Studies report an increased risk of mental health problems among women who experience an unplanned pregnancy. Among women with unplanned pregnancies, there was a higher chance of experiencing poor psychological health and an increased risk of depression (Moreau et al., 2022).

A total of 89.6% of women had an initial health check-up to plan for pregnancy. However, the opposite result was found 47.4% of women reported that they waited after their pregnancy was confirmed before receiving medical care. Most women (92.6%) sought medical attention within the first three months (Kasim et al., 2016).

Although women reported optimizing preconception care behaviours such as lifestyle during the preconception period, including the use of pre-pregnancy supplements, minimizing alcohol and healthy diet and physical activity patterns, it was found that there was a reduced perception of risk and a low priority of engaging comprehensive preconception health services for health screening. This may be due, in part, to perceived difficulties in accessing reliable and consistent preconception health information (Khan et al., 2019).

Based on data from the Gondosari Health Center, which covers 5 villages, there are 10,264 WUS. Based on the results of an initial survey conducted by researchers on September 20, 2023 with the coordinating midwife said that at the Puskesmas, education / counseling related to pre-conception services and pregnancy planning is usually held 2 times a year. One of the mothers who checked at the Puskesmas said that she did not know the factors of pregnancy planning such as physical readiness which includes managing lifestyle, achieving ideal weight and maintaining a diet.

The adverse impact that will occur if pre-conception care behavioral issues are not properly addressed is that it will increase the occurrence of risks to the health of the mother, fetus, and newborn. Many chronic medical conditions such as diabetes, hypertension, psychiatric illness, and thyroid disease have implications for pregnancy outcomes and should be optimally managed before pregnancy (American Society for Reproductive Medicine, 2019).

As a nurse in dealing with pre-conception care behavioral problems can work with mothers and partners to optimize health, address modifiable risk factors, and provide health education about healthy pregnancy planning, so that it will reduce the risk of these adverse effects (American Society for Reproductive Medicine, 2019).

This study was conducted to determine whether there is a relationship between Pregnancy Planning through Pre-conception Care Behavior.

II. METHODS

This type of research uses cross-sectional methodology in correlational analysis using analytical survey methods. The population was 3177 respondents from the target data of the Gondosari Kudus Health Center in 2023, a sample of 97 respondents was obtained using the Slovin formula. Sampling technique with purposive sampling. As a research sample, all participants who came and met the inclusion and exclusion criteria were included. The inclusion criteria in this study were women of childbearing age who were married, women who did not / already had children, were at the health center when data collection. Exclusion criteria in this study were respondents did not fill out the questionnaire correctly or incompletely.

Bivariate analysis using Chi Square and the instrument used was a pregnancy planning questionnaire and a pre-conception care behavior questionnaire. The questionnaire was validated, with Cronbach's Alpha of 0.79. The pregnancy planning questionnaire was categorized into planning and not planning. While the pre-conception care behavior questionnaire consists of 12 questions categorized into good (score 76-100%), moderate (score 56-75%), less (score 0-55%) (Kasim et al., 2016).

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Data collection was conducted using primary and secondary data. The steps in data collection were researchers requesting research permission from the Muhammadiyah Kudus University institution, the Kudus Regency Health Office and the Head of the Gondosari Kudus Health Center. Researchers selected a number of respondents as research samples with the criteria set with the help of midwives at the Gondosari Kudus Health Center. Researchers approached prospective respondents who were willing to become respondents (inform concent) by paying attention to the principles of research ethics guidelines, namely respect for human beings, ethical principles of justice, not harming and benefiting, then researchers provided explanations and the purpose of the research.

The researcher administered the questionnaire and asked to fill in the questions provided in the questionnaire sheet. Results from surveys and observations were collected by the researcher, using SPSS software, and data processing and analysis were completed after data collection. This study has passed the ethical review of the Health Research Ethics Committee of Muhammadiyah Kudus University.

III. RESULTS AND DISCUSSION

Respondent Characteristic

Table 3.1 Characteristics of Respondents Based on Age, Education Level, and Occupation.

Characteristic	f	%
Age		
20-35	76	78,4
>35	21	21,6
Education level		
Elementary School	3	3,1
Junior high school	19	19,6
Senior high school	44	45,4
Diploma/Bachelor's degree	31	32,0
Occupation		
Housewife	55	56,7
Employee	11	11,3
Self employee	31	32,0
Total	97	100,0

Source: Primary Data, 2024

Pregnancy Planning

Tabel 3.2 Frequency Distribution Based on Pregnancy Planning

Pregnancy Planning	f	%
Merencanakan	57	58,8
Tidak merencanakan	40	41,2
Total	97	100,0

Source: Primary Data, 2024

Pre-conception Care Behavior

Tabel 3.3 Frequency Distribution of Pre-conception Care Behavior

Pre-conception Care Behavior	f	%
Less (<55)	17	17,5
Moderate (56-75)	41	42,3
Good (76-100)	39	40,0
Total	97	100,0

Source: Primary Data, 2024

Relationship between pregnancy planning and pre-conception care behavior

Table 3.4 Relationship between pregnancy planning and pre-conception care behavior

Pregnancy Planning	Pre-conception Care Behavior								P value	OR
	Less		Moderate		Good		Total			
	N	%	N	%	N	%	N	%		
Planned	7	41,2%	19	46,3%	31	79,5%	57	58,8%	0,003	11.693
Unplanned	10	58,8%	22	53,7%	8	20,5%	40	41,2%		
Total	17	100,0%	41	100,0%	39	100,0%	97	100,0%		

Source: Primary Data, 2024

The results of statistical tests using the chi square test obtained a p value of 0.003 or smaller than 0.05, so H01 is rejected, which means that there is a significant relationship between pregnancy planning and pre-conception care behavior. From the results of the analysis, the OR value = 11.7 means that

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pregnancy planning has a risk of 11.7x on pre-conception care behavior.

Respondent Characteristics

The results of the study explained that respondents aged 20-35 years totaled 76 people (78.8%) and age> 35 years totaled 21 people (21.6%). This is in accordance with research (Du et al., 2021), the average age of pregnant women is 29 years, ranging from 15 to 45 years. More than half (56.3%) were below 30 years of age. Age and parity were associated with pre-conception care utilization. Women aged 30 years and above were more likely to participate in pre-conception care than women aged less than 30 years. Compared to primiparas, multiparas were less likely to utilize pre-conception care services (Du et al., 2021).

The results of the study explained that out of 97 respondents, the highest frequency of education was high school as many as 44 (45.4%), junior high school as many as 19 (19.6%), diploma / degree as many as 31 (32.0%), while the lowest frequency of respondents was elementary school 3 (3.1%). These results are in accordance with research (Siuntai et al., 2023) which shows that the presentation of the most recent education is high school education as many as 24 respondents (70%) and there is a relationship between education and pregnancy preparation of prospective brides. The learning process is influenced by education, the more educated a person is, the easier it is to process information easily. Knowledge can be obtained through non-formal education as well as formal education, although not exclusively (Siuntai et al., 2023).

The results of the study explained that the highest frequency of respondents' jobs was housewives as many as 55 (56.7%), self-employed as many as 31 (32.0%), while the lowest frequency of respondents' jobs was laborers as many as 11 (11.3%). These results are in accordance with research (Siuntai et al., 2023), which shows that the most work presentation is not working, namely 19 respondents (56%) and there is a relationship between work and pregnancy preparation of prospective brides. The family's ability to meet basic needs and provide the necessary facilities to support its existence will depend on their financial situation (Siuntai et al., 2023).

Pregnancy Planning

The results of this study on the univariate variable of pregnancy planning found that the majority of respondents planned pregnancy as many as 57 people (58.8%). An unplanned pregnancy can have a negative impact, but this can be avoided with good pregnancy planning. Pregnancy planning is the process of preparing for pregnancy to improve the healthy development of pregnancy and produce the desired number of high-quality children for the family (Yanti et al., 2021).

The majority of planning pregnancy may be due to the age of most respondents 20-35 years as many as 76 people (78.4%) this age is a good productive age for planning pregnancy. This is evidenced by the results of research (Misali et al., 2021) stating that there is a relationship between age and pregnancy planning in women of childbearing age with a P value of 0.001 smaller than 0.05.

Pre-conception Care Behavior

The results of this study on univariate variables of pre-conception care behavior found that the majority of respondents had good pre-conception care behavior as many as 39 people (40.2%), 41 people (42.3%), while respondents who had poor pre-conception care behavior were 17 people (17.5%). The results of data analysis showed that more respondents had adequate pre-conception care behavior (42.3%), compared to respondents who had good pre-conception care (40.2%) and less good (17.5%).

Preconception care, which includes risk assessment, health promotion, disease prevention, and service provision, is an important intervention to modify biological, behavioral, and social risks for safe

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pregnancy and delivery (Mamuly et al., 2023).

The findings of a study by (Hartini, 2022) showed that educational status influenced awareness of preconception counseling and preconception counseling utilization behavior. One important component that influences knowledge, attitudes, and behaviors related to safe pregnancy preparation is preconception education.

No problems were found from the frequency distribution of respondents' answers regarding pre-conception care behavior in the Gondosari Kudus Health Center area.

Relationship between pregnancy planning and pre-conception care behavior

After cross tabulation, Chi Square analysis was performed, resulting in a p value of 0.003<0.05, which allows Ha1 to be accepted and H01 to be rejected. Therefore, pre-conception care behavior and pregnancy planning are related.

Pregnancy spacing protects both mother and child and enhances psychological bonding within the family. Effective, safe and healthy pregnancy planning is one component of efforts to reduce maternal mortality. This is in line with the results of the study which showed that the knowledge of pre-conception screening in women of childbearing age at Puskesmas Banjarangkan I was significantly correlated with age, education, and pregnancy history (Dewi et al., 2023).

Knowledge of pre-conception screening in women of childbearing age is significantly correlated with age, education, and pregnancy history, according to the results of statistical analysis tests using the chi square test (p value <0.05). Thus, it can be concluded that a person's knowledge, especially women of childbearing age in conducting pre-conception screening examinations can be influenced by age, education, and pregnancy history.

Having strong preconception knowledge influences the use of preconception counseling. The researchers believe that the purpose of providing pre-conception e-modules to women who are in their childbearing years is to educate them about healthy pregnancy preparation. They also believe that women's attitudes and behaviors regarding healthy pregnancy preparation will be influenced by their level of pre-conception knowledge (Hartini, 2022).

The problem found at the time of the study, 17 respondents who had poor pre-conception care behavior were more respondents who did not plan pregnancy 10 respondents (58.8%) than planning pregnancy 7 respondents (41.2%). 41 respondents who had sufficient pre-conception care behavior had more respondents who did not plan pregnancy 22 respondents (53.7%) than planning pregnancy 19 respondents (46.3%). Meanwhile, 39 respondents who had good pre-conception care behavior had more respondents who planned pregnancy 57 respondents (58.8%) than did not plan pregnancy 40 respondents (41.2%).

The results of the study are in line with research conducted by (Du et al., 2021), explaining that factors related to the lack of utilization of pre-conception care services of less than 50% are due to unplanned pregnancies, and ignorance of pre-conception care. The results showed that the utilization of pre-conception care was positively associated with changes in pre-conception health behaviors such as women taking folic acid supplements before pregnancy, their male partners quitting smoking and drinking alcohol before conception (Du et al., 2021).

Healthy pregnancy planning must be done in the pre-conception period. A well-planned pregnancy process will have a positive impact on the condition of the fetus, physical and psychological adaptation of the mother and her partner (Oktalia & Harizasyam, 2019). Many things need to be planned and prepared for, one of which is lifestyle modification and behavior change which is an integral part of preconception care. Encouraging individuals to quit smoking, reduce alcohol consumption, and avoid the use of illicit drugs can significantly reduce the risk of adverse pregnancy outcomes.

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Similarly, increasing regular physical activity and maintaining a healthy weight are essential for overall health and reducing the risk of complications during pregnancy (Khekade et al., 2023).

Limitations of the study

The researcher realizes that there are several shortcomings and limitations in the research, which include:

The research instrument used in this study for data collection was a questionnaire

In terms of method or approach, data collection methods can be done through questionnaires, interviews, and observation. Each of these methods has advantages and disadvantages. A questionnaire is a data collection method in which participants are given a set of questions or written statements to fill in. Sometimes, due to individual differences in assumptions, ways of thinking, and levels of understanding, questionnaire answers may not accurately reflect the respondents' true opinions. In addition, respondents may choose not to complete the questionnaire if they are unable to understand the questions or provide adequate responses.

Researchers conducted research with one independent variable and one dependent variable

Researchers conducted research on pregnancy planning as an independent variable and pre-conception care behavior as the dependent variable. Discussing the causes of pregnancy planning has many causes, with this, research should be done on other factors that affect pre-conception care behavior.

IV. Conclusion

There is a close relationship between pregnancy planning through pre-conception care behavior. Through pre-conception care measures, one can better prepare oneself physically, mentally and emotionally to face the pregnancy process. By monitoring reproductive health, maintaining a healthy diet, abstaining from risky behaviors such as drinking alcohol and smoking, and increasing awareness of menstrual cycles and fertile periods, can increase the chances of a healthy pregnancy and reduce the risk of complications. Thus, pregnancy planning through preconception care behaviors is not only about getting pregnant, but also about ensuring that the pregnancy occurs in optimal conditions for maternal and fetal health. Future researchers can expand the scope of the study by considering factors that influence the success of pregnancy planning. Researchers can consider psychological, social, economic, cultural, and environmental aspects that influence pre-conception care behavior.

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References

American Society for Reproductive Medicine. (2019). ACOG Committee Opinion No. 762: Prepregnancy Counseling. Obstetrics and Gynecology, 133(1), E78–E89. https://doi.org/10.1097/AOG.0000000000003013

Daisy. (2024). Agar Ibu dan Bayi Selamat. https://sehatnegeriku.kemkes.go.id/baca/blog/20240125/3944849/agar-ibu-dan-bayi-selamat/

Dewi, N. W. E. P., Dwiyanti, N. K. N., Teja, N. M. A. Y. R., & Indriana, N. P. R. K. (2023). Hubungan Karakteristik dengan Pengetahuan Skirining Prakonsepsi Pada Wanita Usia Subur (Wus). Jurnal Ilmu Kesehatan MAKIA, 13(1), 27–32. https://doi.org/https://doi.org/10.37413/jmakia.v13i1.254

Du, L., La, X., Zhu, L., Jiang, H., Xu, B., Chen, A., & Li, M. (2021). Utilization of preconception care and its impacts on health behavior changes among expectant couples in Shanghai, China.

pISSN 2540-7511, eISSN 2540-7546

BMC Pregnancy and Childbirth, 21(1), 1–8. https://doi.org/10.1186/s12884-021-03940-0

Hartini, I. (2022). Pengaruh Penggunaan E-Modul Prakonsepsi Terhadap Perilaku Persiapan Kehamilan Sehat Pada Wanita Usia Subur Di Kabupaten Wonosobo Tahun 2022. Journal of Health (JoH), 9(2), 63–72. https://doi.org/https://doi.org/10.30590/joh.v9n2.474

Kasim, R., Draman, N., Kadir, A. A., & Muhamad, R. (2016). Knowledge, Attitudes and Practice of Preconception Care among Women Attending Appointments at a Rural Clinic in Kelantan. Education in Medicine Journal, 8(4), 57–68. https://doi.org/10.5959/eimj.v8i4.475

Kemenkes RI. (2018). Hasil Riset Kesehatan Dasar Tahun 2018.

Khan, N. N., Boyle, J., Lang, A. Y., & Harrison, C. L. (2019). Preconception health attitudes and behaviours of women: A qualitative investigation. Nutrients, 11(7). https://doi.org/10.3390/nu11071490

Khekade, H., Potdukhe, A., Taksande, A. B., Wanjari, M. B., & Yelne, S. (2023). Preconception Care: A Strategic Intervention for the Prevention of Neonatal and Birth Disorders. Cureus, 15(6). https://doi.org/10.7759/cureus.41141

Mamuly, W. F., & Sainafat, A. (2023). Perawatan Prakonsepsi Sebagai Upaya Preventif Aborsi Pada Remaja. Jik Jurnal Ilmu Kesehatan, 7(1), 63. https://doi.org/10.33757/jik.v7i1.638

Misali, S. A. C. A., Wahyuningsih, W., & Rahman, T. (2021). Attitude and pregnancy planning of the women reproductiove of age not associated. JNKI (Jurnal Ners Dan Kebidanan Indonesia) (Indonesian Journal of Nursing and Midwifery), 9(3), 224. https://doi.org/10.21927/jnki.2021.9(3).224-232

Moreau, C., Bonnet, C., Beuzelin, M., & Blondel, B. (2022). Pregnancy planning and acceptance and maternal psychological distress during pregnancy: results from the National Perinatal Survey, France, 2016. BMC Pregnancy and Childbirth, 22(1), 1–12. https://doi.org/10.1186/s12884-022-04496-3

Oktalia & Harizasyam. (2019). Kesiapan Ibu Menghadapi Kehamilan Dan Faktor-Faktor Yang Mempengaruhinya. Ilmu Dan Teknologi Kesehatan, 3(2), 147–159.

Rahmah, N., & Kurniawati, W. (2021). Relationship between marriage readiness and pregnancy planning among prospective brides. Journal of Public Health Research, 10, 88–93. https://doi.org/10.4081/jphr.2021.2405

Rohmawati, H., Rahma, K. D., F, M. E., Alfika, A., P, W. T., & Yeni, P. A. (2023). Pendidikan Kesehatan Pada Wanita Subur Dalam Perencanaan Kehamilan di Kelurahan Bujel Kota Kediri. Jurnal Pengabdian Kepada Masyarakat, 4(3), 2425–2430. https://doi.org/10.31949/jb.v4i3.5424

Sainafat, A., Asmawati, Ikhlasiah, M., Mat, S. B., & Hassan, H. C. (2020). Preconception care in adolescents. Enfermeria Clinica, 30(2019), 73–76. https://doi.org/10.1016/j.enfcli.2019.11.024

Siuntai, N., M, M. Y., & W, D. E. (2023). Hubungan Umur, Pendidikan dan Pekerjaan dengan Pengetahuan Persiapan Kehamilan Calon Pengantin di Puskesmas Kedondong. Universitas Kusuma Husada Surakarta.

Yanti, L., Surtiningsih, & Adriyani, F. H. N. (2021). Upaya Pemberdayaan Ibu dalam Perencanaan Kehamilan yang Sehat. Upaya Pemberdayaan Ibu Dalam Perencanaan Kehamilan Yang Sehat. Jurnal STIKes SYEDZA Saintika, 1554–1558.