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The Characteristics of Premarital Couple Related to Couple's Knowledge of Healthy Pregnancy Preparation

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ABSTRACT
A well-planned pregnancy procedure will benefit the fetus's health and the mother's physical and psychological adaption to pregnancy. Unwanted pregnancies and on-time pregnancies in a woman might be classified as situations of unmet need. Along with pregnancy, this influence on the mother's unpreparedness to conceive can even lead to the decision to undergo an unsafe abortion. This study aimed to elicit data on the features of premarital couples' preparation for a safe pregnancy and their association with knowledge about pregnancy preparation. The study used a cross-sectional design and purposive sampling to examine 57 premarital couples and then utilizing the chi-square to analyze data. The study's findings indicate that respondents will marry at a high risk of pregnancy. There are still some couples who lack adequate knowledge about pregnancy preparation and have not received adequate counseling. There is a significant relationship between the bride and groom's ages and their level of knowledge about preparing for a healthy pregnancy (p-value 0.000), level of education and level of knowledge (p-value 0.000), perspective and level of knowledge (p-value 0.000), and history of exposure to information and level of knowledge (p-value 0.000). Increased marriage age, greater education level, and provision of relevant information will assist married couples in supporting increased knowledge that is more adequate for pregnancy preparation.
Keywords: *knowledge of healthy pregnancy; pregnancy preparation; premarital couple*

ABSTRAK
Proses kehamilan yang terencana dengan baik akan berdampak positif pada kondisi janin dan adaptasi fisik dan psikologis ibu terhadap kehamilan. Kejadian kasus kehamilan yang tidak diinginkan dan kehamilan yang terjadi tidak tepat waktu pada seorang wanita dapat dikategorikan sebagai kasus *unmet need*. Dampak dari hal tersebut selain pada kehamilan, juga pada ketidaksiapan ibu untuk hamil bahkan dapat berujung pada keputusan untuk melakukan aborsi yang tidak aman. Tujuan penelitian ini yaitu untuk memperoleh informasi tentang karakteristik pasangan pranikah tentang persiapan kehamilan yang sehat dan hubungannya dengan pengetahuan tentang persiapan kehamilan yang sehat. Metode

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penelitian *cross sectional* dengan teknik *purposive sampling* pada 57 pasangan pranikah. Analisis data menggunakan *chi square*. Hasil penelitian ini masih ditemukan bahwa responden akan menikah dengan risiko kehamilan yang tinggi. Masih terdapat pasangan yang belum memiliki pengetahuan yang cukup tentang persiapan kehamilan yang sehat dan belum mendapatkan penyuluhan yang memadai. Ada hubungan yang signifikan antara usia calon pengantin dengan tingkat pengetahuan pasangan tentang persiapan kehamilan yang sehat (*p-value* 0,000), tingkat pendidikan dengan tingkat pengetahuan pasangan dengan (*p-value* 0,000), cara pandang pasangan dan tingkat pengetahuan (*p-value* 0,000) dan riwayat keterpaparan informasi dengan tingkat pengetahuan (*p-value* 0,000). Peningkatan usia perkawinan, peningkatan tingkat pendidikan dan pemberian informasi yang memadai akan membantu pasangan suami istri dalam mendukung peningkatan pengetahuan yang lebih memadai dengan persiapan kehamilan.
Kata kunci: pengetahuan kehamilan yang sehat; persiapan kehamilan; pasangan pranikah

INTRODUCTION

The International Conference on Population and Development (ICPD) recognized women's rights to reproductive and sexual health as an important key to women's health (UN Women, 2014). Human rights contained in international and national law and human rights documents: the basic right of spouses and individuals to freely and responsibly determine the number and spacing of children get information, as well as ways to carry out family planning and the right to make decisions free from discrimination, coercion and violence. Ensuring that knowledge and attitudes support reproductive health is an important part of fulfilling these rights.

Lessons learned from research in the UK during 2010 - 2018 (Public Health England, 2018) obtained data that: Low maternal health status and unwanted pregnancy will have an impact on health during pregnancy and the period after pregnancy; 45% of unplanned pregnancies will be restless during pregnancy/ambivalence; 12% of births occurred to young mothers younger than 20 years. 24% of babies born to these young mothers experienced stillbirths, and 5% experienced the incidence of infant mortality. Pregnancies that occur in an environment with a high risk of becoming active or passive smokers resulting in 2200 preterm births, 5000 cases of miscarriage and 300 perinatal deaths per year. Only 31% of women took folic acid before pregnancy; 2/3 of maternal deaths occur in mothers who had physical and mental health problems before pregnancy (Public Health England, 2018). WHO report shows that preconception care has a positive impact on maternal and child

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health outcomes. Preconception care provides biomedical, behavioral and social health interventions to women and couples before conception occurs (WHO, 2013). Preparation for couples who are going to get pregnant, especially in terms of preparing their health, especially: nutrition, exercise, habits that can interfere with pregnancy, for example, smoking, drinking alcohol, environmental pollution and reducing stress (Chandranipapongse and Koren, 2013).

Prenatal care is often too late because the embryo begins to develop when a woman expects her next period to start, and all major organs form in the first two months of development. Preconception care has targeted the existing risks before pregnancy. One important resource may improve reproductive health by optimizing knowledge before pregnancy (Lassi *et al.*, 2014). The purposes five packaging of preconception care are: Completion of secondary education for adolescent girls and prevention of teenage pregnancy; Nutritional counseling and family planning; Nutritional optimization and weight loss programs; Multicomponent youth development programs including infection prevention; Screening and management of chronic diseases including mental health. WHO recommend 13 areas of preconception care such as nutritional conditions, vaccine-preventable disease, genetic conditions, environmental health, infertility/subfertility, female genital mutilation, too early unwanted and rapid successive pregnancy, sexually transmitted infections, Human Immunodeficiency virus, Interpersonal violence, Mental health, Psychoactive substance use and Tobacco use. This recommendation shows that to get a healthy pregnancy, every couple must work together to ensure that the physical, psychological, social conditions, including the couple's knowledge about pregnancy, must be prepared. This preparation must be done long before pregnancy occurs (Lassi *et al.*, 2014).

In Indonesia's 2019 health profile, it is stated that the 2015 Facilitative Supervision results show that the maternal mortality rate is three times higher than the MDG target (Kementerian Kesehatan RI, 2020). Based on the Basic Health Research results in 2013, the prevalence of anemia in pregnant women in Indonesia is 37.1%. The Indonesian Basic Health Research data shows that not all couples prepare their health to face their pregnancy. Bonte, Pennings and Sterckx (2014), Oktalia and Herizasyam (2016) recommend that there is a need to change

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the paradigm of health services. These changes emphasize preparation for preconception and help couples prepare for a healthy pregnancy (Bonte, Pennings and Sterckx, 2014). In Indonesian society, pregnancy usually occurs after a marriage between a male and female partner happens. Before marriage, the prospective couple will register themselves at the local religious affairs office and carry out a general examination at the community health center (Oktalia and Herizasyam, 2016). This study differs from previous studies because previous studies were conducted on pregnant women and were retrospective. Still, this study analyzed the prospective bride and groom who were about to get married.

METHOD

This research is analytical observational research that uses primary data. Bivariate data analysis using chi-square analysis. The number of respondents is 57 couples of bride and groom. The instrument used is a questionnaire consisting of several components regarding the characteristics of the prospective bride and groom such as age, education level, income level, level of knowledge about preparation for a healthy pregnancy, attitudes towards preparation for a healthy pregnancy, access to health services received exposure to information about preparation for a healthy pregnancy. Inclusion criteria are prospective brides getting married for the first time and planning not to delay pregnancy. This research has passed the Health Research Ethics Commission of Jakarta III Health Polytechnic's ethical clearance with the number KEPK-PKKJ3/242/IV/2019 on 10 Mei 2019. The research process is carried out by providing research information sheets, research approval sheets, including the rights of respondents in this study.

RESULTS AND DISCUSSION

Table 1. Knowledge of healthy pregnancy preparation based on couple's age (n=57)

Couple age	Knowledge				N	%	P-value	95 % CI
	Not enough		Enough					
	n	%	n	%				
Bride's Age								
< 20 years old	14	24.6	6	10.5	20	35.1	0.000	12.056 (3.300 – 44.045)
≥ 20 years old	6	10.5	31	54.4	37	64.9		
Groom's Age								
< 25 years old	31	54.4	0	0	31	54.4	0.000	2.600 (1.599 – 4.228)
≥ 25 years old	10	17.5	16	28.1	26	45.6		

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Based on table 1, it can be seen that there are 14 respondents of prospective female brides who will marry less than 20 years (24.6%). While for the groom, 31 respondents are less than 25 years old (54.4%). Based on statistics, it is known that there is a significant relationship between the age of the married couple and the level of knowledge about preparation for a healthy pregnancy (p-value of 0.000). Brides and grooms who have mature age will have a better knowledge about preparing for a healthy pregnancy.

Based on the research results, it can be seen that there are still some brides who are less than 21 years old. It is feared that this will affect women's physical readiness to have a healthy pregnancy. This study has the disadvantage of not triangulating the physical examination of the prospective bride and groom. Pregnancies among women before 21 ages have major health and social consequences such as eclampsia, puerperal endometritis and systemic infections than women aged 20–24 years. Early childbearing (less than 20 years) can increase risks for newborns. Babies born from mothers under 20 years of age will face higher risks of low birth weight (LBW), preterm delivery and other severe neonatal conditions (Cavazos-rehg *et al.*, 2015). Also, women aged <25 years tend 1.421 times to experience sexually transmitted infections (Simbolon and Budiarti, 2020). There is a relationship between age and the incidence of anemia in pregnant women where pregnant women under the age of 20 years and above the age of 35 years have a 3.921 times greater risk of anemia in pregnancy than pregnant women between the ages of 20 to 35 years. Mothers who experience pregnancy at the age of under 20 years of iron intake will be divided between the fetus in the womb and their biological growth (Sari, Fitri and Dewi, 2021).

Table 2. Knowledge of healthy pregnancy preparation based on bride's educational background (n=57)

Educational background	Knowledge				N	%	P-value	95 % CI
	Not enough		Enough					
	n	%	n	%				
Bride								
Basic – middle	20	35.1	22	38.6	42	73.7	0.001	0.524 (0.393 – 0.699)
Higher education	0	0	15	26.3	15	26.3		
Groom								
Basic – middle	32	56.1	0	56.1	32	56.1	0.000	2.778 (1.647 – 4.685)
Higher education	9	15.8	16	28.1	25	43.9		

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Based on table 2, most respondents have primary and secondary education levels with the distribution for the bride 42 respondents (73%) and the groom 32 respondents (56.1%). Based on statistics, it is known that there is a significant relationship between educational background and level of knowledge about preparation for a healthy pregnancy with a p-value of 0.000 (for the bride and groom group). Brides and grooms who have a higher level of education have a better level of knowledge about preparing for a healthy pregnancy. This research is in line with Wang *et al.* (2018), who found that the education program will improve the person's accuracy rate of knowledge and behaviour. Another study conducted by Kromydas et al. reinforces the view that increasing education will reduce injustice in certain groups through increased knowledge (Kromydas, 2017).

Table 3. Knowledge of healthy pregnancy preparation based on bride's point of view (n=57)

Couple's point of view	Knowledge				N	%	P-value	95 % CI
	Not enough		Enough					
	n	%	n	%				
Bride								
No need preparation (natural process)	17	29.8	8	14	25	43.9	0.000	20.542 (4.791 – 88.073)
Need well preparation	3	5.3	29	50.9	32	56.1		
Groom								
No need preparation (natural process)	27	47.4	0	0	27	47.4	0.000	2.143 (1.462-3.141)
Need well preparation	14	24.6	16	28.1	30	52.6		

Based on table 3, it can be seen that most of them consider that preparation for pregnancy is important as many as 32 respondents (56.1%) in the bride group and 30 people in the groom group (52.6%). However, from this study, it can be seen that there are still brides and grooms who think that a healthy pregnancy is something natural without requiring special preparation, as many as 25 bride respondents (43.9%) and as many as 27 grooms (47.4%). Based on statistics, there is a significant relationship between the perspective and the level of knowledge

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about preparation for a healthy pregnancy (p-value of 0.000).

In this study, it is still found that the bride and groom think that pregnancy is a natural process that can be passed without preparation, and this is in line with the result of Eni-Olorunda, Akinbode and Akinbode (2015). They found in their research that the majority of 59 respondents (59.6%) do not see anything wrong in being pregnant yearly. These research findings will consider that when individuals focus on their perspective (point of view), they actively look for knowledge. In addition, when individuals feel more responsible for their actions instead of being part of a group, their attitudes are more consistent with their behavior. Although pregnancy is a natural event, pregnancy must still be prepared because if pregnancy occurs with the mother's condition being unprepared, the risk of pregnancy complications will be higher. Even WHO (2013) recommends several areas that need to be discussed long before pregnancy occurs, such as Sexually transmitted infections, including HIV; family planning and pregnancy spacing; Healthy body weight and diet; Importance of oral health; reducing the risk of hepatitis C in those with tattoos and/or body piercings; lead and other environmental and/or occupational exposures, etc. (Bialystok, Poole and Greaves, 2013).

Table 4. Knowledge of healthy pregnancy preparation based on bride's exposure to adequate information (n=57)

Information exposure	**Knowledge**				**N**	**%**	**P-value**	**95 % CI**
	Not enough		**Enough**					
	n	**%**	**n**	**%**				
Bride								
No exposure	15	26.3	4	7.0	19	33.3	0.000	24.750
Exposure	5	8.8	33	57.9	38	66.7		(5.808 – 105.463)
Groom								1.842
No exposure	22	36.6	0	0.0	22	38.6	0.000	(1.359 – 2.497)
Eexposure	19	33.3	16	28.1	35	61.4		

Based on table 4, it can be seen that most couples have been exposed to information about preparing for a healthy pregnancy adequately, namely 38 bride respondents (66.7%) and 35 groom respondents (61.4%). Statistics show a significant relationship between information exposure and adequate knowledge about preparation for a healthy pregnancy with a P-value of 0.000 (in the bride and groom group). The

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data shows that there are still couples who have not received adequate preparation for a healthy pregnancy. The information they received was limited to the importance of implementing Tetanus toxoid immunization and a general physical examination. They stated that they had not received special counseling for couples regarding preparation for a healthy pregnancy.

Questions about preconception care counseling have the lowest score out of the components answered correctly by respondents. According to Jack *et al.* (2008), it is known that preconception care counseling is very important in the components of family planning and reproductive life plan, weight status, nutrients intake, folate supplementation, preventing from substance us like tobacco and alcohol, Sexual Transmitted Infections (STIs) risk screening, immunizations such as human papilloma virus (HPV), hepatitis B, measles mumps and rubella. Another study said that many English-speaking women had no distinct reproductive life plans. Most did not think that medical preparations were needed before pregnancy. New approaches may be useful to more productively identify women who need individualized counseling, preconception care, and/or more effective contraceptive methods (Nelson *et al.*, 2016). National and state resources have been developed to help health care providers assist women and men of reproductive age (including adolescents) in developing a reproductive life plan, identifying risk factors for adverse pregnancy outcomes, and providing education and resources to assist in addressing risk factors before pregnancy (Nobles-Botkin, Lincoln and Cline, 2016).

This article also analyzes that couples should be encouraged to screen for possible exposure to HIV, TORCH and other infections that can interfere with pregnancy. Special counseling for pregnancy preparation in chronic diseases such as diabetes mellitus, hypertension, thyroid disease, renal disease and others, including the possibility of genetic disorders, also needs to be done (Jack *et al.*, 2008). Preconception counseling can be done by making a counseling checklist that contains self-assessment for health workers. This checklist includes components that must be given during counseling such as pregnancy intention, folic acid supplementation, screening for medical conditions, taking a family history, screening for the use of teratogenic medications, immunization status, screening for infectious diseases,

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screening for possible exposure to pollutants and toxins in the environment, prevention. Use of alcohol, nicotine and illegal drugs, prevention of violence from partners, adequate nutritional needs and ideal physical activity (UNCRC, 2009).

In the Indonesian context, in the registration process for the prospective bride and groom, couples are required to visit a community health center or PUSKESMAS in the area where the wedding is located. This opportunity can be used well by health workers who are in charge of conducting couples counseling effectively. The DKI Jakarta region has governor regulation number 185 of 2017 concerning the obligation of counseling and examinations for prospective brides who are getting married. However, according to the results of the research before still has pros and cons among the community, so the party from the Jakarta branch of the Indonesian ulama council suggested that the Jakarta government review the effectiveness of this regulation, especially for people who have diseases and prevent them from getting married (Aprilia, 2017).

The implementation of preconception screening in the city of Yogyakarta has met the minimum standards, consisting of a physical examination, supporting examinations in the form of mandatory laboratory examinations and recommendations, giving Tetanus Toxoid immunization, nutritional supplementation, health consultations and psychological services (Yulivantina, Mufdlilah and Kurniawati, 2021). Regardless of the initial examination results that will influence the couple's decision to marry or not, health screening to ensure pregnancy readiness is very important for every couple. A pregnancy that is not prepared will impact the health of the mother, the health of the fetus, and the quality of child care after birth. The right of children to be born healthy and get a family ready to have children (UNCRC, 2009). Mothers have the right to have a healthy pregnancy. The state's obligation ensures that every pregnancy does not end in illness or death (UNFPA, 2012).

CONCLUSION

Information about the characteristics of couples getting married provides an idea of the extent to prepare for pregnancy is carried out. From the characteristics of the respondents, it is still found that respondents will marry at a high risk of pregnancy. The data also found that there were still couples who did not have sufficient knowledge about preparation for a healthy pregnancy and had not received

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adequate counseling. It provides consideration for stakeholders to make more effective and adequate efforts. With the increased capacity for healthy pregnancy preparation for married couples, it is hoped that these couples will plan for a better pregnancy. With better pregnancy preparation knowledge, it is expected to improve the quality of healthy pregnancy preparation and reduce the possibilities of pregnancy complications. Increasing the health status of pregnant mothers will help reduce the likelihood of maternal and infant mortality and morbidity.

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