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Research Article

Factors Affecting the Frequency of K1 Visits for Pregnant Women in Maternal Health Programs

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Abstract: This study aims to identify the factors that influence the first antenatal visit (K1) among pregnant women. The study employed a descriptive design with a cross-sectional approach, utilizing a total sampling technique. A total of 49 respondents, all of whom made the K1 visit, were included in the study. The variables examined in this research included maternal age, parity, and gestational age at the time of the K1 visit. Secondary data obtained from medical records were used for analysis. The results revealed that the majority of pregnant women who made the K1 visit were in the non-risk age group (20–35 years), accounting for 84% of the respondents. Regarding parity, most participants were multiparous, making up 53% of the total sample. In terms of gestational age, 43% of respondents made their K1 visit during the first trimester of pregnancy (0–12 weeks). The study found that the first antenatal visit was predominantly conducted by pregnant women in the non-risk age group (20–35 years) and the multiparous group. Additionally, the K1 visits were most frequently made when the gestational age was in the first trimester, reflecting early engagement with antenatal care. These findings highlight the importance of maternal age, parity, and gestational age in influencing the timing of the first antenatal visit, which plays a critical role in ensuring early and adequate prenatal care for pregnant women. These insights can be used to improve strategies for encouraging timely K1 visits, particularly for pregnant women who may be at risk of delayed prenatal care.

Keywords: Antenatal Care; Maternal Health; Pregnancy

1. Introduction

Maternal Mortality Rate (MMR) reflects the extent of the risk faced by mothers during pregnancy and childbirth. An increase in MMR indicates an increase in maternal mortality cases, which means that the risk of pregnancy is greater (Wulandari & Ariesta, 2014). Pregnancy checks according to standards need to be implemented to reduce mortality rates. Age, gestational age, parity, maternal knowledge, maternal occupation, and family support are factors that can influence the activity of visits (K1) to pregnant women.

Parity is the number of children born to a mother, either alive or dead. Parity that is not safe for pregnancy and childbirth is in the first pregnancy and high parity (>3), while parity 2-3 is the safest category in terms of maternal mortality risk (Anggraeni & Purwati, 2016). Mothers with high parity have a greater risk of maternal mortality, so they are more motivated to carry out regular Antenatal Care (ANC) checks.

From a psychosocial perspective, more mature people will be more trusted because they are considered to have experience and mental maturity. The more mature a person is, the more mature their way of thinking tends to be and more regular in conducting pregnancy check-ups (Dewi et al., 2013). The safe age for pregnancy and childbirth is 20–35 years. Maternal mortality in pregnant women aged <20 years is 2–5 times higher than those aged

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20–29 years. Maternal mortality increases again after the age of 35 years. Mothers aged <20 years, the function of the uterus and other body organs are not ready for pregnancy and tend to pay less attention to their pregnancy. Meanwhile, at the age of 20–35 years, reproductive function is optimal and it is expected to pay more attention to pregnancy. At the age of >35 years, uterine function decreases and health is not as good as the previous age (Wiknjosastro, 2008).

Every pregnant woman is strongly advised to undergo a comprehensive ANC examination at least four times, namely once in the first trimester (<13 weeks), once in the second trimester (14–28 weeks), and twice in the third trimester (28–36 weeks and thereafter). In the maternal and child health monitoring program, K1 is an indicator to determine the coverage of antenatal services and the effectiveness of the program in mobilizing the community (Ministry of Health, 2015).

The impacts of not carrying out ANC include lack of information about proper pregnancy care, undetected danger signs such as pregnancy anemia, pelvic deformities, multiple pregnancies, and comorbidities and complications such as preeclampsia (Peranginangin, 2006).

According to Riskesdas 2013 and 2018, the ideal national K1 coverage in 2013 was 81.6% and K4 was 70.4%. In 2018, K1 coverage increased to 86%, and K4 to 74.1% (Riskesdas, 2018). This difference shows that many mothers who carry out ideal K1 do not continue ANC according to minimum standards.

K1 is divided into pure K1 and access K1. Pure K1 is the first visit of a pregnant woman to a health worker in the first trimester. K1 access is the first visit not done in the first trimester (gestational age >12 weeks). Examination in the first trimester is very important because it is the period of formation and development of fetal organs, so the risk of congenital defects is high if missed.

2. Research Methods

This study is a descriptive study with a cross-sectional approach that aims to describe the characteristics of pregnant women based on data from the first antenatal visit (K1). The study was conducted in a midwife's practice in the period 2018–2019. The population in this study were all pregnant women who visited the midwife during that time period. The sampling technique used total sampling, namely all pregnant women who were recorded as having made a K1 visit were taken as samples. The number of samples obtained was 49 people.

The data used were secondary data taken from the medical records of pregnant women, including the variables of maternal age, parity, gestational age at the time of the K1 visit, and the status of the K1 visit itself. Data processing was carried out using Microsoft Excel software, while data analysis was carried out univariately to describe the frequency distribution

and percentage of each variable. The results of the analysis are presented in the form of tables and narratives to facilitate interpretation of the research findings.

3. Results and Discussion

3.1. Respondent Characteristics

This study used secondary data of 49 medical records of pregnant women who underwent K1, both pure K1 and access K1. Based on Table 1, the most K1 visits based on age were in the non-risk age group (20–35 years), which was 41 people (84%). Meanwhile, the most K1 visits based on parity were multiparous, which was 26 people (53%). The most K1 visits based on gestational age were at 0–12 weeks of gestation, which was 21 people (43%).

Table 1. Respondent Characteristics Based on Age and Gender

Variable	N	%
Age		
20-35 year	41	84
>35 year	8	16
Parity		
1 (primipara	19	39
2-4 (multipara)	26	53
>4 (grandemultipara)	4	8
Gestasional Age		
0-12 week	21	43
13-27 week	20	41
28-41 week	8	16
First visit (K1)		
Pure	21	43
Access	28	57

The results of the study showed that most pregnant women who made their first visit to health services (K1) were in the 20-35 age category, which was 41 people (84%). This age is included in the safe reproductive age category, where the function of the reproductive organs is in optimal condition to support pregnancy and childbirth. This age is also associated with a relatively low risk of pregnancy complications compared to ages <20 years and >35 years. Previous studies have also shown that women aged 20-35 years have better biological and psychological readiness in facing pregnancy and childbirth (Ministry of Health of the Republic of Indonesia, 2018; Wilkinsosastro, 2008). In terms of parity, most respondents were in the multiparous group (2-4 times giving birth) as many as 26 people (53%), which is considered the safest parity in pregnancy and childbirth. Meanwhile, primiparas numbered 19 people (39%) and grandemultiparas numbered 4 people (8%). Primiparous mothers tend to have a higher risk of complications because they have no previous experience, while grandemultiparas are at high risk of experiencing disorders such as postpartum hemorrhage and placental abnormalities (Anggraeni & Purwati, 2016).

Based on gestational age at the time of the first visit, the majority of respondents checked their pregnancy in the first trimester (0–12 weeks), which was 21 people (43%). This is the most recommended time for a K1 visit, because this period is a crucial period in the formation

of fetal organs (organogenesis). However, there are still 57% of mothers who do K1 after 12 weeks of pregnancy, which is categorized as K1 access. This shows that some mothers still lack understanding of the importance of conducting pregnancy checks early.

The type of K1 visit carried out also shows that only 21 people (43%) did pure K1 (in the first trimester), while the majority (28 people or 57%) did K1 access. This indicates challenges in increasing the coverage of antenatal services according to standards. The causes of late visits include lack of education, obstacles to access to health facilities, and low support from the family. In fact, pure K1 is one of the important indicators in reducing maternal and infant mortality rates, as well as ensuring that pregnancy is monitored early (Ministry of Health of the Republic of Indonesia, 2015; Riskesdas, 2018).

Thus, it is important for health workers and stakeholders to continue to educate the public about the importance of antenatal visits from early pregnancy and provide easy access for pregnant women.

3.2. Characteristics of Pregnant Women Based on Pure K1 and Access K1

The indicator for measuring maternal nutritional status during pregnancy is by using the Upper Arm Circumference (MUAC) measurement indicator. The Upper Arm Circumference (MUAC) is one of the options for determining nutritional status because it is easy to do and does not require tools that are difficult to obtain. The results of maternal nutritional status during pregnancy obtained can be seen in Table 2, namely:

Table 2. Characteristics of Pregnant Women Based on Pure K1 and Access K1

No	Variable	First visit (K1)		Total
		Pure	Access	
1	**Age**			
	20-35 year	17	24	41
	>35 year	14	4	8
2	**Parity**			
	1 (primipara	10	9	19
	2-4 (multipara)	10	16	26
	>4 (grandemultipara)	1	3	4
3	**Gestasional Age**			
	0-12 week	21	0	21
	13-27 week	0	20	20
	28-41 week	0	8	8

Based on the results of a study of 49 pregnant women who made their first visit (K1), it was found that most respondents were in the age range of 20–35 years (84%), which is categorized as a healthy reproductive age and not at risk. Of this group, most of them carried out K1 access, namely a visit made at a gestational age of more than 12 weeks. Meanwhile, only a small number of mothers over the age of 35 years (16%) carried out pure K1, and the rest carried out K1 access. This finding shows that despite being at the ideal age, many mothers have not taken advantage of the opportunity to carry out early pregnancy checks. This is in line with Wilopo's opinion (2015) which states that women of productive age tend

to be more ready to undergo pregnancy, but awareness of the ideal time for examination is not optimal.

In the parity variable, most mothers are classified as multiparous (53%), namely having 2–4 children. Even though they have had experience giving birth, only a small number of them carried out pure K1. Primiparous mothers (39%) also showed a similar pattern, with more carrying out K1 access. These results support Manuaba's opinion (2010), that pregnancy experience does not always guarantee compliance with pregnancy service standards, such as first trimester visits.

In terms of gestational age, all mothers who underwent pure K1 checked themselves at 0–12 weeks of gestation. On the other hand, all mothers who were classified as K1 access came for check-ups at more than 12 weeks of gestation, both in the second and third trimesters. This condition indicates that the level of utilization of antenatal care services since early pregnancy is still not optimal. WHO (2016) emphasizes that the first antenatal visit should be carried out before 12 weeks of gestation to detect risks early and provide appropriate interventions. Inaccurate timing of visits can increase the risk of complications that are not detected early.

The results of the study showed that age affects K1 because the older the person, the more mature the level of maturity and strength of a person will be in thinking. Sufficient age makes mothers think maturely about their health needs by checking their pregnancy with health workers. This is known from the results showing the non-risk age category (20-35 years) as many as 24 people (49%) in K1 access. These results differ from previous studies which stated that a person's or community's behavior towards health is influenced by predisposing factors (knowledge, attitudes, traditions, beliefs, education, and socio-economics), enabling factors (availability of facilities and infrastructure), and reinforcing factors (attitudes and behavior of community leaders, religious leaders, health workers, husband's support, and family support) (Notoatmodjo, 2010).

Age 20-35 years is the safest period for pregnancy and childbirth. At that age, the function of the reproductive organs is optimal and the mother is physically and psychologically ready to face pregnancy. On the other hand, at the age of <20 years, the reproductive organs are not ready and at the age of >35 years, reproductive function has decreased (Varney, 2008). Another study revealed that there is a significant relationship between the age of pregnant women and ANCs compliance with p-value = 0.000 (Dewi et al., 2013).

This study also supports that the safe age for pregnancy is between 20 and 35 years. Ages <20 and >35 years are at high risk for pregnancy. The physical condition of pregnant women aged >35 years greatly determines the birth process, including the quality of egg cells which tend to decrease. However, research by Panjaitan et al. (2014) showed that there was no relationship between age and the utilization of K1 and K4 services (p = 0.840).

In the parity variable, the most accessed K1 was in the multiparous group with 16 people (33%). You (2019) revealed that multiparous mothers were more likely to utilize ANC services than primiparous mothers. Previous pregnancy experiences influence the mother's motivation to undergo pregnancy check-ups. Primiparous mothers need more information because they do not have experience and feel worried, so they utilize ANC services more than multiparas who feel they are experienced enough. This is reinforced by Ruliana's research (2013) which showed that 50% of primiparas did pure K1 and 64.7% of multiparas did access K1. Sarli et al. (2015) also stated that there was a significant relationship between parity and utilization of K1 services ($p = 0.05$).

Based on gestational age, pregnant women at 0–12 weeks of gestation utilized pure K1 more. This happens because mothers begin to realize complaints such as not menstruating, frequent urination, morning sickness, cramps, and constipation, so they need support from health workers. If K1 visits are carried out early, the risk of pregnancy can be immediately detected and treated. Conversely, delays in visits can increase the risk of maternal and fetal death (Manuaba, 2009).

K1 coverage is a description of the number of pregnant women who make their first visit to a health facility to get antenatal care. Meanwhile, K4 is a minimum coverage of four visits according to distribution: once in the first trimester, once in the second trimester, and twice in the third trimester. Pregnant women at 13–27 weeks of pregnancy tend to do K1 late because the body begins to adjust and appetite returns. Normal weight gain at this age is around 6.7–7.4 kg (Hulliana, 2001). Therefore, it is recommended that mothers immediately check themselves after experiencing a delay in menstruation to get ANC before 12 weeks of pregnancy (Saifuddin & Adriansz, 2006).

Gestational age is very important in determining the diagnosis of pregnancy. Gestational age that is too young or too old increases the risk of complications. Therefore, pregnant women need to get adequate health services, especially ANC which aims to maintain the health of the mother during pregnancy. The main indicators of ANC services are K1 and K4 coverage. Pregnancy services play a major role in determining the outcome of childbirth through early detection of risks and handling of complications. Pregnant women who do not do ANC are at high risk of complications during childbirth. Therefore, in an effort to improve maternal health, ANC must be carried out periodically according to guidelines to ensure a healthy pregnancy and a baby who is born safely.

4. Conclusions

Based on the results of the study, it is known that the characteristics of pregnant women who make their first visit to a midwife (K1) are mostly in the non-risk age group (20–35 years), with the highest proportion in K1 access. The age of pregnant women plays an important role in influencing antenatal care seeking behavior, where mothers of reproductive age tend

to be more aware of the importance of pregnancy checks. In addition, parity also shows an influence on the type of visit, with multiparous mothers doing more K1 access than primiparas, who do more pure K1. Previous pregnancy experiences provide confidence in multiparas, while primiparas tend to be more alert and need more information. Meanwhile, gestational age also affects the timing of K1 visits, where mothers with a gestational age of 0–12 weeks do more pure K1, while those who check themselves after the first trimester tend to do K1 access. This shows the importance of health promotion and education for pregnant women so that K1 visits can be carried out in a timely manner according to antenatal care standards, so that the risk of complications can be prevented as early as possible.

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