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Effectiveness of using high risk detection card on pregnant women's knowledge about high risk pregnancy in the work area of Kayen health center, Pati District

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Abstract

Background: High-risk pregnancy can have a negative impact on pregnant women and their babies. Based on the Indonesian Health Profile (2020), the Maternal Mortality Rate (MMR) in Indonesia is very high, most of which is caused by high risk events during pregnancy such as bleeding and hypertension. Knowledge is one of the supports in behavior during pregnancy.

Objective: This research aims to determine the effectiveness of using *the High Risk Detection Card* on pregnant women's knowledge about high risk pregnancy.

Method: Quantitative research using *pre-experimental* research methods, research design using *One Group Pretest Posttest Design*, data analysis using the *Wilcoxon Signed Ranks Test*. The research was conducted in the Working Area of the Kayen Public Health Center, Pati Regency, with a total sample of 27 pregnant womens.

Results: The results showed that 26 respondents experienced an increase in knowledge from moderate to good (p value = 0.000).

Conclusion: The use of *the High Risk Detection Card* is significantly effective in increasing pregnant women's knowledge about high risk pregnancies in the Kayen Community Health Center Working Area, Pati Regency.

Keywords: Education, effectiveness, high risk detection card, high risk pregnancy, knowledge

Introduction

Pregnancy is a physiological condition experienced by a woman, it can become pathological or have a risk that endangers the health of the mother and fetus ^[1]. Conditions that are at high risk are pregnancies with hypertension, bleeding, infectious diseases, pregnancies at the age of < 20 years and > 35 years, spacing of pregnancies too close, etc. ^[2]. Dangers that can occur from high-risk pregnancies include premature birth, low birth weight babies, abortions, bleeding before and after childbirth, dead fetuses in the womb (IUID), pregnant or giving birth women who die ^[3].

Based on Indonesia's 2020 Health Profile, the Maternal Mortality Rate (MMR) in Indonesia is very high, namely 305 per 100,000 live births, most of which are due to high-risk events during pregnancy ^[4]. In Pati Regency, the number of MMR has increased in the 2018-2020 period, including due to bleeding, hypertension in pregnancy, and other cases ^[5].

Many factors influence high risk events during pregnancy, one of which is knowledge ^[6]. As *care providers, midwives* must be able to provide safe care and support such as providing health education ^[7]. In delivering health education, media or tools are needed to facilitate the process of delivering education ^[8]. Researchers took the initiative to provide health education using *the High Risk Detection Card*, which is a print media in the form of *flashcards*. Rahmawati, *et al.* (2022) stated that the use of flashcards influences pregnant women's knowledge regarding stunting prevention. The author believes that the use of *the High Risk Detection Card* can increase pregnant women's knowledge of high risk pregnancies in the Working Area of the Kayen Health Center, Pati Regency.

Materials and methods

This research is a quantitative research with *pre-experimental* research methods using the *One Group Pretest Posttest Design*.

The population in this study were pregnant women in the working area of the Kayen Public Health Center, Pati Regency, consisting of 27 pregnant women. The sampling technique used total sampling technique, so that the sample in this study used the entire population of 27 pregnant women. Data collection was carried out in March 2023.

The research instrument used was a *pretest - posttest questionnaire* to measure the level of knowledge of pregnant women. The data collection process included filling out the *pretest questionnaire*, intervention using the *High Risk Detection Card*, and filling out the *posttest questionnaire*. Univariate analysis was carried out to determine the characteristics of respondents including age, education, occupation and gravid a using frequency distribution tables and presentations. Bivariate analysis used the *Wilcoxon Signed Ranks Test* to analyze the effectiveness of using the *High Risk Detection Card* on the knowledge of pregnant women.

Result

Respondent Characteristics

Table 1: Frequency distribution of respondent characteristics in the kayen community health center working area, Pati Regency

Characteristics	Respondents	
	F	%
Age (years)		
< 20	3	11,1
20-35	21	77,8
> 35	3	11,1
Education		
No school	0	0
Elementary School	3	11,1
Junior High School	7	25,9
Senior High School	17	63,0
Academy/College	0	0
Work		
No work	17	63,0
Self-employed	10	37,0
Private sector-employee	0	0
Civil servants	0	0
Gravida		
One (Primi)	14	51,9
Two and so on (Multi)	13	48,1

In Table 1, it can be seen that the majority of respondents were aged 20-35 years, namely 21 respondents (77.8%), their last education was high school, 17 respondents (63.0%), not working, namely 17 respondents (63%), and primigravida pregnancy status or pregnant for the first time as many as 14 respondents (51.9%).

Knowledge of Pregnant Women

Table 2: Knowledge level of pregnant women before and after education using the high risk detection card

Knowledge	Pre test		Post test		P value
	F	%	F	%	
Good	19	70.4	26	96.3	0,000*
Enough	8	29,6	1	3,7	
Not enough	0	0	0	0	

*Wilcoxon Signed Ranks Test

In Table 2, it can be seen that the majority of respondents' knowledge before being given education about high-risk

pregnancies using the *High Risk Detection Card* was good knowledge, 19 respondents (70.4%) and after being given education, 26 respondents (96.3%) became good knowledge.

The Effect of Education Using the High Risk Detection Card on the Knowledge of Pregnant Women Before and After Education

In Table 2, shows the value of *Asymp. Sig (2-tailed)* has a value of $0.000 < \alpha (\alpha = 0.05)$, so it can be concluded that $H1$ is accepted and $H0$ is rejected, which means that the use of the *High Risk Detection Card* is significantly effective in increasing pregnant women's knowledge about high risk pregnancies.

Discussion

Respondent Characteristics

The results showed the characteristics of the respondents, with the age category of the majority of pregnant women aged between 20-35 years as many as 21 respondents (77.8%). These results show that the majority of respondents are of healthy reproductive age (20-35 years). According to Prawirohardjo (2016), the older one is, the more mature a person's level of maturity and strength will be in thinking and working. Unhealthy reproductive age, those who are too young < 20 years, do not have the readiness physically and psychologically, including in dealing with pregnancy, while those who are too old (> 35 years) think that pregnancy is something normal, they have experienced it before. Previously, they felt experienced so they felt they didn't need to look for new information during their pregnancy^[9].

The majority of respondents with the last high school education were 17 respondents (63%). In line with research conducted by Rahayu *et al.* (2021) which shows that the level of education has a significant relationship with pregnant women's knowledge regarding the danger signs of pregnancy with a value of $P = 0.000$. Based on the theory put forward by Notoatmodjo that the higher a person's education, the more information they receive so that the higher the knowledge they have^[10].

In the job category, 17 respondents (63%) did not work the most. These results indicate that the respondents are dominated by pregnant women who do not work or housewives. This research is in line with research conducted by Yusma Putri & Patma Anakota (2017), which shows the results that there is a relationship between work and pregnant women's knowledge about KIA books ($P = 0.008$)^[11]. But that doesn't mean someone who doesn't work doesn't have the experience and effort to find information. Pregnant women who don't work have more free time than pregnant women who work so they can find out information related to pregnancy more freely^[12].

In the gravida status category, the majority of pregnant women with primigravida status were 14 respondents (51.9%). Mothers who are pregnant for the first time (primigravida) are something very new, so they are motivated to check their pregnancy. On the other hand, pregnant women who have given birth to more than one person (multigravida) assume that they have experience, so they are not motivated to check their pregnancies^[13].

Knowledge of pregnant women before and after given health education using the high risk detection card

Table 2, shows an increase in the number of pregnant women with good knowledge from 19 to 26 respondents. From the research results it is known that there is one respondent who does not experience an increase in his knowledge results, the researcher assumes that everyone has different abilities in capturing and understanding new information. Differences in abilities possessed by each person are generally caused by innate factors and environmental factors^[14].

This research is in line with research conducted by Nadhyatul Fyrda (2022), that there was an increase in the knowledge of pregnant women in the intervention group after being given health education ($P=0.001$)^[15]. Research by Siti Najma (2022), also showed similar results, namely that pregnant women's knowledge increased significantly after being given education using MCH books and using electronic media with a value of $P = 0.000$ (Najmah^[16]).

The Effect of health education using a high risk detection card on pregnant women's knowledge about high risk pregnancies

Analisis Wilcoxon Signed Ranks Test using SPSS show the *Asym value. Sig. (2-tailed)* of $0.000 < \alpha$ ($\alpha = 0.05$), then H_1 is accepted and H_0 is rejected, which means that there is an influence of the use of *the High Risk Detection Card* on the knowledge of pregnant women. Thus, it can be concluded that health education using *the High Risk Detection Card* is significantly effective in increasing pregnant women's knowledge about high risk pregnancies.

Notoatmodjo (2007) explains that knowledge is the result of human sensing which is a very important domain for shaping one's actions. The use of media in providing education is a supporter of success in efforts to increase the knowledge of pregnant women. With the increasing knowledge of pregnant women in this study, it is one measure of the success of health education using the *High Risk Detection Card*, which includes a teaching and learning process through the information on the card. The existence of a visualization process in studying the contents of *the High Risk Detection Card* will make the brain more proficient in carrying out the activities being studied^[17].

Media *High Risk Detection Cards* can provide detailed descriptions such as colorful pictures to attract someone's attention so that they can strengthen the message being conveyed and easier to understand^[8]. From this statement, the researcher assumes that the use of *the High Risk Detection Card* is beneficial in increasing pregnant women's knowledge about high risk pregnancies because the contents of the card are related to conditions during pregnancy, so that they are related or directly related to pregnant women.

With increased knowledge of pregnant women about high-risk pregnancies, mothers will be able to recognize and be aware of any conditions that could harm their pregnancy. With the information that has been obtained, it is hoped that the mother will be able to plan her next delivery and pregnancy with good consideration.

Conclusion

Based on the results of research conducted in the Working Area of the Kayen Community Health Center, Pati Regency, the following conclusions can be drawn

- Characteristics of most of the respondents aged between 20-35 years, high school education, not working, and primigravida.

- Knowledge of pregnant women before being given education using *the High Risk Detection Card*, the majority of them had good knowledge of 19 pregnant women (70.4%). After being given health education, the majority had good knowledge of 26 pregnant women (96.3%).
- The use of *the High Risk Detection Card* in conducting health education is effective in increasing pregnant women's knowledge about high risk pregnancies in the Working Area of the Kayen Health Center, Pati Regency ($P = 0.000$).

Suggestion

For Researchers

It is hoped that researchers can perfect the *High Risk Detection Card media* in terms of appearance, theoretical source information, ease of storage, and security.

For Further Researchers

It is hoped that future researchers can conduct similar research by adding a control group as a comparison subject.

For Health Workers

It is hoped that health workers, especially midwives, will routinely provide education about high-risk pregnancies to pregnant women, both in pregnancy class activities and during ANC.

For Pregnant Women and Families

1. It is hoped that pregnant women and their families can be more alert during the pregnancy process and be able to carry out early detection of high-risk pregnancies.
2. It is hoped that pregnant women will regularly visit health workers, not just when they have complaints.

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