



## Original Article

## Awareness of Pakistani Pregnant Women Regarding Danger Signs of Pregnancy

Afsha Bibi<sup>1</sup>, Rasheed Ahmad Khan<sup>1</sup>, Noor Illahi<sup>1</sup>, Ashfaq Ahmad<sup>2</sup> and Mai siani<sup>3</sup><sup>1</sup>Horizon School of Nursing & Health Sciences, Karachi, Pakistan<sup>2</sup>Suvastu School of Nursing & Health Sciences, Karachi, Pakistan<sup>3</sup>Community Midwifery School, Tando Allahyar, Pakistan

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## \*Corresponding Author:

AfshaBibi  
Horizon School of Nursing & Health Sciences,  
Karachi, Pakistan  
fawad52005@gmail.comReceived Date: 9<sup>th</sup> May, 2023Acceptance Date: 28<sup>th</sup> May, 2023Published Date: 31<sup>st</sup> May, 2023

## ABSTRACT

The early warning signs of pregnancy suggest that a woman may be dealing with a problem that could endanger her and her unborn child's health. If these warning symptoms are not addressed immediately, the consequences could be severe and even fatal. **Objective:** To assess Pakistani pregnant women's awareness regarding the danger signs of pregnancy. **Methods:** This cross-sectional study was conducted at a tertiary care hospital in Karachi among 114 pregnant women from September to December 2022. Participants were recruited through the purposive sample method. **Results:** According to the study results, 18% of the participants had a low level of awareness, 62% had a moderate, and 20% had a high level of awareness regarding danger signs of pregnancy. **Conclusions:** This study concluded that most participants had moderate awareness regarding the danger signs of pregnancy. Moreover, there is a need for continued efforts to educate pregnant women about the danger signs of pregnancy to improve their understanding.

## INTRODUCTION

Pregnancy is a crucial period in a woman's life, and it is essential to ensure that the pregnancy progresses smoothly. Pregnancy is seen as a common occurrence in a woman's life. However, it's estimated that 40% of pregnancies are high-risk, which could harm both the mother and the fetus [1]. Moreover, risk approach screening for high-risk disorders in pregnancy is a managerial tool essential to antenatal primary health care. To avoid obstetric difficulties, this risk method comprises the early screening of high-risk pregnancies [2]. Moreover, according to WHO, there are ten common danger signs during pregnancy, including vaginal bleeding, excruciating headaches, blurred vision, intense abdominal discomfort,

fever, facial or finger swelling, less frequent fetal movements, convulsions, difficulty breathing, and excessive vomiting. Furthermore, a woman dies during pregnancy or childbirth at least once every minute worldwide [3]. It is simple to avoid deaths from vaginal birth and pregnancy-related problems [4]. Increased awareness of pregnancy danger signs, which are directly associated with the early diagnosis of pregnancy hazards, can help prevent pregnancy-related problems—knowing the warning symptoms of pregnancy 6.657 times more likely to do so than people who are unaware of the risks associated with early pregnancy. There are several causes of maternal fatalities. Obstetric, obstetrical, and postpartum problems

are among the direct causes of maternal death. Most of these issues arise during pregnancy; however others may already exist before conception and deteriorate during labor. Major complications include severe bleeding (typically after childbirth), infections (usually after childbirth), and high blood pressure during pregnancy (pre-eclampsia and eclampsia), which together account for 80% of all maternal deaths [5]. Studies have revealed that many pregnant women are not entirely taught about these risk signs, despite how important it is to be aware of them. Due to this ignorance may take longer to get medical help, increasing the likelihood that both the mother and the unborn child may experience adverse results [6-9]. Therefore, it is crucial to educate pregnant women about the check for pregnancy danger signals and ensure they have access to medical care when needed. This can be achieved through various means, such as antenatal care services, community health education programs, and social media campaigns [10-13]. Pakistan has the third-highest maternal, fetal, and child mortality rate worldwide. As well as tackling common social determinants of health, it has made only modest progress towards attaining MDGs 4 and 5. The nation faces significant political instability, intricate security issues, and natural calamities. We thoroughly examined Pakistan's performance concerning MDGs 4 and 5 and the key factors influencing health in terms of nutrition and reproductive, maternal, newborn, and child health [14]. While several studies have been conducted globally on the awareness of pregnant women towards dangerous signs of pregnancy, there is a research gap in the specific context of Pakistan. The country has a high maternal and neonatal mortality rate, and a lack of awareness about danger signs during pregnancy could be one of the contributing factors [14]. In conclusion, recognizing pregnancy danger symptoms is crucial for ensuring the health and well-being of pregnant women and their babies [15, 16]. It is imperative that pregnant women are informed about these signs and encouraged to seek medical attention promptly if they experience any of them. Furthermore, increasing awareness and knowledge of warning indications during pregnancy is essential to improve maternal and neonatal health outcomes, reduce maternal and neonatal mortality and morbidity, and attain the sustainable development objective of reducing maternal and newborn fatalities [17]. Therefore, a study on pregnant women's understanding of the dangerous indications of pregnancy is a crucial first step in accomplishing these objectives.

## METHODS

At Sindh Govt. Hospital, New Karachi in Pakistan, a descriptive cross-sectional study was carried out. Additionally, it lasted from September 2022 to December

2022 for four months. 114 people were recruited through the purposive sampling method. Additionally, Open EPI was utilized to determine the sample size. A 95% confidence level was used with a sample size of 114. All pregnant mothers who consented to participate in the study were also enrolled. In addition, individuals in the pilot trial and those in labor pain who did not sign the consent form were eliminated from the study. Researchers obtained study approval and authorization for data collection before beginning. This approval guarantees that the study is carried out ethically and that the welfare and rights of the participants are maintained. Pregnant women who are not in labor pain were recruited from antenatal OPD. Participants had informed about the purpose of the study, the data collection procedure, and their right to refuse or withdraw from the study at any time. Informed consent in both English and Urdu was obtained from each participant before participating in the study. The informed consent process includes an explanation of the study's purpose, the data collection procedure, the risks and benefits of participating, and the participants' rights. Participants signed a consent form indicating their agreement to participate in the study. Data was collected through a questionnaire with informed consent from pregnant women who are not in labor pain, and collecting data in 20 minutes requires careful planning and execution. The study tool had two parts. Part I is Sociodemographic data which has four questions. And part II is awareness regarding danger signs of pregnancy which is 12 questions. The questions had two options: correct answer and wrong answer. Correct answer =1, wrong answer=0. The total score was converted into percentage. Those participants who scored below 50% had a poor low awareness, 50% to 75% moderate, and above 75% had a high awareness regarding danger signs of pregnancy. Three experts reviewed the tool and calculated the CVI, which is 0.83. and for reliability, a pilot study was conducted on 10% of the sample size, and the calculated Cronbach alpha was 0.84. The data were analyzed on SPSS version 26.0 software. Percentages and Frequencies were used to describe sociodemographic characteristics and the awareness level.

## RESULTS

Table 1 presents the frequency and percentage of participants according to different variables, including age, gestational age of current pregnancy, gravida status, and maternal education. The table provides valuable information on the demographics and characteristics of the study participants. Regarding their age, 36 participants (31.6%) were less than 20 years old, 71 participants (62.3%) were between 20 to 29 years old, only 6 participants (5.3%) were between 30 to 39 years old, and 1 participant (0.8%)

was over 40 years old. Concerning their gestational age, 15 participants (13.2%) were in their 1st trimester, 36 participants (31.6%) were in their 2nd trimester, and 63 participants (55.2%) were in their last trimester. In their gravida, 25.4% of participants were primigravida, 23.8% were second-gravida, and 25.4% were third-gravida, indicating they had been pregnant twice. The remaining 25.4% were multigravida. Regarding their education, 20 participants (17.5%) were illiterate, 36 participants (31.6%) had primary education, 39 participants (34.2%) had matriculation education, and 19 participants (16.7%) had more than matriculation education.

**Table 1:** Results of Sociodemographic Data

Variables	Frequency(%)
<b>Age</b>	
Less than 20 years	36(31.6)
20 to 29 years	71(62.3)
30 to 39 years	6(5.3)
Greater than 40 years	1(0.8)
<b>Gestational age of current pregnancy</b>	
1st trimester	15(13.2)
2nd trimester	36(31.6)
Last trimester	63(55.2)
<b>Gravida Status</b>	
Primi-gravida	29(25.4)
2nd Gravida	27(23.8)
3rd Gravida	29(25.4)
Greater than 3 (multi gravida)	29(25.4)
<b>Maternal education</b>	
Illiterate	20(17.5)
Primary	36(31.6)
Matriculation	39(34.2)
More than matriculation	19(16.7)

Table 2 shows the results of awareness out of the total number of participants. 18% had a low level of awareness of the danger signs of pregnancy, 62% had a moderate level of awareness, and 20% had a high level of awareness.

**Table 2:** Levels of Awareness

No of participants	Level of awareness
18%	Low level
62%	Moderate level
20%	High level

## DISCUSSION

The danger signs of pregnancy indicate that a pregnant woman may be experiencing a complication that could threaten her health and that of her baby [9]. The impact of these danger signs can be severe and potentially life-threatening if not addressed promptly [18]. The lack of knowledge and awareness of danger signs during pregnancy can potentially lead to adverse health outcomes for both the mother and the child [19]. Therefore, it is

essential to assess the level of awareness of Pakistani pregnant women toward the danger signs of pregnancy. Present study findings revealed that 36 participants (31.6%) were less than 20 years old, 71 participants (62.3%) were between 20 to 29 years old, only 6 participants (5.3%) were between 30 to 39 years old, and 1 participant (0.9%) was over 40 years old. Regarding this, a study from Ethiopia reveals that 75% of the participants were between 20 and 30 [4]. These results might be explained by societal norms that encourage marriage and childbearing earlier in life, which might explain why more young women are likely to become pregnant. Present findings show that 25.5% of the women have multigravida. In contrast, another study shows that most participants have multigravida [20]. This variation may be due to the differences in the study population. The present study was conducted in Pakistan, while the other study may have been conducted in a different country with different demographics and reproductive health patterns. Present findings demonstrated that 55.3% were in their last trimester. Similarly, a study found that 71.8% of pregnant women were in their last trimester [21]. The possible result of this difference could be attributed to the difference in the study population, sample size, and study setting. It is also possible that the timing of data collection in each study differed, which could have affected the distribution of gestational age among participants. Current findings show that 57% of the participants knew about severe headaches, a danger sign of pregnancy. Similarly, another study found an almost similar result that 55% know severe headaches [22]. The design and sample size of the two studies may have contributed to the comparability of their findings. This study's findings show that 86% of the participants knew that decrease fetal movement is a danger sign of pregnancy. In contrast, another study found a different result 18% of the participants knew that decreased fetal movement is a danger sign of pregnancy [23]. The knowledge and comprehension of risk signs during pregnancy may vary depending on cultural and geographic factors. The importance of informing people about particular risk signals, such as decreasing foetal movement, may vary according to cultural beliefs, practices, and healthcare systems. Present findings show that 41.2% of the participants said that blurred vision is a danger sign in pregnancy. While another study found that 32.1% of the participants said that blurred vision is a dangerous sign during pregnancy [23]. Current findings show that 54.4% of the participants responded that convulsion is a dangerous sign of pregnancy. Another study found that 10.1% of the participants knew that convulsion is a danger sign of pregnancy [24]. Moreover, current findings show that 18% had a low awareness of the danger signs of pregnancy. A

study from Nepal found almost similar results that 21.0% have low awareness regarding the danger signs of pregnancy [25]. Similarly, a study from Tanzania found a minor inconsistency: 25.2% of the participants had a low level of awareness regarding the danger signs of pregnancy [12]. A study from Tanzania found slightly different results and showed that 26% of pregnant women were aware of at least one pregnancy danger indication [9]. In comparison, a study from Bhutan found different results, that 37.2% had "poor" understanding [26]. Another study from Ethiopia shows a slight variance result that 31.9% of the study's participants were aware of at least three major pregnancy danger symptoms [24]. In addition, another study found that in terms of pregnancy and childbirth, 31.8% of respondents were unaware of any warning indications [22]. Furthermore, another study shows that 59.5% of the respondents did not understand obstetric warning indicators [4]. Conversely, a study found different results and demonstrated that 75.9% were unaware of the obstetric warning symptoms that can develop during pregnancy [27]. A lack of knowledge about pregnancy danger signals may cause medical action to be postponed or overlooked. Women might overlook the warning indications of a potential issue, which would cause them to put delay getting the proper medical attention. Present findings revealed that 62% had moderate awareness of the danger signs of pregnancy. In this regard, a study from Bhutan shows that the majority of women, 58.1%, had a moderate level of knowledge [26]. A study from Nepal found a disparity in results that 13.0% had a moderate understanding regarding the danger signs of pregnancy [25]. These results show that different populations have different levels of knowledge about pregnancy danger symptoms. The study from Nepal implies a lesser level of comprehension, whereas the current study and the study from Bhutan imply a comparatively higher moderate awareness level. Present findings show that only 20% of the participants had a high understanding of the danger signs of pregnancy. A study from Jordan found a slight disparity: 16% of the participants had a high understanding of danger signs of pregnancy [28]. In contrast, the study found a variance result that 66.0% had high knowledge [25]. Moreover, another study shows that only 9.5% of the participants have high knowledge about the danger signs of pregnancy [20]. On the contrary, a study from Ethiopia shows that 59% of the participants have a good understanding regarding the danger signs of pregnancy [29]. In addition, another study from Egypt found that most participants have a high level of knowledge regarding the danger signs of pregnancy [30]. Therefore, designing and implementing context-specific health education programs is essential to improve awareness among pregnant women

toward danger signs of pregnancy [31, 32].

## CONCLUSIONS

Based on the study findings, most participants had moderate levels of awareness, and few had high levels regarding the danger signs of pregnancy. It highlights the need for continued efforts to educate pregnant women about the danger signs of pregnancy, particularly those with low levels of awareness.

## Authors Contribution

Conceptualization: AB, RAK

Methodology: NI

Formal analysis: AA

Writing-review and editing: MS, NI, AA, AB, RAK

All authors have read and agreed to the published version of the manuscript.

## Conflicts of Interest

The authors declare no conflict of interest.

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