

# Maternal Awareness of Pregnancy Normal and Abnormal Signs

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**Abstract:** Awareness of normal and especially abnormal signs during pregnancy is important for the women to take necessary health-seeking behaviors. Pregnancy is considered a period characterizes by a lot of sensitivity where there are unexpected life-threatening problems arising at any stage of the pregnancy right from conception to the postpartum period. Aim: To assess maternal awareness of pregnancy normal and abnormal signs among pregnant women attending maternal clinics at the Obstetrics and gynecology hospital, King Saud medical city. Methods: The study used a cross-sectional study design. A purposive sampling method was used to select a sample size of 130 based on the gestational period of 3 months and above and women attending clinic follow-ups at the Obstetrics and Gynecology Hospital, King Saud Medical City. Results: the majority of the respondents were aged 30 years and above (76.9%) and 23.1% of them were aged less than 29 years. Regarding education level, 33.9% had less than secondary education, the bachelor education level 51.5% while 14.6% attained postgraduate education. The majority of the respondents, 76.2% had a good awareness level of the signs while 23.8% did not know any signs. Conclusion: the respondents had good levels of awareness regarding pregnancy's normal and abnormal signs. Recommendation: study recommends that antenatal care clinics should be on the frontline of providing adequate knowledge to pregnant women about normal and abnormal signs of pregnancy.

**Keywords:** Maternal, Normal Signs, Abnormal Signs, Pregnancy.

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## 1. INTRODUCTION

According to WHO ((World Health, 2019), 298, 000 women globally died due to complications related to pregnancy and childbirth. It is reported that 62 % of global maternal mortality rates occur in sub-Saharan Africa ((World Health, 2019). The major pregnancy-related complications accounting for mortality rates include bleeding, infections, high blood pressure during pregnancy, obstructed labor, and unsafe abortion. Every pregnant woman is supposed to be aware of the various signs occurring during pregnancy because the complications are unpredictable. Abnormal pregnancy signs include vaginal bleeding, severe headache, vision problems, high fever, swollen hands, and face, and reduced fetal movement. Awareness of the signs is important in assisting pregnant women in making the right decisions and taking appropriate healthcare ((Zaki & Fouad, 2021).

Pregnancy is considered a period where women spend their lives in anticipation and waiting to hold their newborns at the end of the pregnancy period. During pregnancy, women require to be provided with better healthcare and attention, the care provided helps the women to navigate through the pregnancy period with minimal health issues and experience fewer

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complications during birth. During the pregnancy period, the body of women changes. The changes can be normal or abnormal, the abnormal changes cause serious health complications, and therefore pregnant women need to be aware of the signs associated with pregnancy. Providing a clear understanding of how pregnant women can manage various signs related to pregnancy is important in helping to reduce mortality due to pregnancy problems ((Belay & Limenih, 2020). Healthcare nurses have crucial roles in enhancing the awareness and understanding of public health problems for women during their pregnancy time and assisting them to be aware of the normal and abnormal signs and symptoms and necessary steps for seeking medical help ((Zaki & Fouad, 2021).

The objectives of antenatal care are providing optimization to maternal and fetal health, improving the pregnancy experience in the women, and preparing the pregnant women for motherhood. Antenatal educational interventions are provided to enable pregnant women to gain the required knowledge and skills in various aspects of health related to maternal and fetal development and well-being ((Almalik & Mosleh, 2017). During pregnancy, women face the development of various new signs and symptoms. Many of the symptoms and signs are regarded as normal parts of pregnancy without complications but other signs raise concern. The anatomy and physiology-related changes accompanying normal pregnancy are well established as the common signs during pregnancy include palpitations, dyspnoea, peripheral edema, nausea, vomiting, and pruritus. While there exist assumptions that there are risks associated with the pregnancy period, women should be aware of the signs related to obstetric complications during pregnancy, delivery, and the postpartum period ((Teekhasaenee & Kaewkiattikun, 2020a) The knowledge will empower the women and their families in making appropriate healthcare decisions of seeking care from medical professionals.

**Statement of the Problem**

Pregnancy is considered a period characterizes by a lot of sensitivity where there are unexpected life-threatening problems arising at any stage of the pregnancy right from conception to the postpartum period. Complications in the pregnancy period may appear as initial signs of severe complications coming ahead. According to the world health organization, ((World Health, 2019), the estimated that a significant number of women die due to preventable pregnancy-related complications, and a high number is witnessed in developing nations globally.

Previous studies have reported awareness of the normal and abnormal pregnancy signs in various nations but the awareness levels vary across the nations ((Kaewkiattikun & Lekbornvorwong, 2019a), The studies have been conducted in developing nations including Ethiopia, Tanzania, and India. The results of the study have showed awareness of the signs during pregnancy with other factors contributing to either increased or decreased levels of the normal and abnormal pregnancy signs. In Saudi Arabia, few studies have assessed the maternal awareness of pregnancy normal and abnormal signs and therefore the current study will be carried out to assess the Maternal Awareness of Pregnancy Normal and Abnormal Signs among pregnant women attending maternal clinics at Obstetrics and Gynecology Hospital, King Saud Medical City.

**Purpose of the study**

The study aims to assess maternal awareness of pregnancy normal and abnormal signs among pregnant women attending maternal clinics at the Obstetrics and gynecology hospital, King Saud medical city.

**Research question**

What is the level of maternal awareness of the normal and abnormal pregnancy signs among pregnant women attending maternal clinics at the Obstetrics and gynecology hospital, King Saud medical city?

**2. METHODOLOGY AND IMPLEMENTATION PLAN****Identification of design**

A cross-sectional study design was used to assess maternal awareness of pregnancy normal and abnormal signs among pregnant women attending maternal clinics at the Maternal and Children's Hospital, Hail City. Cross-sectional study design refers to an observation design where the researcher measures the study outcomes and exposures in the respondents at the same time ((Kesmodel, 2018) The researcher employed the design to be able to select the respondents based on the set inclusion criteria and criteria for the study ((Kesmodel, 2018).

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### Target group and Sample size.

The target population is defined as the broad group of individuals that the researcher intends to examine

The target population of the study is pregnant women attending antenatal clinics. The study employed a purposive sampling method in sample selections. The sample size included 130 respondents purposively selected based on the gestational period of 3 months and above and women attending clinic follow-ups at the Obstetrics and Gynecology Hospital, King Saud Medical City.

### Setting

The study was carried out at the Maternal and Children's Hospital, Hail City. The facility has a total bed capacity of 1,500 and houses various departments including an emergency department and divisions in orthopedics, general surgery, obstetrics and gynecology, pediatrics, radiology department, laboratory, pharmacy, and immunization departments.

### Plan and implementation process

The data collection started after the approval of the researcher by the Institutional Review Board. The purpose of the study was explained and made known to study participants before data collection. After disclosing the study purpose the researcher obtained consent for participation from the respondents both orally and in writing.

The data collection was done using a structured questionnaire adopted from the study of (Amasha & Heeba, 2013), the adopted questionnaire contains the following parts; "Socio-demographic characteristics (age, education, occupation, family income, family size.). Obstetric history (gravidity, parity, number of living children, types of previous delivery) and Questions related to woman's awareness about normal and abnormal signs of pregnancy and practices to relieve the current pregnancy complaints"

The questionnaire was tested with 10 pregnant women at the Obstetrics and Gynecology Hospital, Maternal, and Children's Hospital, Hail City to check applicability and clarity. The pilot study sample was not included in the main study sample. The time of completing the questionnaire was estimated at 30 minutes.

### Data analysis

The collected data were coded, entered, and analyzed with the help of the Statistical Package for Social Science (SPSS) program version 25. Results were presented in form of tables, figures, and texts based on the information obtained during collection in the field.

### Ethical considerations

The study was approved by Institutional Review Board in the university and ethical clearance was obtained. Permission of conducting the study was obtained also from the Maternal and Children's Hospital, Hail City before beginning the collection of data. Informed consent was obtained from the pregnant mothers after the purpose of the study has been made known to them. The involvement of the respondents in the study was after they have signed the written consent form of participation. The respondents had the right to withdraw from the study at any time.

## 3. RESULTS

### Characteristics of participants

The background characteristics of the pregnant women are presented in Table (1). It can be noticed that almost two-thirds of the study sample (76.9 %) were in the age group of more than 30 years and only 23.1% of them were aged less than 29 years old. As regards educational level, less than (33.9%) of the study sample were less than secondary education, while bachelor education had the highest frequency (51.5%). However, only 14.6% attained a postgraduate level of education. More than half of the study sample (56.6%) were unemployed. Regarding family size, only 25.4% of the study sample had two members of the family whilst more than 75% had more than two members.

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As regards obstetrical history, the same table shows that less than one-third of the sample (25.4%) were primigravid whilst two-thirds of the study sample had more than one pregnancy. Moreover, 22.3% of women were in the first trimester, 35.4% were in the second trimester and 42.3% were in the third trimester. Additionally, more than half of the mothers had no history of previous abortion. In addition, the same table showed that the most common place of delivery was public hospitals, for 99.2% and only one mother (0.8%) delivered at home in previous deliveries.

**Table 1: Socio-Demographic and Obstetrical History of the Participants (N=130)**

Characteristics	Frequency	Percentage
<b>Age</b>		
20 -29 years	30	23.1
30 -39 years	74	56.9
>40 years	26	20
<b>Education level</b>		
Primary	7	5.4
Intermediate	7	5.4
Secondary	30	23.1
Bachelor	67	51.5
Postgraduate	19	14.6
<b>Occupation</b>		
Employed	59	45.4
Unemployed	71	56.6
<b>Number of family members</b>		
<2	33	25.4
3 -4	68	52.3
>4	29	22.3
<b>Number of pregnancy</b>		
First time	29	22.3
1 -3 times	58	44.6
4 -5 times	30	23.1
>6 times	13	10
<b>Age of pregnancy</b>		
First trimester	29	22.3
Second trimester	46	35.4
Third trimester	55	42.3
<b>Number of abortions</b>		
No abortion	73	56.2
Less than three times	47	36.2
More than three times	10	7.7
<b>Place of delivery</b>		
Public/private hospital	129	99.2
Home Clinic	1	0.8

**Table 2** The results of the study indicated that 34.6% of mothers recognized fainting/dizziness as a normal sign of pregnancy. In addition, the majority of the study sample (84.6%) believed that nausea and vomiting are normal symptoms during pregnancy. Likewise, 82.3% of women showed that heartburn could be associated with normal pregnancy. 40% of mothers reported constipation as another normal sign of pregnancy. Only 16.2% of women indicated that varicose vein is a normal sign that occurs during pregnancy whilst 20% of them also mentioned piles could take place during pregnancy. In contrast, two-thirds of women viewed leg cramps and fatigue are normal signs during pregnancy. Moreover, back pain and vaginal discharge with no itching are believed such signs occur during pregnancy. Change of defecation (24.6%) and adnominal cramp (27.7%) are reported as other normal signs during pregnancy. Only 23.8% of the mothers did not know of any symptoms considered normal during pregnancy. Table 2 shows the awareness of the study group about normal symptoms of pregnancy.

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**Table 2: Normal pregnancy symptoms as viewed by the participants (n=150)**

	<b>Sign</b>	<b>Frequency</b>	<b>Percent</b>
1.	Fainting/ dizziness	45	(34.6%)
2.	Nausea and vomiting	110	(84.6%)
3.	Heartburn	107	(82.3%)
4.	Constipation	52	(40%)
5.	Varicose veins	21	(16.2%)
6.	Piles	26	(20%)
7.	Leg cramp	93	(71.5%)
8.	Fatigue	88	(67.7%)
9.	Back pain	101	(77.7%)
10.	Vaginal discharge with no itching	87	(66.9%)
11.	Change of defecation	32	(24.6%)
12.	Abdominal cramp	36	(27.7%)
13.	Do not know	21	23.8%

Table (3) shows the awareness of the studied group regarding the abnormal signs and symptoms during pregnancy that needs to seek medical consultation. The table revealed that the majority (91.8%) of participants identified vaginal bleeding as an abnormal symptom that needs medical consultation, followed by vaginal discharge (77.0%). The third, fourth, and fifth frequently reported symptoms were the urinary problem, hypotension, and leakage of amniotic fluid reported by 89.5%, 89.5%, and 87.7% of the participants respectively, even if the discharge is mild without odor or itching reported by 16.8%. As well, lower limb edema was reported by two-thirds of the participants (76.2%), while more than half (59.2%) considered dyspareunia during pregnancy to need medical consultation. In addition, out of the 68 (79.4%) mothers who considered headaches needing medical consideration, 20.5% mentioned mild headaches as considered abnormal symptoms during pregnancy. The same table revealed that of 109 (76.2%) mothers who mentioned edema as an abnormal symptom of pregnancy, 7.3 % considered lower limb edema during pregnancy needs medical consultations.

**Table 3: Abnormal Pregnancy Signs And Symptoms Needing Medical Consultation As Viewed By The Pregnant Women In The Study Sample (N=150).**

	<b>Sign</b>	<b>Frequency</b>	<b>Percent</b>
1.	<b>Headache</b>	68	(52.3%)
	Mild	14	20.5%
	Severe & repeated	54	79.4%
2.	<b>Leakage of amniotic fluid</b>	114	(87.7%)
3.	<b>Vaginal bleeding</b>	118	(91.8%)
	Spotting	100	84.7%
	Small amount	9	7.6%
	large amount	9	7.6%
4.	<b>Vaginal discharge</b>	119	(91.5%)
	Mild without odor or itching	20	16.8%
	Copious without odor or itching	40	33.6%
	Mild or copious, with odor or itching	59	49.5%
5.	<b>Urinary Problems</b>	115	(89.5%)
6.	<b>Hypotension</b>	115	(89.5%)
7.	<b>Hypertension</b>	62	(47.7%)
8.	<b>Dyspareunia</b>	77	(59.2%)
9.	<b>Edema</b>	109	(76.2%)
	Face	12	11%
	Lower limbs	8	7.3%
	Whole body	89	81.6%

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**Table 4** The results of correlation between the study participants sociodemographic data and abnormal sign/symptom of pregnancy showed that age of the study participants is statistically significant negatively with vaginal bleeding and vaginal discharge ( $r=-0.177$  and  $-0.183$ ;  $p<0.05$ ). In addition, there is negative statistically significant correlation between age and urinary problem. However, there is no correlation between other demographic variables and other abnormal signs/symptoms. Regarding education level, the results revealed that there is statistically significant correlation between education level and vaginal bleeding and discharge ( $r=0.320$ ;  $p=0.01$ ;  $r=0.343$ ;  $p=0.02$ ). In contrast, other signs and symptoms are not significantly correlated with education level. As regards occupation, there is a positive correlation between occupation and leakage of amniotic fluids ( $r=-0.234$ ;  $p=0.02$ ) and vaginal bleeding ( $p=0.0237$ ;  $p=0.01$ ). The results showed that number of family members are not statistically significant related with abnormal signs of pregnancy. The negative and significant relationship was found among number of pregnancy, age of pregnancy, number of abortion and place of delivery with abnormal signs of pregnancy

**Table 4: The relationship between sociodemographic data and abnormal sign Signs And Symptoms Needing Medical Consultation As Viewed By The Pregnant Women In The Study Sample**

	Age	Education level	Occupation	Number of family members	Number of pregnancy	Age of pregnancy	Number of abortion	Place of delivery
<b>Headache</b>	$r=-0.026$ $p=0.75$	$r=0.13$ $p=0.44$	$r=0.004$ $p=0.96$	$r=0.110$ $p=0.22$	$r=0.066$ $p=0.43$	$r=0.02$ $p=0.45$	$r=0.087$ $p=0.75$	$r=0.07$ $p=0.27$
<b>Leakage of amniotic fluid</b>	$r=-0.53$ $p=0.35$	$r=0.004$ $p=0.27$	$r=-0.234$ $p=0.02$	$r=0.054$ $p=0.32$	$r=-0.07$ $p=0.37$	$r=-0.011$ $p=0.22$	$r=0.092$ $p=0.72$	$r=-0.42$ $p=0.75$
<b>Vaginal bleeding</b>	$r=-0.177$ $p=0.03$	$r=0.320$ $p=0.01$	$r=-0.237$ $p=0.01$	$r=-0.085$ $p=0.35$	$r=-0.018$ $p=0.87$	$r=-0.111$ $p=0.42$	$r=-0.041$ $p=0.27$	$r=-0.076$ $p=0.53$
<b>Vaginal discharge</b>	$r=-0.183$ $p=0.03$	$r=0.343$ $p=0.02$	$r=0.03$ $p=0.21$	$r=0.45$ $p=0.24$	$r=-0.53$ $p=0.89$	$r=0.035$ $p=0.42$	$r=0.35$ $p=0.24$	$r=-0.47$ $p=0.72$
<b>Urinary Problems</b>	$r=-0.201$ $p=0.02$	$r=0.265$ $p=0.12$	$r=-0.136$ $p=0.34$	$r=0.002$ $p=0.87$	$r=-0.07$ $p=0.54$	$r=-0.078$ $p=0.42$	$r=0.087$ $p=0.65$	$r=-0.04$ $p=0.52$
<b>Hypotension</b>	$r=0.01$ $p=0.45$	$r=0.056$ $p=0.12$	$r=-0.27$ $p=0.23$	$r=0.065$ $p=0.34$	$r=0.07$ $p=0.24$	$r=-0.32$ $p=0.41$	$r=0.057$ $p=0.43$	$r=0.43$ $p=0.24$
<b>Hypertension</b>	$-0.167$ $p=0.06$	$0.71$ $p=0.22$	$r=-0.123$ $p=0.36$	$r=0.004$ $p=0.78$	$r=0.030$ $p=0.78$	$r=-0.247$ $p=0.31$	$r=0.054$ $p=0.68$	$r=0.076$ $p=0.78$

**4. DISCUSSIONS**

Maternal awareness of normal and abnormal among pregnant women is an important step for the mothers to have an appropriate referral as well as timely referral. The results of the present study provide information on maternal awareness of normal and abnormal signs. The findings of the study considered the respondents to have awareness of the normal and abnormal signs if they had the capability of mentioning three or more normal and abnormal signs during pregnancy as well as the delivery period. Abnormal signs during pregnancy are not easily predictable, but the knowledge of these signs is significant for women to prevent serious health complications and seek timely medication, ((Yosef & Tesfaye, 2021). Improving the knowledge and awareness level of pregnant women regarding normal and abnormal pregnancy signs, acts as health promotion and helps pregnant women to have better healthcare-seeking behavior and reduce mortality rates due to pregnancy complications, ((Yosef & Tesfaye, 2021).

The study indicated that the respondents knew normal pregnancy signs. The majority of the respondents, 76.2% mentioned normal pregnancy symptoms while Only 23.8% of the mothers did not know of any symptoms considered normal during pregnancy. (Kaewkiattikun & Lekbornvornwong, 2019b) observed good awareness of normal signs of pregnancy among the respondents. (Kaewkiattikun & Lekbornvornwong, 2019b), associated the awareness levels with a bachelor’s level of education or higher level, gestational age > 28 weeks, and visits to an antenatal clinic. More so, the predictor of good

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awareness was the bachelor's degree education level and postgraduate. These findings are comparable to the current study's findings which identified that pregnant women with bachelor's degree were more aware of the normal signs of pregnancy (51.5%), followed by those with postgraduate level (14.6%).

The present study revealed that the majority of the respondents were aware of nausea and vomiting as normal pregnancy symptoms. Other identified normal signs of pregnancy included fainting, dizziness, heartburn, varicose vein, leg cramps, fatigue, back pain, vaginal discharge with no itching, change of defecation, and adnominal cramps. Similar findings have been reported by ((Khuon et al., 2023) a study that revealed awareness related to normal pregnancy signs including nausea and vomiting, back pain, fatigue, and heartburn. The findings also be compared to those identified by ((Teekhasanee & Kaewkiattikun, 2020a), which revealed that the respondent had good knowledge of obstetric signs during pregnancy, delivery, and postpartum periods.

The most mentioned danger sign was severe vaginal bleeding during the postpartum period (77.6%) and the least mentioned danger sign was convulsion and retained placenta during labor and childbirth (29.9%). The participants were able to mention neonatal danger signs more than obstetric danger signs. None of the participants knew  $\geq 12$  danger signs, 43.3% knew  $\geq 8$  danger signs, and 60.4% knew  $\geq 4$  danger signs.

Regarding abnormal pregnancy signs, this study identified that the respondents were aware of vaginal bleeding (91.8%) as an abnormal sign, followed by vaginal discharge (77%). Generally, the participants of this study knew danger signs during the pregnancy period. (Bililign & Mulatu, 2017), also observed that the respondents were knowledgeable regarding danger or abnormal pregnancy signs, they were aware of associated danger signs during the pregnancy period, delivery, and postpartum period. (Bililign & Mulatu, 2017), observed that the respondents showed that vaginal bleeding was the most dangerous sign reported by the respondents during the pregnancy, delivery period and postpartum period. As observed by ((Bililign & Mulatu, 2017), respondents with a secondary level of education or higher had better knowledge about abnormal pregnancy signs. Employment status and the number of visits to an antenatal clinic were also associated with knowledge of abnormal pregnancy signs. The present study identified urinary problems, amniotic fluid leakage, hypotension, lower limb edema, dyspareunia, headaches as abnormal signs and symptoms during pregnancy.

The knowledge and awareness of normal and abnormal signs during pregnancy are regarded as an imperative step toward pregnant women seeking appropriate obstetric healthcare. The behavior of pregnant women to timely seek medical attention largely depends on their level of awareness regarding the signs and symptoms that accompany pregnancy, delivery, and postpartum periods in their lives. The present study identified that the respondents had a good level of awareness of normal and abnormal pregnancy signs. the results of the present study are in contrast to the study conducted by ((Yosef & Tesfaye, 2021), which revealed low levels of awareness of the abnormal pregnancy signs among the respondents. Although ((Yosef & Tesfaye, 2021) determined that those who knew about the abnormal signs showed that vaginal bleeding is a dangerous sign during pregnancy, thus conforming with the current findings on vaginal bleeding being an abnormal pregnancy sign. (Yosef & Tesfaye, 2021), also associated the knowledge levels of pregnancy normal and abnormal signs with respondents having husbands with higher or secondary education levels, high levels of income, women with multigravida, and previous delivery in healthcare settings.

In contrast to this study, ((Mwilike et al., 2018), revealed a low level of awareness or knowledge regarding abnormal signs during pregnancy. (Mwilike et al., 2018) identified that only 31% of the respondents could correctly mention four abnormal signs while 2.7% did not have the capability of mentioning any signs. The respondents however listed vaginal bleeding, face swelling, finger swelling, leg swelling, and severe headaches as dangerous signs associated with pregnancy. The results on abnormal signs agree with the current findings because the respondents in the present study identified similar abnormal signs. However, the present study disagrees with the levels of knowledge and awareness; the present study respondents have good levels of awareness while, ((Mwilike et al., 2018) observed low knowledge levels.

When examining the knowledge and awareness of abnormal or danger-pregnancy signs, ((Shamanewadi et al., 2020) showed that the respondents could identify three signs that are abnormal during the pregnancy period. Vaginal bleeding, convulsions, and pain in the abdomen were considered abnormal signs by all the respondents (n = 210 pregnant women), while blurred vision (3 %), reduced movement of the fetus (1%), and leaking fluid (2%) were also revealed as abnormal

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signs. (Nabugwere et al., 2022) revealed common abnormal signs as indicated by the respondents to be excess bleeding pain in the abdomen swelling of hands and face, and reduced movement of the fetus. (Krishna & Venkat, 2017) carried out a study and observed that the participants indicated convulsion as an abnormal sign during pregnancy.

While assessing the awareness of danger-pregnancy signs, ((Teekhasaenee & Kaewkiattikun, 2020b) established that 19% of the participants could mention all abnormal signs related to pregnancy. (Leta, 2019) revealed excess vaginal bleeding as an abnormal sign among pregnant women. (Haleema et al., 2019) established that the respondents revealed the common abnormal pregnancy sign was vaginal bleeding and other signs included nausea and vomiting as well as decreased movements of the fetus. According to the results identified by ((Teekhasaenee & Kaewkiattikun, 2020a), the respondents revealed that severe vaginal bleeding was a danger sign during postpartum (77.6%), and convulsion and retained placenta during child labor and birth were considered the least danger sign (29.9%).

Several other research studies, including ((Abdurashid et al., 2018), revealed that the participants of their study mentioned vaginal bleeding as a common and danger-pregnancy sign, 74%, of the respondents. (Nkamba et al., 2021), identified that the respondents showed awareness of the signs categorized as normal and abnormal during pregnancy. The awareness levels were associated with multigravida respondents, pregnant respondents attending private antenatal care, and those attending subsequent antenatal care as well as those who had received counseling during their visits to antenatal clinic.

The variations in levels of awareness and knowledge about normal and abnormal pregnancy signs can be associated with different demographic characteristics, research designs used, study locations as well as different research instruments utilized. The current study assessed awareness of normal and abnormal pregnancy signs and revealed good knowledge levels regarding the signs. majority of the respondents identified Headache, Leakage of amniotic fluid, Vaginal bleeding, Vaginal discharge, Urinary Problems, Hypotension, Dyspareunia, Edema as well as convulsions as danger-pregnancy signs. normal signs included vomiting, nausea Fainting/ dizziness, Heartburn, Constipation, Varicose veins, Piles, and Vaginal discharge with no itching. The knowledge and awareness level of normal and abnormal signs during pregnancy was good compared to other research studies that identified low awareness levels of respondents regarding the danger and normal signs during the pregnancy period.

The results of the current study demonstrated that there is statically significant correlation between some demographic variables and abnormal signs/symptoms of pregnancy. This results are in the same line with previous studies which suggested that number of pregnancy and place of delivery is significantly correlated with abnormal signs of pregnancy. However, there is no significant relationship noted between age, gender, education level and occupation with abnormal signs/symptoms of pregnancy (Yosef & Tesfaye, 2021)

**Strengths and Limitations**

The strengths of the present study included the disclosure of the purpose of the study to the respondents before data collection was carried out. The researcher also obtained the consent of participation, therefore, implying that all the respondents were willing to participate and no one was forced to be included in the study. the used questionnaire for data collection was administered to the respondents and given enough time to respond to the questions. Another strength is that the researcher was able to carry out a pilot study where the research instrument was tested at the Obstetrics and Gynecology Hospital, Maternal, and Children's Hospital, Hail City to check applicability and clarity.

The limiting factors of the current study included the sample size, although the sample size was considered appropriate for the study (n = 130), findings obtained from this sample size cannot be generalized to a larger population of pregnant women and assume they have good or better awareness levels of the normal and abnormal signs during pregnancy periods. Also, a significant number of the respondents could have faced difficulties in responding to the questionnaires because they were experiencing first-time pregnancy and therefore were not familiarized with the correct responses to the questions. The study was carried out in a clinical environment and among those attending follow antenatal care and having above 3 months of gestational period, therefore the findings cannot be as well generalized to women with less than 3 months of gestational period and not attending antenatal care clinics.

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### 5. CONCLUSION

Pregnancy is a normal occurrence in the life of women. However, some pregnancies are considered to be of high risk. Therefore, to prevent adverse outcomes that are associated with pregnancy, it is important to ensure that pregnant women are aware of the normal and abnormal signs related to the pregnancy period. The study identified that the respondents had good levels of awareness (76.2% ) while only 23.8% of the respondents could not identify any sign either normal or abnormal pregnancy signs.

The present study revealed that the majority of the respondents were aware of nausea and vomiting as normal pregnancy symptoms. Other identified normal signs of pregnancy included fainting, dizziness, heartburn, varicose vein, leg cramps, fatigue, back pain, vaginal discharge with no itching, change of defecation, and adnominal cramps. Reported abnormal signs from the respondents included Headache, Leakage of amniotic fluid, Vaginal bleeding, Vaginal discharge, Urinary Problems, Hypotension, Dyspareunia, Edemaas well as convulsions as danger-pregnancy signs. From the findings, the study revealed that vaginal bleeding was the common abnormal sign as identified by the respondents and this has been seconded by other research studies where the majority of the participants showed the same responses. Educational level was also an important aspect associated with the awareness level, where having secondary and post-secondary education resulted in better awareness about the normal and abnormal signs during pregnancy, delivery as well as postpartum periods.

### 6. RECOMMENDATIONS FOR FURTHER RESEARCH

The current study recommends that antenatal care clinics should be on the frontline of providing adequate knowledge to pregnant women about normal and abnormal signs of pregnancy. Antenatal care is the primary opportunity for women of reproductive age to get empowered and therefore they should take center stage in promoting awareness of the signs. the study also recommends that pregnant women should be involved in community-based interventions to increase their awareness levels of the normal and abnormal signs during pregnancy.

The study identified good levels of awareness regarding Maternal Awareness of Pregnancy's Normal and Abnormal Signs, while other studies reported low levels, therefore this study recommends that other studies be carried out to address the differences in results and identify factors contributing to the variations

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