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# ASSESSMENT OF KNOWLEDGE OF DANGER SIGNS IN PREGNANCY AMONG PREGNANT WOMEN ATTENDING ANTENATAL CLINIC IN DUTSE GENERAL HOSPITAL JIGAWA STATE, NIGERIA

**BY**

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**Abstract**
Jigawa has an unacceptably high maternal mortality ratio (MMR) which is estimated at 2,000 deaths per 100,000 live births. Despite this alarmingly high mortality attributed to obstetric complications, the proportion of those with any kind of knowledge of these danger signs is not known in this state. This study aimed to assess the level of knowledge of danger signs of pregnancy among pregnant women attending antenatal clinics in Dutse General Hospital, Jigawa State. The study is a health facility-based and a descriptive cross-sectional study was adopted. A total sample size of 378 pregnant women was drawn from retrospective data from the previous year using the research advisor's table. Data was collected through the use of a structured questionnaire using a systematic sampling technique and analyzed using a Statistical Package of Social Science (SPSS). Findings indicated that respondents are well aware of danger signs in pregnancy but have limited knowledge of it. Only 31.2% of the respondents had sufficient knowledge about the danger signs of pregnancy while the majority could not differentiate between danger signs and minor discomfort. Data analysis indicated that knowledge of danger signs in pregnancy positively correlated and was significant to the level of education of the respondent at a 95% confidence limit. Based on the findings of this study, it can be concluded that there is a low level of knowledge about the danger signs of pregnancy among women attending antenatal clinics in Dutse General Hospital.
**Keywords:** Danger signs, pregnancy, antenatal clinic, knowledge

## Introduction

Pregnancy is not a disease, and pregnancy-related morbidity and mortality are almost always preventable. Yet, 303,000 women die from complications arising during pregnancy, delivery, or puerperium globally, with a maternal mortality ratio of 216 maternal deaths per 100,000 live births (Alkema *et al.,* 2016). About 99% of these cases are said to occur in developing regions, with sub-Saharan Africa alone accounting for 2 in 3 (66%) deaths (World Health Organization, 2016). Nigeria accounted for the second highest burden of maternal death globally after India (WHO, 2016).

Say et al., (2014) an update of WHO global causes of maternal death, attributed 73% of all maternal deaths to be due to direct obstetric causes and 27.5% to be caused indirectly. Among the direct causes of global maternal death, hemorrhage accounted for 27.1%, hypertensive disorders 14.0%, and sepsis 10.7%. Among the indirect causes, unsafe abortion accounted for 7.9% while embolism 3.2%. Most causes of maternal mortality are linked to inadequate knowledge of obstetric complications and danger signs in pregnancy. Pregnancy-related complications cannot be reliably predicted, and it is therefore important for pregnant women to have knowledge about pregnancy danger signs and seek immediate help if needed. (Sufiyan et al., 2016). Danger signs in pregnancy are those symptoms that may indicate a pregnant woman's health or that of her fetus is in jeopardy hence the need for swift medical attention the commonest danger signs during pregnancy which places the life of both the mother and her fetus at risk of deaths include vaginal bleeding, convulsions/fits, swollen face/hand, high fever, abdominal pain, severe headaches, blurred vision, absence of fetal movements, the gush of fluid from the vagina, foul-smelling vaginal discharge ( Harvard school of public health 2014, as cited by Mwilike *et al.,* 2018). Increasing pregnant women's knowledge of pregnancy "danger signs" is the most effective method used in improving the utilization of skill care during pregnancy and puerperium (Bintabara *et al*., 2017; Munro *et al.,* 2017; Azeze *et al.,* 2018; Masoi & Kibusi 2019).

Many pregnant women and their families in developing countries have a limited understanding of pregnancy danger signs (Okour *et al.,* 2010). Underdeveloped countries like Nigeria face worse complications of the problem than the developed ones. Low awareness is a major contributing factor that leads to delays in reaching a facility with trained

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providers when complications occur (Sufyan *et al.,* 2016). Therefore, contributes to high maternal morbidity and mortality experienced (Bintabara *et al.,* 2017). Mgawadere *et al.,* (2017) identified these delays to be, delays in the decision to seek care, delays in reaching the place of care, and delays in receiving appropriate care.

Each pregnancy carries some level of risk (Nikiema *et al.,*2009; Okour *et al.,* 2012 ) and for every maternal death, between 15 to30 women who survive childbirth suffer from short and long-term disabilities such as obstetric fistula, ruptured uterus, or pelvic inflammatory disease(Aborigo *et al.,* 2014). Complications can occur at any time from conception to the postpartum period. Fortunately, many obstetric complications can be effectively managed if warning signs are detected early and acted upon promptly (Bintabara *et al,* 2017). Therefore, pregnant women as well as women of reproductive age and families need to be trained on how to recognize danger signs and develop plans for emergencies that include transport to hospitals or skilled care, and access to financial resources, which can be achieved through community mobilization and the need to utilizing ANC services among pregnant women, as this will have a significant effect in the reduction of maternal mortality. During pregnancy, antenatal care is the care that a woman receives to ensure healthy outcomes for her newborn and herself and serves as a means to identify high-risk pregnancy (WHO, 2010) as cited by hxd Mcnellan *et al.,*2019). There are potential benefits that can be obtained from antenatal care. The period presents opportunities for reaching pregnant women with several interventions that may be crucial to their health and well-being and that of their infants (WHO, 2016). Besides, it is an opportunity to educate the women and families about danger signs, symptoms, and risks of labour to plan for delivery.

Despite all the efforts by the federal ministry of health and some non-governmental organizations to make ANC service accessible and affordable to all pregnant women, Jigawa state still records low coverage which stands at 20.1%; delivery by health professionals and facility-based delivery rates are 5.1% and 4.5% respectively. The Low ANC coverage has been attributed to religious and cultural beliefs in Jigawa state (Kanuwa, 2012) This has made the maternal mortality ratio to be high in Jigawa state as early recognition of these danger signs is needed to reduce these high mortality and also improve pregnancy outcomes. Fortunately, many obstetric complications can be effectively managed if warning signs are detected early and acted upon promptly (Bintabara *et al.,* 2017). In Jigawa state, where maternal morbidity and mortality are high, little is known about the level of knowledge and health-seeking behavior of pregnant women towards pregnancy danger signs, this gave the researcher concern and thus the need to carry out this study.

**Literature review**

**Concept of Danger Signs In Pregnancy**

Most women go through pregnancy without serious problems. Normal discomforts of pregnancy may include heartburn, a need to urinate often, backache, breast tenderness and swelling, and feeling tired. However, some symptoms may mean danger for the woman or her baby (Summit Medical Group, 2014). It is of paramount importance for pregnant women to have adequate knowledge of these danger signs, and to seek health care when the need arises.

**Model of Health-Seeking Behavior**

Various studies demonstrated that one's decision to engage with a particular medical channel is influenced by a variety of socio-economic variables, sex, age, social status of women, type of illness, access to services, and perceived quality of the service and all these factors have been grouped into two types of health seeking behaviour model which is: pathway model and determinate model (Tipping & Segall, 1995, as cited in University of British Columbia, 2015).

**Knowledge of Danger Signs in Pregnancy**

"Knowledge is power", this means that knowing things gives us control over them. Knowledge is a powerful factor that empowers people to achieve greater results. The more knowledge an individual acquires the more powerful he/ she becomes. It is therefore of paramount importance to empower pregnant women and women of childbearing age with the knowledge of danger signs in pregnancy as this will help them in early diagnosis, management, and prevention

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of complications that may arise during pregnancy, and thereby, reduce maternal morbidity and mortality associated with these conditions. It also allows pregnant women to seek medical care early and then participate actively in their care and also helps them in their healthcare decision-making. If a pregnant woman is equipped with the knowledge of danger signs in pregnancy, it will increase the level of awareness of this condition to other women thereby reducing our workload as health care providers.

Studies have been done on pregnant women on danger signs in pregnancy in sub-Saharan Africa, in some states in Nigeria, but there is little or no research on this in Jigawa state where maternal mortality is said to be high. Several studies done on danger signs during pregnancy as well as during labour and puerperium have all shown inadequate/ low levels of knowledge. A study done in Southern Ethiopia by Hailu *et al.,* (2010) showed poor knowledge of danger signs in pregnancy. Most studies have shown a low level of knowledge of danger signs not only during pregnancy but also during delivery and after childbirth. A study carried out in Uganda and Ethiopia found knowledge of danger signs in pregnancy to be relatively low And suggested that pregnant women should be given health education on danger signs of pregnancy during antenatal care, to equip these women with good understanding and be able to seek help immediately when they experience one or more of the symptoms(Hoque & Hoque, 2011; Kabakyenga *et al.,* 2011)., A similar result was obtained from research carried out in Tanzania on rural women's awareness of danger signs(Pembe, *et al.,* 2009). The study suggested the need to improve the quality of counseling and family members' involvement in caring for pregnant both during pregnancy and delivery. Mwilike (2013) also found low knowledge of danger signs among Tanzanian women and also attributed knowledge to their educational level and age. Mwilike (2013) also shows self-employment to be a major motivating factor for seeking help as women can decide on their own without seeking permission while women who are employed by others have a tight schedule and can only visit health facilities when there is a complication.

Studies have also shown a correlation between knowledge and area of residence. Hailu *et al.*, (2010) Found knowledge to be low and affected by residential areas whereby those who lived in urban were more knowledgeable than those who lived in rural areas. Additionally, a study in Uganda shows similar results about knowledge and residential areas (Kabakyenga, 2011). Further studies have also shown a relationship between knowledge and socio-demographic characteristics. Amenu *et al.*, (2014), attributed knowledge scored by the women to maternal educational level, ANC follow-up during the last pregnancy family income, and being multiparous and of last delivery. A similar study carried out by Bililign and Mulatu (2016) on knowledge of obstetric danger signs and associated factors in Ethiopia found low knowledge of obstetric danger signs. Vaginal bleeding was found to be the most common mention danger sign during pregnancy and associated factors were being employed, previous delivery in a health facility, and the number of ANC visits. Ossai and Uzochukwu's (2015) socioeconomic status, age less than 30, being single, and having a primary school education or less were attributed to poor knowledge scores. Sufiyan *et al.,* 2016) also found poor knowledge among pregnant women as only 4.9% percentage of these women had good knowledge as well as poor perception.

**Research Objective**

To assess pregnant women's level of knowledge about danger signs during pregnancy.

**Research Question**

What is the level of knowledge of pregnant women about pregnancy danger signs?

**Methodology**

A descriptive survey design was adopted for the study.The study was conducted in Dutse the state capital of Jigawa. Dutse is a local government located in the northwest of Nigeria, with an estimated population of 325,500 (National Population Commission of Nigeria, 2015). It has an estimated population of 16,275 pregnant women which constitute 5% of the total population. Dutse General Hospital is located in Jigawa state capital along Kiyawa Road. The target population for the study was pregnant women attending antenatal clinics in Dutse General Hospital. A total of 378

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respondents were utilized for this study. Consenting pregnant women attending antenatal clinic in this health facility pregnant women who have attended antenatal clinic more than once were included. Very ill pregnant clients as well as mentally retarded pregnant women were excluded since it will be difficult for them to comprehend and answer questions for themselves. Pregnant women who were not aware of the term danger signs in pregnancy were excluded from the study.

The sample size was determined using a retrospective annual record of pregnant women that attended ANC in this facility last year (2017) as well as those that correspond with the months of study that is July /August which were gotten to 11,521, 876, and 940 attendees respectively. The total sample size was drawn from the research advisor's sample size table (2006) using a sample frame of 11,521. Retrieved from (http://research-advisors.com) all rights reserved. Using a confidence interval of 95% and a 5% margin of error. The resulting sample size was 378. A systematic sampling technique was used to recruit the sample of 378 pregnant women from the months of July and August. The sample fraction was gotten to be $1/5^{th}$, generator of random numbers was used to generate a number between 1 and 5, this number was then picked as the first number and the next number was then since the sampling fraction was $1/5^{th}$ then every fifth number was then included. The researcher picked a random number 1 to 5 and from this onwards every 5th eligible pregnant woman attending ANC was selected until the desired sample was gotten in each of the months. Where the identified respondent is ineligible the next number was selected until a total sample size of 378 was achieved. One main tool (questionnaire) was used for data collection. It was adopted by the researcher from Mwilike (2013). Content and face validity of the research instruments were done. The research instrument was distributed to five experts from the Department of Nursing Sciences, and the Department of Obstetrics and Gynecology, at Ahmadu Bello University Zaria. Their corrections were incorporated in the final draft of the questionnaire.

Permission to carry out the study was sought from hospital management, informed consent was obtained from all the respondents recruited for this study. The researcher and two research assistants (a newly qualified nurse and a community health extension worker (CHEW)) who were fluent in the Hausa language were involved in the data collection process from the month of July to August 2018. The questionnaire was formulated in English language and then given to an expert in Hausa language to be translated into Hausa language/ and back to English to maintain the consistency of the data. Training on how to collect the data was given to the research assistants for 2 days this was done by describing the overall research aim and objectives, methods of data collection and techniques, sampling and inclusion criteria as well as procedures for obtaining both verbal and written consent from the respondents during pretesting in a similar health facility in Dutse. The researcher along with the two research assistants interviewed the women in the Hausa language. The researcher also went further to supervise the general data collection process and check for consistency and completeness of the material. The questionnaire consists of two sections that seek information on the sociodemographic characteristics of pregnant women and knowledge of danger signs.

An introductory letter was obtained from the Department of Nursing Science at Ahmadu Bello University Zaria. Which was taken alongside a copy of the proposal and an application letter to the Ministry of Health Dutse seeking ethical clearance from the Honourable Commission for Health Dutse Jigawa State. Permission to conduct the study was obtained from Dutse General Hospital. The research respondents were informed about the purpose of the study and were equally informed that their participation is voluntary, they can withdraw from the study at any time if they no longer feel comfortable. Both written and verbal consent were obtained from the participants before administering the questionnaire to them. Anonymity and confidentiality were assured by following the World Medical Association (WMA) Declaration of Helsinki-ethical principles for medical research involving human subjects. Descriptive and inferential statistics were used, and chi-square and linear association were used to examine the level of association between knowledge and sociodemographic data as well as knowledge. The responses on the research instrument were checked for completeness and coded using numbers. The researcher then enters the data directly into the computer using a statistical software package called the Statistical Package for the Social Sciences (SPSS) version 24 for analysis.

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**Analysis**

**Table 1:** Distribution of Respondent's Socio-Demographic Characteristic (n= 378)

| Variables | Categories | Frequency | Percentage % |
|---|---|---|---|
| **AGE** | ≤19 | 137 | 36.2 |
| | 20-29 | 202 | 53.4 |
| | 30-39 | 26 | 6.9 |
| | ≥40 | 13 | 3.4 |
| **Ethnic group** | Hausa | 332 | 87.9 |
| | Yoruba | 3 | 0.7 |
| | Others(specify) | 43 | 11.3 |
| **Religion** | Muslim | 365 | 96.5 |
| | Christian | 13 | 3.5 |
| **Marital status** | Married | 375 | 99.3 |
| | Single | 3 | 0.7 |
| **Occupation** | Not employed | 60 | 16.0 |
| | Farming | 9 | 2.5 |
| | Artisan | 216 | 57.1 |
| | Public servant | 2 | 0.4 |
| | Employed in formed private sector | 23 | 6.0 |
| | Businesswoman | 44 | 11.7 |
| | Others | 24 | 6.4 |
| **Monthly income In naira** | ≤4900 | 340 | 89.9 |
| | 5000-14900 | 26 | 6.9 |
| | 15000- 24900 | 9 | 2.3 |
| | ≥25000 | 3 | 0.8 |
| **Level of education** | None | 62 | 16.3 |
| | No formal education | 162 | 42.9 |
| | Primary | 48 | 12.8 |
| | Secondary | 74 | 19.5 |
| | Tertiary | 32 | 8.5 |
| **Type of Family** | Nuclear family | 107 | 28.2 |
| | Extended family | 178 | 47.1 |
| | Joint family | 93 | 24.6 |
| **Gravidity** | 1 | 34 | 8.9 |
| | 2-4 | 144 | 38.1 |
| | ≥5 | 200 | 52.9 |
| | 0 | 287 | 75.9 |
| | 1-3 | 54 | 14.4 |

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| | | | |
|---|---|---|---|
| **Number of times given birth in health facility** | ≥4 | 37 | 9.7 |
| **Residency** | Urban | 172 | 45.5 |
| **In the previous pregnancy** | Rural | 206 | 54.5 |
| **Did you attend an antenatal care visit?** | No | 49 | 13.0 |
| | Yes | 329 | 87.0 |

A total number of 378 pregnant women were recruited for this study. The average age of the respondents was 25 years. The majority 87.9% of the respondents were Hausa, and the dominant religion was Muslim, 96.5% and up to 99.3% of the respondents are married, furthermore, 57.1% are Artisan, while 16% of them not employed, with an average monthly income of ₦4200. Also, 27% and 26.3% of the respondents revealed that their spouses are Farmers and public servants respectively. 42.9% of the respondents had no formal education, while only 8.5% of them attended tertiary institutions. Among the respondents, 87% admitted attending antenatal care in the previous pregnancy; meanwhile, only 24.1% had utilized the health facility during labour and childbirth in their previous pregnancy.

**Table 2: Respondents knowledge on danger signs of pregnancy (n=378)**

| Questions | Danger signs | Freq. | % |
|---|---|---|---|
| Do you know the danger sign of medical health that occurs during pregnancy | No | 7 | 1.8 |
| | Yes | 371 | 98.2 |
| | Total | 378 | 100.0 |
| If yes mention the danger signs that you know to occur during pregnancy | Convulsion | 161 | 42.6 |
| | Vaginal bleeding | 212 | 56.0 |
| | Severe headache | 197 | 52.1 |
| | High fever | 121 | 31.9 |
| | Severe Abdominal pain | 115 | 30.5 |

98.2% of the respondents (n=371) were aware of the obstetric danger signs that occur during pregnancy. Meanwhile, when asked to verbally mention these danger signs of pregnancy 56% of the respondents mention vaginal bleeding, 52.1% mention severe headache, 42.6% mentioned convulsion, while 31.9% and 30.5% respectively mention high fever and severe abdominal pain.

**Table 3: categorization of respondents' knowledge of danger signs in pregnancy based on scores. (n=371)**

| Variable | Frequency (%) |
|---|---|

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| | |
|---|---|
| No knowledge | 0 (0) |
| Low knowledge | 256(68.8) |
| Sufficient knowledge | 115(31.2) |

Table 3 shows the overall knowledge score of the respondents and depicts that the majority 256(68.8%) of the respondents have low knowledge of danger signs in pregnancy.

**Table 4: Respondents knowledge on danger signs of pregnancy when prompted by the researcher (n=371)**

| | Categories | | |
|---|---|---|---|
| | Minor discomfort | Danger signs | Total |
| **Variables** | **Freq. (%)** | **Freq. (%)** | **Freq. (%)** |
| Severe vaginal bleeding | 5 (1.3) | 366 (98.6) | 371(100.0) |
| Severe persistent headache | 8 (2.2) | 363 (97.9) | 371(100.0) |
| Blurred vision | 8 (2.2) | 363 (97.8) | 371(100.0) |
| Severe abdominal pain | 12 (3.2) | 359 (96.8) | 371(100.0) |
| Reduced fetal movement | 21 (5.7) | 350(94.3) | 371(100.0) |
| Too weak to get out of bed | 25(6.7) | 346 (93.2) | 371 (100.0) |
| Swelling of finger, face and leg | 8 (2.2) | 363 (97.8) | 371 (100.0) |
| Convulsion | 8 (2.2) | 363 (97.8) | 371 (100.0) |
| Fast or difficulty in breathing | 12 (3.2) | 359(96.8) | 371 (100.0) |
| Fever | 89 (23.9) | 282 (76.0) | 371 (100.0) |
| Frequency of urination | 143 (38.5) | 235 (63.3) | 371(100.0) |
| Nausea and vomiting | 149 (40.1) | 222 (59.8) | 371 (100.0) |
| Food dislikes and food | 159 (42.8) | 212 (57.1) | 371 (100.0) |
| Cravings | 163(43.9) | 208 (56.0) | 371 (100.0) |
| Heartburn | 113 (30.4) | 258 (69.5) | 371 (100.0) |
| Constipation | 104 (28.0) | 267 (71.9) | 371 (100.0) |
| Swollen veins | 84 (22.6) | 287 (77.3) | 371 (100.0) |
| Back and joint pain | 78 (21.0) | 293(78.9) | 371(100.0) |
| Abdominal cramps in early pregnancy | 71 (19.1) | 300 (80.8) | 371 (100.0) |
| Headaches and migraines | 68 (18.3) | 303 (81.6) | 371(100.0) |
| **Average** | **17.8%** | **82.2%** | |

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Findings from Table 2.2 show that the respondents with the majority (82.2%) indicated all the variables (severe vaginal bleeding, severe persistent headache, blurred vision, etc.) as danger signs.

**Table 5: Distributions of problems that might cause symptoms (n=371)**

| | No | | Yes | | Total | |
|---|---|---|---|---|---|---|
| | Freq. | % | Freq. | % | Freq. | % |
| Ectopic pregnancy | 95 | 25.6 | 276 | 74.4 | 371 | 100.0 |
| Miscarriage | 93 | 25.1 | 278 | 74.9 | 371 | 100.0 |
| Hyperemesis gravidarum | 101 | 27.2 | 270 | 72.8 | 371 | 100.0 |
| Preterm labor | 99 | 26.7 | 272 | 73.3 | 371 | 100.0 |
| Infection in pregnancy | 101 | 27.2 | 270 | 72.8 | 371 | 100.0 |
| Fetal distress | 109 | 29.4 | 262 | 70.6 | 371 | 100.0 |
| Preeclampsia | 93 | 25.1 | 278 | 74.9 | 371 | 100.0 |
| Toxemia | 96 | 25.9 | 275 | 74.1 | 371 | 100.0 |

Table 5 shows that the respondents with the majority (73.5%) admitted all the variables (Ectopic pregnancy, Miscarriage, Hyperemesis gravidarum, Preterm labor, Infection in pregnancy, Fetal distress, Preeclampsia, and Toxemia.) are the problems that might cause these symptoms.

**Table 6: Relationship between knowledge and level of education**

**Chi-Square Tests**

| | Value | df | Asymp. Sig. (2-sided) |
|---|---|---|---|
| Pearson Chi-Square | 376.397[a] | 116 | .000 |
| Likelihood Ratio | 344.521 | 116 | .000 |
| Linear-by-Linear Association | .645 | 1 | .422 |
| N of Valid Cases | 371 | | |

From the above table it was revealed that the p-value (0.000) is less than (0.05) we therefore reject the null hypothesis ($H_0$) and conclude that knowledge of danger signs during pregnancy is associated with the level of education at a 95% confidence limit.

**Discussion**

The purpose of this study was to assess the level of knowledge of danger signs in pregnancy among pregnant women attending antenatal clinics in Dutse General Hospital, Jigawa State. A total of 378 respondents were used for the study and a structured questionnaire was utilized to answer the research question. This chapter discussed the findings based on the research objective. All the respondents were pregnant women attending antenatal clinics. The age of the respondents ranges from 15 to 45 with an average of 25 years. The majority (87.9%) of the respondents are Hausa, 96.5% of the respondents are Muslims, and up to 99.3% of the respondents are married, furthermore, 57.1% are artisans, while 16% of them are not employed. This may explain why most of the respondents had a monthly income ranging from ₦200 to ₦30,000 with an average of ₦4200. Results on knowledge of danger signs of pregnancy among pregnant women attending an antenna clinic in Dutse General Hospital indicate that the majority of these women are well aware of it. But when asked to mention any of the danger signs they know, most of the respondents were able to mention vagina bleeding (56.0%) which was followed by severe headache (52.1%), convulsion (42.6%), high fever (31.9%) and severe abdominal pain (30.5%) respectively. This is similar to the study carried out in Northwestern Nigeria by (Sufyan *et al*., 2016) on knowledge, attitude, and perception of pregnancy danger signs among women of childbearing age which showed that 62.2% of the respondent knew vagina bleeding while 35.1% knew convulsion as danger signs in pregnancy.

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Furthermore, studies carried out in Tanzania, Sothern Ethiopia, and Uganda all found vagina bleeding to be the most frequently mentioned danger signs in pregnancy this may be because vagina bleeding is not supposed to be seen in a normal pregnancy. Failure to recognize danger signs in pregnancy may compromise these women's decision to seek prompt care when a complication arises. In terms of their overall knowledge score, it was found that the majority (68.8%) had low knowledge while approximately a third (31.2%) had sufficient knowledge of it. This is not surprising as similar studies were done in Ethiopia (30.9%), South Africa, rural Tanzania (26%), South Africa and northwest Nigeria (4.9%), a (2%) and (Hailu *et al.*, 2010; Hoque & Hoque, 2011; Pembe *et al.*, 2009; Sufyan, *et al*., 2016.). A low level of education can be one of the major reasons for low knowledge of dangerous signs of pregnancy as 42.9% of the respondents had no formal education with only 4.9% having attended tertiary institutions. When asked to differentiate between danger signs in pregnancy and minor discomfort, respondents with the majority percentage (82.2%) indicated all the variables (severe vaginal bleeding, severe persistent headache, blurred vision, etc.) as danger signs, the least percent (17.8%) sees all the variables as minor discomfort. This is speculated to be due to poor quality of care and inconsistency of information during ANC since about 97.9 percent of women had attended antenatal clinics at least once in their last pregnancy. Information on obstetric danger signs is usually delivered to pregnant women during antenatal clinics, but the quality of the service in low-resource settings is said to be inconsistent (Villar *et al.*, as cited in Aborigo *et al*., 2014). This Poor quality of care was thought to be due to a shortage of providers, informal costs in public hospitals, and illiteracy (Tibandebage *et al.*, 2013). Appropriate Health-seeking behavior is influenced by the knowledge and awareness of danger signs in pregnancy. That is pregnant women and their families are likely to seek immediate care in the event of an emergency if they are fully aware of these warning signs. Therefore, reducing morbidity and mortality associated with it. Effective approaches are therefore required to streamline the information delivery systems. The recollection ability of these women can be enhanced through the use of a Simplified information delivery system with little or no education and implication enabling them to use public health services more effectively.

**Conclusion and Recommendation**

Based on the findings of this study, it can be concluded that there is a low level of knowledge about the danger signs of pregnancy among pregnant women attending antenatal clinics at Dutse General Hospital. Knowledge about danger signs during pregnancy has been found to have a significant relationship with the level of education. Based on the findings, it is recommended that access to health information and education on the danger signs of pregnancy should be made readily available to all women of reproductive age and their family members by health workers in the state. This can be done through community outreach programs that are solemnly targeting information on obstetric complications in pregnancy.

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