

Research Article

# Evaluation of Health Challenges Among Pregnant Women Visiting Paiko Town Clinic and Model Clinic for Antenatal: A Case Study Paiko Paikoro Local Government Niger State

Jamil Hassan Abdulkareem<sup>1,\*</sup>, Fatima Zahra Abubakar Otaru<sup>2</sup>, Yusuf Yahya Miya<sup>3</sup>, Ajayi Philomena Hope<sup>4</sup>, Abdulmalik Abdulraman<sup>5</sup>

<sup>1</sup>Department of Public Health, Galaxy Collage of Health Technology, Bauchi, Nigeria

<sup>2</sup>Department of Public Health, Amr Bin Saad Bin Al Harth, Al Hofuf, Kingdom of Saudi Arabia

<sup>3</sup>Department of Medical Laboratory, Galaxy College of Health Technology, Bauchi, Nigeria

<sup>4</sup>Department of Sociology, University of Abuja, Abuja, Nigeria

<sup>5</sup>Department of General Studies, Crown College of Health Science and Technology, Minna, Nigeria

## Abstract

The study aims to assess the health challenges pregnant women are facing in Paiko, Paikoro Local Government and the study went further to compare pregnant women attending antenatal clinics in two healthcare clinic facilities in Paiko with the view to ascertain their health challenges and taking into consideration of age variation. However, few women have medical conditions that emerge during pregnancy, and different women have medical issues before they become pregnant, that could prompt intricacies. It is vital for women to get medical services previously and during pregnancy to diminish the danger of pregnancy entanglements. The type of study conducted in the two clinics in Paiko was a descriptive cross-sectional study. This study was conducted to describe the patterns of health challenges occurring in pregnant women in the study area. A stratified sampling technique was used in this study conducted within the two clinics among the pregnant women in Paiko, Paikoro local government however the tools for the collection of data are questionnaires and interviewers (face-to-face interviews). Data were collected from the two clinics using the techniques mentioned above. The questionnaires were administered to the pregnant women from the two clinics and observations were made from the study population. Data collected were through primary and secondary means, which is questionnaire and interview. The pregnant women were sensitized about the information in the survey template in other to enlighten them about the survey study plan and the required data from them. *Result:* The findings revealed major health challenges that pregnant women face was High Blood Pressure, Ulcer, and Malaria etc.

## Keywords

Health Challenges, Pregnant Women, Paiko Nigeria

\*Corresponding author: [abdulkarimhassan55@gmail.com](mailto:abdulkarimhassan55@gmail.com) (Jamil Hassan Abdulkareem)

**Received:** 25 November 2023; **Accepted:** 17 January 2024; **Published:** 19 March 2024



Copyright: © The Author(s), 2023. Published by Science Publishing Group. This is an **Open Access** article, distributed under the terms of the Creative Commons Attribution 4.0 License (<http://creativecommons.org/licenses/by/4.0/>), which permits unrestricted use, distribution and reproduction in any medium, provided the original work is properly cited.

## 1. Introduction

Increased access to safe, affordable and effective methods of contraception has provided individuals with greater choices and opportunities for responsible decision-making in reproductive matters. Achievement of sexual and reproductive health is also a human rights issue. Failure to improve sexual and reproductive health has adverse effects as it also relates to numerous health outcomes such as neonatal, infant and mothers' mortality rates. Improvement and access to antenatal and post-natal care will prevent maternal morbidity and mortality.

The African continent has experienced large intraregional health inequalities in terms of coverage of basic maternal and child health interventions like antenatal care [1]. In the other hand, Southern Africa has almost universal coverage in 2010, while West Africa about one-third of pregnant women are not privilege to have receive antenatal care visits [2].

A pregnant woman may be exposed to infectious diseases, some of which have the ability to infect the placenta and seriously harm a fetus resulting in various neurological and behavioral disorders or other birth defects. Toxoplasmosis, cytomegalovirus (CMV), varicella, rubella, and lymphocytic choriomeningitis virus (LCMV) are among the agents that are recognized to have the potential to cause birth defects in a developing fetus. Additionally, while some infectious diseases may not pass from an infected women to her baby, they may have a serious impact on pregnancy such as uterine infection, miscarriage, premature labor, or stillbirth [3].

In sub-Saharan Africa region, maternal mortality levels have been halved since 1990. In other regions, including Asia and North Africa, greater headway was made. The global maternal mortality ratio (the number of maternal deaths per 100,000 live births) declined by only 2.3% per year between 1990 and 2015. However, there was an accelerated decline in maternal mortality experience from 2000 onwards. In some countries, annual declines in maternal mortality from 2000–2010 were above 5.5 % [2].

### 1.1. Challenges of Pregnant Women

It is vital for women to get medical services prior and during pregnancy to diminish the danger related to pregnancy. Pregnancy is a state of physiological condition that brings about various changes in the oral cavity along with other physiological changes taking place throughout the female body. They can include the women's well-being, the child's well-being, or both. A few women have medical conditions that emerge during pregnancy while some have medical issues before they became pregnant which could trigger complexities. They include, cramps, urinary frequency - needing to pass urine often, Urinary stress incontinence - leaking urine, heartburn and indigestion, blocked nose, varicose veins - swollen leg veins, varicose veins in the genital area, constipation and hemorrhoids [4].

Some women experience health problems during pregnancy. These complications can involve the women's health, the fetus's health, or both. Even women who were healthy before getting pregnant can experience complications. These complications may make the pregnancy a high-risk pregnancy [5]. Due to increase in poverty most of sub-saharan African woman experience some depression, making pregnancy-related depression and anxiety among the more common pregnancy complications. These medical conditions can have significant effects on the health of the women and her child [6].

Global priority has continued towards improving maternal health during pregnancy and childbirth. Maternal health care is the care given to women during pregnancy, childbirth, and postpartum periods to ensure good health outcomes for the woman and baby [7]. Consequently, the contribution of ANC to maternal mortality reduction has been challenged. High-risk screening during antenatal care as a means of identifying women for facility-based delivery is not effective since most of the antenatal care provided is of poor quality in many low-income countries [8]. Factors such as poverty, inequality, poor attitude towards women and their health, and cultural/traditional practices have been reported to influence the use of maternal and prenatal care in developing countries [9]. Poverty has been identified as a major barrier to human development as it makes standard healthcare excessively expensive [10].

Some certain percentage of woman also experiences dental problem during pregnancy. Research indicate pregnant women's dental health care demands differ dramatically from those of the general population. The most frequent oral health concerns during pregnancy include periodontal disease, xerostomia, halitosis, and tooth movement. During pregnancy, the hormonal balance of pregnant women alter because the placenta produces increased levels of oestrogen and progesterone causing several tissues to experience modifications. Increased sensitivity to irritations arises in the gingiva during this time [11]. With a prevalence of 60 to 75 percent, gingivitis is the most frequent dental illness among pregnant women. A severe aggravation of preexisting gingivitis occurs in around half of all pregnant women [12]. Researchers discovered very few oral bacteria in the amniotic fluid and placenta of women who had preterm labour with periodontitis in one investigation [13].

### 1.2. Chronic Condition and Complication in Pregnancy

Pregnant women with chronic health conditions increase their risk for certain pregnancy complications. However, careful treatment from health care providers can help manage their condition to help ensure a healthy pregnancy and a healthy baby. Thus, condition such as diabetic may lead to

premature birth (birth before 37 weeks of pregnancy). Babies born prematurely are more likely to have health problems than babies born full term. Birth defect may occur in other cases, which come as the result certain challenge experienced by pregnant women. These are health conditions that are present at birth that change the shape or function of one or more parts of the body. Birth defects can cause problems in overall health, how the body develops or how the body works. Stress during pregnancy and inadequate dietary intake may result in miscarriage and still birth (miscarriage is the baby in the womb before 20 weeks of pregnancy) [14].

Hypertensive women may also develop complication when not properly managed, however women's cardiovascular physiology adapts significantly as a result of the hormonal changes that occur during pregnancy. Consequently, pregnant women require careful attention during antenatal to monitor the condition and manage it to prevent complication [15]. In the case of gestational diabetes, woman with history of obesity usually develop it during pregnancy if not properly managed. In recent years, prevalence of gestational diabetes mellitus (GDM) is rising in lockstep with the rise in overweight and obesity among women of childbearing age. GDM-affected pregnancies increase the risk of caesarean and surgical vaginal delivery, macrosomia, neonatal hypoglycemia, and hyperbilirubinemia for both mother and child [16].

Furthermore, the high insulin level in the foetus caused by increased placental glucose transport and maternal hyperglycemia is responsible for fetal hyperinsulinemia which leads to fetal macrosomia and accelerates growth [17]. Great number of pregnant women also experience gestational thrombocytopenia and anaemia during pregnancy due to poor dietary intake specifically iron rich food. The haematological parameters must adjust in several ways, including providing vitamins and minerals for foetal haematopoiesis. This include, iron, vitamin B12 and folic acid which can decrease maternal anaemia and prepare the body for postpartum bleeding to necessarily to improve homeostasis [18].

Ectopic Pregnancy is another complications of pregnancy if not managed carefully. This occurs when an embryo implants anywhere aside the uterus (commonly in the fallopian tubes, bladder etc). Pregnancies in these locations can be life-threatening and must be terminated or moved to the uterus [19]. Preeclampsia which is considered pregnancy-induced high blood pressure may also be accompanied by an uncharacteristic amount of protein in the urine. Eclampsia, the more severe form is defined as seizures occurring due to this condition. Eclampsia may result to coma, permanent disabilities or in severe cases lead to death [19].

## 2. Methodology

The population studied for health challenges of pregnant

women was the total population of women attending the antenatal care in town and model clinic in Paiko through sampling technique. However, the study type was a descriptive cross-sectional study conducted in two primary health care clinics to describe the pattern of the health challenges face by pregnant women during pregnancy. Consequently, the unit of analysis was carried out individually within the two clinics. The study employed stratified sampling techniques to sample the clients in two clinics in Paiko Paikoro Local Government. Questionnaires and face-to-face interviews were tools used in the data collection, meanwhile, the source data were both primary and secondary. Furthermore, the study utilized descriptive statistics to analyze the research findings.

Orientation of the study population was conducted on 22/02/2021 through sensitization of pregnant women about the aim and objectives of the survey and the different activities to be carried out during and after completion of the survey.

## 3. Results and Discussion

The results of the qualitative and quantitative research conducted at the two clinics are presented as follows.

The Town Clinic Kwakwarapi has a population of about 428 pregnant women as of 1<sup>st</sup> of March 15<sup>th</sup> march 2021 and at the Model Clinic Zabupi, the population of pregnant women is 245 as of March. During the period of the study,

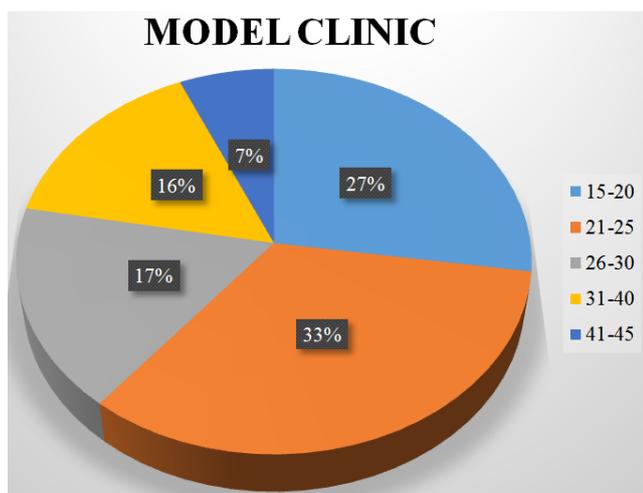
From [Table 1](#), it can be observed that the age group 21 – 25 has the highest incidence of pregnancy as recorded in both clinics, while the last age group 41 – 45 has the lowest cases of pregnancy. The average pregnancy cases for the two clinics are 85.6 and 49 for the town clinic and model clinic respectively.

*Table 1. Data Collected for the Two Clinics.*

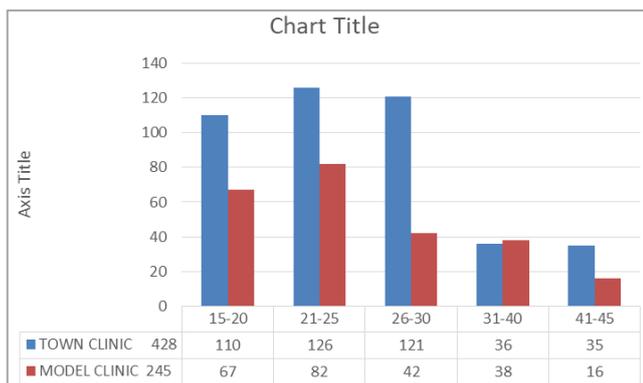
AGE Group	TOWN CLINIC Kwakwarapi	MODEL CLINIC Zabupi
15-20	110	67
21-25	126	82
26-30	121	42
31-40	36	38
41-45	35	16
Average	85.6	49
Total	428	245



**Figure 1.** Pie Chart Showing Variation in Pregnancy across the Age Group for Town Clinic.



**Figure 2.** Pie Chart Showing Variation in Pregnancy across the Age Group for Model Clinic.



**Figure 3.** Reveal the comparison of the Occurrence of the Pregnancy between the Two Clinics.

The common pregnancy complications found from the two clinics during the visitation are presented in [Table 2](#).

**Table 2.** Common Complications Recorded During the Visit to the Two Clinics.

S/No	Common Complication
1.	Underweight
2.	Infection
3.	Gestational diabetics
4.	Malnutrition (Obdema)
5.	Malaria
6.	BP
7.	Ulcer (Heartburn)

The study revealed some of the health challenges the pregnant women faced as indicated in the [table 2](#). This was gathered during the interaction section with the pregnant women as well as from the questionnaire administered to the client in the Paiko area of Paikoro local government. Furthermore, malaria was one health challenge pregnant women faced in the study. According to the CDC, Malaria infection during pregnancy can have adverse effects on both women and fetus, including maternal anemia, fetal loss, premature delivery, intrauterine growth retardation, and delivery of low birth-weight infants (<2500 g or <5.5 pounds) which is a risk factor for death. It is also a problem for women in their first and second pregnancies and for women who are HIV-positive. Mostly in sub-Saharan Africa where there is prevalent infection, pregnant women have developed immunity that generally prevents severe disease [20].

The study further gathered that other health challenges the pregnant women experienced in the study area included high blood pressure which can lead to heart disease, kidney disease, and stroke. High blood pressure during pregnancy also increases the risk of preeclampsia, preterm birth, placental abruption, and cesarean birth. Unfortunately, when blood pressure goes up during pregnancy, it can place extra stress on your heart and kidneys [21]. Malnutrition is also one of the health challenges pregnant women faced in the region. However, poor dietary intake during pregnancy may result in some unseen complication, low birth weight anemia, pre-eclampsia, hemorrhage, developmental delays for children and death in women. A pregnant woman requires a healthy diet to support herself and the baby during pregnancy. However, the improper consumption of relevant nutrients including iodine, iron, folate, calcium, and zinc can lead to stillbirth, low birth weight and many more [22].

Furthermore, the patients also mentions issues such as microbial infection, ulcer and gestational diabetes. Most of these were rooted in poor dietary intake, poor personal and environmental hygiene considering the socio-economic problem in the region which possibly increased the cases.

## 4. Conclusion

In conclusion, fieldwork was undertaken at two clinics at Paiko town in Paikoro local government in Niger state. The highest health challenges recorded during the visit was Ulcers and high BP for the two clinics. Most maternal morbidity is preventable with timely management by a skilled health professional working in a supportive environment. Ending preventable maternal mortality as well as preventing morbidity must remain at top priority for the Paikoro Local Government as well as the Niger State agenda. At the same time, simply surviving pregnancy and childbirth can never be the marker of successful maternal health care. It is critical to expand efforts to reduce maternal injury and disability to promote health and well-being by addressing all the root causes.

## Acknowledgments

The research team thanks all the staff of Town Clinic Model Clinic Paiko for their support during the field survey and research work, in Paiko Paikoro Local Government Niger State for their support and advice.

## Author Contributions

Jamil Hassan Abdulkareem Developed the topic, gathered Literature, and developed it, conducted field survey and gather the data from pregnant attending the antenatal clinic in Paiko with the help of students and developed the manuscript.

## Data Availability Statement

Most of the information or data used for the research were available.

## Ethics Approval

officially received ethical clearance from both clinics before the commencement of field research.

## Consent for Publication

The research team has sought verbal consent from the study group publication and their approval was given to publish the outcome of the survey and research work.

## Conflicts of Interest

The authors declare no conflicts of Interest.

## References

- [1] African Health Organization (2020) Maternal Health: Available from <https://aho.org/health-topics/maternal-health/> [Accessed on 8 March 2024]
- [2] World Health Organization Regional Office for African (2023) Maternal Health: Available from <https://www.afro.who.int/health-topics/maternal-health> [Accessed on October 13, 2023].
- [3] Health line (January 2024) Birth defect type and causes Available from <https://www.healthline.com/health/birth-defects> [Accessed on January, 2024].
- [4] National Institute of Child Health and Human Development (2021) What are Some Common Complication of Pregnancy: Available From <https://www.nichd.nih.gov/health/topics/pregnancy/conditioninfo/complications> [Accessed on 13 October, 2023].
- [5] National institute of Child Health and Human (January 16, 2024) Development Common complication of pregnancy <https://www.nichd.nih.gov/health/topics/pregnancy/conditioninfo/complications> [Accessed on January, 2024].
- [6] National Institute of Child Health (January 2024) mental health during pregnancy <https://www.nichd.nih.gov/ncmh/ncmh/initiatives/moms-mental-health-matters/moms/Pages/default.aspx> [Accessed on 16 January 2024].
- [7] Hounton S, Chapman G, Menten J, De Brouwere V, Ensor T, et al. (2008) Accessibility and utilisation of delivery care within a Skilled Care Initiative in rural Burkina Faso. *Trop Med Int Health* 13: 44-52.
- [8] Penn-Kekana L, McPake B, Parkhurst J (2007) Improving maternal health: getting what works to happen. *Reprod Health Matters* 15: 28-37.
- [9] United Nations Children's Education Fund (2008) Report highlights risks of maternal mortality in developing world.
- [10] Babalola S, Fatusi A (2009) Determinants of use of maternal health services in Nigeria--looking beyond individual and household factors. *BMC Pregnancy Childbirth* 9: 43.
- [11] Dörtbudak O, Eberhardt R, Ulm M, Persson GR. Periodontitis, a marker of risk in pregnancy for preterm birth. *J Clin Periodontol.* 2005 Jan; 32(1): 45-52.
- [12] Website [Internet]. [cited 2021 May 26]. Available from: American Dental Association Council on Access, Prevention and Interprofessional Relations. Women's oral health issues. American Dental Association, 2006. [http://www.ada.org/prof/resources/topics/healthcare\\_women.pdf](http://www.ada.org/prof/resources/topics/healthcare_women.pdf) [Accessed on January 16, 2024].
- [13] Goepfert AR, Jeffcoat MK, Andrews WW, Faye-Petersen O, Cliver SP, Goldenberg RL, et al. Periodontal Disease and Upper Genital Tract Inflammation in Early Spontaneous Preterm Birth [Internet]. Vol. 104, *Obstetrics & Gynecology*. 2004. p. 777-83. Available from: <http://dx.doi.org/10.1097/01.aog.0000139836.47777.6d>

- [14] Centre for Disease Control and Prevention (January 16, 2024), Pregnancy complications and maternal infant health: Available from <https://www.cdc.gov/reproductivehealth/maternalinfanthealth/pregnancy-complications.html> [Accessed on January 16, 2024].
- [15] Sanghavi M, Rutherford JD. Cardiovascular Physiology of Pregnancy [Internet]. Vol. 130, *Circulation*. 2014. p. 1003-8. Available from: <http://dx.doi.org/10.1161/circulationaha.114.009029>
- [16] Catalano PM, Ehrenberg HM. Review article: The short- and long-term implications of maternal obesity on the women and her offspring [Internet]. Vol. 113, *BJOG: An International Journal of Obstetrics & Gynaecology*. 2006. p. 1126-33. Available from: <http://dx.doi.org/10.1111/j.1471-0528.2006.00989.x>
- [17] The Pregnant Diabetic and Her Newborn. Problems and Management [Internet]. Vol. 43, *Archives of Disease in Childhood*. 1968. p. 391-391. Available from: <http://dx.doi.org/10.1136/adc.43.229.391-a>
- [18] Mohamed A, Hamza K, Babker A. Physiological changes in some hematological and coagulation profile among Sudanese healthy pregnant women [Internet]. Vol. 5, *International Journal of Medical Science and Public Health*. 2016. p. 525. Available from: <http://dx.doi.org/10.5455/ijmsph.2016.30092015149>
- [19] Johns Hopkins medicine (January, 2024) Pregnancy Complications: Available from <https://www.hopkinsmedicine.org/health/conditions-and-diseases/staying-healthy-during-pregnancy/complications-of-pregnancy> [Accessed on January 16, 2024].
- [20] Centre for Disease Control and Prevention (July, 2023) Malaria World Reduction during Pregnancy: Available From [https://www.cdc.gov/malaria/malaria\\_worldwide/reduction/iptp.html#](https://www.cdc.gov/malaria/malaria_worldwide/reduction/iptp.html#) [Accessed on 14 October, 2023].
- [21] American College of Obstetrician and Gynecology (2023) Woman Health during Pregnancy Preeclampsia and High Blood Pressure: Available From <https://www.acog.org/women-health/faqs/preeclampsia-and-high-blood-pressure-during-pregnancy#> [Accessed on 14 October, 2023].
- [22] United Nation Children's Educational Fund (2023) Nutrition/Maternal during Pregnancy: Available From <https://www.unicef.org/nutrition/maternal#:~:text=During%20pregnancy> [Accessed on 14 October, 2023].