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# Socio-demographic Determinants of Reproductive Women's Health Status in Nigeria

Rukayat A. Olaoye

Department of Agricultural Economics, University of Ibadan, Oyo State, Nigeria  
Email: [rukayataooye1803@gmail.com](mailto:rukayataooye1803@gmail.com)

## ABSTRACT

This study examined the socio-demographic determinants of reproductive women's health status in Nigeria using secondary data sourced from the 2018/2019 National Demographic Health Survey (NDHS). Data were retained on 6603 women aged 15-49 years and were analysed using descriptive statistics, women health index and ordered logistic regression. Results showed that the average age of Nigerian women is  $29.88 \pm (6.96)$ . Majority were married, lived in male-headed households, had an average household size of 6 persons and were employed. More than half live in the rural area and were Muslims, many had secondary education, reside in the Northwest zone and many were unhealthy. Age ( $p < 0.01$ ), formal education ( $p < 0.01$ ), autonomy ( $p < 0.01$ ), health insurance coverage ( $p < 0.05$ ), rich wealth quintile ( $p < 0.01$ ), urban residence ( $p < 0.01$ ), residing in the Southeast ( $p < 0.01$ ) and Southwest ( $p < 0.10$ ) zones were significant and positively influenced women health status, while household size ( $p < 0.01$ ), religion ( $p < 0.05$ ), residing in the Northeast ( $p < 0.01$ ), Northwest ( $p < 0.01$ ), and South-south zones ( $p < 0.10$ ) were significant and negatively influenced women health status in Nigeria. Therefore, women of childbearing age should be enlightened about the benefit of regular and proper ante-natal visit and care. Women of reproductive age should also be encouraged by providing basic amenities required for proper health management

**Keywords:** Reproductive Women, Post-natal care, Health Status, Ante-natal Visit.

## 1.0 INTRODUCTION

Quality health is a fundamental human right, the global health and welfare organizations strive to achieve possible outcomes for their societies (Biglari, *et al.*, 2024). Humans' health have a complex relationship with cultural and social factors of the community of resident, resulting to health inequities (Artiga and Hinton, 2019). Health outcome is influenced by medical and non-medical factors, non-medical factors include the conditions in which people are born, grow, work, live, and age. It also include the forces and system shaping the conditions of daily life, including income and social protection, education, employment and job security, working life conditions, food security, basic amenities, early childhood development, social inclusion and non-discrimination, structural conflict, and access to affordable health services (World health Organization, 2022).

Women's health is influenced by physical, mental, sociocultural, and spiritual dimensions, determined by the biological, social, political, and economic background of the community (Biglari, *et al.*, 2024). The health of women is very crucial because it affects the health of every member of the household, especially, that of children and aged persons. The health of mothers and children is closely related to the general health of the community and the increasing burden of poor institutional healthcare delivery service presents mothers with multiple challenges during pregnancy and delivery, resulting to high maternal mortality in developing countries (Becker *et al.*, 2021). Reproductive health impairment accounted for 15% of the total burden of diseases and leads to women's disabilities around the world (Ravindra *et al.*, 2020). Prioritizing maternal health is crucial to achieving the fourth and fifth Millennium Development Goals (MDGs) (Biglari, *et al.*, 2024).

From 2000 to 2020, the global maternal mortality ratio (MMR) declined by 34% from 339 deaths to 223 deaths per 100,000 live births, according to UN inter-agency estimates. Almost 95% of all maternal deaths occurred in low and middle-income countries in 2020 (WHO *et al.*, 2023). Improving maternal and infant health continues to be a major challenge as women in developing country has 1 in 31 chances of dying during pregnancy or childbirth, as compared to 1 in 4,300 in high-income country (Lega *et al.*, 2023). The United Nations International Children Emergency Fund (UNICEF), World Health Organization (WHO) and other partnering agencies are working closely with country governments to accelerate progress in maternal and new-born health. Agencies like Every New-born Action Plan (ENAP) and Ending Preventable Maternal Mortality (EPMM) groups, developed new strategies to ensure that every pregnant girl and woman receives essential interventions, and that both the mother and the new-born receive postnatal care within two days of birth. For instance, in Nigeria, the Integrated Maternal, New-born and Child Health (IMNCH) strategy was rolled out by the government as part of maternal and infant mortality control measures (Maas, 2020). In Nigeria, reproductive health challenges are significant, impacting women's overall well-being and contributing to high rates of maternal mortality and morbidity. Nigeria faces a high maternal mortality rate, with an approximately 545 deaths per 100,000 live births which is due to factors such as inadequate access to quality healthcare, lack of skilled birth attendants, and socio-cultural barriers (FEMNET, 2022).

Efforts to improve maternal health have been made, but disparities persist, particularly in rural areas (USAID, 2011). Contraceptive use in Nigeria remains low, with a contraceptive prevalence rate of only 13% (FEMNET, 2022). This low rate is influenced by limited access to family planning services, cultural and religious opposition, and misinformation about contraceptive methods. Increasing access to and education about family planning is crucial for reducing unintended pregnancies and improving women's health (USAID, 2011). Sexually transmitted infections (STIs), including HIV, are also a significant concern. The prevalence of HIV among women in Nigeria is 4.4%, highlighting the need for genital comprehensive sexual health education and services (FEMNET, 2022). Additionally, practices such as female mutilation (FGM) and early marriage continue to pose serious health risks to women and girls (Sule, *et al.*, 2023). Maternal mortality in Nigeria is higher than its regional average, but has improved from 1,148 in 2000 to 1,047 in 2020 (WHO *et al.*, 2023). Nigerians pre-natal care performance has fallen consistently below the national target of 57% and the post-natal care coverage only includes 16 states out of 36 states in 2021 (WHO *et al.*, 2023). The maternal mortality ratio was 196.6, with the some Northern states such as Katsina, Zamfara, Kano, Sokoto, Jigawa, and Kebbi exceeding the national target of 288 in 2020 (Health Think, 2020).

Recently, there has been a surge in research into women's healthcare, more focus are being placed on incorporating women into clinical trials, addressing the long-standing deficit in representation (Becker *et al.*, 2021). However, women's symptom are under-recognized, they face an alarming increase in misdiagnosis and under-medication. Women's health has unique challenges that require special attention from dysmenorrhea to fertility and pregnancy-related complications (Sule *et al.*, 2023). Improving reproductive health in Nigeria requires a multifaceted approach that includes enhancing healthcare infrastructure, increasing access to family planning, and addressing socio-cultural barriers. Addressing these challenges is essential for improving health outcomes and achieving health equity. Therefore, this study aims to examine the socio-demographic determinants of reproductive women's health status in Nigeria. Specifically, it:

- i. profiles the socio-demographic features of women of reproductive age.
- ii. describes the health indicators of reproductive women in Nigeria.
- iii. assesses the health status of women of reproductive age.
- iv. examine the socio-demographic determinants of reproductive women's health status in Nigeria.

### **1.1 Hypothesis of the Study**

H<sub>0</sub>: Socio-demographic factors do not have significant influence on reproductive women's health status in Nigeria.

## **2.0 Literature Review**

### **2.1 Theoretical Framework**

The theories underpinning this study are model of health beliefs, social cognitive theory and theoretical transposition model.

#### **2.1.1 Model of health beliefs (1950)**

The health belief model was put forth in the 1950s (Janz and Becker, 1984). It states that the perceived severity and susceptibility of a particular disease and its state determine how dangerous it is. It also highlights how much of a difference between expected importance of exhibiting a given health habit and assumed barriers to doing so (that is, decisional balance). An effect of both the perceived danger and the decisional equilibrium over expected outcomes leads to healthy conduct (Janz and Becker, 1984). The model recognizes the influence of environmental and psychosocial factors on health behaviour through perceived danger or decisional balance.

#### **2.1.2 Social cognitive theory (1986)**

Bandura outlined social cognitive theory in 1986 on the assumption that each person is a rational entity. This theory holds that dynamic self-efficacy, or the perception of one's ability to implement a given course of action in a particular situation, is crucial. People who have higher levels of self-efficacy for a task typically have larger expectations for related results, sense more aids from the society, and engage in more healthy self-regulatory behaviours than those with low self-efficacy. SCT is based on the fact that people learn a healthy habit through their own experiences, by observing others actions and its results.

#### **2.1.3 Theoretical transposition model (1992)**

The theoretical transposition model views changing health behaviour as a process that involves coaching people through five stages (Beulah, 2018). The first stage is the pre-contemplation stage where people have little to no intention to change a behavior, but could change the behaviour if become more conscious of the need to change such behaviour for better health. Secondly, contemplation stage that requires encouragement and motivation where people decide to change a behaviour in the near future (within six months). Thirdly, preparation stage where people intend to make changes and has already made some modifications (typically within a month). The fourth is the action stage where people have exhibited health behaviour for less than six month and lastly maintenance stage where people engaged in health behaviour for more than six month and strive to prevent relapse (for about 6 months to 5 years) (Beulah, 2018).

## **2.2 Empirical Review**

Chawalowska *et al.* (2020) examined the reproductive health literacy and fertility awareness among Polish female students. Data were sourced from 456 women aged 18–29, who were students of 6 public universities located in Poznan, Poland and were analysed using regression analysis and univariate analysis of variance. Older students and medical students were found to be the most knowledgeable. About 93.4% correctly identified the optimum age for a woman to have the first child from the point of view of achieving pregnancy fast. Over 90% knew such fertility-compromising risks as smoking, diseases and psychological distress. There was awareness of the adverse effect of unbalanced diet, irregular sleep, and long-lasting physical effort. About 47.1% reported gaining information from a number of sources, about 28.3% declared the source was primary or middle school classes.

Chen *et al.* (2020) investigated the current reproductive health status, knowledge, and associated factors among women aged 20–39 years in rural China. The study was a cross-sectional study conducted in five villages in China. The data collected were analyzed using descriptive statistics and logistic regression model. One-third of the participants suffered gynecopathy and about 38.89% did not seek medical treatment. Condoms and intrauterine devices were the main contraceptive measures used, and 28.70% had an induced abortion. More than half (53.00%) had a low reproductive health knowledge which was associated with a lower level of education, no history of gynecopathy, and lack of knowledge from medical staff, WeChat/micro-blog, or the internet.

Izadi *et al.* (2024) examined the association between occupational exposures and reproductive health, pregnancy outcomes, and the lactation period among hospital staff. About 733 female healthcare workers from hospitals affiliated with the Tehran University of Medical Sciences were interviewed

using cross-sectional study. The measurement method for fertility consequences was self-report. Results show that chemical exposures (solvents) were a risk factor for stillbirth. Prolonged working hours were associated with spontaneous abortion and breastfeeding periods. Shift workers did not have a higher frequency of reproductive and pregnancy outcomes, but the breastfeeding period was significantly decreased in shift workers. Psychiatric disorders were associated with preterm labour, low birth weight, and stillbirth in sequence with nervousness, depression, and mood disturbance. Furthermore, depression affects the breastfeeding period and there was a link between job titles and infertility and the socioeconomic status was related to stillbirth and infertility.

Sule *et al.* (2023) investigated the reproductive health issues of concern to Nigerians and their suggestions for improvement of services. Data were collected using Google Forms and were analysed using rates and comparative analysis. Sexual health, contraception, infections, fertility issues, and female reproductive tract cancer, were the prominent reproductive health issues. There were inadequate access to reproductive health information and services and the most common suggestions for improvement were access to information, greater men involvement, and access to health services. The preferred media of information included social media, email, and health workers including door-to-door services and seminars in schools (13.85%). Zaleweska *et al.* (2024) evaluated women knowledge of reproductive health, infertility risk factors, and causes of infertility and determined whether the level of this knowledge varies by socio-demographic variables. Data were sourced from 111 patients and were analysed using the Chi-square test and Fisher's test. Results indicated that women had a good or very good level of knowledge of the causes of infertility. The level of knowledge on the diagnosis of infertility did not depend on the age of the examined people, their educational level, or personal experience in the field ( $p>0.05$ ). Also the awareness of women on reproductive health was poor. Women had a low level of knowledge of infertility risk factors, and there was no correlation the knowledge and age, educational level, or personal experiences.

### **3.0 METHODOLOGY**

#### **3.1 The Study Area**

The study area is Nigeria, located on the western coast of Africa with a diverse of geography and climate ranging from humid to arid equatorial. Nigeria is bordered to the south by the Gulf of Guinea of the Atlantic Ocean, to the west by the Benin, to the north by Niger, and to the east by Chad and Cameroon. Nigeria is endowed with human and natural resources, with current live population of 238,553,792 which is equivalent to 2.89% of the world population as of September 15, 2025, according to the latest United Nations World meter elaboration, out of which women accounted for about 118.5 million (49.6%) at median age of 18.1 years and the density of the population is 255/km<sup>2</sup>.

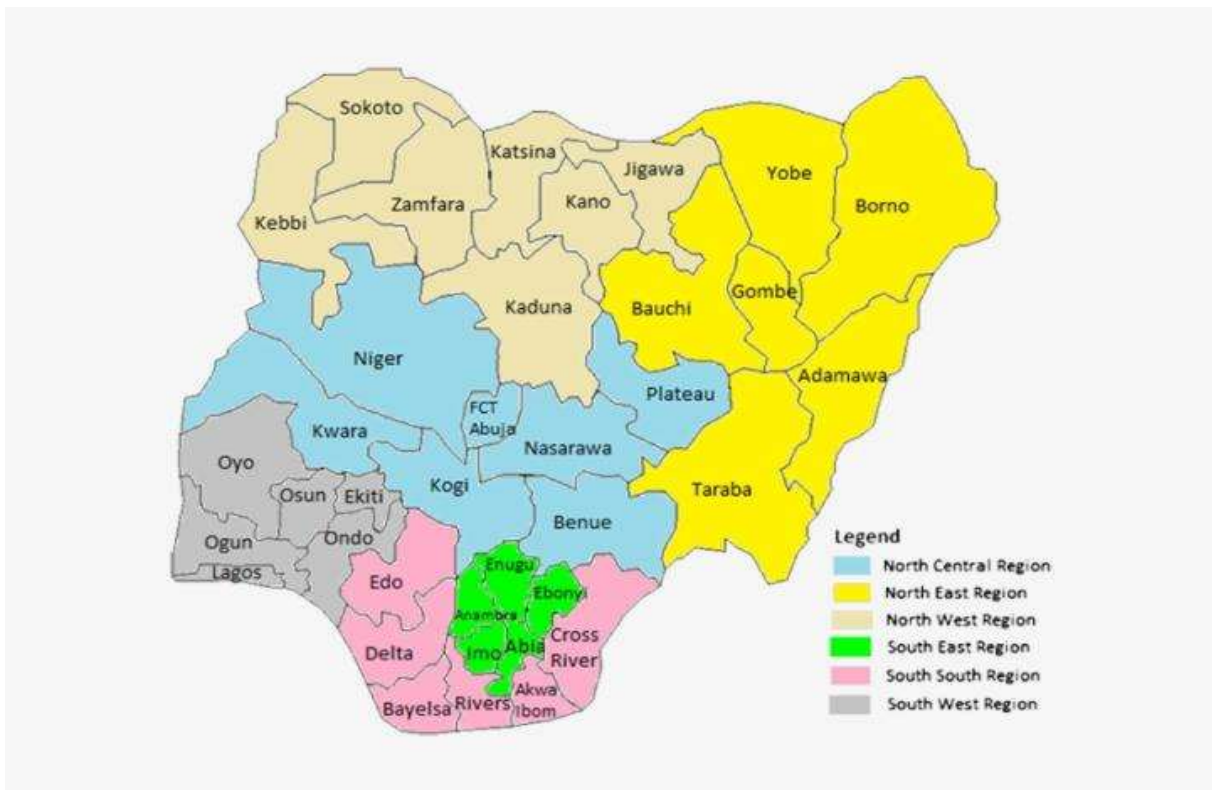


Figure 3.1: Map of Nigeria showing the six geopolitical zones  
 Source: National Population Commission, 2019.

### 3.2 Sources of Data

The study used secondary data sourced from the 2018/2019, sixth round of the Nigeria Demographic and Health Survey (NDHS). The survey was implemented by the National Population Commission using computer-assisted personal interviewing (CAPI), allowing more rapid provision of data than in previous surveys. The target groups were women aged 15-49 and the dataset was cleaned up to a total of 6603 households, with the complete required data on socio-demographic features of Nigerian women and women health indicators.

### 3.3 Method of Data Analysis

The data extracted were analyzed using descriptive statistics, women health index, and ordered logistic regression model.

#### 3.3.1 Women health index

Women health index was generated using four indicators. The indicators include prenatal care, number of antenatal visits, body mass index, and place of delivery, as utilized by Oladokun and Adenegan (2019) and Shoba and Debosmita (2022) to measure women health. The responses to the indicators are dichotomous. To generate the dichotomous responses for prenatal care, any respondent that seeks care from qualified medical doctors have the score of 1, otherwise, 0. For number of antenatal visit, according to UNICEF (2022), the recommended number of antenatal visits was at least 8, respondent who attended less than 8 visits as recommended by World Health Organization scored 0 while those who attended 8 or more visits were scored 1. For the body mass index, we have four different subcategories (underweight, normal weight, overweight and obese) using WHO standard. Of these subcategories, the underweight, overweight, and obese women were scored 0 and those who had normal weight were scored 1. Lastly, respondents who deliver at home were scored 0 while those who deliver at any government or private hospital were scored 1. The mean of the dichotomous responses was generated using the following formula:

$WHI = \frac{1}{V}(\sum N)$ . Where, WHI = women health index V = number of included variables N = sum of possible responses. When, WHI = 0, poor health status; WHI = 0.25, fair health status; WHI = 0.50, good health status, WHI = 0.75, very good health status, WHI = 1, excellent health status

### 3.3.2 Ordered logistic regression model

To examine the socio-demographic determinants of reproductive women’s health status, the study adopted ordered logistic regression model as utilized by Demozie *et al.* (2021) and by Vishwajeet *et al.* (2020). The model was adopted because it can be used to predict the threshold limit which an ordinal exogenous variable fall, given one or more explanatory variables. It can be expressed as follows:

$$\text{Logit}[P(Y \leq j)] = \text{Log} \left[ \frac{P(Y \leq j)}{P(Y > j)} \right] = \beta_0 - \sum [\beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + \beta_9 X_9 + \beta_{10} X_{10}]$$

Where,

P = probability, Y = dependent variable, J = threshold for categories of the dependent variable  
 $\log[P(Y \leq j)]$  = log of believing that women health status is poor, fair, good, very good, or excellent.  $\beta_0$ = intercept,  $\beta_1 - \beta_{10}$  = parameters of the model,  $X_1 - X_{10}$  = Independent variables  
 $j = 0$ , Y =0, poor health status;  $j = 0.25$ , Y= 1, fair health status;  $j = 0.50$ , Y= 2, good health status;  $j = 0.75$ , Y = 3, very good health status;  $j = 1.0$ , Y = 4, excellent health status.  
 $X_1$ = Age (in years),  $X_2$ = Household size (in numbers),  $X_3$ = Religion (Christianity, Islam, Traditional),  $X_4$ = Partner’s education (no formal education, primary education, secondary education, higher education),  $X_5$ = Autonomy index (no autonomy, low autonomy, high autonomy),  $X_6$ = Employment status (employed =1, unemployed=0),  $X_7$ = Health insurance coverage (yes =1, no = 0),  $X_8$ = Residence (urban=1, rural=0),  $X_9$ = Wealth status (poorest, poorer, middle, richer, richest),  $X_{10}$ = Geopolitical zone (north central, northeast, northwest, southeast, south-south, southwest).

## 4.0 RESULTS AND DISCUSSION

### 4.1 Socio-demographic Characteristics of Reproductive Women in Nigeria.

The socio-demographic characteristics of women of reproductive age in Nigeria are presented in Table 4.1. Results show that most (48.27%) of the respondents were aged between 26-35 years with an average of 29.88±(6.96). The majority (92.25%) were married, lived in male-headed households (87.79%), had household size (93.18%) of 1-10 and 6 persons on the average. More than half (59.39%) lived in rural areas and were Muslims (50.81%). About 37.35% had secondary education while 36.70% of them had no formal education. Similarly, Makinde *et al.* (2024) found that most Nigerian women are aged between 25-34years, Muslims, lived in the rural, majorly married, but had no formal education. Furthermore, majority (70.13%) of the women were employed while low proportion (20.82%) were richer than others, and about 22.96% reside in the Northwest geopolitical zone of Nigeria. Makinde *et al.* (2024) also found that 25.15% of Nigerian women reside in the Northwest zone and about 20.89% were richer than others.

**Table 4.1: Socio-demographic Characteristics of Nigerian Women**

Variables	Frequency (n=6603)	Percentage
<b>Age</b>		
15 – 25	2036	30.83
26 – 35	3187	48.27
≥ 36	1380	20.90
29.88 ±(6.96)		
<b>Marital status</b>		
Never married	365	5.5
Married	6091	92.25
Divorced	53	0.80
Widowed	94	1.42
<b>Sex of household head</b>		
Male	5797	87.79
Female	806	12.21
<b>Household size</b>		
1 – 10	6153	93.18
11 – 20	433	6.60
≥ 21	17	0.2
5.86 ± (2.86)		
<b>Religion</b>		
Christian	3205	48.54
Islam	3355	50.11
Traditional	43	0.65
<b>Level of education</b>		
No formal education	2423	36.70
Primary education	1070	16.20
Secondary education	2466	37.35
Higher education	644	9.75
<b>Employment status</b>		
Employed	4631	70.13
Unemployed	1972	29.87
<b>Wealth status</b>		
Poorest	1308	19.81
Poorer	1324	20.05
Middle	1295	19.61
Richer	1375	20.82
Richest	1301	19.70
<b>Residence</b>		
Urban	2675	40.51
Rural	3928	59.49
<b>Geopolitical zone</b>		
North Central	1184	17.93
Northeast	1141	17.28
Northwest	1516	22.96
Southeast	883	13.37
South South	731	11.07
Southwest	1148	17.39

**Source:** Author's Computation, NDHS, 2018

#### 4.2 Reproductive Women Health Indicators

Table 4.2 shows the description of the indicators of reproductive women health in Nigeria. In the table above, 19.25% of the women received prenatal care from medical doctors/specialists and the average antenatal visit was 6.71 times. Large percentage (54.13%) of Nigerian women had antenatal visit between 1-7 times and about 21.02% did not attend at all, these are contrary to the World Health Organization's recommendation that women should exercise at least eight antenatal visitations during pregnancy to avoid maternal and children death as well as to improve women care (UNICEF, 2022).

Desta *et al.* (2024) found a similar result in Northwest, Ethiopia where only 21.20% and 17.5% of women had given birth in medical centres and used early postnatal care services respectively. Most (61.21%) of the women had a normal weight and about 50.54% delivered babies at home.

**Table 4.2: Reproductive Women’s Health Indicators**

Variables	Frequency (n=6603)	Percentage (%)
<b>Prenatal care</b>		
Medical doctor/specialist	1271	19.25
Others	5332	80.75
<b>Number of Antenatal visit</b>		
None	1388	21.02
1 - 7	3574	54.13
8 - 14	1158	17.54
15 and above	483	7.31
Mean: 6.71±(12.62)		
<b>Body mass index (BMI)</b>		
<18.50	616	9.33
18.50 – 24.99	4042	61.21
25.00 – 29.99	1227	18.58
≥ 30.00	718	10.87
Mean: 24.79±(11.21)		
<b>Place of delivery</b>		
Respondent’s home	2944	44.59
Other home	399	6.04
Government hospital	940	14.24
Government health center	1046	15.84
Government health post	72	1.09
Other public sector	7	0.11
Private hospital	1035	15.67
Other private sector	17	0.26
Other	143	2.17

Source: Author’s computation, NDHS, 2018

### 4.3 Reproductive Women’s Health Status in Nigeria

Table 3 presents reproductive women health status in Nigeria. It was found that about 44.90% had a poor health status, 26.90% had a fair health status, 20.19% had a good health status, while only 8.01% had very good health status. The mean women health index was  $0.23 \pm (0.25)$  and was below having 1 of the scores assigned to each of the 4 women health indicators. Based on the mean health index, it can be stated that majority of Nigerian women are not healthy while a few (8.01%) are healthy. The majority being unhealthy may be attributed to the fact that many did not attend antenatal visit up to the WHO recommended times and more than half delivered at home as profiled in Table 2.

**Table 4.3: Women Health Status in Nigeria**

Variables	Frequency (n=6603)	Percentage (%)
Women health index		
0 – poor health status	2965	44.90
0.25 – fair health status	1776	26.90
0.5 – good health status	1333	20.19
0.75 – very good health status	529	8.01
Mean: $0.23 \pm (0.25)$		

Source: Author’s computation, NDHS, 2018

### 4.4 Socio-demographic Determinants of Women Health Status in Nigeria

Results of the socio-demographic determinants of reproductive women’s health status in Nigeria are presented in Table 4. The P-value of 0.000 was low enough not to accept the null hypothesis that socio-demographic factors have no significant influence on reproductive women’s health status in Nigeria

**Age:** Age was found to be positive and significant at  $p < 0.01$  and by 1.41%. A year increase in age was associated with a reduced likelihood of having poor health status by 0.20%, and was associated with an increased likelihood of having fair, good, and very good health status by 0.02%, 0.09%, and 0.08% respectively, given other factors.

**Household Size:** Household size was positive and significant at  $p < 0.10$ . Generally, it was associated with 2.8% decrease in the likelihood of women being healthy. Specifically, it was associated with 0.42% decrease in the likelihood of having poor health status while respectively associated with 0.04%, 0.21% and 0.18% decrease in the likelihood of having fair, good, and very good health status among reproductive women in Nigeria.

**Religion:** Traditional religion was significant at  $p < 0.1$  and associated with 61.56% decrease in women health status. It increased the likelihood of poor health status by 8.96% and respectively reduced the likelihood of fair, good and very good health status by 1.32%, 4.49%, and 3.14% among women of reproductive age in Nigeria.

**Level of Education:** Levels of education were positive and significant at  $p < 0.01$ . Attaining primary, secondary and higher education level were respectively associated with 53.62%, 95.06% and 132.71% increase in health status. Primary education reduced the occurrence of poor health (9.03%) and increased the occurrence of fair (2.32%), good (4.55%), and very good health status (2.15%) among the women. Therefore, the more educated Nigerian women are, the higher their likelihood of been healthy, all things been equal.

**Husband Education:** Husband attaining secondary (23.53%) and higher (47.98%) level of education remain positive and significant at  $p < 0.01$ . Having secondary education reduced the likelihood of having poor health status (0.19%) and influenced having a fair (0.03%), good (0.09%), and very good (0.07%) health status. Similarly, attaining a higher educational level reduced the likelihood of having poor health status (7.07%) and it increased the likelihood of having a fair 0.63%), good 11.29) and very good health status (7.18%). These imply that women whose husband are educated are likely to be healthier than those whose husband had no formal education, *ceteris paribus*.

**Autonomy:** Autonomy was also positive and significant at  $p < 0.01$ . Low level of autonomy decreased the likelihood of having poor by 6.42%, and it increased the likelihood of having fair, good, and very good health by 0.62%, 3.22%, and 2.58% respectively. Also, high autonomy reduced the likelihood of

poor health by 4.3%, while it increases the likelihood of fair, good, and very good health among women by 0.48%, 2.18%, and 1.65% respectively.

**Health Insurance Coverage:** being under health insurance coverage was directly related to reproductive women health status at  $p < 0.05$  by 37.89%. Women under health insurance coverage have 5.39% reduced likelihood of having poor health and about 0.45%, 2.67%, and 2.27% increased likelihood of having fair, good, and very good health. Thus, reproductive women under health insurance coverage are likely to be healthier than those not under health insurance coverage in Nigeria.

**Residence:** sector wherein reproductive women reside was positive and significant at  $p < 0.01$  and it was associated with 96.37% increase on the likelihood of being healthy. Residing in the urban sector lowers the likelihood of having poor health by 13.73%, while it increases the likelihood of women having a fair, good, and very good health by 1.2%, 6.8%, and 5.8% respectively. Therefore, women of reproductive age in the urban Nigeria are likely to be healthier than those in the rural Nigeria, given other factors.

**Wealth Status:** reproductive women being in a poorer, middle, richer, and richest wealth quintile were respectively associated with 35.59%, 63.32%, 81.69, and 134.39% increase health status at  $p < 0.01$ . Poorer quintile was associated with about 5.56% decreased likelihood of poor health status, and about 1.32%, 2.82%, and 1.43%, increase the likelihood of having fair, good, and very good health status respectively. Middle quintile reduced the likelihood of poor health status by 9.89%, while it increased the likelihood of fair, good, and very good health status by 2.05%, 5.02%, and 2.82% respectively. Furthermore, Richer quintile was associated with a reduced likelihood of poor health status by 12.74%, and an increased the likelihood of fair, good, and very good wealth status by 2.40%, 6.45%, and 3.89%, respectively. Being in the richest quintile lowered the likelihood of poor health status by 20.74%, and it improved the likelihood of fair, good, and very good health status by 2.78%, 10.24%, and 7.71%, respectively. Therefore, women of reproductive age in the poorest wealth quintile are not likely to be as healthy as those in the poorer, middle, richer and richest in Nigeria, all things being equal. This is expected because wealthy women will likely be privileged to access, afford, and utilize quality health services than the less privileged. Also, inequalities in social status are a fundamental health inequalities especially among women (Mohite, 2019).

**Geopolitical Zones:** Northeast ( $p < 0.01$ ), Northwest ( $p < 0.01$ ), and South-south ( $p < 0.10$ ) were significant and negative while southeast and southwest were significant and positive at  $p < 0.01$ . Generally, residing in the northeast, northwest, and south-south were respectively associated with 72.64%, 123.91%, and 16.99% decrease in the level of reproductive women health status, while residing in the Southeast and Southwest were respectively associated with 66.58% and 121.34% increase in the level of reproductive women health status in Nigeria. By implication, women of reproductive age in the northeast, northwest and south-south are less likely to be as healthy as those in the north central, while women of reproductive age in the southeast and southwest are likely to be healthier.

**Table 4.4: Socio-demographic Determinants of Women’s Health Status in Nigeria**

Independent Variables	$\beta$	S.E.	y=0	y=1	y=2	y=3
Age	0.0141***	0.0042	-0.0020	0.0002	0.0009	0.0008
Household size	-0.0289***	0.0109	0.0042	-0.0004	-0.0021	0.0018
Religion (b=Christianity)						
Traditional	-0.6156*	0.3258	0.0896	-0.0132	-0.0449	-0.0314
Respondent education (b: no education)						
Primary	0.5362***	0.0907	-0.0903	0.0232	0.0455	0.0215
Secondary	0.9506***	0.0899	-0.1589	0.0325	0.0816	0.0447
Higher	1.3271***	0.1278	-0.2187	0.0339	0.1129	0.0718
Husband education (b: no education)						
Secondary	0.2353***	0.0834	-0.0019	0.0003	0.0009	0.0007
Higher	0.4798***	0.1047	-0.0707	0.0063	0.0354	0.0291
Autonomy (b: no autonomy)						
Low autonomy	0.4458***	0.0749	-0.0642	0.0062	0.0322	0.0258
High autonomy	0.2986***	0.0728	-0.0431	0.0048	0.0218	0.0165
Health insurance (b: no coverage)	0.3789**	0.1627	-0.0539	0.0045	0.0267	0.0227
Residence (b: rural)	0.9637***	0.0642	-0.1373	0.0116	0.0678	0.0579
Wealth status (b: poorest)						
Poorer	0.3559***	0.0930	-0.0556	0.0132	0.0282	0.0143
Middle	0.6332***	0.0933	-0.0989	0.0205	0.0502	0.0282
Richer	0.8169***	0.0955	-0.1274	0.0240	0.0645	0.0389
Richest	1.3439***	0.1055	-0.2074	0.0278	0.1024	0.0771
Geopolitical zone (b: North Central)						
Northeast	-0.7264***	0.0929	0.1348	-0.0400	-0.0691	-0.0257
Northwest	-1.2391***	0.0966	0.2281	-0.0835	-0.1081	-0.0364
Southeast	0.6658***	0.0953	-0.1154	0.0064	0.0689	0.0399
South-South	-0.1699*	0.0985	0.0312	-0.0072	-0.0172	-0.0074
Southwest	1.2134***	0.0871	-0.1974	-0.0111	0.1199	0.0885
Log likelihood	-6103.61					
Pseudo R <sup>2</sup>	0.2533					
Chi <sup>2</sup> (22)	4141.50					
P-value	0.000					

Source: Author’s computation, NDHS, 2018

Note: \*\*\* p<0.01, \*\* p<0.05, and \* p<0.1.

## 5.0 Summary

The study examined the socio-demographic determinants of reproductive women’s health status in Nigeria using secondary data obtained from the 2018 NDHS. Data were analysed using descriptive and inferential statistics (ordered logistic regression model). The study found that most of the women were aged between 26-35 years, married, lived in male-headed households, had average household size of 6 persons, lived in the rural areas, were Muslims, had secondary education, were employed, resided in the Northwest geopolitical zone of Nigeria. Further, only a few received ante-natal care from specialist and attended 8 or more antenatal visit. Many had poor health status which was significantly influenced by their socio-demographic features especially, geopolitical zones (northeast, northwest and south-south), religion and household size. Therefore, socio-demographic features have significant effect on health status of reproductive women in Nigeria.

## 6.0 RECOMMENDATIONS

In light of the findings of this study, the following recommendations are made:

- i. Enlightenment of childbearing age women about the benefit of regular and proper ante-natal visit and care.

- ii. Women of childbearing age should be encouraged by providing basic amenities required for proper health management
- iii. Female education should be encouraged especially among the Northerners and South-south residents.

### 7.0 Suggestions for Further Studies

A research may be carried out on the prevalence and impact of gender-based violence on women's health in Nigeria. Another study may assess the relationship between nutrition, diet and women's health status in Nigeria. Further research may also examine the causes and consequences of maternal mortality rate in Nigeria.

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### 9.0 Conflicts of Interest

I declare that there is no conflicts of interest on this paper

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