



## Attitude Towards Telemedicine Among Women of Childbearing Age With Fibroid Tumor Attending Aminu Kano Teaching Hospital, Kano State

OLUWAYEMISI ADEFUNKE MAKINDE  
National Open University, Abuja, Nigeria

ABDULSALAM ABDULLAH  
University of Maiduguri, Borno State, Nigeria

**Abstract.** Telemedicine gains traction, particularly following the COVID-19 pandemic, its potential to enhance healthcare access for women with fibroids remains a critical area for investigation. This study aims to assess the attitudes of women of childbearing age towards telemedicine at Aminu Kano Teaching Hospital, Kano State, Nigeria. A cross-sectional research design was employed to examine the attitudes of 197 women towards telemedicine for managing fibroid tumors. Participants were selected through an availability sampling method, and data were collected via a structured questionnaire. The instrument was validated and assessed using Cronbach's Alpha, revealing a reliability coefficient of 0.82. Data analysis involved descriptive statistics and one sampled t-test at a significance level of 0.05. The study revealed that the majority of respondents were aged between 36-45 years (43.30%), predominantly married (69.71%), and had varied educational backgrounds. The analysis indicated a mean attitude score of 2.1866, falling below the neutral mean of 2.5, with a t-test indicating no statistically significant attitude towards telemedicine ( $p = 0.1001$ ). This suggests that the participants do not exhibit a significant inclination towards the use of telemedicine for managing fibroid tumors. To foster a more positive attitude towards telemedicine among women with fibroid tumors, it is recommended to develop telemedicine platforms that support local languages, implement comprehensive cultural competency training for healthcare providers, and establish telemedicine support centers within the local health system to provide accessible consultations.

**Keywords:** Telemedicine, Uterine Fibroids, Women's Health, Attitude, Kano State

### 1. Introduction

Uterine fibroids are benign tumors that grow in the uterus and affect a large number of women of reproductive age throughout the world. Epidemiological studies show that between 70 and 80% of all women experience fibroids by the age of 50, with a higher prevalence in African American women (Stewart et al., 2017). These tumors may lead to considerable medical burdens, specifically profuse menstruation, pelvic discomfort, reproductive issues, and substantial effects on the quality of life (Marsh et al., 2018). Telemedicine has seen widespread adoption and proved transformative in the healthcare landscape, especially in light of the global COVID-19 pandemic. Telemedicine may help address many of the barriers to health care access, such as geographic location, time, and exposure to infectious environments (Stahl et al., 2020). Now this technology offers opportunities and complications for women with fibroid tumors and how they manage their complicated medical problem. Telemedicine adoption is affected by digital divide factors, which vary across various socioeconomic and demographic groups (Vimalananda et al., 2019). Women have reported high levels of concern about the private and personal nature of gynecological consultations by remote (Sood et al., 2020). Many patients labour under the misconception that complex conditions such as fibroids are not amendable to telemedicine (Arya et al., 2021). This study explored

the attitudes of childbearing aged women at Aminu Kano teaching hospital, Kano, toward telemedicine for the management of fibroid tumors.

**1.1 Hypothesis**

There is no significant attitude towards telemedicine among women of childbearing age with fibroid tumor attending Aminu Kano Teaching Hospital, Kano State.

**2. Methodology**

Cross-sectional research is an observational research design that collects data from a population at a specific point in time. This design is primarily used to assess the prevalence of outcomes or characteristics within a defined population, providing a snapshot of the variables of interest (Scribbr, 2023). They allow for the assessment of multiple variables simultaneously, providing a broader understanding of the population (Mwayungu, 2021). The independent variable must precede the dependent variable. This temporal relationship is crucial for implying a cause-and-effect connection; however, causality can only be inferred,

not definitively demonstrated (Neil, 2021). The study population consists of one hundred ninety-seven individuals (197). The study employed an availability sampling approach. The data collection instrument was a structured questionnaire titled 'Knowledge of Telemedicine Among Women of Childbearing Age with Fibroid Tumor'. The instrument consisted of two sections: A and B. Section A comprises of demographic characteristics, while Section B addresses the awareness of telemedicine among women of reproductive age with fibroid tumor. The questionnaire utilised a modified Likert scale with the following values: Strongly Agree (SA) = 4, Agree (A) = 3, Disagree (D) = 2, and Strongly Disagree (SD) = 1. The test-retest reliability method was employed to assess the instrument's reliability. Cronbach's Alpha was employed to calculate the reliability coefficient using the Statistical Package for the Social Sciences (SPSS). The reliability coefficient was 0.82. The data collected for the study were analysed using frequency and percent to describe the demographic characteristics, while one sampled t-test was used to test hypotheses at 0.05 level of significance.

**3. Results**

**Table 1:** Demographic Characteristic of the respondents

Variables	Frequency	Percent
Age		
15-24years	47	23.86%
25-34 years	46	23.35%
36-45 years	104	52.79%
Marital Status		
Married	147	74.61%
Widow	22	11.16%
Divorced	19	9.64%
Separated	9	4.56%
Level of Education		
Non-formal Education	22	11.17%
Primary Education Certificate	19	9.64%
SSCE	51	25.89%
NCE/ND	69	35.03%

Degree/HND	36	7.96%
Income Per Month		
N50,000 - N100,000	68	34.51%
N100,001 - N150,000	29	14.72%
N150,001 - N200,000	41	20.81%
N200, 000 and above	59	29.94%
<b>Total</b>	<b>197</b>	<b>100%</b>

Table 1 presents the Demographic Characteristics of respondents. In the age category, the lowest age range comprising of 47 respondents, accounts for 23.86% of the total sample. This relatively small percentage indicates that younger individuals are less represented in this study. With 46 respondents, this age group represents 23.35%. This suggests a moderate presence of young adults, who may be in early career stages or furthering their education. The largest group, with 104 respondents, makes up 52.79% of the total sample. This indicates that the demographic trend in this study is towards the older population which are the middle-aged individuals. Married individuals are 147 (74.61%) of the total sample. Widows are 22 individuals with 11.16%. Divorced women are 19 individuals who fall into this category, while separated are 9. Twenty-two (22) respondents (30.53%) fall under the category of non- formal education, indicating a significant number of women who may have received training outside formal educational systems. With 19 respondents (9.64%), this group shows that some individuals have only completed basic education. A total of 51 respondents (25.88%) have completed secondary education. The NCE/ND category includes 69 respondents (35.02%), indicating vocational or higher education training. The least represented group, with 22 respondents (7.96%), suggests that fewer participants have no formal education. The largest income group, with 68 respondents (33.41%), indicates that many participants earn within this range, which may reflect average earnings in the population studied. This group has 29 respondents (28.20%), suggesting a moderate earning level among some participants. Comprising 41 respondents (24.41%), this income bracket indicates a smaller segment earning higher than average but still within a reasonable range. With 59 respondents (13.98%), this group represents those with higher income levels, possibly indicating greater financial stability or success.

**Table 2:** Summary of One-Sample t-test on attitude towards telemedicine among women of childbearing age with fibroid tumor attending Aminu Kano Teaching Hospital

	N	Mean	Std. Deviation	df	t-test	Prob	decision
attitude towards telemedicine	197	2.1866	0.53050	196	0.800	0.1001	accepted
Constant Mean		2.5					

Table 2 shows that the mean of attitude score is 2.1866. The assumed constant mean of 2.5. The standard deviation is 0.53050. The t-value of 0.800 indicates the computed value for the test statistic. The p-value of 0.1001 indicates the probability of observing the sample data, or something more extreme, under the null hypothesis (no significant attitude). The significance level of 0.05 was used to determine significance. Since the p-value (0.1001) is greater than the significance level of 0.05, we accept the null hypothesis (H0). This means that there is no statistically significant attitude towards telemedicine among the women of childbearing age with fibroid tumors attending Aminu Kano Teaching Hospital. There is no significant difference between the mean attitude score of women of childbearing age with

fibroid tumors towards telemedicine and the constant mean of 2.5. In other words, the women in this study do not have a significant attitude toward telemedicine.

#### 4. Discussions

Telemedicine technology is the use of telecommunication telecommunications to provide and maintain health care services remotely. This process has been shown to have many advantages including decreased patient travel time, heightened access to patients experiencing mobility challenges, and the capacity to deliver consistent care during emergencies (Koonin et al., 2020); dynamic trends that is related to demographical features, technology affinity and beliefs (Wong et al., 2020). This study

concerns women of childbearing age with fibroid tumors. This demography is especially relevant because fibroid tumors can negatively impact quality of life and make pregnancy much more difficult (Baird & Dunson, 2003). Telemedicine may be an effective management of such conditions; however, the attitude of the population, particularly, towards telemedicine as alternative mode of healthcare delivery is imperative to be understood for its potential diffusivity.

In Nigeria and indeed in many cultures, it is customary to conduct traditional face to face consultations because they involve direct human contact with their associated medley of sensitivities (Ayanlola, 2020). Other women may find it too impersonal to trust getting health care in an unusual way like this, particularly on something sensitive like fibroids. Tech Barriers: Older age or lack of familiarity with technology were major concerns to women and telemedicine. It has been shown that those who do not feel comfortable engaging with technology are less likely to accept telemedicine solutions (Koonin et al., 2020).

Patients may question the quality of care offered via telemedicine. Acceptability can be hampered by questions regarding accurate diagnosis and adequacy of treatment delivered remotely (Wong et al., 2020). Acceptance may be aided by raising awareness of telemedicine benefits. Educational campaigns that highlight the value of remote consultations in the management of chronic conditions will be key (Baker et al., 2021). Ensure that telemedicine platforms are easy to use looking at the technological literacy of this demographic. Making it easier for all women with high tech exposure to exist in these platforms is critical for women's attitudes improvements (Wong et al., 2020). Combining telemedicine with conventional care models might improve acceptance. Initial consultations may be conducted in person, and then later check-ups via telemedicine, so patients can become more familiar with the technology while still keeping a personal connection with healthcare providers (Baird & Dunson, 2003).

### 5. Recommendations

The following recommendations are made in order to improve on the attitude of women of child bearing age with fibroid tumor towards telemedicine:

1. Develop telemedicine platforms that support predominant local language, alongside English.
2. Implement comprehensive training programs for healthcare providers to understand local cultural nuances and respect religious and social considerations

3. Establish telemedicine support centers within Aminu Kano Teaching Hospital, local community health centers and provide free or subsidized access to telemedicine consultations

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