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Patients' Satisfaction with Healthcare Services Among Older People with Multimorbidity: Subnational Gender Perspective

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Abstract

Background and Aim The universal use of patient satisfaction as a measure of quality of healthcare cannot be overemphasized, but studies of healthcare satisfaction between older women and older men with multimorbidity in our contemporary society has been questioned over the years. This paper explores the disparities in patient satisfaction between older women and men with multimorbidity in Nigeria using survey data. **Methods** We analyzed data collected between October 2021 to February 2022 from a cross-section of randomly sampled 734 participants with multimorbidity with age 60 years and above who presented for routine check-ups and consented to participate in the study. The data were entered into JISC online data collection tool and exported to IBM Statistical Package for Social Science (SPSS) version 27 for analysis. Mann-Whitney U test analysis was performed to compare the participant's mean satisfaction level and gender. **Results** Despite higher education among males, females utilize healthcare services more. Our study shows that females are less likely to be satisfied with factors that are linked to access and quality of healthcare, and financial burden of medical care. Whereas males are more likely to be satisfied with factors that relate to patient-physician interaction time and patient waiting time and confidence and trust in medical care. **Conclusions** Female and male patients may have different expectations regarding healthcare, especially in our society where men are more educated, but females utilize the healthcare services more. The development of appropriate strategies for the implementation of knowledge about patient gender differences will be crucial for the delivery of high-quality gender-sensitive healthcare.

Keywords Gender, Patients Satisfaction · Multimorbidity · North-central · Nigeria and Older Adult

Extended author information available on the last page of the article

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Introduction

The coexistence of multiple chronic diseases in an individual at the same time a term known as multimorbidity is increasingly recognized as an imperative issue of public health and health care system in present-day societies (Nguyen et al., 2019). Despite the rise in life expectancy among lower- and middle-income countries over the last decades, the growing prevalence of multimorbidity has led to a decreased quality of life in patients with chronic diseases, especially in populations with limited resources (Reza et al., 2013), because most healthcare systems are not wholly intended nor satisfactorily prepared to provide personalized care to patients with multimorbidity (Boyd & Fortin, 2010; Hughes et al., 2013). Multimorbidity intensifies the physical complications, social hardships for patients, heavy burden for healthcare systems (Alimohammadian et al., 2017) and could affect overall perceived patient satisfaction with healthcare.

Patient satisfaction promote adherence to prescribed medical and follow-up (Zolnierek & DiMatteo, 2009), however, does not always signify the best outcomes in all cases (Chen et al., 2019). Overall, researchers have identified perceived patient satisfaction to improve healthcare (Chen et al., 2019; Oljira & Ajema, 2016; Ahmad, Nawaz and ud Din, 2011; Khamis & Njau, 2014; Mpinga & Chastonay, 2011; Batbaatar et al., 2015; Abdulsalam & Khan, 2020). Determinants of patient satisfaction are (i) the personal preference of the patient, (ii) the patient's expectation, (iii) the response tendency of the patient due to personal characteristics, and the quality of care received (Coulter et al., 2009), (iv) the previous experience of the patient and the views of others, such as relatives and friends (Elliot et al., 2010). However, balancing between patients having a great healthcare experience and physicians providing great healthcare is almost always difficult to align. Studies in the USA(Moret et al., 2007) and the UK(Fox & Storms, 1981; Hekkert et al., 2009a) have found that patients with advanced age and literacy-deficient tend to have a higher degree of satisfaction than their younger and functionally literate peers. While some researchers argued that this could be due to lower expectations among older adults (Hekkert et al., 2009a), similarly others observed that their understanding of standard requirements for health facilities may be limited because of their low educational background, and their current experiences may be beyond their expectations (Ahmed et al., 2022a). Some believed that older patients are also likely to be treated with more respect by physicians (Hall & Dornan, 1990).

Gender differences in perception of patient satisfaction attract mixed feelings, with some claiming that female patients have a higher degree of satisfaction and others reaching an opposite conclusion (Hekkert et al., 2009a; Fox & Storms, 1981). Investigating patient satisfaction by gender is worthwhile not only because women are often the healthcare decision-makers in their families, but also, because quality improvement and research in women's healthcare could benefit from a gender analysis of patient satisfaction data and gender-sensitive perception of patient satisfaction measures (Weisman et al., 2000). Patients have a wide range of expectations regarding organizational aspects of care which should be taken into reasoning when considering likely improvements to the quality of primary care (Sebo et al., 2015). This has important public health implications, and measures should be undertaken to

promote equitable healthcare delivery (Okunrintemi et al., 2018). Lastly, improving patient perception of level of healthcare satisfaction positively is vital to high levels of life satisfaction, and studies have shown that it is essential to support the elderly to maintain a high level of life satisfaction, as the elderly with high life satisfaction tend to be more emotionally positive, maintain good health, and have a lower risk of mortality (Bai et al., 2018).

Previous studies have shown that prevalence of multimorbidity is higher among women than men (Ahmed et al., 2023), and that women use more healthcare facilities, particularly public funded healthcare, compared to men (Autenrieth et al., 2013). However, little is known on patient health care satisfaction based on gender among individuals living with multimorbidity in Niger state north central Nigeria. To boost patients' satisfaction of older people with multimorbidity, it is necessary to investigate the relevant factors of patient satisfaction and to examine the contrasts in factors according to gender. This paper explores the disparities in patient satisfaction between older women and men with multimorbidity in Nigeria using survey data.

Methods

This institutional-based cross-sectional study analyzed data from 4 high-volume purposefully selected public secondary health facilities in Niger state north central Nigeria. We analyzed data from randomly selected 734 participants from these health facilities between October 2021 and February 2022. The inclusion criteria include patients with multimorbidity aged 60 years and above who presented for routine outpatient checkup and consented to participate in the study. Data were collected by a structured interviewer-administered questionnaire, entered into JISC online data collection tool, and exported to SPSS version 27 for analysis. Detailed of the data collection of this study have been described in our previous study (Ahmed et al., 2022a).

The sample size was calculated using the formula for sample size determination when the target population is more than 10,000 (Yamane, 1967). A purposive sampling method was used to select 4 high-volume general hospitals, one each in the 3 senatorial districts and one in the state capital, all having a good representative of multimorbid patients. The total average number of patients seen in 2020 at the four selected secondary health facility was 336,000 total patients and about 105,000 patients 60 years and above (sample frame) are seen at the outpatient department of the 4 sampled hospitals. Substituting the values in the formula.

n = N/1 + N (e)2.

Where n = sample size,

N is the population size (sample frame),

and e is the level of precision. e was defined from power calculations used in other calculation in other similar studies.

105,000/1 + 105,000 (0.05) * (0.05) = 396

To reduce the margin error and allow for drop out of the participants the sample size was increased to about double the calculated value to 800. A systematic random number of 5 was used to select every 5th patient, after identifying the first patient randomly daily. Of the 800 participants contacted for the studies, 734 consented and

answered the questionnaire (response rate 91.8%), 66 refused to participate for personal reasons. All four secondary health facilities attained or surpassed the minimum required sample size.

Measures

The outcome variable patient satisfaction was measured with a patient satisfaction questionnaire (PSQ)-18(Marshall & Hays, 1994a) that was adopted on a Likert scale. It is the revised short-form version of PSQ-III and PSQ that retains many characteristics of its full-length counterpart. The PSQ is an assessment tool used to evaluate patients' perspectives of their doctor's communication and interpersonal skills (Henriksen et al., 2014). This includes general satisfaction, Technical Quality, Interpersonal Communication, Financial Aspects, Time spent with Doctor, Accessibility, and Convenience. The PSQ-18 has been validated for use in different settings (Marshall & Hays, 1994b). This was developed through rigorous research and abbreviated from much larger questionnaires maintaining internal consistency and reliability (Ware et al., 1976). And the socio-demographic feature i.e. Gender as the predicted variable.

The morbidity was assessed by adopting the list of chronic diseases used in prospective urban and rural epidemiology (PURE) studies (Teo et al., 2009) because the disease on the list fulfills WHO criteria for chronic diseases. For this study, multimorbidity is commonly defined as the co-occurrence of at least two long-term conditions in the same individual and simple disease count was used to measure multimorbidity.

Statistical Analysis

Descriptive statistics were used to summarize the overall characteristics of the participants including gender, age, marital status, family structure, educational level, ethnicity, occupation, and level of income. Mann-Whitney U test analysis was performed to compare the participant's mean satisfaction level and gender. The assumption for this test was fulfilled because the dependent variable was measured as ordinal (non-parametric) and our independent variable consisted of two categorical (male and female), and there is no relationship between the observations in each group or between the groups themselves. Chi-square was used to test the statistical difference between gender and educational level. Unadjusted and adjusted analysis for gender with education and confounders was perform with Pearson's correlation.

Results

The socio-demographic characteristics of the respondents for this study include gender, age, marital status, family structure, educational level, occupational level, ethnicity, level of income. Majority of the participants are female (60%), the mean age of the sample is 67.3 years (male 66.3 years and female 68.1 years), married (65.8%), in extended family structure (60%), without any form of education (62.9%), own a business as their occupation (38.1%) and are from the 3 major ethnic groups in the state,

see Table 1. The association between sociodemographic features and multimorbidity is shown in Table 2.

Association Between Gender and Educational Level of the Respondents

Table 3 shows the association between gender and educational level. There is a statistically significant difference in educational level between males and females. Males are more educated even though females utilize healthcare services more. Table 4 shows multiple regression analysis for patients' healthcare satisfaction. In the unadjusted model, gender, family structure, education and ethnicity were found to be associated with patient satisfaction. Moreover, all the factors after adjusted analysis were found to be still present conditional on patient satisfaction with healthcare services.

Association Between Gender and Patient Satisfaction

A statistically significant difference was observed in mean values of patient satisfaction level of males and female with their healthcare pathway experiences. There is a statistical difference in the mean of the males and females in all the items of access to quality healthcare, see Table 5. The mean values were mostly slightly higher in males than females. For items that relate to patients waiting time and patients-physician interaction time, the mean values were higher in females than males except for one item which is Doctors usually spend plenty of time with me. And in all items, except my medical bills are often beyond my reach, there is statistically significant difference in the means of males and females. For perceptions on the financial burden of healthcare the mean values of satisfaction are higher in males. And the item I feel confident that I can get the medical care I need without being set back financially was significant statistically. For perception of confidence and trust in medical care, the mean values were higher in females for 2 items, see Table 5. The item sometimes doctors make me wonder if their diagnosis is correct is statistically significant and the mean value is higher in the males than female.

From our previous study (Ahmed et al., 2022b), patient satisfaction items were grouped into 4 dimensions: (1) accessing quality care, (2) patient-physician interaction time and waiting time (3) The financial burden of medical care (4) Confidence and trust in medical care.

Fig. 1 shows the mean summary of the dimension by gender. The overall mean satisfaction score of males is higher than that of females in 2 dimensions i.e., access to quality care and financial burden of treatment, it can be interpreted that females are less likely to be satisfied with access and the quality of healthcare, and financial burden of medical care. Similarly, males are more likely to be satisfied with the patient-physician interaction time and patient waiting time and confidence and trust in medical care.

Table 1 Socio-demographic characteristics of the respondent. ($n=734$). * Mean age

Variables	*n*	%
Gender		
Male	300	40.9
Female	434	59.1
Total	734	100
Age * 67.37 (66.37 for male and 68.06 for female)		
60–64	262	35.7
65–69	267	36.4
70–74	123	16.8
75–79	29	4.0
80 and greater	53	7.2
Total	734	100.0
Marital status		
Never married	11	1.5
Currently married	483	65.8
Divorced	21	2.9
Separated	19	2.6
Widow/er	200	27.2
Total	734	100.0
Family structure		
Nuclear family	140	19.1
Three-generation family	150	20.5
Extended family	442	60.4
Total	732	100.0
Education level		
Illiterate	462	62.9
Can read and write	35	4.8
Primary school level	74	10.1
Secondary school	64	8.7
Tertiary school	83	11.3
Post-graduate	16	2.2
Total	734	100.0
Occupation		
Government staff	36	4.9
Own business	280	38.1
Involve in the family business	36	4.9
Company staff/worker	30	4.1
Dependent	214	29.2
Retired	128	17.4
Others (specify)	10	1.4
Total	734	100
Ethnicity		
Gwarri	193	26.3
Hausa	174	23.7
Nupe	204	27.8
Others	163	22.2
Total	734	100
Level of income		

Table 1 (continued)

Variables	*n*	%
NGN 0–15k	477	65.0
NGN 16–30k	124	16.9
NGN 31–45k	30	4.1
NGN 46–60k	27	3.7
Greater than NGN 60	76	10.4
Total	734	100

Discussion

This paper explores the disparities in patient satisfaction between older women and men with multimorbidity in northern part of Nigeria using survey data. Patients' satisfaction is said to be influenced by the literacy level of the patients and has been adopted widely in developed countries as an index of health care quality (Al-Abri & Al-Balushi, 2014). However, the use of patient's satisfaction in low-and middle-income countries for quality measurement is inadequate (Kruk & Freedman, 2008). It is important to note that the role of gender in different cultures may vary considerably. Our study was conducted in northern part of Nigeria, where cultural beliefs influence how individuals perceive health and illness. These beliefs are shaped by factors such as religion, language, historical origin, and social constructs of race.

In this study males were found to be more educated than females, but females utilize healthcare services more. This might not be unconnected with the fact that the overall mean score satisfaction of females with medical care was higher in females than males. And the higher satisfaction level among women may justify the higher utilization of healthcare services despite their low education. Possibly, the low level of education among the participants might have contributed to the level of satisfaction seen in this study because two-thirds of the participants do not have any form of education. Our finding is in congruent with findings in the UK and USA that reported higher satisfaction among older adults and advance age/lower education for primary healthcare services (Moret et al., 2007). This was buttressed by researchers who stated that older patients have lower expectations (Hekkert et al., 2009b).

Gender differences in patient satisfaction are not straightforward because they vary according to underlying cultural and social factors (Foss, 2000). The inconsistency in the satisfaction score across items of satisfaction in studies may indicates that female and male patients may have different expectations regarding the practice of the organization (Schmittdiel et al., 2000). For this study, females were more statistically significantly satisfied than males mainly in all items of patient-physician relationship and timing except doctors usually spend plenty of time with me. Although patient satisfaction with healthcare studies across gender among multimorbidity patients is not popular, our findings are tantamount to (Delanois et al., 2018), which reported that staff responsiveness and communication with doctors and nurses were more influential factors of satisfaction for women. In single morbidity studies like patients with inflammatory bowel disease that measured quality of care, it was found that female patients reported lower satisfaction with their overall quality of care (Vasudevan et al., 2013). Also, of importance to note is that the gender disparities were generally larger for older

Table 2 Shows cross-tabulation of socio-demographic features and multimorbidity ($n=734$)

	Multimorbidity									
Sociodemographic Variables	Number of chronic diseases									
	2		3		4		5			
Age group	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**Total**	**%**
60–64	184	70.23	70	26.72	7	2.67	1	0.38	262	35.7
65–69	178	66.67	82	30.71	5	1.87	2	0.75	267	36.4
70–74	62	50.41	42	34.15	16	13.01	3	2.44	123	16.8
75–79	14	48.28	13	44.83	2	6.90	0	0.00	29	4
80 and greater	14	26.42	23	43.40	8	15.09	8	15.09	53	7.2
Gender										
Male	198	66.0	84	28	14	4.67	4	1.33	300	40.9
Female	254	58.5	146	33.64	24	5.53	10	2.30	434	59.1
Marital status										
Never married	5	45.45	4	36.36	2	18.18	0	0	11	1.5
Currently married	330	68.32	139	28.78	11	2.28	3	0.62	483	65.8
Divorced	13	61.90	6	28.57	1	4.76	1	4.76	21	2.9
Separated	11	57.89	5	26.32	2	10.53	1	5.26	19	2.6
Widow/er	93	46.50	76	38	22	11	9	4.5	200	27.2
Education level										
Illiterate	248	53.68	172	37.23	29	6.28	13	2.81	462	62.9
Can read and write	25	71.43	8	22.86	2	5.71	0	0	35	4.8
Primary school level	54	72.97	17	22.97	3	4.05	0	0	74	10.1
secondary school	45	70.31	15	23.44	4	6.25	0	0	64	8.7
Tertiary school	65	78.31	17	20.48	0	0	1	1.20	83	11.3
Post-graduate	15	93.75	1	6.25	0	0	0	0	16	2.2
Family structure										
Nuclear Family	108	76.60	31	21.99	2	1.42	0	0	141	19.1
Three Generation Family	65	43.05	62	41.06	16	10.60	8	5.30	151	20.5
Extended Family	279	63.12	137	31.00	20	4.52	6	1.36	442	60.4
Occupation										
Government staff	30	83.33	5	13.89	0	0	1	2.78	36	4.9
Own business	191	67.97	81	28.83	8	2.85	1	0.36	281	38.1
Involve in the family business	24	66.67	12	33.33	0	0.00	0	0	36	4.9
Company staff/ worker	26	86.67	4	13.33	0	0.00	0	0	30	4.1
Dependent	81	37.85	95	44.39	26	12.15	12	5.61	214	29.2
Retired	92	71.88	32	25	4	3.13	0	0	128	17.4
Others (specify)	8	88.89	1	11.11	0	0	0	0	9	1.4
Level of income										
0-15k	269	56.39	167	35.01	29	6.08	12	2.52	477	65
16k-30k	86	69.35	30	24.19	6	4.84	2	1.61	124	16.9
31k-45k	18	60	9	30	3	10.00	0	0.00	30	4.1
46k-60k	22	81.48	5	18.52	0	0	0	0.00	27	3.7
greater than 60	57	75	19	25	0	0	0	0.00	76	10.4
Ethnicity										
Gwarri	115	59.59	65	33.68	8	4.15	5	2.59	193	26.3
Hausa	103	59.20	58	33.33	9	5.17	4	2.30	174	23.7
Nupe	137	67.16	57	27.94	9	4.41	1	0.49	204	27.8
Others	97	59.51	50	30.67	12	7.36	4	2.45	163	22.2

Table 3 Association between gender and educational level among older adults with multimorbidity in north-central Nigeria

	The education level of the respondent							
		Illiterate	Can read and write	Primary school	Secondary school	Tertiary school	Post-graduate	Row Total
Gender	Male	130	19	36	45	59	11	300
	Row %	43.33	6.33	12	15	19.67	3.67	100.00
	Female	332	16	38	19	24	5	434
	Row %	76.50	3.69	8.76	4.38	5.53	1.15	100.00
	Column total	462	35	74	64	83	16	734
	Column Percentage	62.94	4.77	10.08	8.72	11.31	2.18	100.00

Table 4 Multiple regression analysis for patient satisfaction with healthcare service

	Patient Healthcare satisfaction			
	Unadjusted coefficient (b)	*p*-value	Adjusted coefficient (b)	*p*-value
Age	0.070	0.058	0.024	0.568
Gender	0.171**	< 0.001	0.129**	< 0.001
Marital status	0.065	0.080	-0.054	0.209
Family structure	-0.101**	0.006	-0.152**	< 0.001
Education	-0.174**	< 0.001	-0.189**	< 0.001
Occupation of the respondent	-0.010	0.783	0.046	0.268
Average monthly family income (Naira)	-0.070	0.058	0.025	0.570
The ethnicity of the respondent	-0.095*	0.010	-0.079*	0.030

**Correlation is significant at the 0.01 level (2-tailed) and *correlation is significant at 0.05 level (2-tailed)

patients with worse self-reported health status (Elliott et al., 2012), this in congruent with our study bearing in mind that the participants in our studies are older patients having 2 or more chronic medical conditions.

Only three items do not show statistically significant differences in the mean satisfaction score between males and females, which include My medical bills are often beyond my reach, I have some doubts about the ability of the doctors who treat me, and Doctors sometimes ignore what I tell them. Therefore, we recommend that practitioners, hospital administrators, relevant stakeholders, and policymakers look for the results based on the findings of every single item of the patient's experience satisfaction as it is aggregated by gender instead of those based on overall patient satisfaction.

Conclusion and Limitations

Female and male patients may have different expectations regarding healthcare, and this should be taken seriously, especially in our society where men are more educated, but females utilize the healthcare services more. The development of appropriate strategies

Table 5 Mann-whitney u test association of satisfaction level and gender

		Mean rank	Z (*P*-value)
Accessing quality care	I think my doctor's office has everything needed to provide complete medical care		
	Male	417.49	-5.741
	Female	332.95	(0.001)
	Doctors are good at explaining the reason for medical tests		
	Male	432.38	-7.137
	Female	322.65	(0.001)
	The medical care I have been receiving is just about perfect		
	Male	417.96	-5.731
	Female	332.62	(0.001)
	When I go for medical care, they are careful to check everything when treating and examining me		
	Male	413.03	-5.160
	Female	336.03	(0.001)
	My doctors treat me in a very friendly and courteous manner		
	Male	396.49	-3.282
	Female	347.46	(0.001)
	I have easy access to the medical specialists I need		
	Male	399.97	-3.727
	Female	345.06	(0.001)
	I can get medical care whenever I need it		
	Male	408.44	-4.638
	Female	339.20	(0.001)
Patient-physician relationship and timing	Doctors act too businesslike and impersonal toward me		
	Male	338.43	-3.273
	Female	387.59	(0.001)
	Those who provide my medical care sometimes hurry too much when they treat me		
	Male	326.02	-4.722
	Female	396.17	(0.001)
	When I need emergency care, the waiting times are usually too long		
	Male	338.90	-3.343
	Female	387.27	(0.001)
	I am dissatisfied with some things about the medical care I receive		
	Male	322.26	-5.154
	Female	398.77	(0.001)
	Doctors usually spend plenty of time with me		
	Male	391.52	-0.675
	Female	350.90	(0.007)
	I find it hard to get an appointment for medical care right away		
	Male	342.51	-2.858
	Female	384.78	(0.004)

Table 5 (continued)

		Mean rank	Z (*P*-value)
The financial burden of medical care	My medical bills are often beyond my reach		
	Male	371.25	-0.425
	Female	364.91	(0.671)
	I feel confident that I can get the medical care I need without being set back financially		
	Male	386.70	-2.236
	Female	354.23	(0.025)
Confidence and trust in medical care	I have some doubts about the ability of the doctors who treat me		
	Male	360.40	-0.811
	Female	372.41	(0.417)
	Doctors sometimes ignore what I tell them		
	Male	355.61	-1.346
	Female	375.72	(0.178)
	Sometimes doctors make me wonder if their diagnosis is correct		
	Male	389.04	-2.618
	Female	352.61	(0.009)

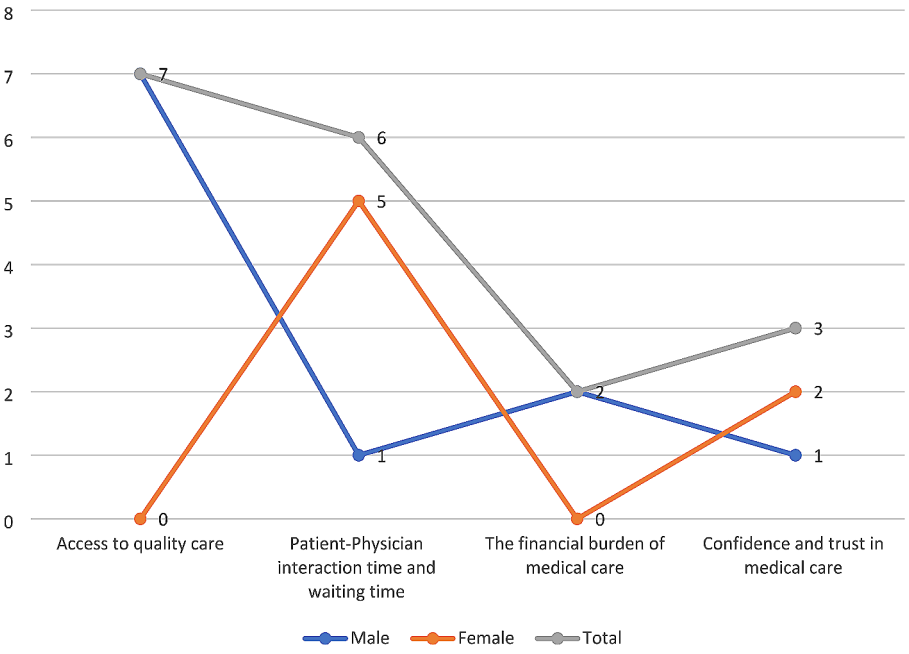

Fig. 1 Overall dimension score of satisfaction by gender

for the implementation of knowledge about patient gender differences will be crucial for the delivery of high-quality gender-sensitive healthcare. And exploring knowledge of patient-physician gender differences in the future will be paramount to high-quality healthcare. Although our study contributed new perspectives around patient satisfac-

tion in Nigeria, its findings cannot be generalized, however, they can be replicated elsewhere to increase its impact.

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Declarations

Ethical Approval Ethical approval was obtained from the College of Nursing, Midwifery, and Healthcare, the Research Ethics Panel (Ethical Approval No. 1055), and authorization to collect data was sought from the Research, Ethics, and publication committee (REPC) of the Hospitals Management Board, Minna, Niger state of Nigeria.

Informed Consent The researchers read out details of the research to participants and provided them in writing. Participants could freely sign an informed consent form prior to participating in the study, and the individual's right to withdraw partially or completely was observed.

Compliance with Ethical Standards I, the undersigned, give my consent for the publication of identifiable details, which can include text and/tables and/or figure and/or details within the article to be published in the above Journal. The authors confirm that the data supporting the findings of this study are available within the article [and/or] its supplementary materials.

Conflict of Interest The authors declare no conflicts of interest.

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