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# Patients' satisfaction with physiotherapy management of chronic mechanical neck pain in physiotherapy departments of public hospitals in Ibadan, Nigeria: A mixed-method study

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## ABSTRACT

**Introduction:** The study was aimed at determining patients' satisfaction level with physiotherapy in the management of chronic mechanical neck pain (CMNP) in physiotherapy departments of the 3 public hospitals in Ibadan, Nigeria.

**Methods:** A mixed-method design that involved 51 and five both purposively selected participants for the cross-sectional survey (CSS) and qualitative study, respectively. For the CSS, data was collected using the MedRisk instrument and analyzed using the Chi-square test at  $p \leq .05$ . For the qualitative study, patients' satisfaction was explored through a focus group discussion (FGD) and analyzed using thematic analysis.

**Results:** For CSS, 49.0% and 7.8% of the participants reported excellent and fair satisfaction, respectively, with physiotherapy in the management of CMNP. There was no significant association of patients' satisfaction level with: age ( $p = .588$ ); sex ( $p = .851$ ); and marital status ( $p = .409$ ). For the FGD, three themes (patients' experience with physiotherapists; patient satisfaction with physiotherapy services; patient satisfaction with other health care services) that emerged further explained that participants were satisfied with physiotherapy management of their CMNP. However, they were not satisfied with the attitude of the record officers, constancy of the same treating physiotherapists, and unavailability of resources.

**Conclusion:** Patients with CMNP are satisfied with the physiotherapy care they received.

## Introduction

Neck pain is the fourth most common musculoskeletal pain and a leading cause of morbidity and disability in adults (Genebra et al., 2017; Hoy et al., 2014). It is a common musculoskeletal complaint affecting about 30–50% of the population every year (Cheung Kajaks, and MacDermid, 2013), with mechanical neck pain, being the most common and usually associated with radiculopathy (Koura et al., 2017). Mechanical neck pain is caused by putting abnormal stress or strain on the neck and usually occurs through sustained posture or certain movements (Cohen, 2015). The pain can affect the muscles, tendons, discs, and joints of the neck.

Physiotherapy is often prescribed in the management of chronic mechanical neck pain (CMNP), with the aim of reducing the pain and improving function (Hurley and Bearne, 2008). Evidence-based clinical guidelines

have been developed for the physiotherapy management of chronic mechanical neck pain. The majority of these guidelines recommend the combination of education, exercise, and manual therapy as the preferred evidence-based physiotherapy management of chronic mechanical neck pain (Corp et al., 2021; Parikh et al., 2019).

In Nigeria, physiotherapy care is usually provided in the secondary and tertiary hospitals with little or no care provided in the primary health centres (Mbada et al., 2019). The practice of first contact physiotherapy is not common as physiotherapists depend largely on referrals from physicians and other health professionals (Odebiyi et al., 2016). However, there is still first-line access as some patients are referred by self, family members, and friends without going through another health professional. Physiotherapists in Nigeria have clinical autonomy (Odebiyi et al., 2016). They assess, diagnose, treat

and refer to other health professionals. They also offer private and home care physiotherapy services. The majority of the consumers of physiotherapy services make an out-of-pocket payment because less than 5% of Nigerians have access to health insurance (Enabulele, 2020) thereby creating high expectations with respect to the quality of care (Iloh et al., 2013).

Patient satisfaction with physiotherapy care is an important measure of the quality of healthcare delivered to the patients as it provides feedback to physiotherapists on their services and areas that need to be improved (Hills and Kitchen, 2007). It refers to the extent to which patients perceive that their needs are met by physiotherapy care (Odumodu, Olufunlayo, Ogunnowo, and Kalu, 2020) and is usually related to health outcomes that are consistent with their values (Iloh et al., 2013). It predicts patients' return visits to the physiotherapists as patients who are satisfied are likely to seek additional care (Boshoff and Gray, 2004). It is a determinant of patients' cooperation and compliance with recommended treatment plans (Xesfingi and Vozikis, 2016). The level of patient satisfaction may be mediated by gender, with females reporting more satisfaction than males (Hills and Kitchen, 2007). It also appears that the level of satisfaction varies with marital status, with the married individuals reporting the most satisfaction among the single and divorced or widowed individuals (Odumodu, Olufunlayo, Ogunnowo, and Kalu, 2020). There seems to be an age-related difference in patients' satisfaction, with older patients reporting more satisfaction than the younger patients (Casserley-Feeney et al., 2008). The duration of disease condition may influence patients' satisfaction, possibly because those with acute conditions are more optimistic and hence more satisfied than those with chronic conditions (Casserley-Feeney et al., 2008).

Healthcare provision has become more patient-centered with patient satisfaction emerging as a critical outcome of care (Miles and Asbridge, 2018). However, in Nigeria and many developing countries, the views and opinions of the patient as the receiver of care are rarely considered when assessing the quality of healthcare service delivery (Daniel, 2013). Also, knowledge about the patients' satisfaction in the field of physiotherapy from the Nigerian setting is still underreported (Danazumi et al., 2019). Therefore, the aims of this study were to determine the level of patients' satisfaction with physiotherapy care in the management of CMNP and to determine the association of patients' level of association with age, sex, and marital status. Also, the qualitative part of the study was aimed at exploring in detail the patients' satisfaction with physiotherapy care in the

management of CMNP. We hypothesized that there will be no significant association of patients' level of association with age, sex, and marital status.

## Methods

This study involved a mixed-method design of a cross-sectional survey (CSS) and a qualitative study (focus group discussion).

### *Cross-sectional survey*

#### *Participants*

The record officers provided the list of patients with chronic mechanical neck pain where participants were purposively and consecutively selected. Purposive sampling was used to select participants from the available population at the beginning of the study. Subsequently, participants who were not available at the beginning of the study and who met the inclusion criteria were consecutively selected. The participants were individuals who have been diagnosed with mechanical neck pain for more than 3 months and were still receiving and have received at least 6 sessions of guideline-compliant physiotherapy treatment at the physiotherapy departments of the 3 public hospitals in Ibadan, Nigeria. Participants who are not literate in either English or Yoruba languages were excluded. The minimum sample size of 42 was calculated using absolute precision of 0.05, z-value of 1.96, and prevalence of 2.8% (Odole, Ogunlana, Akinpelu, and Oladejo, 2013) based on the method described by Charan and Biswas (2013) for a cross-sectional survey on proportion, but 51 participants were recruited.

A typical physiotherapy department in a public hospital is made up of several units which include the: orthopedic unit; neurology and medicine unit; pediatric unit; women health unit; and cardiopulmonary/intensive care unit. Each of these units has outpatient and inpatient sections. The departments have various electrotherapy equipment such as ultrasound therapy, electrical muscle stimulator, short wave diathermy, transcutaneous electrical nerve stimulator (TENS), among others. The departments also have functional gym settings for improving cardiopulmonary endurance and physical fitness as well as weight reduction. The applied therapies for chronic mechanical neck pain included manual therapy, exercise therapy, electrotherapy, education, and counseling. Patients with chronic neck pain are usually reviewed comprehensively after 10 treatment sessions.

The study protocol was approved by the Ethics Committee of the University of Ibadan/ University College Hospital (Approval Number: UI/EC/19/0491). Approval for the study was obtained from the Heads of Physiotherapy Departments of the selected hospitals. The participants were given a detailed explanation of the study protocol and its objectives. Those who volunteered to participate signed a written informed consent before being included in the study.

### **Instrument**

The MedRisk instrument for measuring patient satisfaction with physiotherapy care (Tennakoon and de Zoysa, 2014) was used for the CSS (Appendix 1). The instrument comprises 20 items; 9 items are related to patient-physiotherapist interaction, 9 items are related to other aspects of health service, and the last 2 items are considered global (de Medeiros, Pena Costa, Costa Oliveira, and Menezes Costa, 2016). Items 4, 6, 8, and 13 of the questionnaire were purposely ordered reversely to minimize yeasaying bias.

Every item on the MRPS is graded using a 5-point Likert Scale, in which 1 represents Strongly Agree, 2 represents Agree, 3 represents Neutral, 4 represents Disagree and 5 represents Strongly Disagree. The minimum and maximum scores obtainable for the 20-item questionnaire were 20 and 100 points respectively with higher scores representing higher satisfaction (Costa Oliveira et al., 2014). The points were categorized as follows: points < 20 was graded as poor; points  $\geq 20$  and < 40 were graded as fair; points  $\geq 40$  and < 60 were graded as good; points  $\geq 60$  and < 80 were graded as very good; and points  $\geq 80$  were graded as excellent. A Yoruba language version (the most widely spoken language in Ibadan, South-west Nigeria where this study was conducted) of the instrument was administered to participants who are literate in the Yoruba language. The Yoruba version was an unvalidated translation translated by a professional linguist translator of the original English version through a forward-backward translation process. The version was made available to ensure that participants who are literate in the Yoruba language were not excluded from the study. The version ensured that questions were standardized for the Yoruba-literate participants. Forty-four individuals filled the English questionnaire while seven filled the Yoruba questionnaire. Sociodemographic variables (i.e. age, sex, and marital status) were collected using a data entry sheet attached to each questionnaire.

### **Procedure**

Participants were met by one of the researchers at the physiotherapy departments. Copies of the questionnaire were distributed to each of them for self-administration after obtaining their consent. The researcher waited to retrieve the questionnaires immediately after participants completed the form. To ensure confidentiality and no influence of the therapists, the participants were given the questionnaire to fill at the point of exit by the researcher only and none of the researchers work in the selected hospitals.

### **Qualitative study – focus group discussion (FGD)**

#### **Participants**

Five individuals (Krueger and Casey, 2009) who were purposively selected from the participants in the cross-sectional survey participated in the FGD. The participants were individuals who have been diagnosed with mechanical neck pain for more than 3 months and were still receiving and have received at least 6 sessions of guideline-compliant physiotherapy treatment at the outpatient physiotherapy department of the 3 public hospitals in Ibadan, Nigeria.

#### **Venue**

All the participants were informed about the date, time, and venue for the FGD in advance, giving them the opportunity to plan toward it. The venue for the FGD was an accessible and convenient central place for all participants as they all reached the venue on time without difficulty. The room was spacious, lighted, air conditioned, and devoid of noise in and around. The members of the FGD were seated in a circular arrangement which allowed them to see, listen and engage one another during the discussion.

#### **Instrument**

The focus guide (Appendix 2) for exploring the satisfaction of patients with physiotherapy care was used in the qualitative study. The focus guide contained 5 questions. These questions served only as a guide as the moderator was at liberty to ask other questions pertaining to the discussion.

#### **Procedure**

A focus group discussion (FGD) was conducted to explore in detail the satisfaction of patients with physiotherapy care. The FGD was chosen because the data or information generated through the process is often deeper and richer than those obtained from other qualitative research methods (Thomas et al., 1995). The focus group was homogenous and there was data saturation at the

end of the discussion (Krueger and Casey, 2009; Morgan, 1997), thereby leaving no basis for another FGD. The members of the FGD comprised the moderator, the note taker, the transcriptionist, and the participants. The focus group was moderated by one of the researchers (ACO) who is an expert in focus group discussions. The moderator asked questions using the focus guide as a guide. Probes were used to explore and obtain more information. The note taker took note of the vital information reported by the focus group participants while one of the researchers (BA) recorded all information given by the participants during the discussion. Examples of information recorded by the note taker included but were not limited to: physiotherapists are friendly, physiotherapists educated them, participants were not happy with the unavailability of materials. The participants were encouraged to talk freely and spontaneously as the discussion was held to the point of saturation. In order to ensure anonymity during the discussion, the participants were referred to as participants 1, 2, 3, 4, 5. Socio-demographic information of age, sex, and marital status were obtained from the participants. Participants were asked questions in relation to the aims of the study. The discussion lasted for 127 minutes. The audiotape recording from the discussion was transcribed verbatim by the transcriptionist after which the content of the transcription was analyzed.

### Data analysis

The data were analyzed using SPSS 23.0 software (SPSS, Chicago, Illinois, USA). Descriptive statistics of mean, standard deviation, frequencies, and percentages were used to summarize the age, sex, and marital status. The Chi-Square was used to test the association of patients' level of satisfaction with age, sex, and marital status. The level of significance was set at 0.05.

Content thematic analysis was used to analyze data for the focus group discussion. Kiger and Varpio (2020) guideline for thematic analysis was employed. The analysis was done manually by two qualitative data analysts and was started by checking the transcripts against original audio recordings for accuracy thereby getting familiarized with the data. The data were then inductively organized into codes by taking notes on the data items of interest. The created coding template was harmonized by the analyst and applied to the dataset by labeling data extracts with relevant codes. The codes and the data extracts were examined leading to the creation of themes of broader significance. The analysts reviewed all relevant codes and data extracts under each theme for proper fit and decided whether the individual themes fit meaningfully within the data set.

## Results

### Cross-sectional survey

Fifty-one individuals (28 females; 23 males) participated in the CSS. More than half (54.9%) of the participants were female and more than half (56.9%) were above 50 years (Table 1). A large proportion (90.20%) of the participants were married. Almost half (49.0%) of the participants reported excellent satisfaction levels with physiotherapy in the management of CMNP (Table 2). Only 7.8% of the participants reported a fair satisfaction level. There was no significant association of the patients' level of satisfaction with age ( $X^2 = 1.925$ ;  $p = .588$ ), sex ( $X^2 = 0.794$ ;  $p = .851$ ) and marital status ( $X^2 = 6.130$ ;  $p = .409$ ) (Table 3).

Table 4 provides information on the participants' ratings as strongly disagree, disagree, neutral, agree, and strongly agree of statements related to physiotherapist-patient interaction. Two-third (66.7%) and more than half (54.9%) of the participants agreed that the physiotherapist answered all their questions and advised them on ways to avoid future problems, respectively. Table 5 provides information on the participants' ratings as strongly disagree, disagree, neutral, agree, and strongly agree of statements related to other aspects of health care and ratings of global statements. More than two-thirds (72.5%) and over half (58.8%) of the participants agreed that the registration process was appropriate and the waiting area was comfortable, respectively.

### Qualitative study

Participants (4 females; 1 male) for the qualitative study were aged  $62.8 \pm 6.85$  years (Table 1). Three themes: 1) patients' experience with physiotherapists; 2) patient satisfaction with physiotherapy services; and 3) patient satisfaction with other health care services and eight subthemes emerged from the focus group discussion (Table 6).

**Table 1.** Socio-demographic characteristics of the participants.

Variable	Class	Frequency (N)	Percentage (%)	Mean $\pm$ S.D
For Cross-sectional Survey				
Age (years)	21–50	22	43.1	54.24 $\pm$ 14.08
	> 50	29	56.9	
Sex	Male	23	45.1	54.9
	Female	28	54.9	
Marital Status	Single	3	5.9	90.2
	Married	46	90.2	
	Widower	2	3.9	
For Qualitative Study				
Age (years)	21–50	2	40	62.80 $\pm$ 6.85
	> 50	3	60	
Sex	Male	1	20	80
	Female	4	80	
Marital Status	Married	5	100	

**Table 2.** Level of patients' satisfaction with physiotherapy in the management of CMNP based on sex and marital status.

Variables	Category	Satisfaction Level				
		Excellent N (%)	Very Good N (%)	Good N (%)	Fair N (%)	Poor N (%)
Overall distribution		25 (49.0)	15 (24.4)	7 (13.7)	4 (7.8)	0 (0)
Age	21–50	12 (54.5)	1 (4.5)	4 (18.2)	5 (22.8)	0 (0)
	> 50	13 (44.8)	3 (10.4)	3 (10.4)	10 (34.4)	0 (0)
Sex	Male	9 (36.0)	9 (60.0)	4 (57.1)	1 (25.0)	0 (0)
	Female	16 (64.0)	6 (40.0)	3 (42.9)	3 (75.0)	0 (0)
Marital Status	Single	0 (0)	2 (13.3)	1 (14.3)	0 (0)	0 (0)
	Married	23 (92.0)	13 (86.7)	6 (85.7)	4 (100.0)	0 (0)
	Widower	2 (8.0)	0 (0)	0 (0)	0 (0)	0 (0)

**Table 3.** A association of patients' level of satisfaction with age, sex, and marital status.

Variable	Category	X <sup>2</sup> -statistics	p-value
Age	21–50	1.925	0.588
	> 50		
Sex	Male	0.794	0.851
	Female		
Marital Status	Single	6.130	0.409
	Married		
	Widower		

### Patients experience with physiotherapists

Three subthemes that emerged from this theme were: 1) relational skills; 2) patient education; and 3) evaluation of treatments.

**Relational skills.** The participants reported that the physiotherapists were friendly.

*In the first place, the human relationship was good and it is as if my neck pain was gone because the physiotherapists are friendly such that I do forget all my problems whenever I come for treatment. (Participant 3)*

**Patient education.** The participants said that physiotherapists explained, educated, and advised them on information relevant to their condition and the treatments are given.

*They explained everything clearly. For instance, they told me the cause of my neck pain could be as a result of my teaching job i.e. writing notes and writing on blackboards can affect my neck pain. They also advised me to be doing my exercises at home, to purchase a cervical collar, and taught me how to position myself when sleeping. (Participant 4)*

**Evaluation of treatments.** The participants said that physiotherapists evaluated them after an intervention.

*Once they are done with treatment, they will ask me whether the pain has reduced because I am the one to tell them my feelings. (Participant 1)*

**Patient satisfaction with physiotherapy services** Four subthemes that emerged from this theme were: 1) organization; 2) quality of care; 3) appointment time; and 4) resource availability.

**Organization.** Some of the participants reported that the physiotherapy services were very organized.

*What brought about ease in the treatment we are receiving here is that everything is now well organized. Even, for those of us not under National Health Insurance Scheme (NHIS), everything is well organized. (Participant 5)*

However, some participants mentioned that they only had issues with the record officers:

**Table 4.** Rating of statements on physiotherapist-patient interaction.

Item	Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
		N (%)	N (%)	N (%)	N (%)	N (%)
6	I waited too long to see my physiotherapist	17 (33.3)	14 (27.5)	4 (7.8)	10 (19.6)	6 (11.8)
8	My physiotherapist did not spend enough time with me	14 (27.5)	18 (35.5)	2 (3.9)	10 (19.6)	7 (13.7)
9	My physiotherapist thoroughly explained the treatments I received	0 (0)	12 (23.5)	9 (17.6)	13 (25.5)	17 (33.3)
10	My physiotherapist treated me respectfully	0 (0)	3 (5.9)	2 (3.9)	26 (51.0)	20 (39.2)
12	The physiotherapist's assistant/aide was respectful	0 (0)	1 (2)	29 (56.9)	12 (23.5)	9 (17.6)
13	My physiotherapist did not listen to my concerns	13 (25.5)	25 (49)	8 (15.7)	8 (15.7)	5 (9.8)
14	My physiotherapist answered all my questions	0 (0)	2 (3.9)	3 (5.9)	34 (66.7)	12 (23.5)
15	My physiotherapist advised me on ways to avoid future problems	0 (0)	0 (0)	3 (5.9)	28 (54.9)	20 (39.2)
18	My physiotherapists gave me detailed instructions on my home program	0 (0)	0 (0)	3 (5.9)	35 (68.6)	13 (25.5)

**Table 5.** Rating of statements on other aspects of health care not related to physiotherapist-patient interaction and rating of global statements.

Item	Statement	Strongly Disagree N (%)	Disagree N (%)	Neutral N (%)	Agree N (%)	Strongly Agree N (%)
Other aspects of health care not related to patient-physiotherapist interaction						
1	The records officer was courteous	2 (3.9)	8 (15.7)	10 (19.6)	23 (45.1)	8 (15.7)
2	The registration process was appropriate	0 (0)	5 (9.8)	0 (0)	37 (72.5)	9 (17.6)
3	The waiting area was comfortable (lightening, temperature, furnishings)	2 (3.9)	5 (9.8)	4 (7.8)	30 (58.8)	10 (19.6)
4	The office location was not convenient	6 (11.8)	23 (45.1)	4 (7.8)	11 (21.6)	7 (13.7)
5	The hospital provided convenient parking	3 (5.9)	8 (15.7)	17 (33.3)	19 (37.3)	4 (7.8)
7	The appointment hours were convenient for me	0 (0)	4 (7.8)	0 (0)	31 (60.8)	16 (31.4)
11	The office staff was respectful	0 (0)	0 (0)	16 (31.4)	21 (41.2)	14 (27.5)
16	The office and its facilities were clean	0 (0)	1 (2)	13 (25.5)	29 (56.9)	8 (15.7)
17	The office used up-to-date equipment	4 (7.8)	0 (0)	30 (58.8)	13 (25.5)	4 (7.8)
Global statements						
19	Overall, I am completely satisfied with the services I received from my physiotherapist	0 (0)	3 (5.9)	6 (11.8)	25 (49)	17 (33.3)
20	I would return to this office for future services or care	1 (2)	0 (0)	11 (21.6)	25 (49)	14 (27.5)

*At the physiotherapy department, my first encounter was with the record officers who delayed me because I didn't have a referral card. I got angry to the extent that I thought what if what happened to me was more than this, is this how they will attend to me? (Participant 3)*

Also, one participant had issues with not being attended to by other physiotherapists.

*Others don't attend to you if the person that ought to attend to you isn't around. (Participant 3)*

In contrast, other participants reported that they prefer to be attended by the same physiotherapist.

*I don't like another person to treat me when I am used to one person. I think that's the reason my physiotherapist gives me an appointment by himself. In fact, he once called me to cancel it when he was not around. (Participant 2)*

Participant 3 admitted coming for treatment outside his appointment date.

*No wonder, I came outside my appointment date. I was finally attended by another person who told me that patients are usually not satisfied when another person treats them.*

**Quality of care.** The participants reported that the physiotherapists treated them well and they were willing to refer people for physiotherapy services.

*So far, the treatment I have received was very good. The reason why I can tell people to come for treatment here is that I was treated well and my pain has gone, so why I won't refer people here so that I can help them get well too. (Participant 3)*

**Appointment time.** The participants said that the physiotherapists gave them suitable appointment dates and times.

*They do ask if the time is comfortable before they gave me. If not, they will change the time for me. (Participant 1)*

**Resource availability.** The participants were not satisfied with the unavailability of resources.

*When I was treated with ice, the bedsheet got wet and the physiotherapist could not find another bedsheet to replace it. I had to use the plinth without a bed sheet and you know the effect of lying on it. This is not good since it is different people that come for treatments. (Participant 2)*

**Patient satisfaction with other health care services**  
One subtheme that emerged from this theme was quality of care.

**Quality of care.** The participants were satisfied with the quality of care provided by other health care services.

*Yes, they do well (Participant 5)*

**Table 6.** Themes/sub-themes from the qualitative study.

Themes	Sub-themes
1. Patients experience with physiotherapists	1) Relational skills 2) Patients' education 3) Evaluation of treatments
2. Patients' satisfaction with physiotherapy services	1) Organization  2) Quality of care 3) Appointment time 4) Resource availability
3. Patients' satisfaction with other health care services	1) Quality of care

## Discussion

The majority of the participants had an excellent satisfaction score with physiotherapy care in the management of CMNP. This agrees with the findings of previous studies which reported a high level of patient satisfaction with physiotherapy services (de Medeiros Fc, Pena Costa, Costa Oliveira, and Menezes Costa, 2016; Hush et al., 2012; Odole, Akinlosotu, Adekanla, and Akinpelu, 2016; Tennakoon and de Zoysa P, 2014). The high level of satisfaction may mean that physiotherapy care in the management of CMNP is of a good standard and that physiotherapists' priority is the quality of care they render (Ampiah, Ahenkorah, and Karikari, 2019).

The findings of this study revealed no significant association of the level of patients' satisfaction with age which is similar to the findings of Odumodu, Olufunlayo, Ogunnowo, and Kalu (2020). In contrast, Casserley-Feeney et al. (2008) reported an association of patients' satisfaction with age, with older patients reporting more satisfaction than the younger patients. The difference was attributed to the fact that the needs and expectations of individuals differ according to their stage of life. Hence, the older patients, with chronic pain and mobility problems, have a greater need for physiotherapy services and thus, would appreciate the services more (McKinnon, 2001). The difference between the finding of this study and that of Casserley-Feeney et al. (2008) could be attributed to the kind of physiotherapy department offering physiotherapy care. While this study involved physiotherapy departments of public hospitals, that of Casserley-Feeney et al. (2008) involved private physiotherapy clinics. Patients' satisfaction and its associated factors are entirely different between public and private physiotherapy clinics (Odebiyi, Aiyejusunle, Ojo, and Tella, 2009).

There seems to be an inconsistent trend regarding the level of satisfaction with physiotherapy services between males and females. In this study, there was no significant association of patients' level of satisfaction with sex. However, Rufa'i et al. (2019) reported that females were more satisfied than males while de Medeiros, Pena Costa, Costa Oliveira, and Menezes Costa (2016) reported males to be more satisfied. The reason for this inconsistency is unclear but may be attributed to the kind of physiotherapy services rendered. While the satisfaction with physiotherapy service in this study was for the management of CMNP, that for the abovementioned studies was for general physiotherapy services. The findings of this study also revealed no significant association of the level of patient satisfaction with marital status which is similar to findings by Chen et al. (2016). On the contrary, Odumodu, Olufunlayo, Ogunnowo, and

Kalu (2020) reported that the married participants were more satisfied than the single, divorced, and widowed participants. The non-significant findings based on age, gender, and marital status in this study may indicate that the physiotherapists are abiding by the code of ethics of the physiotherapy profession in Nigeria, which mandates physio-therapists to practice in a nondiscriminatory manner and to treat all patients equally irrespective of age, gender, marital status, and socioeconomic status (Medical Rehabilitation Therapists (Registration) Board of Nigeria, 2013).

Both the quantitative and qualitative aspects of this study revealed that participants were satisfied with the education/advice given by the physiotherapists. In the quantitative study, the majority of patients agreed and strongly agreed that the physiotherapists gave them a thorough explanation of the treatments they received, answered all their questions, advised them on ways to avoid future problems, and gave detailed instruction regarding their home program. In the qualitative study, they reported that the physiotherapists explained, educated, advised them on information relevant to their condition and the treatments, and evaluated them after treatments. This is in agreement with findings from a study by Tekkanoon and de Zoysa (2014) which reported a significant association between patient satisfaction with physiotherapy services and giving advice, answering patients' questions, and giving instructions on a home exercise program.

Further, the participants were satisfied with the quality of the physiotherapy services. In the quantitative study, the majority of the participants reported that the physiotherapists did not keep them waiting for too long, listened to their concerns, treated them respectfully, and spent enough quality time with them. It is surprising that the majority of the patients agreed that the physiotherapists spent enough time with them in a Nigerian hospital where many patients are treated daily with an insufficient number of physiotherapists (Odole, Odunaiya, Ojo, and Akinpelu, 2019). This may indicate the high level of empathy physiotherapists have for their patients. Tennakoon and de Zoysa P (2014) reported that patients who were treated respectfully and had enough contact time with physiotherapists reported higher levels of satisfaction. In the qualitative study, they reported that the physiotherapy services were very organized and that the physiotherapists treated them well in a friendly manner and gave them comfortable appointment dates and times. They were also willing to refer people for physiotherapy services. However, one of the participants was not satisfied with the fact that other physiotherapists hardly attend to patients if the patients' physiotherapists are not around. The discontinuity of



the same physiotherapist may have been in place as a result of feedback from patients. May (2001) reported that discontinuity of the same physiotherapist was a source of patient dissatisfaction. Therefore, flexibility in the change of treating physiotherapists should be tailored to the satisfaction of the patients.

Although the quantitative aspect of this study showed that participants had a good level of satisfaction with other aspects of care, they identified areas with which they were dissatisfied in the qualitative study. These areas include the attitude of records officers and the unavailability of resources such as bed linens and plinths. The unavailability of resources is a reflection of the deplorable state of health facilities in government institutions (Adeloye et al., 2017). Therefore, the government should improve the state of health care facilities, to ensure better healthcare service delivery. Also, remedial training should be organized for the record officers from time to time, and collaboration between them and the physiotherapists should be strengthened for easy booking and compliance with physiotherapy appointments.

The result on the global statement domain from both the qualitative and the quantitative aspects of this study are in tandem. Participants expressed a high level of overall satisfaction with the quality of physiotherapy services and a willingness to refer others for physiotherapy care. This presents a positive image of physiotherapists and may serve as a means of advocacy on the benefits of physiotherapy to the general public.

One of the limitations of this study was that it was conducted in one region of Nigeria, thus, generalization should be applied with caution. Also, the reliability and validity of the Yoruba version of the instrument have not been investigated. In addition, there may be a lack of representation of the population due to the sampling method used. However, this study appears to be the first mixed-method design on patients' satisfaction in Nigeria as previous studies were mainly quantitative. We did not prove the association of patients' satisfaction with many variables like educational/employment status, duration of disease, number of co-morbidities, type of physiotherapy treatment, and duration of physiotherapy as the focus was mainly to explore patients' satisfaction in detail through the qualitative study. Future research should use a validated version and should be conducted in other regions of Nigeria.

Patients being managed for CMNP at selected outpatient physiotherapy facilities in Ibadan, Nigeria are satisfied with physiotherapy care for their CMNP. However, areas of improvement such as availability of

resources, flexibility in the change of treating physiotherapists, and collaboration between physiotherapists and the records office in booking appointments to improve convenience and compliance with physiotherapy appointments were identified.

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## References

- Adeloye D, David RA, Olaogun AA, Auta A, Adesokan A, Gadanya M, Opele JK, Owagbemi O, Iseolorunkanmi A 2017 Health workforce and governance: The crisis in Nigeria. *Human Resources for Health* 15:32. [10.1186/s12960-017-0205-4](https://doi.org/10.1186/s12960-017-0205-4).
- Ampiah PK, Ahenkorah J, Karikari M 2019 Patients' satisfaction with inpatient orthopaedic physiotherapy services at a tertiary hospital in Ghana. *Journal of Patient Experience* 6:238–246. [10.1177/2374373518793144](https://doi.org/10.1177/2374373518793144).
- Boshoff C, Gray B 2004 The relationship between service quality, customer satisfaction and buying intentions in the private hospital industry. *South African Journal of Business Management* 35:27–38. [10.4102/sajbm.v35i4.666](https://doi.org/10.4102/sajbm.v35i4.666).
- Casserley-Feeney SN, Phelan M, Duffy F, Roush S, Cairns MC, Hurley DA 2008 Patient satisfaction with private physiotherapy for musculoskeletal pain. *BMC Musculoskeletal Disorders* 9:50. [10.1186/1471-2474-9-50](https://doi.org/10.1186/1471-2474-9-50).
- Charan J, Biswas T 2013 How to calculate sample size for different study designs in medical research? Review Article. *Indian Journal of Psychological Medicine* 35:121–125. [10.4103/0253-7176.116232](https://doi.org/10.4103/0253-7176.116232).
- Chen H, Li M, Wang J, Xue C, Ding T, Nong X, Liu Y, Zhang L 2016 Factors affecting inpatients' satisfaction with hospitalization service in public hospitals in Shanghai, The People's Republic of China. *Patient Preference and Adherence* 10:469–477. [10.2147/PPA.S98095](https://doi.org/10.2147/PPA.S98095).

- Cheung J, Kajaks T, MacDermid JC 2013 The relationship between neck pain and physical activity. *Open Orthopaedics Journal* 7:521–529. [10.2174/1874325001307010521](https://doi.org/10.2174/1874325001307010521).
- Cohen SP 2015 Epidemiology, diagnosis and treatment of neck pain. *Mayo Clinic Proceedings* 90: 284–299.
- Corp N, Mansell G, Stynes S, Wynne-Jones G, Morsø L, Hill JC, van der Windt Da 2021 Evidence-based treatment recommendations for neck and low back pain across Europe: A systematic review of guidelines. *European Journal of Pain* 25:275–295. [10.1002/ejp.1679](https://doi.org/10.1002/ejp.1679).
- Costa Oliveira N, Pena Costa L, Nelson R, Maher CG, Beattie PF, de Bie R, Oliveira W, Azevedo D, Menezes Costa L 2014 Measurement properties of the Brazilian Portuguese version of the MedRisk instrument for measuring patient satisfaction with physical therapy care. *Journal of Orthopaedic and Sports Physical Therapy* 44:879–889. [10.2519/jospt.2014.5150](https://doi.org/10.2519/jospt.2014.5150).
- Danazumi MS, Ibrahim SU, Abubakar MF, Hassan AB, Zaraki UU, Yakasai A 2019 A qualitative study into Nigerian patients' satisfaction with physiotherapy management of low back pain. *IOSR Journal of Nursing and Health Science* 8:70–75.
- Daniel OJ 2013 Patient satisfaction with healthcare services at the out-patient department of a tertiary hospital in Nigeria. *Nigerian Journal of Clinical Medicine* 5:1–6. [10.4314/njcm.v5i1.2](https://doi.org/10.4314/njcm.v5i1.2).
- de Medeiros Fc, Pena Costa L, Costa Oliveira N, Menezes Costa L 2016 Satisfaction of patients receiving physiotherapy care for musculoskeletal conditions: A cross-sectional study. *Fisioterapia e Pesquisa* 23:105–110.
- Enabulele O 2020 Achieving universal health coverage in Nigeria: Moving beyond annual celebrations to concrete address of the challenges. *World Medical and Health Policy* 12:47–59. [10.1002/wmh3.328](https://doi.org/10.1002/wmh3.328).
- Genebra CV, Maciel N, Bento T, Simeão S, Vitta A 2017 Prevalence and factors associated with neck pain: A population-based study. *Brazilian Journal of Physical Therapy* 21:274–280. [10.1016/j.bjpt.2017.05.005](https://doi.org/10.1016/j.bjpt.2017.05.005).
- Hills R, Kitchen S 2007 Satisfaction with outpatient physiotherapy: Focus groups to explore the views of patients with acute and chronic musculoskeletal conditions. *Physiotherapy Theory and Practice* 23:1–20.
- Hoy D, March L, Woolf A, Blyth F, Brooks P, Smith E, Vos T, Barendregt J, Blore J, Murray C, et al. 2014 The global burden of neck pain: Estimates from the global burden of disease 2010 study. *Annals of the Rheumatic Diseases* 73:1309–1315. [10.1136/annrheumdis-2013-204431](https://doi.org/10.1136/annrheumdis-2013-204431).
- Hurley MV, Bearne LM 2008 Non-exercise physical therapies for musculoskeletal conditions. *Best Practice and Research Clinical Rheumatology* 22:419–433. [10.1016/j.berh.2008.01.001](https://doi.org/10.1016/j.berh.2008.01.001).
- Hush JM, Yung V, Mackey M, Adams R, Wand BM, Nelson R, Beattie P 2012 Patient satisfaction with musculoskeletal physiotherapy care in Australia: An international comparison. *Journal of Manual and Manipulative Therapy* 20:201–208. [10.1179/2042618612Y.0000000009](https://doi.org/10.1179/2042618612Y.0000000009).
- Iloh G, Ofoedu JN, Njoku PU, Okafor G, Amadi AN, Godswill-Uko EU 2013 Satisfaction with quality of care received by patients without the national health insurance attending a primary care clinic in a resource poor environment of a tertiary hospital in eastern Nigeria in the era of scaling up the Nigerian formal sector health insurance scheme. *Annals of Medical and Health Science Research* 3:31–37.
- Kiger ME, Varpio L 2020 Thematic analysis of qualitative data. *AMEE Guide No. 131. Medical Teacher* 42:846–854. [10.1080/0142159X.2020.1755030](https://doi.org/10.1080/0142159X.2020.1755030).
- Koura GM, Kamel EA, Hamada AH, Badawy WM, Hamada HA, Zakaria HM 2017 Influence of gluteus maximus inhibition on upper trapezius over activity in chronic mechanical neck pain with radiculopathy. *International Journal of Medical Research and Health Sciences* 6:10–16.
- Krueger RA, Casey MA 2009 *Focus Groups: A Practical Guide for Applied Research*. 4th Thousand Oaks, California:Sage Publications.
- May SJ 2001 Patient satisfaction with management of back pain. *Physiotherapy* 87:4–20. [10.1016/S0031-9406\(05\)61186-8](https://doi.org/10.1016/S0031-9406(05)61186-8).
- Mbada C, Olawuyi A, Oyewole OO, Odole AC, Ogundele AO, Fatoye F 2019 Characteristics and determinants of community physiotherapy utilization and supply. *BMC Health Services Research* 19:168. [10.1186/s12913-019-3994-4](https://doi.org/10.1186/s12913-019-3994-4).
- McKinnon AL 2001 Client satisfaction with physical therapy services: Does age make a difference? *Physical and Occupational Therapy in Geriatrics* 19:23–37.
- Medical Rehabilitation Therapists (Registration) Board of Nigeria 2013 *The Code of Ethics for Rehabilitation Professionals In Nigeria*. 14th December 2021. <https://www.mrtb.gov.ng/media/archive1/docs/ethics/code-of-ethics.pdf>
- Miles A, Asbridge JE 2018 Person-centeredness in health and social care - What exactly is it that patients and their carers want? *European Journal for Person Centered Healthcare* 6:1–4. [10.5750/ejpc.v6i1.1569](https://doi.org/10.5750/ejpc.v6i1.1569).
- Morgan DL 1997 *Focus Groups as Qualitative Research*. 2nd ed Thousand Oaks, CA:Sage Publications.
- Odebiyi DO, Aiyejusunle CB, Ojo TS, Tella BA 2009 Comparison of patients' satisfaction with physiotherapy care in private and public hospitals. *Journal of the Nigeria Society of Physiotherapy* 17:23–29.
- Odebiyi DO, Bakare U, Fapojuwo OA, Owofe OB, Kareem RO 2016 Qualitative evaluation of the contents of physicians' referral to the physiotherapy department of a teaching hospital in Nigeria. *Journal of Clinical Science* 13:173–177. [10.4103/2468-6859.192282](https://doi.org/10.4103/2468-6859.192282).
- Odole AC, Akinlosotu RY, Adekanla BA, Akinpelu AO 2016 In-patients' satisfaction with healthcare in a tertiary health institution in Nigeria. *Nigerian Quarterly Journal of Medicine* 26:399–402.
- Odole AC, Odunaiya NA, Ojo JO, Akinpelu AO 2019 Factors influencing the use of outcome measures in knee osteoarthritis: A mixed-method study of physiotherapists in Nigeria. *Physiotherapy Theory and Practice* 35:1259–1268. [10.1080/09593985.2018.1471762](https://doi.org/10.1080/09593985.2018.1471762).
- Odole AC, Ogunlana MO, Akinpelu AO, Oladejo KS 2013 Pattern of spinal pain managed at the physiotherapy department of a tertiary health institution in Nigeria. *African Journal of Physiotherapy and Rehabilitation Sciences* 5:16–21. [10.4314/ajpr.v5i1-2.3](https://doi.org/10.4314/ajpr.v5i1-2.3).

- Odumodu IJ, Olufunlayo TF, Ogunnowo BE, Kalu ME 2020 Satisfaction with services among attendees of physiotherapy outpatient clinics in tertiary hospitals in Lagos State. *Journal of Patient Experience* 7:468–478. [10.1177/2374373519847370](https://doi.org/10.1177/2374373519847370).
- Parikh P, Santaguida P, Macdermid J, Gross A, Eshtiaghi A 2019 Comparison of CPG's for the diagnosis, prognosis and management of non-specific neck pain: A systematic review. *BMC Musculoskeletal Disorders* 20:81. [10.1186/s12891-019-2441-3](https://doi.org/10.1186/s12891-019-2441-3).
- Rufa'i AA, Saidu IA, Lawan MD, Oyeyemi AL, Aliyu SU, Lawan A, Jajere AM, Oyeyemi AY 2019 Outpatients' satisfaction with the provision of physiotherapy services. *Middle East Journal of Rehabilitation and Health Studies* 6:e69431.
- Tennakoon TM, de Zoysa P 2014 Patient satisfaction with physiotherapy services in an Asian country: A report from Sri Lanka. *Hong Kong Physiotherapy Journal* 32:79–85. [10.1016/j.hkpj.2014.07.001](https://doi.org/10.1016/j.hkpj.2014.07.001).
- Thomas L, MacMillan J, McColl E, Hale C, Bond S 1995 Comparison of focus group and individual interview methodology in examining patient satisfaction with nursing care. *Social Sciences in Health* 1:206–219.
- Xesfingi S, Vozikis A 2016 Patient satisfaction with the healthcare system: Assessing the impact of socio-economic and healthcare provision factors. *BMC Health Services Research* 16:94. [10.1186/s12913-016-1327-4](https://doi.org/10.1186/s12913-016-1327-4).

## Appendix 1. The MedRisk instrument for measuring patient satisfaction with physical therapy care

If you want to participate in this study, please answer the following questions. Your name is not recorded on this form and your individual answers will not be given to this clinic. Thank you for participating in this study.

- (1) Age: \_\_\_\_\_ (years)  
 (2) Sex:  Male  Female  
 (3) Marital status:  Single  Married  Divorced  Widow  Widower

Please answer the questions below by ticking the response that best describes your opinions about your treatment.

Strongly Disagree   Disagree   Neutral   Agree   Strongly Agree

1. The records officer was courteous
2. The registration process was appropriate
3. The waiting area was comfortable (lighting, temperature, furnishings)
4. The office location was not convenient
5. The hospital provided convenient parking
6. I waited too long to see my physiotherapist
7. The appointment hours were convenient for me
8. My physiotherapist did not spend enough time with me
9. My physiotherapist thoroughly explained the treatment(s) I received
10. My physiotherapist treated me respectfully
11. The office staff was respectful
12. The physiotherapist's assistant/aide was respectful
13. My physiotherapist did not listen to my concerns
14. My physiotherapist answered all my questions
15. My physiotherapist advised me on ways to avoid future problems
16. The office and its facilities were clean
17. The office used up-to-date equipment
18. My physiotherapist gave me detailed instructions regarding my home program
19. Overall, I am completely satisfied with the services I received from my physiotherapist
20. I would return to this office for future services or care

## Appendix 2. Patients' satisfaction with physiotherapy care in the management of chronic mechanical neck pain in selected out-patient clinics in Ibadan

Focus Guide

- (1) In your own words, how will you describe your experience at the physiotherapy clinic since admission?.
- (2) How well or poorly was information regarding your condition shared with you?
- (3) How clear were your expectations of the outcome of physiotherapy care?
- (4) Have the physiotherapy care you received so far been organized in your opinion. If so, can you please describe how?
- (5) Do you feel the quality of care you have received has improved over time?