


# Patients' Satisfaction With Inpatient Orthopedic Physiotherapy Services at a Tertiary Hospital in Ghana

Journal of Patient Experience  
2019, Vol. 6(3) 238-246  
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DOI: 10.1177/2374373518793144  
journals.sagepub.com/home/jpx  


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## Abstract

**Background:** Although assessing patient satisfaction ensures quality assurance, compliance, and better effects of therapy, patient satisfaction studies are lacking within the Ghanaian physiotherapy domain. **Objective:** To ascertain patients' satisfaction with physiotherapy services and evaluate factors that influence satisfaction levels at the trauma and orthopedic directorate of Komfo Anokye Teaching Hospital. **Method:** A cross-sectional survey was done, and systematic random sampling was used to recruit participants. One-hundred twenty (120) patients participated in the study. Data were collected using an adapted structured patient satisfaction questionnaire. Data obtained were analyzed using SPSS version 24. Descriptive statistics and nonparametric tests were performed. **Results:** The mean age of participants was  $39.9 \pm 15.8$  years. They comprised 48 (40%) females and 72 (60%) males. The most common cause of patient admission was road traffic accident (71.7%). All dimensions of satisfaction assessed were highly rated (>90%). Majority of the participants reported that they were satisfied (95.7%) and compliant (91.6%) with the physiotherapy treatment. Respect shown by therapist (98%) and courtesy and friendliness (97%) were the most rated indices; however, some respondents had uncertainties pertaining to patient involvement in decision-making. The majority of participants also reported that due to their satisfaction, compliance came naturally (75.9%) and reported compliance had a significant association with satisfaction ( $P = .02$ ). Age was also found to influence satisfaction ( $P = .04$ ). **Conclusion:** Patient satisfaction with physiotherapy services rendered at the inpatient facility was high, and satisfaction reportedly translated into ease with compliance.

## Keywords

patient satisfaction, orthopedic, musculoskeletal, physiotherapy, Ghana

## Introduction

Health-care provision has become more patient centered, with patient satisfaction emerging as a critical outcome of quality of care (1,2). This approach to patient care necessitates the need to measure the quality of care delivered by every profession, of which physiotherapy is no exception (3). Evaluation of patient's satisfaction with physiotherapy care provides specific and objective feedback to physiotherapists about the services they provide (3,4). It highlights the needs of patients and necessary areas for improvement in service delivery (5). Currently, patient satisfaction forms an essential part of quality assurance and is regarded as one of the imperative measures of quality of care by consumers and funders of health services (6). Patient satisfaction may also improve compliance to advice, reattendance, and benefit derived from the therapy (7).

Physiotherapists are one of the leading providers of preoperative and postoperative care for patients with neuromusculoskeletal conditions (1). Physiotherapy tends to provide a more intense therapeutic-patient interaction, as it entails multiple treatment sessions (8).

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Long-term physiotherapy patients may require surgical intervention with the physiotherapist as an integral part of the care (9).

Satisfaction with health-care delivery is a complex and multidimensional concept influenced by a myriad of factors (10). Initial studies have categorized determinants of patient satisfaction to include process of care (waiting time, number of sessions, continuity of care, and patient involvement in decision-making), treatment outcomes; organization (accessibility and finances); interpersonal relations (therapist attitudes and humaneness); patient expectations; and communication (5, 11–13). Therefore, most survey instruments analyzing patient satisfaction seek to uncover satisfaction with health-care delivery in relation to these areas. Previous experiences, duration of condition, age, gender, and level of education have also been shown to influence patient satisfaction with musculoskeletal physiotherapy services (1,3,14,15).

Predominantly, physiotherapy research in Ghana and globally has focused on treatment outcomes, assessed through intervention studies. In the last decade, however, there has been an increase in patient satisfaction studies seeking to assess quality of care from the patient's own perspective (3,4,8,10,14,16). These satisfaction studies were mainly conducted in Western countries and among patients with musculoskeletal pain. Hush et al (10) reports that although there are commonalities with areas deemed as important satisfaction parameters by patients, cultural differences in these parameters exist. The need for primary and continuous assessments of patient satisfaction with physiotherapy services within Ghana is further strengthened by the fact that physiotherapy is an emerging field within the health sciences in Ghana. Also, patient satisfaction data on inpatient physiotherapy services are generally scarce. Inpatient physiotherapy forms an important aspect of physiotherapy delivery and serves as a first point of physiotherapy contact for most patients (13). Hence satisfaction/dissatisfaction may potentially influence patients' compliance with continuation of physiotherapy on outpatient basis, patient expectation, and overall benefit from physiotherapy treatment (5). Assessing patient satisfaction of physiotherapy services within an inpatient environment also allows for an evaluation of quality of physiotherapy care within a multidisciplinary context. This study therefore sought to assess patient satisfaction with inpatient orthopedic physiotherapy services at Komfo Anokye Teaching Hospital in Ghana and evaluate factors that influence patient satisfaction. We hypothesized that sociodemographic variables (age, sex, marital status, employment status, and educational level) would have no effect on overall satisfaction with physiotherapy services. It was further hypothesized that satisfaction with physiotherapy services would not have an effect on reported compliance with treatment.

**Table 1.** Summary of Demographic Characteristics of Participants.

Factor, n = 120	Number	Percentage
Age category		
≤55 years	98	81.7
>55 years	22	18.3
Age (years)	Mean (SD) = 39.9 (15.8)	
Sex		
Female	48	40
Male	72	60
Marital status		
Single	50	41.7
Married	60	50
Divorced	5	4.2
Widowed	5	4.2
Education level		
Never attended school	12	10
Primary school	52	43.3
Secondary school	35	29.2
Tertiary	21	17.5
Employment status		
Employed	98	81.7
Not employed	22	18.3
Cause of admission		
RTA	86	71.7
Falls	22	18.3
Others (eg, gunshot)	12	10

Abbreviations: RTA, Road traffic accident; SD, standard deviation.

## Methods

### Study Design, Setting, and Participants

The study was a cross-sectional survey. Participants included male and female adult inpatients aged 18 to 80 years receiving physiotherapy treatment who could communicate in English. Participants were patients receiving physiotherapy at the Trauma and Orthopaedic directorate of the Komfo Anokye Teaching Hospital (KATH). Komfo Anokye Teaching Hospital is the second largest teaching hospital in Ghana. Participants had varied sociodemographic characteristics (Table 1). Children and patients who did not consent to participate in the study were excluded from the study. The range of length of admission for participants was 2 to 12 weeks. Patients received physiotherapy 3 to 5 times a week from the point of referral to discharge. One hundred forty-five patients were recruited for the study, but 120 questionnaires were returned.

### Data Collection

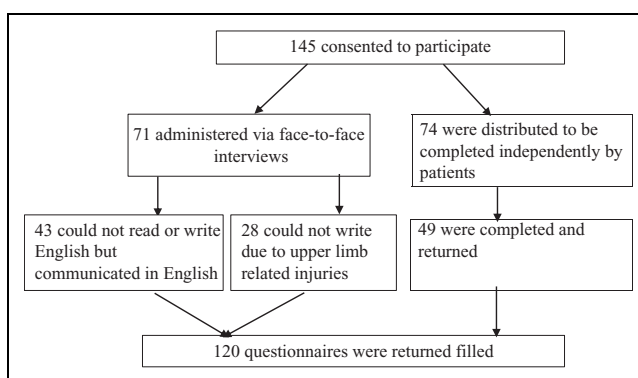
**Recruitment.** Data were collected over a period of 5 months. A systematic sampling method was adopted for this study. This was done by assigning numbers to all patients undergoing physiotherapy in the study site and then choosing every third patient among the assigned numbers.

**Instrument for data collection.** A survey questionnaire measuring patient satisfaction with physiotherapy practice,

developed and validated by Monnin and Perneger (17) and endorsed by the American Physical Therapy Association, was used to collect data. Sociodemographic variables were collected using a data entry sheet attached to each questionnaire (see Appendix A). The questionnaire was originally developed to specifically assess satisfaction with physiotherapy services, and the validation process included inpatients receiving physiotherapy and therefore was suited for the current study's purposes. Questions contained in the questionnaire also addressed the current study objectives. The questionnaire was adapted and modified to suit Ghana, for instance, physical therapist was replaced with physiotherapist, administrative processes were also reworded to suit the Ghanaian context, and the general questions were modified to include compliance and satisfaction. Overall admission was also modified specifically to physiotherapy received. The questionnaire consisted of 17 questions with 10 questions pertaining to the treatment process (including interpersonal factors), 2 questions pertaining to logistics, 2 pertaining to organizational factors, and the remaining 3 general questions.

**Scoring and pilot study.** Responses were scored on a 5-point Likert-type scale (Strongly agree = 1, agree = 2, not certain = 3, disagree = 4, strongly disagree = 5). The questionnaire was piloted among 10 patients who had similar characteristics with the study participants and were also on admission at the trauma and orthopedic directorate. Five males and 5 females with age ranging from 18 to 75 were involved in the pilot study. Half of the pilot was conducted via face-to-face interviews, and the rest of the questionnaires were completed independently by the patients. The pilot was done to assess language clarity and the feasibility. Data from the pilot study were not included in the main study. The pilot suggested questions are asked in the first-person and Likert-type scheme changed from the 5-point continuum of poor to excellent to strongly agree to strongly disagree; therefore, the questionnaire was modified accordingly.

**Questionnaire administration.** The study questionnaires were anonymized and administered by 2 research assistants who had no previous contact with patients. The research assistants were trained to ensure uniformity in how questionnaires were administered in situations, where patients could not read or write but understood English or had injuries affecting the upper limbs and therefore could not write. Most of the questionnaires (71) were administered via face-to-face interviews and the rest completed independently by patients. Figure 1 shows a breakdown of the questionnaire administration process. Questionnaires were administered to participants a day or 2 before discharge from the inpatient facility. Follow-ups were made via 2 phone calls and/or at the next review appointments of the patients. Follow-ups were carried out by research assistants. All participants consented to participate in the study, and ethical approval was received from the Committee on Human Research



**Figure 1.** Questionnaire administration.

Publication and Ethics, Kwame Nkrumah University of Science and Technology.

### Data Analysis

The data collected were entered into excel sheet. A double-check entry method, which involved entry and cross-checking by an independent researcher, was adopted to ensure data were entered correctly. The data were analyzed using SPSS version 24. The generated data were organized into tables. Frequencies, percentages, means, medians, and ranges were used to summarize data. Nonparametric tests for independent measures (Mann-Whitney *U* and Kruskal Wallis) were used to assess whether sociodemographic variables (age, sex, educational level, employment status, and marital status) had an effect on reported overall satisfaction with physiotherapy received. Mann-Whitney *U* test was used to assess sociodemographic variables that had only 2 groups (age and sex), and Kruskal Wallis test was used to assess sociodemographic variables with 3 or more groupings. Age of participants was dichotomized ( $\leq 55$  and  $> 55$ ) to allow for assessment of the influence of being old or young. To assess the association between reported overall satisfaction and compliance,  $\chi^2$  was used. Level of significance was set at  $P \leq .05$ .

## Results

### Sociodemographic Characteristics of the Participants

Of 145 participants contacted for the study, 120 questionnaires were retrieved representing 83% response rate. Participants comprised 48 (40%) females and 72 (60%) males. The mean age of participants was  $39.9 \pm 15.8$  years. Majority of participants were employed 98 (81.7%). Approximately 43% of the participants had primary school level of education, 52 (43.3%). The study also showed that exactly half 60 (50%) of the participants were married. The most common cause of admission was road traffic accidents (RTAs; 71.7%) as presented in Table 1.

**Table 2.** Participants Responses to Physiotherapy Services Received.

Factor, N = 120		Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
Physiotherapists were good about explaining the reason for my physiotherapy	n (%): 54 (45.0); M (R): 2.0 (1-2)	58 (48.3)	6 (5.0)	1 (0.8)	1 (0.8)	
I think the physiotherapist had materials and equipment needed to complete my care	n (%): 36 (30.0); M (R): 2.0 (1-3)	31 (25.8)	25 (20.8)	20 (16.7)	8 (6.7)	
Physiotherapists always made me feel their diagnosis was correct	n (%): 45 (37.5); M (R): 2.0 (1-2)	69 (57.5)	6 (5.0)	–	–	
The physiotherapists were thorough in treating and examining me	n (%): 31 (25.8); M (R): 2.0 (1-2)	70 (58.3)	16 (13.3)	3 (2.5)	–	
I had easy access to the physiotherapists I needed regarding feedback on my physiotherapy procedures	n (%): 42 (35.3); M (R): 2.0 (1-2)	62 (52.1)	8 (6.7)	7 (5.9)	–	
I didn't have to wait for a long period before being attended to by the physiotherapists after I was referred to them	n (%): 34 (28.3); M (R): 2.0 (1-2)	70 (58.3)	7 (5.8)	8 (6.7)	1 (0.8)	
My physiotherapists treated me in a very friendly and courteous manner	n (%): 87 (72.5); M (R): 1.0 (1-2)	30 (25.0)	2 (1.7)	1 (0.8)	–	
Those who provided my physiotherapy care always took their time when they treated me	n (%): 65 (54.2); M (R): 1.0 (1-2)	52 (43.3)	1 (0.8)	1 (0.8)	1 (0.8)	
The physiotherapists always acknowledged what I told them	n (%): 33 (27.5); M (R): 2.0 (1-2)	61 (50.8)	22 (18.3)	3 (2.5)	1 (0.8)	
I had no doubts about the ability of the physiotherapists who treated me	n (%): 45 (37.5); M (R): 2.0 (1-2)	65 (54.2)	6 (5.0)	2 (1.7)	2 (1.7)	
I felt confident that I was receiving the physiotherapy I need without being setback financially	n (%): 71 (59.2); M (R): 1.0 (1-2)	46 (38.3)	1 (0.8)	–	2 (1.7)	
The physiotherapists who treated me gave me respect	n (%): 79 (65.8); M (R): 1.0 (1-2)	39 (32.5)	2 (1.7)	–	–	
During my physiotherapy I was allowed to say everything that I thought was important	n (%): 47 (39.2); M (R): 2.0 (1-2)	51 (42.5)	19 (15.8)	2 (1.7)	1 (0.8)	
The physiotherapists who treated me had a genuine interest in me as a person	n (%): 30 (25.0); M (R): 2.0 (1.25-3)	50 (41.7)	33 (27.5)	6 (5.0)	1 (0.8)	
I was very satisfied with the physiotherapy care I received	n(%): 65 (54.2); M (R): 1.0 (1-2)	50 (41.7)	4 (3.3)	1 (0.8)	–	
I was fully compliant with the physiotherapy treatment I received	n(%): 41 (34.2); M (R): 2.0 (1-2)	69 (57.5)	7 (5.8)	2 (1.7)	1 (0.8)	
Due to my level of satisfaction my compliance to the physiotherapy came naturally	n(%): 41 (34.2); M (R): 2.0 (1-2)	62 (51.7)	14 (11.7)	–	3 (2.5)	

Abbreviations: %, percentage; n, number; M (R), Median (Range).

**Participants' Responses to Physiotherapy Services Received**

Overall, most participants agreed with the questions posed, with a few disagreeing and others being uncertain as shown in Table 2. The highest rated attributes were the physiotherapist showing patients respect and being courteous and friendly to patients. Seventy-nine (65.8%) participants agreed and 39 (32.5%) strongly agreed that physiotherapists showed them respect, and 87 (72.5%) patients strongly agreed and 30 (25%) agreed that physiotherapists were courteous and friendly. Although most participants either agreed 50 (41.7%) or strongly agreed 30 (25.0%) with the fact that physiotherapists took a genuine interest in them as persons while attending to them, a good number of them, 33 (27.5%), were uncertain about the decision to make in that regard. Also, some patients were uncertain about whether the physiotherapists always acknowledged what they told them (22

[18.3%]) and allowed them to say everything that they thought was important (19 [15.8%]).

Overall satisfaction with the physiotherapy services recorded 65 (54.2%) patients strongly agreeing and 50 (41.7%) patients agreeing, with only 1 (0.8%) patient disagreeing with it. The question of whether participant's satisfaction made their compliance with treatment come naturally had 41 (34.2%) strongly agreeing and 62 (51.7%) agreeing, with the rest either being uncertain 14 (11.7%) or strongly disagreeing 3 (2.5%; Table 2).

**Effect of Sociodemographic Variables on Satisfaction With Physiotherapy Services**

Age had a significant influence on patient satisfaction ( $U = 817; P = .04$ ). Younger patients ( $\leq 55$ ) were more satisfied than elderly patients ( $>55$ ; Table 3). Educational level,

**Table 3.** Nonparametric Tests Assessing Satisfaction With Physiotherapy Services and Sociodemographic Variables.

Satisfied with physiotherapy care{SA[1]-SD[5]}	U Value/ $\chi^2$ (df)	P Value
Sex = Mann Whitney U		
Male	1642.0	.6
Female		
Education = Kruskal-Wallis		
Never attended school		
Primary	0.347 (3)	.9
Secondary		
Tertiary		
Age category = Mann Whitney U		
≤55	817.0	.04 <sup>a</sup>
>55		
Employment status = Mann Whitney U		
Not employed	966.0	.4
Employed		
Marital status = Kruskal Wallis		
Married	6.5 (3)	.09
Divorced		
Widow		
Single		

Abbreviations: SA, strongly agree; SD, strongly disagree.

<sup>a</sup>Indicates a significant *p*-value; that is *p* value less than or equal to 0.05.

employment status, and marital status had no statistically significant effect on satisfaction ( $P > .05$ ; Table 3).

### Association Between Satisfaction and Compliance to Physiotherapy

A statistically significant association was recorded between reported compliance and satisfaction with physiotherapy services ( $\chi^2 = 31.5$ ;  $P = .02$ ; Table 4).

### Discussion

Majority of the study participants were in their productive years (≤55). This may be closely related to the most common cause of admission found in this study, RTA, since RTAs have been found to be more common in younger populations by most studies (18–21). A probable explanation for this trend could be because most traumatic incidents

occur irrespective of comorbid conditions; increasing age is not directly correlated with these conditions. Participants were predominantly male, and this is supported by a male to female ratio of 2:1 recorded in a Ghanaian study exploring the trend analysis of RTAs over a 21-year period (20) and other similar studies (19,21). The highest level of education for most participants was primary education, with others having no education at all, although the study was conducted in the second largest city of Ghana, where the level of education is expected to be higher. An explanation could be that the study setting being the second largest referral center in Ghana, participants were from diverse geographical areas of the country. Most of the patients reporting at the orthopedic ward were involved in RTAs, thus reechoing the alarming rate of RTAs in Ghana. Its effect on productivity is also eminent as most of the study participants were employed and in their productive years. The study findings resonate the findings of previous studies conducted in other African orthopedic health settings and geographical locations within Ghana (18–21). This continuing menace may be due to lack of enforcement of road laws, deplorable states of roads, poor lighting, lack of understanding, and observation of road signs precipitated by low levels of education as observed in this study.

Majority of the patients were satisfied with the inpatient physiotherapy services rendered to them. This is consistent with findings of most studies conducted within musculoskeletal physiotherapy settings (1,6,8,16,17,22). This gives an indication of a good standard of physiotherapy care and prioritization of quality of care within the Ghanaian health setting. Increased satisfaction has been found to be more common in patients with acute conditions (14). This study participants were mostly patients involved in traumatic experiences and hence could be described as having acute conditions (9). Patients with acute conditions may have little expectation of the service provided, may not have a yardstick against which quality should be judged, are optimistic, and, therefore, are easily satisfied with health-care provided (1). Also, physiotherapy being a less known health profession in Ghana may contribute to patients lower expectations of what care to expect from the physiotherapist.

**Table 4.** Association Between Reported Satisfaction and Compliance With Physiotherapy.

Satisfaction	Compliance n (%)						$\chi^2$ (df)	P Value
	SA	A	N	D	SD	Total		
SA	25 (20.8)	36 (30.0)	3 (2.5)	1 (0.8)	0 (0)	65 (54.2)	31.5 (12)	.002 <sup>a</sup>
A	15 (12.5)	30 (25.0)	4 (2.3)	1 (0.8)	0 (0)	50 (41.7)		
N	1 (0.8)	2 (1.7)	0 (0)	0 (0)	1 (0.8)	4 (3.3)		
D	0 (0)	1 (0.8)	0 (0)	0 (0)	0 (0)	1 (0.8)		
Total	41 (34.2)	69 (57.5)	7 (5.8)	2 (1.7)	1 (0.8)	120 (100)		

Abbreviations: A, agree; D, disagree; df, degree of freedom; N, neutral; SA, strongly agree; SD, strongly disagree.

<sup>a</sup>Indicates a significant *p*-value; that is *p* value less than or equal to 0.05.

Continuity of care has also been found to influence patient satisfaction, with patients generally being satisfied when seen by the same physiotherapist throughout the treatment process (12,23). This might have contributed to the high satisfaction score garnered because patients in the trauma and orthopedic directorate (the study site) were seen by a consistent team of physiotherapists. Continuity of care, in addition to fostering patient satisfaction, builds rapport, therapeutic relationship, and adherence (23–24). However, from inference, the physiotherapist to patient ratio in Ghana is approximately 1:140 000. Since Ghana's population is about 28.21 million with about 200 physiotherapists (25–26), continuity of care might pose a challenge within most areas of physiotherapy practice. Ali (27) found that outcomes of therapy, not necessarily recovery, influenced patient satisfaction. Especially, for inpatients with chronic diseases, recovery might not be a yardstick against which patients measure satisfaction. The therapists' values and process of care are consistent determinants for most patient groups (1). This study focused on professional/interpersonal and organizational values of care.

Most of the indices for satisfaction measured in this study were highly rated in this study (>90%). Areas assessed included communication with patient, therapist's attitude, therapist's knowledge, process of care, and organization. The highest rated area pertained to therapist's attitude in which most respondents highly satisfied with the level of respect shown to them by the therapist. Therapist attitude is one of the significant and highly rated dimensions of patient satisfaction (8,10). The therapist–patient relationship, a multifaceted concept, is an essential index of patient satisfaction, and this is facilitated by the therapist's attitude (28). Numerous dimensions within the therapeutic relationship were assessed in this study, and patients reported a high level of satisfaction with all the dimensions assessed. Showing respect to patients is in unison with professionalism, and patients are more likely to be satisfied with care when shown respect (29). A study by Tennakoon (6) however found no significant association between respect and patient satisfaction.

Although all items assessed were highly rated, a good number of patients were uncertain about whether the physiotherapists always "acknowledged what they told them" and "allowed them to say everything that they thought was important." These pertain to involvement of patients in decision-making. Patient-centered approaches however advocate for a partnership in decision-making with therapists and patients, as these improve compliance to treatment and enhance recovery (30). The relationship between involvement of patients in decision-making and satisfaction revealed a weak but positive correlation in a study by Tennakoon (6). A study conducted in Ghana around patient-centered care revealed a largely paternalist approach to treatment by physiotherapists (31). May (12) however revealed that lack of involvement of patients in

decision-making yielded dissatisfied patients. There are variations in patients' views about being involved in treatment decisions, with some of these variations culturally situated. While some view the therapist as "the expert," and therefore wield confidence in them to take decisions pertaining their health (27), others regard having a say in the decision-making process pertinent (12). Irrespective of the uncertainty about whether therapists involved study participants in decision-making, satisfaction scores were high. This could be due to the low level of formal education and a culturally accepted norm where the health professional is believed to be well-knowledgeable, thus having the final and better say.

Age was associated with patient satisfaction in this study. Older patients have been identified in some studies (3,32) as more satisfied with physiotherapy services, and authors suggested that older patients may have lesser expectations of services due to comorbidity and increased utilization of health-care services (3,32). This is in disagreement with the current study findings, as younger patients were found to be more satisfied with physiotherapy care than older patients. The difference in findings could be attributed to variations in geographical locations, the low level of physiotherapy knowledge, and awareness among Ghanaians and hence less-defined patient expectations as well as differences in indices measured in previously conducted studies compared to the current study. Educational level was not significantly associated with patient satisfaction in this study. A review by Jin et al (15) and a study by Mahdzir and Ismal (24), however, revealed that well-educated patients are more compliant and satisfied with their treatment regimens. There is an inconsistent trend regarding the influence of gender on patient satisfaction with physiotherapy services. In this study, there was no clear link between patient satisfaction and gender. In the study by Hills and Kitchen (14), females were found to be more satisfied than males, and another study found males to be more satisfied (8). The reason for this is unclear but may be attributed to males and females judging satisfaction based on different indices, and different indices measured in different studies may explain these inconsistent results.

Patients' reporting of compliance to physiotherapy instructions was very high, and a significant association was recorded between compliance and satisfaction. Patients, however, have the propensity to report higher compliance compared to their actual level of compliance (15). Compliance with physiotherapy treatment continues to be one of the challenges faced within the delivery of physiotherapy services (33). Assessment of patient compliance with home exercises especially is difficult, and compliance requires a highly motivated patient. However, numerous studies opine that a satisfied patient is most likely to be compliant (34), and this was supported by this study finding. Therefore, improving quality of care

that translates into patient satisfaction may improve patient compliance.

**Study Limitations**

The survey instrument used may not have adequately captured all areas deemed important measures of satisfaction by the Ghanaian patient, since it was adapted from a Western country. Also, the adapted questionnaire was not formally validated. Nonetheless, the instrument assessed most components deemed relevant determinants of patient satisfaction in the extant literature, and a pilot test was done prior to the study. The sample size could have been larger to increase confidence in research findings; however, systematic sampling method adopted introduced some form of random selection and hence an increased probability that study findings are representative of majority of the inpatients at the trauma and orthopedic directorate of the hospital. Also, the inclusion of only patients who understood English is a limitation, since the views of non-English speakers were not captured and could potentially affect the study results. Also,

face-to-face has the potential of introducing interviewer bias; however, adequate training was given to research assistants to reduce any potential biases.

**Conclusion**

Most of the study participants reported a high satisfaction with the various domains of the physiotherapy services assessed. There was a statistically significant association between reported compliance and satisfaction ( $P = .02$ ). Age was found to influence satisfaction ( $P = .04$ ). Although all assessed parameters of satisfaction were highly rated, some patients reported uncertainty in areas relating to patient involvement. Patients were mostly satisfied with 2 parameters relating to the therapist attitude. A continuous evaluation of physiotherapy services in different settings and areas of physiotherapy within Ghana is necessary for quality assurance and other associated benefits with patient satisfaction. More attention on patient involvement in decision making would be beneficial.

**Appendix A**

**Physiotherapy Patient Satisfaction Questionnaire**

*Project title:* Patient’s satisfaction with inpatient orthopedics physiotherapy services at a tertiary hospital in Ghana.

Questionnaire number:..... Today’s date:.....

*Section 1. Demographics*

*Please Indicate the Appropriate Information and Circle the Number That Apply to You*

1. Participant ID:
2. Date of birth (dd/mm/yr):
3. Age (in years):
4. Sex: Male Female
5. What is your marital status? Single Married Divorced Widow/widower
6. What is your highest level of education? Primary Secondary Tertiary Never attended school
7. What is your current employment status? Employed Not employed

The next questions are about how you feel about the physiotherapy service you have received. Please read each one carefully keeping in mind the physiotherapy service you have received. I am interested in how you feel whether good or bad about the physiotherapy service you have received.

Section 2. How Strongly do you AGREE or DISAGREE With Each of the Following Statements?

(Circle one number on each line)						
		Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
1	Physiotherapists were good about explaining the reason for my physiotherapy	1	2	3	4	5
2	I think the physiotherapist had materials and equipment needed to complete my care	1	2	3	4	5
3	Physiotherapists always made me feel their diagnosis was correct	1	2	3	4	5
4	The physiotherapists were thorough in treating and examining me	1	2	3	4	5
5	I had easy access to the physiotherapists I needed regarding feedback on my physiotherapy procedures	1	2	3	4	5
6	I didn't have to wait for a long period before being attended to by the physiotherapists after I was referred to them	1	2	3	4	5
7	My physiotherapists treated me in a very friendly and courteous manner	1	2	3	4	5
8	Those who provided my physiotherapy care always took their time when they treated me	1	2	3	4	5
9	The physiotherapists always acknowledged what I told them	1	2	3	4	5
10	I had no doubts about the ability of the physiotherapists who treated me	1	2	3	4	5
11	I felt confident that I was receiving the physiotherapy I need without being setback financially	1	2	3	4	5
12	I was very satisfied with the physiotherapy care I received	1	2	3	4	5
13	The physiotherapists who treated me gave me respect	1	2	3	4	5
14	During my physiotherapy I was allowed to say everything that I thought was important	1	2	3	4	5
15	The physiotherapists who treated me had a genuine interest in me as a person	1	2	3	4	5
16	I was fully compliant with the physiotherapy treatment I received	1	2	3	4	5
17	Due to my level of satisfaction my compliance to the physiotherapy came naturally	1	2	3	4	5

Any other comments:

.....  
 .....

**Declaration of Conflicting Interests**

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

**Funding**

The author(s) received no financial support for the research, authorship, and/or publication of this article.

**References**

1. Hush JM, Cameron K, Mackey M. Patient satisfaction with musculoskeletal physical therapy care: a systematic review. *Phys Ther.* 2011;91(1):25-36.
2. Brown J, Stewart M, Mccracken E, Mcwhinney IR, Levenstein J. The patient-centred clinical method. 2. Definition and application. *Fam Pract.* 1986;3(2):75-9.
3. Casserley-Feeney SN, Phelan M, Duffy F, Roush S, Cairns MC, Hurley DA. Patient satisfaction with private physiotherapy for musculoskeletal pain. *BMC Musculoskelet Disord.* 2008;9:50.
4. Olatunji TO, Ogunlana MO, Bello MA, Omobaanu SO. Assessment of patients' satisfaction with physiotherapy care. *J Niger Soc Physiother.* 2009;16:11-5.
5. Hills R, Kitchen S. Satisfaction with outpatient physiotherapy: focus groups to explore the views of patients with acute and chronic musculoskeletal conditions. *Physiother Theory Pract.* 2007;23(1):1-20.
6. Tennakon T, de Zoysa P. Patient satisfaction with physiotherapy services in an Asian country: a report from Sri Lanka. *Hong Kong Physiotherapy J.* 2014;32:79-85.
7. Crow R, Gage H, Hampson S, Hart J, Kimber A, Storey L, et al. The measurement of satisfaction with healthcare: implications



- for practice from a systematic review of the literature. *Health Technol Assess*. 2002;6(32):1-244.
8. Meidioros CF, Costa POL, Oliveira CFN, Costa MCL. Satisfaction of patients receiving physiotherapy care for musculoskeletal conditions: a cross-sectional study. *Fisioterapia Pesquisa*. 2016;23.
  9. Joshi J. *Essentials Of Orthopedics & Applied Physiotherapy*. India: Elsevier; 1999:604.
  10. Hush JM, Lee H, Yung V, Adams R, Mackey M, Wand BM, et al. Intercultural comparison of patient satisfaction with physiotherapy care in Australia and Korea: an exploratory factor analysis. *J Man Manip Ther*. 2013;21(2):103-12.
  11. Layzell M. Back pain management: a patient satisfaction study of services. *Br J Nurs*. 2001;10(12):800-7.
  12. May S. Patient satisfaction with management of back pain. Part 2: an explorative, qualitative study into patients' satisfaction with physiotherapy. *Physiotherapy*. 2001;87:10-20.
  13. Sheppard LA, Anaf S, Gordon J. Patient satisfaction with physiotherapy in the emergency department. *Int Emerg Nurs*. 2010;18(4):196-202.
  14. Hills R, Kitchen S. Satisfaction with outpatient physiotherapy: a survey comparing the views of patients with acute and chronic musculoskeletal conditions. *Physiother Theory Pract*. 2007;23(1):21-36.
  15. Jin J, Sklar GE, Min Sen Oh V, Chuen Li S. Factors affecting therapeutic compliance: a review from the patient's perspective. *Ther Clin Risk Manag*. 2008;4(1):269-86.
  16. Hush JM, Yung V, Mackey M, Adams R, Wand BM, Nelson R, et al. Patient satisfaction with musculoskeletal physiotherapy care in Australia: an international comparison. *J Man Manip Ther*. 2012;20(4):201-8.
  17. Monnin D, Perneger TV. Scale to measure patient satisfaction with physical therapy. *Physical Therapy*. 2002;82(7):682-91.
  18. Edomwonyi EO, Enemudo RE, Okafor IA. Pattern of mortalities among orthopedic and trauma admissions in irrua. *Open J Orthopedics*. 2015;5(7):179-85.
  19. Torgbenu LE, Nakua KE, Kyei H, Badu E, Opoku PM. Causes, trends, and severity of musculoskeletal injuries in Ghana. *BMC Musculoskelet Disord*. 2017;18(1):349.
  20. Siaw AN, Duodu E, Sarkodie KS. Trends in road traffic accidents in Ghana; implications for improving road user safety. *Int J Humanit Soc Sci*. 2013;2:31-5.
  21. Ahmed E, Chaka T. The pattern of orthopedic admissions in Tikur Anbessa University Hospital, Addis Ababa. *Ethiop Med J*. 2005;43(2):85-91.
  22. Mahdzir MN, Ismail A. Patient satisfaction with services in physiotherapy clinics: a cross sectional study at teaching hospitals in Klang Valley. *BMC Public Health*. 2012;12(suppl 2):A15.
  23. Beattie PF, Dowda M, Turner C, Michener L, Nelson R. Longitudinal continuity of care is associated with high patient satisfaction with physical therapy. *Phys Ther*. 2005;85(10):1046-52.
  24. Baker R, Mainous AG III, Gary DP, Love MM. Exploration of the relationship between continuity, trust in regular doctors, and patient satisfaction with consultations with family doctors. *Scand J Prim Health Care*. 2003;21(1):27-32.
  25. World Confederation for Physical Therapists WCPT). Ghana Physiotherapy Association: country Profile. 2017. Last Retrieved January 30, 2018, from: <http://www.wcpt.org/>.
  26. Population Reference Bureau: Ghana. Last Retrieved January 30, 2018, from: <http://www.prb.org>.
  27. Ali N. An explorative qualitative study into Egyptian patients' satisfaction with physiotherapy management of low back pain. *Physiotherapy*. 2016;102:e68-9.
  28. Beattie PF, Pinto MB, Nelson MK, Nelson R. Patient satisfaction with outpatient physical therapy: instrument validation. *Phys Ther*. 2002;82(6):557-65.
  29. Johns Hopkins Medical Institutions. Patients treated with respect more likely to follow medical advice. 2005. Retrieved December 20, 2017, from: <http://www.sciencedaily.com/releases/2005/09/050902070215.htm>.
  30. Department of Health (DOH). The NHS Improvement Plan: Putting People at the Heart of Public Services. London: Department of Health (DOH); 2004:2.
  31. Ahenkorah J, Snowdon N. Perspectives on patient centered care: a survey of Ghanaian physiotherapists. *Int J Physiother*. 2015;2:502-12.
  32. McKinnon AL. Client satisfaction with physical therapy services: does age make a difference? *Phys Occup Ther Geriat*. 2001;19:23-7.
  33. Campbell R, Evans M, Tucker M, Quilty B, Dieppe P, Donovan JL. Why don't patients do their exercises? Understanding non-compliance with physiotherapy in patients with osteoarthritis of the knee. *J Epidemiol Community Health*. 2001;55(2):132-138.
  34. Barbosa CD, Balp MM, Kulich K, Germain N, Rofail D. A literature review to explore the link between treatment satisfaction and adherence, compliance, and persistence. *Patient Prefer Adherence*. 2012;6:39-48.

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