

Original Article

Caregiver Satisfaction with Outpatient Physiotherapy Care for Children with Selected Neurological Conditions in Nigeria

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Abstract

Background: Impairments due to neurological disorders in children have been found to require long-term rehabilitation and physiotherapy has been proven to be an important aspect of the rehabilitation process. The extent of satisfaction of the caregiver with the physiotherapy services received however plays an important role in their compliance with treatment and an eventual positive treatment outcome.

Aim: This study aimed to identify the level of satisfaction with outpatient physiotherapy care among caregivers of children with selected neurological conditions in Ibadan, Nigeria

Methodology: A descriptive, cross-sectional study was conducted at the outpatients physiotherapy clinic of a tertiary level care institution and a secondary level care institution, both in Ibadan. A total of 102 consenting caregivers of children with erb's palsy, cerebral palsy, and injection palsy were recruited for this study and the Physical Therapy Outpatient Satisfaction Survey (PTOPs) instrument was used for data collection. Data collected was analyzed using SPSS (29).

Results: The survey revealed that female caregivers accounted for 87.1% of the caregivers who participated in this study, majority of whom were biological mothers (73.3%) of the children. About 66.3% of the respondents had good satisfaction with the healthcare providers, 22.8% had good satisfaction with the facility and treatment received, 24.8% had good satisfaction with the location of the clinic and 33.7% had good satisfaction with the cost of treatment however only 21.8% of the caregivers had good satisfaction with the overall physiotherapy services. Analysis revealed that was no significant difference between the level of satisfaction with the outpatient physiotherapy care among caregivers of children with all three neurological conditions. The caregivers of children with erb's palsy and the caregivers of children receiving physiotherapy care in the secondary level care institution were however more satisfied than those receiving treatment in the tertiary level care institution.

Conclusion: Only few caregivers had good satisfaction with the outpatient physiotherapy care of their children in both the secondary level and tertiary level care institutions.

Key words: Patient satisfaction, pediatric neurological conditions, rehabilitation

Introduction

Physiotherapy treatments help with the development, improvement and rehabilitation of physical function when caring for both adult and pediatric patients thus making it an important aspect of a multidisciplinary health team (Fafolahan et al., 2022). Physiotherapy for pediatric patients entails the examination, diagnosis and treatment of conditions in children with major emphasis being placed on

improving their motor function and promoting their independence (Kanniappan et al 2024)

The World Health Organization defines neurological disorders as diseases of the central and peripheral nervous system (WHO, 2016), some examples of these disorders in children are cerebral palsy, erb's palsy, injection palsy, autism and spinal bifida amongst others. Impairments arising from neurological disorders usually require long-term

rehabilitation and management with physiotherapy playing an important role in the overall improvement of functional abilities and well-being of pediatric patients (Lagunju & Okafor, 2009).

The health care industry like other service industries has increasingly grown complex, competitive and market-driven and this has made strong emphasis to be placed on the quality-of-service delivery to the consumers and their ultimate satisfaction (Jackson & Kroenke, 1997; Juwaheer & Kassean, 2006). This is evidenced by the increasingly numerous publications that pivot on satisfaction as a key variable of healthcare outcomes (Akinpelu et al., 2014; Al-sager, Al Naqbi & Shehada, 2023; Alzaabi et al., 2022; Foldager Jeppesen et al., 2024; Jackson & Kroenke, 1997; Juwaheer & Kassean, 2006; McCormick et al., 2008). Accreditation bodies have also been shown to use patient satisfaction as a crucial measure to assess hospital care services (Hush et al., 2011; Nguyen et al., 2014). Some reports have also shown that the higher the satisfaction of the caregivers with services received, the greater the probability of caregivers collaborating with health care professionals, increased treatment compliance and eventual positive impact on treatment outcome (Nguyen et al., 2014; Segers et al., 2019; Tsironi & Koulterakis, 2019).

While a lot of studies have focused on patient satisfaction with physiotherapy care in Nigeria (Odumodu et al., 2020a; Rufa'i et al., 2019; Olatunji, 2008), there appears to be a dearth of published studies on the satisfaction of caregivers of children with neurological conditions in Nigeria despite evidence that this factor is an important contributor to the wellbeing of the children. Hence, this study aimed to identify the level of satisfaction with outpatient physiotherapy care among caregivers of children with selected neurological conditions in Ibadan, Nigeria.

Research Questions

This study was therefore designed to provide answers to the following questions:

1. What is the level of satisfaction with outpatient physiotherapy care among caregivers of children with selected neurological conditions (cerebral palsy, erb's palsy and injection palsy) in Ibadan, Oyo state?
2. Is there any difference between level of satisfaction of caregivers with outpatient

physiotherapy care based on the type of neurologic condition of their child and the facility providing outpatient care among caregivers of children with selected neurological conditions in Ibadan, Nigeria.

Methodology

This was a descriptive, cross-sectional study conducted at the University College Hospital (UCH) Ibadan (a tertiary level care institution) and the Oni Memorial children Hospital, Ibadan (a secondary level care institution). This study recruited consenting caregivers of children with erb's palsy, cerebral palsy, and injection palsy from the outpatient Physiotherapy clinics of the hospitals. For the caregivers to be included in the study, they had to have been presenting their child/ward for physiotherapy care for at least four treatment sessions and must also be able to comprehend and communicate in English language and/or Yoruba language (the prevalent language spoken among locals who do not speak/understand English in the city where the hospitals are located). Caregivers of children with co-existing conditions like speech and language disorder, vision and hearing impairment and epilepsy were not included in the study. A convenience sampling technique was used to recruit participants for this study. The appropriate sample size was calculated using the Slovin's formula and a total of 102 participants were recruited. Ethical approval for this study was sought and obtained from University of Ibadan/ University College Hospital (UI/UCH) Health Research Ethics Committee before the commencement of the study.

Instrument: The Physical Therapy Outpatient Satisfaction Survey (PTOPs) instrument was used for data collection in this study. This questionnaire was developed by Susan E.R and Robert J.S (1999) and the questionnaire consists of four domains, which include: Satisfaction with health care provider, satisfaction with facilities and treatment received, satisfaction with location of facility and satisfaction with cost of treatment. The questionnaire was pretested before data collection on a sample of 20 caregivers from the selected outpatient physiotherapy clinics to test the applicability of the tool in this study and to identify the difficulties that may be faced during data collection. The instrument was found to be reliable and valid and the Cronbach Alpha score for each of the four domain is

above 0.70 (Scott et al., 2007). A 5-point Likert scale was used to determine the level of satisfaction for each domain and the score in percentage of each caregiver in each domain was calculated by applying the following equation: Domain score = total score (summation of all domain questions)/highest possible score \times 100

The level of satisfaction was divided into three levels using the criteria below:

Poor satisfaction: <50% score

Fair satisfaction: 50-74% score

Good satisfaction: \geq 75% score

Ethical Consideration: The research ethics committee of the University of Ibadan/University College Hospital reviewed and approved the study request on April 4th 2024 with a validity of one year under the reference number UI/EC/24/0024.

Data collection: Permission to conduct this study was obtained from the Directors of both outpatient clinics selected for this study. Caregivers' permission was also obtained, and participants was given an informed consent form to sign after they must have read through its content and be briefed on what the study entails. The questionnaire was distributed, self-administered or interviewed in case of participants who cannot read or write in English or Yoruba language. The questionnaire assessed the caregiver's the level of satisfaction of caregivers of children with selected neurological condition.

Data analysis: SPSS version 29 was used to analyze the data. Descriptive statistics were used for the participants sociodemographic information while inferential statistics (Kruskal wallis test) was used to evaluate the difference between the level of satisfaction with outpatient physiotherapy care of caregivers among children with cerebral palsy, erb's palsy and injection palsy. Mann-Whitney U test of difference was used to evaluate the difference in satisfaction between the two outpatient clinics. The level of significance was set at 0.05.

Results

One hundred and one (101) caregivers of children with cerebral palsy, erb's palsy and injection palsy consented to participate in this study and 101 questionnaires were completed and analyzed. The demographic characteristics

of the participants are presented in table 1. Female caregivers accounted for 87.1% of the caregivers who participated in this study, about 40% of the caregivers were between 30-40 years of age, 98% of the caregivers were family members with 73.3% of the caregivers being the child's biological mothers; 13.9% biological fathers; 4% biological siblings, 6.9% grandparents. A total of 82.2% of the caregivers were married and 47.5% of the caregivers had completed tertiary education and the predominant ethnicity of the caregivers Yoruba (91.1%).

The score for each caregiver in each domain was calculated and is presented in table 2. At the end of the analysis, 66.3% of the respondents had good satisfaction with the healthcare providers, 22.8% had good satisfaction with the facility and treatment received, 24.8% had good satisfaction with the location of the clinic and 33.7% had good satisfaction with the cost of treatment. The score for the satisfaction with the overall physiotherapy service was presented in table 3 and it was revealed that only 21.8% of the caregivers had good satisfaction with overall physiotherapy services; of this number, 31.8% were respondents from the outpatient physiotherapy clinic in UCH while the remaining were from the outpatient physiotherapy clinic in Oni Memorial Children hospital.

Results of the Kruskal Wallis test (table 4) showed that was no significant difference between the level of satisfaction with outpatient physiotherapy care among caregivers of children with Cerebral palsy, erb's palsy and injection palsy ($\chi^2=3.212$, $p=0.201$). Results of the Mann-Whitney U test (table 5) revealed that there was no significant difference in the level of satisfaction with both outpatient physiotherapy clinics among the caregivers of children with cerebral palsy ($U=438.50$; $p=0.658$), and injection palsy ($U=20.50$; $p=0.0324$) but among the caregivers of children with Erb's palsy, there was a significant difference in their satisfaction levels ($U=33.50$; $p=0.013$) with caregivers of children with Erb's palsy receiving treatment in Oni Memorial being better satisfied than caregivers of children receiving treatment in UCH.

Table 1: Socio-demographic characteristics of Caregivers of Children with selected neurological conditions

Variables	Frequency (n)	Percentage (%)
Age of Caregiver		
≤ 30	36	35.6
31-40	41	40.6
41- above	24	23.8
Mean \pm S.D	34.5\pm7.5	
Physiotherapy clinic		
UCH	44	43.6
Oni Memorial children Hospital	57	56.4
Gender		
Male	13	12.9
Female	88	87.1
Marital status		
Married	83	82.2
Single	6	5.9
Widowed	3	3.0
Divorced	9	8.9
Ethnicity		
Yoruba	92	91.1
Igbo	9	8.9
Religion		
Christianity	55	54.4
Islam	41	40.6
Traditional	5	5.0
Relationship with child		
Mother	74	73.3
Father	14	13.9
Sibling	4	4.0
Grandparent	7	6.9
Others	2	2.0
Educational status		
Primary education	8	7.9

Secondary education	41	40.6
Tertiary education	48	47.5
None	4	4.0

Table 2: Satisfaction of caregivers with outpatient physiotherapy care

Domain	Poor n(%)	Fair n(%)	Good n(%)
Satisfaction with health care Provider	0(0.0)	34(33.7)	67(66.3)
Satisfaction with facility and treatment received	8(7.9)	70(69.3)	23(22.8)
Satisfaction with location of clinic	25(24.8)	51(50.5)	25(24.8)
Satisfaction with cost of treatment	3(3.0)	64(63.4)	34(33.7)

Table 3: Summary of overall satisfaction of caregivers of children with selected neurological conditions

Satisfaction with outpatient Physiotherapy care	Frequency (n)	Percentage (%)
Poor Satisfaction	9	8.9
Fair Satisfaction	70	69.3
Good Satisfaction	22	21.8

Table 4: Comparison of the level of satisfaction with outpatient physiotherapy care among caregivers of children with cerebral palsy, erb's palsy and Injection palsy using Kruskal wallis test.

	Cerebral palsy	Erb's palsy	Injection palsy	X ²	P-value
N	62	24	15	3.212	0.201
Mean Rank	54.35	45.85	45.37		

Table 5: Comparison of the level of satisfaction between caregivers of children receiving treatment at UCH and those receiving treatment at Oni Memorial Children's Hospital using the Mann-Whitney U test

	UCH	Oni Memorial	Mann-Whitney U	P-value
Cerebral palsy				
n	25	37	438.5	0.658
Mean Rank	32.46	30.85		
Erb's Palsy				
n	13	11	33.50	0.013
Mean Rank	9.58	15.95		
Injection palsy				
n	6	9	20.50	0.324
Mean Rank	6.92	8.72		

Discussion

The main aim of this study was to determine the level of satisfaction among caregivers of children with selected neurological conditions in Ibadan, Nigeria with outpatient physiotherapy care by examining four major domains which are: Satisfaction with health care provider, satisfaction with facilities and treatment received, satisfaction with location of facility and satisfaction with cost of treatment. Data obtained from the survey revealed that compared to men, women comprised majority of the caregivers with a large portion of them being biological mothers of the patient and this is a reflection of the sociocultural background of Ibadan and Nigeria as a whole where mothers are typically responsible for caregiving while fathers are expected to be at work in order to provide financial support. This is similar to the findings across the world where mothers are the major caregiver of children with neurological conditions, examples include but are not limited to: Saudi Arabia (Almosallam et al., 2024), Brazil (Camargos et al., 2009), Serbia (Milićević, 2023), Canada (Raina et al., 2005), Nigeria (Olaleye et al., 2015; Omole et al., 2019). Approximately half of the caregivers

have completed tertiary education, indicating a relatively high level of education within the sample and this is similar to the findings of (Almosallam et al., (2024) where about half of the population of their study were highly educated. Previous studies have shown that higher education levels among caregivers may impact their ability to comprehend and navigate the complexities of managing neurological conditions in children, as well as access resources and support services (Elkhatib Smidt et al., 2020).

Majority of the participants had good satisfaction with the health care provider and this is similar to a previous reports by various researchers that revealed that patients and caregivers were more satisfied when the physicians had friendly interactions with them, took time to explain diagnosis and treatment plans and helped them to understand the information given to them by the physician (Abdullah & Hussien- Ibrahim, 2016; Barilaro et al., 2020; Biglu et al., 2017; Mohamed et al., 2024; Rezaei & Askari, 2014). A possible reason for the similarities among these studies might be because patients tend to appreciate when healthcare providers take the time to explain

diagnoses and treatments clearly and interact with them in a friendly and empathetic manner regardless of geographic location or cultural context. The survey also revealed that a large portion of the participants in this study were dissatisfied with the facility and treatment received as was evidenced by the fact that most of the participants felt that the therapists spent too little time with their children and have a heavy workload. This finding is not out of place as several reports exist that support the fact that patient and caregiver satisfaction with treatment received can be impacted by their expectation of the time the physician should spend with them and their perception of the time actually spent with them (Lin et al., 2001; Lou et al., 2022; Ogunfowokan & Mora, 2012) and that when caregivers felt that not sufficient time was being spent with their children, their level of dissatisfaction increased (Al-sager, Al Naqbi & Shehada, 2023). Only about a quarter of the participants had good satisfaction with the location of the clinic as most of the participants felt that the facility could have been more conveniently located for them. About one third of the participants had good satisfaction with the cost of treatment and this is in line with the findings of existing studies that reported that cost of treatments significantly impacted the level of patient and caregivers' satisfaction (Al-sager, Al Naqbi & Shehada, 2023; Begum et al., 2022; Odumodu et al., 2020b; Olatunji et al., 2008; Wu & Lu, 2018). Only about one-fifth of the participants had good satisfaction with the overall physiotherapy service. This means that majority of the participants were not satisfied with the outpatient physiotherapy care of their children. This is in line with a previous study conducted in Ibadan by Olaleye et al., (2015), where caregivers' perception on the quality of physiotherapy care received by their children was poor. However, a study in Dubai by (Al-sager, Al Naqbi & Shehada, 2023) found a different result where 94% of the caregivers were satisfied with the physiotherapy services offered to their children at the healthcare facility. The difference might be attributed to socioeconomic differences between the locations where the studies were conducted, which may contribute to differences in healthcare systems.

In our study, we compared the level of satisfaction of caregivers of children diagnosed with cerebral palsy, Erb's palsy, and injection palsy with outpatient physiotherapy care

received using the Kruskal wallis test and found that there was no significant difference between the level of satisfaction of caregivers with outpatient physiotherapy care among children with cerebral palsy, Erb's palsy and injection palsy. This suggests that, regardless of the specific neurological condition affecting the child, caregivers perceived the quality of physiotherapy care similarly. Such uniformity in satisfaction levels may imply that outpatient physiotherapy services have similar standard of practice across a spectrum of neurological conditions. This may also imply that caregivers of children with different neurological conditions have equitable access to outpatient physiotherapy services. Ensuring equal access to high-quality care is essential for promoting health equity and improving health outcomes among children with diverse neurological conditions (Kruk et al., 2018). We also compared the levels of satisfaction between caregivers of children receiving treatment at UCH and those receiving treatment at Oni Memorial Children's Hospital using the Mann-Whitney U test and results of our analysis revealed that there was no significant difference in satisfaction levels between those receiving treatment at UCH and Oni Memorial Children's Hospital among caregivers of children with cerebral palsy and injection palsy and is in line with the results of the study of Adib et al., (2019) where it was reported that level of the healthcare institution did not affect caregivers' satisfaction levels, rather their satisfaction was influenced by other factors. However, among the caregivers of children with Erb's palsy, caregivers of children receiving physiotherapy care in Oni memorial Hospital were more satisfied than those receiving treatment in UCH and more research may be able to verify why this difference occurred compared to the response of caregivers of children with cerebral and injection palsy.

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