

Research Article

Satisfaction with Physiotherapy Services Among Parents of Cerebral Palsy in Rehabilitation Centers of Kathmandu Valley: A Cross-Sectional Study

K. C. Smita^{1,*} , Gautam Sarthak² , Sigdel Kripa³ , Maharjan Sukrina¹ ,
Tenzing Norbu Lama⁴ 

¹Department of Physiotherapy, Kathmandu University School of Medical Science, Dhulikhel, Kavre, Nepal

²Grande International Hospital, Dhapasi, Kathmandu, Nepal

³Hope Center for Child Development and Research Center, Gairidhara, Kathmandu, Nepal

⁴Chiropractic and Manual Therapy Center, Tripureshwor, Kathmandu, Nepal

Abstract

Background: Patient satisfaction reflects the extent to which individuals perceive that their needs and expectations have been met in relation to the cost and quality of healthcare services received. Satisfied patients are more likely to adhere to treatment plans, seek continued care, and provide constructive feedback, all of which are particularly important in the management of children with Cerebral Palsy (CP), a lifelong condition requiring long-term rehabilitation. As children with CP are often unable to adequately express their perceptions of care, parental perspectives serve as a crucial proxy for assessing satisfaction with healthcare services. **Objective:** To determine the level of satisfaction with physiotherapy services among parents of children with Cerebral Palsy attending rehabilitation centers in Kathmandu Valley and to examine the relationship between individual questionnaire items and overall satisfaction. **Methods:** The MedRisk Instrument for Measuring Patient Satisfaction (MRPS) with physiotherapy services was administered to 82 parents of children with Cerebral Palsy receiving care at rehabilitation centers in Kathmandu Valley. **Results:** Parents reported a high level of satisfaction with physiotherapy services as measured by the MRPS (Mean = 4.37, SD = 0.38). Bivariate correlation analysis was conducted to examine the relationship between individual item scores and global satisfaction. Internal factors demonstrated the strongest correlations with global satisfaction, while external factors showed weak to moderate correlations. **Conclusion:** Patient satisfaction is a key indicator of the quality of physiotherapy services and should be assessed regularly to ensure optimal care delivery. This study found a high level of satisfaction with physiotherapy services among parents of children with Cerebral Palsy attending rehabilitation centers in Kathmandu Valley.

Keywords

Cerebral Palsy, Parents, Patient Satisfaction, Physiotherapy, Quality of Care

*Correspondence: K. C. Smita (smitakc5@gmail.com)

Received: 12 February 2026; **Accepted:** 27 July 2026; **Published:** 20 August 2026



Copyright: © The Author(s), 2026. Published by Science Publishing Group. This is an **Open Access** article, distributed under the terms of the Creative Commons Attribution 4.0 License (<http://creativecommons.org/licenses/by/4.0/>), which permits unrestricted use, distribution and reproduction in any medium, provided the original work is properly cited.

1. Introduction

Cerebral palsy (CP) is a group of permanent neurological disorders that affect movement, muscle coordination, posture, and balance. [1] It results from injury to the developing brain and is characterized by abnormalities in muscle tone and motor control. [2] CP is frequently associated with additional impairments, including sensory and perceptual deficits, cognitive and communication disorders, behavioral problems, epilepsy, and secondary musculoskeletal complications. [3] These impairments contribute to limitations in activity and restrictions in participation, making CP a childhood disability with complex, multidimensional functional consequences. [4] Furthermore, children with CP may present with various medical comorbidities involving neurological, auditory, visual, sleep-related, and gastrointestinal systems. [5] Consequently, parents of children with CP often experience substantial variability in caregiving demands, responsibilities, and expectations. [6].

Early intervention using a comprehensive, multidisciplinary approach plays a crucial role in the management of CP. [7] Physiotherapy is a core component of CP management and aims to maintain or improve muscle strength, balance, and functional movement, as well as to facilitate the acquisition of essential motor skills such as sitting, walking, or wheelchair mobility.¹ Physiotherapy services encompass not only specialized therapeutic interventions and professional guidance but also general aspects of service delivery, including accessibility, communication, and hospitality within the clinical setting. [8].

Patients and caregivers seek healthcare services with various expectations, including receiving care that meets their needs and satisfaction. [9] Patient satisfaction refers to the extent to which individuals are content with the healthcare services provided by their healthcare professionals. [6] It is a multidimensional construct that reflects the overall experience of an individual receiving assessment and treatment within a specific healthcare environment over a defined period. [10] Patient satisfaction has also been described as the degree to which a patient perceives that their needs and perspectives have been addressed in relation to the financial and personal investment made to obtain quality healthcare services. [11, 12] As such, patient satisfaction is recognized as a valid indicator of healthcare quality and an essential component in promoting patient-centered care. [9].

Measurement of patient satisfaction is commonly categorized into two domains: satisfaction with treatment outcomes and satisfaction with the process of care. Satisfaction with outcomes pertains to perceived improvements resulting from the intervention, whereas satisfaction with care reflects the quality of services received throughout the course of treatment. [10] Patient satisfaction is influenced by both patient-related and physiotherapist-related factors, which represent distinct components affected by different domains. [11, 13, 15] Consequently, separate outcome measures are required to assess these components accurately.

Evidence suggests that satisfied patients are more likely to adhere to healthcare advice, actively engage in their treatment,

and maintain loyalty to their healthcare providers. Dissatisfied patients, in contrast, may discontinue care or fail to return for future services. Satisfied individuals are also more likely to recommend services to others through positive word-of-mouth, thereby influencing service utilization and overall healthcare system efficiency. [16].

Children with CP have long-term healthcare needs that exceed those of typically developing children. [4] However, due to their limited ability to express perceptions and experiences of care, direct assessment of patient satisfaction is often not feasible. In such cases, parents serve as essential partners in evaluating satisfaction and contributing to quality improvement based on their experiences. Additionally, according to The Act Relating to Children, 2075 (2018) of the Government of Nepal, parents and family members are legally responsible for ensuring access to healthcare and treatment for children under 18 years of age. As primary decision-makers regarding healthcare utilization, parents determine the choice of healthcare settings and the continuation or discontinuation of treatment. Therefore, assessing satisfaction with physiotherapy services among parents of children with CP is critically important. This study aims to determine the level of satisfaction with physiotherapy services among parents of children with Cerebral Palsy and to examine the relationship between individual items within the satisfaction questionnaire.

2. Methods

A descriptive cross-sectional study was conducted between March 2023 and December 2023 in three rehabilitation centers located in Kathmandu Valley, Self Help Group for Cerebral Palsy (SGCP) Lalitpur, Neo Child care center, Bhaktapur, Special education rehabilitation center for disabled, (SERC school), Lalitpur. A total of 82 parents of children diagnosed with Cerebral Palsy (CP) were recruited using a non-probability convenience sampling technique. The sample size was calculated using G*Power software (version 3.1.9.7), assuming an effect size of 0.3, a significance level (α) of 0.05, and a statistical power of 0.80.

Parental satisfaction with physiotherapy services was assessed using the MedRisk Instrument for Measuring Patient Satisfaction (MRPS), a standardized tool developed and approved by MedRisk, Inc. The MRPS consists of 12 items, including 10 specific items and 2 global items. Items 1–3 assess external factors, items 4–10 assess internal factors, and items 11 and 12 represent global satisfaction. Each item is rated on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree), with higher scores indicating greater satisfaction. Items 1, 4, and 8 are positively worded and were scored accordingly. The questionnaire was translated into the Nepali language, and a pilot study involving 10% of the total sample was conducted to assess feasibility and clarity prior to

data collection. In addition to the MRPS, a separate questionnaire was used to collect demographic information.

Ethical approval for the study was obtained from the Kathmandu University Institutional Review Committee with IRC – KUSMS 103/23 and written informed consent was secured from all participants prior to enrollment. Parents of children under 18 years of age with a diagnosis of CP who had received physiotherapy services were included in the study. Parents who declined consent or had a medically diagnosed psychological condition were excluded.

Subscale scores were calculated by summing the responses to the respective items, and overall satisfaction was determined by calculating the mean of the subscale scores, with a maximum possible score of 5. For the global satisfaction item (Item 11), response options 1 and 2 were categorized as low satisfaction, option 3 as moderate satisfaction, and options 4 and 5 as high satisfaction. Participants completed the questionnaires independently; however, an outcome assessor was available to provide clarification when required. Prior to administration, participants were briefed on the structure of the questionnaire, including examples of both positively and negatively worded items.

Data analysis was performed using the Statistical Package for the Social Sciences (SPSS) version 26. Descriptive statistics, including means and standard deviations, were calculated for each MRPS item. Bivariate correlation analysis was conducted to examine the relationships between individual item scores and global satisfaction.

3. Results

A total of 82 parents of children with Cerebral Palsy participated in the study. The demographic characteristics of the parents and their children are presented in [Tables 1 and 2](#), respectively. Half of the participants (50%) reported visiting rehabilitation centers more than 13 times for physiotherapy services. Regarding therapist exposure, 34.1% of the children received treatment from more than three physiotherapists, 28% from three therapists, 13.4% from two therapists, and 24.4% from a single therapist. The mean age of the children with Cerebral Palsy was 5.21 years (SD = 4.56), with males comprising 58.5% of the sample. The mean age at diagnosis was 1.81 years (SD = 1.07).

Table 1. Demographic characteristics of parents of Cerebral Palsy (N= 82).

Variables	Mean (S.D)
Age (Years)	32.34 (6)
Gender	N (%)
Female	68 (82.9%)
Male	14 (17.1%)
Marital status	N (%)

Variables	Mean (S.D)
Unmarried	0
Married	82 (100%)
Educational level	N (%)
Uneducated	5 (6.1%)
Primary	6 (7.3%)
Secondary	31 (37.8%)
Intermediate	18 (22%)
Bachelors	17 (20.7%)
Masters or Higher	5 (6.1%)
Number of visits	N (%)
<3	12 (14.6%)
3-6	21 (25.6%)
7-10	7 (8.5%)
10-13	1 (1.2%)
>13	41 (50%)
Occupation, N (%)	N (%)
Housewife	53 (64.6%)
Business	9 (11%)
Private Job	7 (8.5%)
Farmer	7 (8.5%)
Government Officer	3 (3.7)
Driver	1 (1.2%)
Laborer	1 (1.2%)
Pharmacist	1 (1.2%)
Number of therapists	N (%)
One	20 (24.4%)
Two	11 (13.4%)
Three	23 (28.0%)
>Three	28 (34.1%)

Table 2. Demographic characteristics of children with Cerebral Palsy (N= 82).

Variables	Mean (S.D)
Age (Years)	5.2 (4.5)
Gender	N (%)
Male	48 (58.5%)
Female	34 (41.5%)

Table 3. Patient satisfaction scores for each MRPS item, and Bi variate correlations between each item and Global satisfaction score.

S.N.	MRPS Items	Mean patient satisfaction	Correlation with Global satisfaction (Spearman's 95% CI)
1.	The registration process is appropriate.	4.32	0.42
2.	The office receptionist is courteous.	4.01	0.31
3.	The waiting area is comfortable (in terms of lighting, temperature, decor, and furnishings).	4.45	0.41
4.	My therapist spent enough time with me.	4.35	0.65
5.	My therapist thoroughly explains the treatment(s) I receive.	4.44	0.73
6.	My therapist treats me respectfully.	4.49	0.61
7.	My therapist listens to my concerns.	4.43	0.69
8.	My therapist understands all my questions.	4.39	0.70
9.	My therapist advises me on ways to avoid future problems.	4.46	0.69
10.	My therapist gives me detailed instructions regarding my home program.	4.41	0.72
11.	Overall, I'm completely satisfied with the services I receive from my therapist	4.29	1
12.	I would return to this office for future services and care.	4.43	0.47

Table 3 presents the bivariate correlations between individual MRPS item scores and global satisfaction (Item 11). Overall, parents reported a high level of satisfaction with physiotherapy services, with a mean MRPS score of 4.37 (SD = 0.38). Mean item scores ranged from 4.49 (SD = 0.50) for “*My therapist treats me respectfully*” to 4.01 (SD = 0.68) for “*The registration process is appropriate.*”

Internal factor items demonstrated strong correlations with global satisfaction, including time spent with the therapist ($r = 0.65$, $p < 0.001$), explanation of treatment ($r = 0.73$, $p < 0.001$), respectful behavior ($r = 0.61$, $p < 0.001$), listening to concerns ($r = 0.69$, $p < 0.001$), answering questions ($r = 0.70$, $p < 0.001$), advice on preventing future problems ($r = 0.69$, $p < 0.001$), and provision of detailed home program instructions ($r = 0.72$, $p < 0.001$).

Among external factors, the appropriateness of the registration process ($r = 0.42$, $p < 0.001$) and comfort of the waiting area ($r = 0.41$, $p < 0.001$) showed moderate correlations with global satisfaction, whereas receptionist courtesy demonstrated a weak correlation ($r = 0.31$, $p < 0.001$). The item “*I would return to this office for future services and care*” showed a moderate correlation with global satisfaction ($r = 0.47$, $p < 0.001$).

4. Discussion

The findings of this study indicate a high level of satisfaction with physiotherapy services among parents of children

with Cerebral Palsy, with 87.8% reporting high satisfaction. Mean item scores were consistently elevated, ranging from 4.01 to 4.49, suggesting that respondents generally agreed or strongly agreed with the satisfaction statements included in the survey. Notably, the highest satisfaction scores were associated with items related to therapist–parent interaction, a finding consistent with previous research by Hush et al., who reported that interpersonal aspects of care and respectful communication are key determinants of patient satisfaction. [18] These results underscore the importance of clear treatment explanations and effective communication skills in enhancing satisfaction with physiotherapy services.

In contrast, the lowest mean score was observed for the item “*The office receptionist was courteous,*” highlighting an area requiring improvement to further enhance overall service quality. This finding suggests that while clinical interactions were rated highly, non-clinical aspects of service delivery may influence the overall perception of care.

Therapist-related attributes emerged as a critical component of patient satisfaction, as evidenced by the strong correlations between internal factors and global satisfaction. Internal factor items including adequate time spent with parents, thorough explanation of treatment, respectful behavior, attentive listening, responsiveness to questions, advice on preventing future problems, and provision of detailed home program instructions demonstrated the strongest associations with overall satisfaction, with a mean score of 4.42. These findings reinforce the central role of therapist parent engagement in shaping satisfaction and highlight the importance of patient centered

communication and individualized care in pediatric physiotherapy settings.

The findings of the present study demonstrate a significant association between respectful treatment by physiotherapists and overall satisfaction with physiotherapy services. This result is consistent with the findings of Hingarajia, who reported that patient satisfaction is directly influenced by the quality of patient therapist interactions. [19] Similarly, a significant correlation was observed between physiotherapists' attentiveness to parents' concerns and satisfaction with services, supporting the findings of Beattie et al., who emphasized the importance of therapists demonstrating empathy and concern through active listening. [17] Additionally, the ability of physiotherapists to adequately address parent's questions regarding their child's condition and treatment was significantly associated with higher satisfaction levels. Beattie et al. further noted that patient satisfaction is strongly related to the extent to which physiotherapists provide clear and comprehensive responses to patient inquiries. [17] Collectively, these findings highlight the critical role of effective communication, respectful behavior, and clear explanation of treatment in achieving high levels of patient satisfaction.

Patient satisfaction was also influenced by non-clinical or external service factors. Previous studies have reported higher satisfaction levels when access-related and environmental factors such as courteous administrative staff, efficient registration processes, and comfortable waiting areas are adequately addressed. [20] In the present study, these external factors demonstrated weak to moderate correlations with global satisfaction, with a mean score of 4.26, suggesting that such factors contribute to parental satisfaction, albeit to a lesser extent than therapist-related factors. However, these findings contrast with those of Beattie et al., who reported that patients placed less emphasis on non-clinical aspects of care. [21] This discrepancy may reflect differences in patient populations, service settings, or cultural expectations.

Furthermore, patient satisfaction has been shown to influence engagement with healthcare services. Satisfied patients are more likely to actively participate in treatment and continue utilizing services, whereas dissatisfaction may result in discontinuation of care. [14] In the present study, a moderate correlation was observed between willingness to return for future services and global satisfaction, consistent with findings reported by Beattie et al., who noted that satisfied patients are more likely to return for care and provide positive recommendations regarding services and facilities. [16] These findings underscore the importance of ensuring high levels of satisfaction in physiotherapy practice, as satisfied clients are more likely to recommend services through positive word-of-mouth, thereby influencing service utilization and overall healthcare delivery.

5. Limitations

This study has several limitations. First, although the

MedRisk Instrument was translated into Nepali and pilot tested for feasibility, the psychometric properties of the translated version were not formally evaluated, which may affect the validity of the findings. Second, rehabilitation centers were selected based on researcher knowledge due to the unavailability of an official registry of centers providing physiotherapy services for children with Cerebral Palsy in Kathmandu Valley, potentially limiting the generalizability of the results.

Abbreviations

CP	Cerebral Palsy
MRPS	MedRisk Instrument for Measuring Patient Satisfaction
SERC	Special Education Rehabilitation Center for Disabled
SGCP	Self Help Group for Cerebral Palsy

Acknowledgments

We would like to express our sincere gratitude to Prof. Dr. Philip McClure, PT, PhD, FAPTA—Vice President of MedRisk's Expert Clinical Benchmarks and Chair of Physical Therapy at Arcadia University, Pennsylvania, USA—for granting permission to use the MedRisk Instrument. We also thank the participants and the staff of the selected rehabilitation centers for their cooperation and support during the study.

Author Contributions

K. C. Smita: Conceptualization, Data curation, Investigation, Methodology, Writing – review & editing

Gautam Sarthak: Conceptualization, Data curation, Investigation, Methodology, Writing – review & editing

Sigdel Kripa: Investigation, Writing – original draft, Writing – review & editing

Maharjan Sukrina: Investigation, Writing – original draft, Writing – review & editing

Tenzing Norbu Lama: Investigation, Writing – original draft, Writing – review & editing

Conflicts of Interest

The authors declare no conflicts of interest.

References

- [1] National Institute of Neurological Disorders and Stroke. Cerebral palsy. Bethesda (MD): National Institute of Neurological Disorders and Stroke; 2023. <https://doi.org/10.32388/671075>.
- [2] Gulati S, Sondhi V. Cerebral palsy: an overview. Indian J Pediatr. 2018; 85(11): 1006–1016. <https://doi.org/10.1007/s12098-017-2475-1>

- [3] Rosenbaum P, Paneth N, Leviton A, Goldstein M, Bax M, Damiano D, et al. A report: the definition and classification of cerebral palsy April 2006. *Dev Med Child Neurol.* 2007; 49(S109): 8–14. <https://doi.org/10.1017/s001216220500112x>
- [4] Murphy N, Caplin DA, Christian BJ, Luther BL, Holobkov R, Young PC. The function of parents and their children with cerebral palsy. *PM R.* 2011; 3(2): 98–104. <https://doi.org/10.1016/j.pmrj.2010.11.006>
- [5] Vova J. Cerebral palsy: an overview of etiology, types and comorbidities. *OBM Neurobiol.* 2022; 6(2). <https://doi.org/10.21926/obm.neurobiol.2202120>.
- [6] Manzoor F, Wei L, Hussain A, Asif M, Shah SIA. Patient satisfaction with health care services: an application of physician's behavior as a moderator. *Int J Environ Res Public Health.* 2019; 16(18): 3318. <https://doi.org/10.3390/ijerph16183318>
- [7] Sharan D. Recent advances in the management of cerebral palsy. *Indian J Pediatr.* 2005; 72(11): 969–973. <https://doi.org/10.1007/bf02731674>
- [8] Thawalyawichachit S. Factors affecting satisfaction of patients of physiotherapy clinics in Bangkok. *J Bus Adm Lang.* 2014; 2(2): 9–16. <https://doi.org/10.58837/chula.the.1999.492>
- [9] Tennakoon T, de Zoysa P. Patient satisfaction with physiotherapy services in an Asian country: a report from Sri Lanka. *Hong Kong Physiother J.* 2014; 32(2): 79–85.
- [10] Barham L. Starting on the path to high patient satisfaction with health care in India. *N Am J Med Sci.* 2012; 4(9): 411–413. <https://doi.org/10.1001/archinternmed.2011.1662>
- [11] Khan M, Ghous M, Amjad I, Nouman M, Yaqoob I. Level of satisfaction regarding physical therapy services in district Poonch Azad Jammu Kashmir. *J Pak Med Assoc.* 2020; 70: 1–5. <https://doi.org/10.5455/jpma.10977>
- [12] Hush JM, Cameron K, Mackey M. Patient satisfaction with musculoskeletal physical therapy care: a systematic review. *Phys Ther.* 2011; 91(1): 25–36. <https://doi.org/10.2522/ptj.20100061>
- [13] Hudak PL, Wright JG. The characteristics of patient satisfaction measures. *Spine.* 2000; 25(24): 3167–3177. <https://doi.org/10.1097/00007632-200012150-00012>
- [14] George SZ, Hirsh AT. Distinguishing patient satisfaction with treatment delivery from treatment effect: a preliminary investigation of patient satisfaction with symptoms after physical therapy treatment of low back pain. *Arch Phys Med Rehabil.* 2005; 86(7): 1338–1344. <https://doi.org/10.1016/j.apmr.2004.11.037>
- [15] 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. <https://doi.org/10.1186/1471-2474-9-50>
- [16] Beattie P, 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): 1046–1052. <https://doi.org/10.1093/ptj/85.10.1046>
- [17] Beattie P, Turner C, Dowda M, Michener L, Nelson R. The MedRisk instrument for measuring patient satisfaction with physical therapy care: a psychometric analysis. *J Orthop Sports Phys Ther.* 2005; 35(1): 24–32. <https://doi.org/10.2519/jospt.2005.35.1.24>
- [18] Hush J, Yung V, Mackey M, et al. Patient satisfaction with musculoskeletal physiotherapy care in Australia: an international comparison. *J Man Manip Ther.* 2012; 20(4): 201–208. <https://doi.org/10.1179/2042618612y.0000000009>
- [19] Hingarajia D. A psychometric analysis of patient satisfaction with physical therapy care. *Innov J Med Health Sci.* 2013; 3(5): 1–4. <https://doi.org/10.2519/jospt.2005.1471>
- [20] Kamau PW. Patient satisfaction with physiotherapy services for low back pain at selected hospitals in Kenya [dissertation]. Kenya: University of Nairobi; 2005. p. 172. <https://doi.org/10.24248/cahrj.v9i1.839>
- [21] Beattie PF, Pinto MB, Nelson MK, Nelson R. Patient satisfaction with outpatient physical therapy: instrument validation. *Phys Ther.* 2002; 82(6): 557–565. <https://doi.org/10.1093/ptj/82.6.557>