

# A Study on Satisfaction Level for Physiotherapy Treatment Among Caregivers of Cerebral Palsy in Kota City

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## ABSTRACT

### Background:

Cerebral palsy (CP) is a non-progressive neurological disorder characterized by impairments in movement, posture, and motor function caused by damage to the developing brain. Children with cerebral palsy often require long-term rehabilitation, including physiotherapy, to improve functional abilities and quality of life. Caregivers play a crucial role in the rehabilitation process, as they are responsible for assisting children with daily activities and therapy programs. Therefore, understanding caregiver satisfaction with physiotherapy services is important for improving rehabilitation outcomes and ensuring effective service delivery.

### Aim:

The aim of this study was to evaluate the satisfaction level of caregivers regarding physiotherapy treatment provided to children with cerebral palsy.

### Methodology:

A survey-based cross-sectional study was conducted among 36 caregivers of children with cerebral palsy who were regularly attending physiotherapy sessions. Participants were selected using convenient sampling. Caregiver satisfaction was assessed using the Caregiver Satisfaction Questionnaire for Cerebral Palsy Children (CSQCP), a self-report questionnaire consisting of 29 items divided into six domains, including coordinated care, delivery of information, respectful and supportive care, partnership, provision of information, and treatment response. Each item was scored on a four-point Likert scale, and the total score was converted into percentage satisfaction levels.

## Results:

The results revealed that the majority of caregivers demonstrated high satisfaction with physiotherapy services. Approximately 69.44% of caregivers reported satisfaction levels between 80–100%, indicating satisfaction to a very great extent, while 27.77% reported satisfaction between 60–79%. Only 2.77% of caregivers demonstrated satisfaction between 40–59%, and none reported lower satisfaction levels. An unpaired t-test comparing male and female caregivers showed no statistically significant difference in satisfaction levels ( $p > 0.05$ ). Higher education levels among caregivers were generally associated with higher satisfaction percentages.

## Conclusion:

The findings of the present study suggest that caregivers of children with cerebral palsy are highly satisfied with the physiotherapy services provided. Effective communication, supportive care, and active involvement of caregivers in rehabilitation programs may contribute to higher satisfaction levels and improved treatment outcomes.

**Keywords:** *Cerebral palsy, caregiver satisfaction, physiotherapy, rehabilitation, pediatric physiotherapy.*

## INTRODUCTION

Stroke is one of the leading causes of disability and mortality worldwide. It occurs due to an interruption of blood supply to the brain, which results in neurological deficits and functional impairments. Stroke can be broadly classified into **ischemic stroke**, caused by blockage of a blood vessel, and **hemorrhagic stroke**, caused by rupture of a blood vessel in the brain. The consequences of stroke often include **muscle weakness, loss of motor control, impaired balance, reduced functional independence, and difficulties in performing activities of daily living (ADLs)**.

Stroke survivors frequently require long-term rehabilitation in order to regain functional abilities and improve their quality of life. **Physiotherapy plays a crucial role in stroke rehabilitation**, as it focuses on improving motor control, muscle strength, balance, coordination, and mobility. Rehabilitation programs are often individualized and may include therapeutic exercises, gait training, balance training, and functional task practice.

In many cases, **family members act as the primary caregivers of stroke patients**, providing both physical and emotional support during the rehabilitation process. Caregivers assist patients with daily activities, transportation to rehabilitation centers, and adherence to home exercise programs. The involvement of caregivers is therefore essential for the successful rehabilitation of stroke patients.

However, caring for a stroke patient can place significant physical, emotional, and psychological stress on caregivers. The sudden onset of disability following stroke often leads to major lifestyle adjustments for both patients and their families. Caregivers may experience increased responsibilities, financial strain, and emotional burden while managing the long-term care of the patient.

Because caregivers are actively involved in the rehabilitation process, their **perception and satisfaction with physiotherapy services are important indicators of the quality and effectiveness of treatment**. A high level of caregiver satisfaction may improve adherence to rehabilitation programs, enhance patient motivation, and ultimately contribute to better functional outcomes.

Healthcare services that provide **clear communication, coordinated care, supportive interactions, and involvement of caregivers in treatment planning** are more likely to achieve higher satisfaction levels among caregivers. Therefore, assessing caregiver satisfaction with physiotherapy services can provide valuable information for improving rehabilitation programs and service delivery.

Although stroke rehabilitation services are widely available, **limited research has been conducted to evaluate caregiver satisfaction with physiotherapy treatment in Indian cities**, particularly in Kota city. Understanding caregiver satisfaction can help identify strengths and areas of improvement in physiotherapy services.

Therefore, the present study was undertaken to **evaluate the satisfaction level among caregivers of stroke patients who are receiving physiotherapy treatment in Kota city**.

## METHODOLOGY

### Sample

The study included a total of **30 caregivers of stroke patients** who were attending physiotherapy treatment sessions regularly at rehabilitation centers or clinics in Kota city.

### Sampling Method

Participants were selected using a **convenient sampling technique**, based on availability and willingness to participate in the study.

### Inclusion Criteria

- Caregivers of patients diagnosed with **stroke by a qualified physician or neurologist**.
- Caregivers who have been **accompanying the patient for physiotherapy rehabilitation for at least one month or more**.
- Caregivers who were **willing to participate and provide informed consent**.

### Exclusion Criteria

- Caregivers of patients suffering from **neurological conditions other than stroke**.
- Caregivers who had **not attended physiotherapy sessions with the patient for at least one month**.
- Individuals unwilling to participate in the study.

### Outcome Measure

A **Caregiver Satisfaction Questionnaire** was used to assess caregiver satisfaction regarding physiotherapy services. The questionnaire consisted of **multiple items assessing different aspects of physiotherapy care**, including:

- Coordinated care
- Delivery of information about the patient's condition
- Respectful and supportive care
- Provision of general information
- Partnership between therapist and caregiver
- Treatment response

Each item was scored using a **4-point Likert scale**, where:

- **0** – Not applicable
- **1** – Not at all
- **2** – To some extent
- **3** – To a great extent
- **4** – To a very great extent

The **maximum total score was calculated and converted into a percentage**, which was used to categorize satisfaction levels as follows:

Satisfaction Percentage	Interpretation
0–19%	Low satisfaction
20–39%	Satisfaction to a small extent
40–59%	Satisfaction to a good extent
60–79%	Satisfaction to a great extent
80–100%	Satisfaction to a very great extent

### Procedure

Initially, caregivers of stroke patients attending physiotherapy rehabilitation in **various clinics and rehabilitation centers in Kota city** were approached for participation in the study.

Participants were screened based on the **inclusion and exclusion criteria**. Those who met the criteria and agreed to participate were included in the study. **Informed consent was obtained from all participants before data collection.**

Demographic information such as **age, education level, and relevant patient details** was recorded. Participants were then provided with the **caregiver satisfaction questionnaire**, and necessary explanations were given in their preferred language to ensure proper understanding.

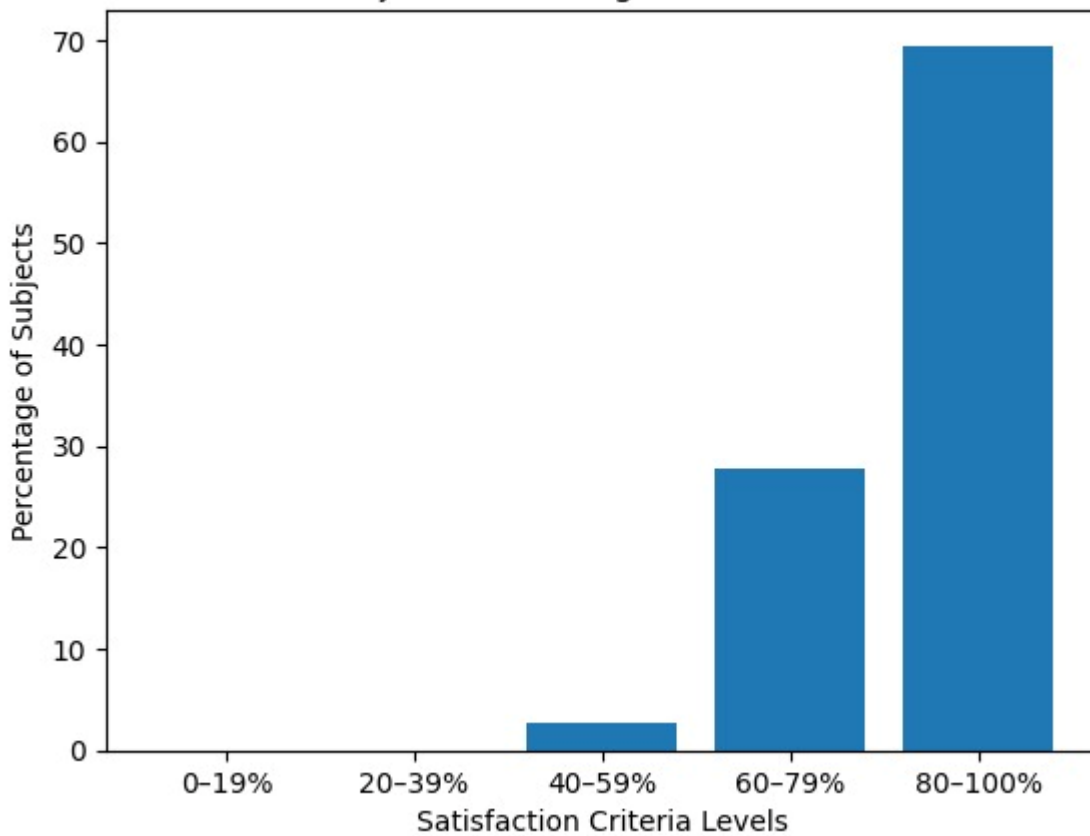
### RESULTS

A total of **36 caregivers of cerebral palsy children** were included in the present study to assess the **satisfaction level regarding physiotherapy treatment**. The collected data were analyzed using descriptive statistics and an **unpaired t-test**. The results are presented in the following tables.

**Table 1: Distribution of Subjects According to Satisfaction Criteria Levels**

Satisfaction Criteria Levels	Percentage of Subjects
0–19%	0%
20–39%	0%
40–59%	2.77%
60–79%	27.77%
80–100%	69.44%

### Distribution of Subjects According to Satisfaction Criteria Levels



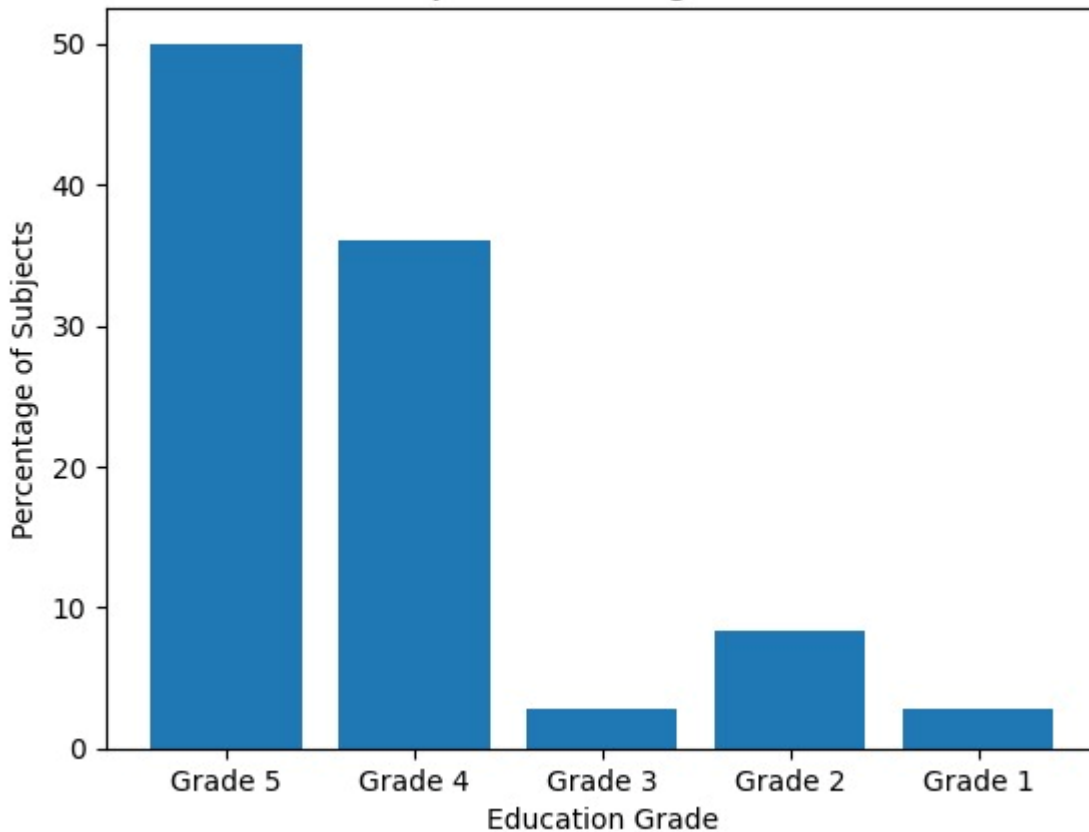
#### Interpretation

The above table shows that **69.44% of caregivers reported satisfaction levels between 80–100%**, indicating satisfaction to a very great extent. **27.77% of caregivers demonstrated satisfaction levels between 60–79%**, while only **2.77% reported satisfaction between 40–59%**. No participants reported satisfaction levels below 40%.

**Table 2: Distribution of Subjects According to Grades of Education**

Education Grade	Percentage of Subjects
Grade 5	50%
Grade 4	36.11%
Grade 3	2.77%
Grade 2	8.33%
Grade 1	2.77%

### Distribution of Subjects According to Grades of Education



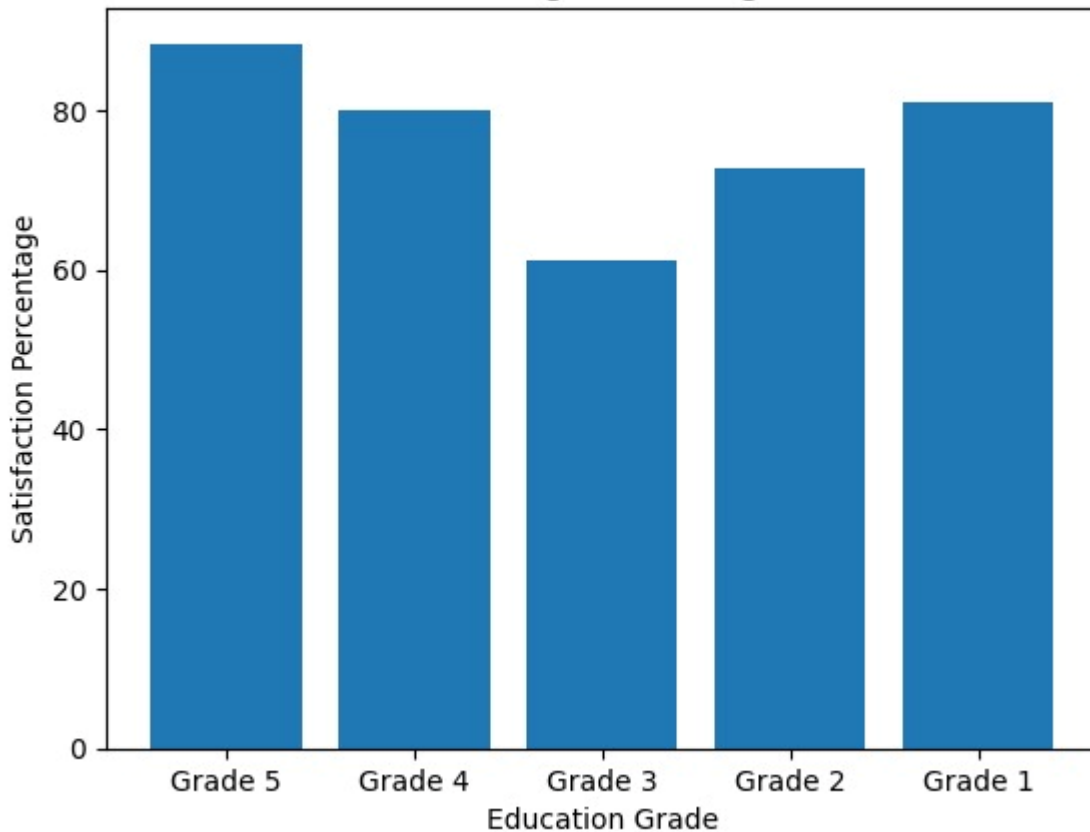
#### Interpretation

The majority of caregivers belonged to **higher educational levels**, with **50% categorized under Grade 5** and **36.11% under Grade 4**. Only a small proportion belonged to lower education grades.

**Table 3: Satisfaction Level Percentage According to Education Grades**

Education Level	Number of Subjects	Satisfaction Percentage
Grade 5	18	88.36%
Grade 4	13	79.97%
Grade 3	1	61.20%
Grade 2	3	72.69%
Grade 1	1	81.03%

### Satisfaction Level Percentage According to Education Grades

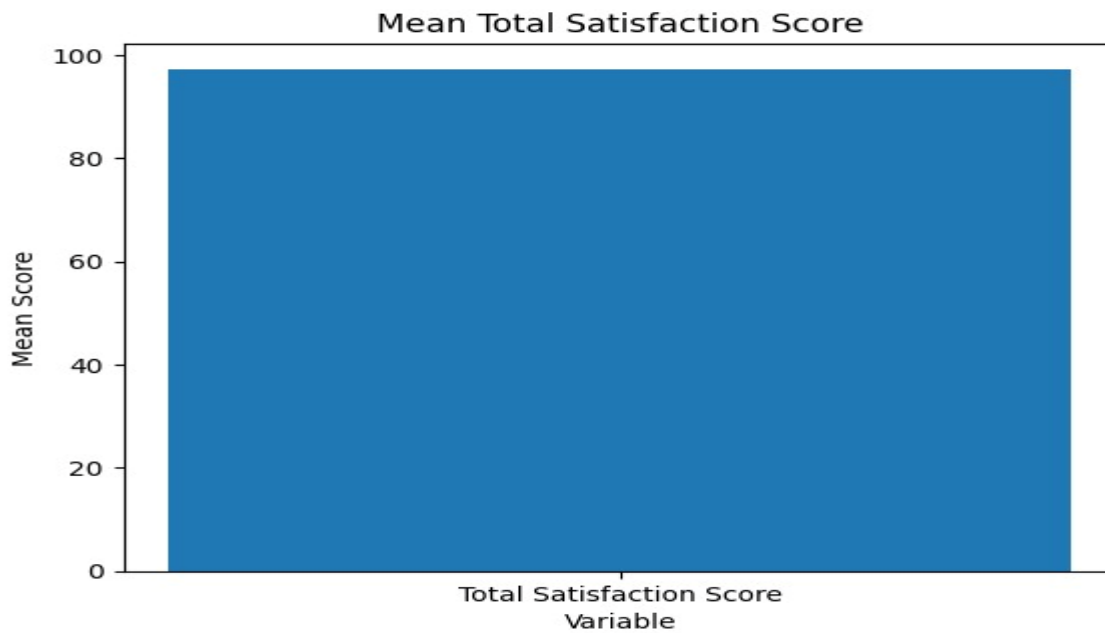


#### Interpretation

Caregivers with **Grade 5 education** showed the highest satisfaction level (**88.36%**), followed by **Grade 1 (81.03%)** and **Grade 4 (79.97%)**. Overall, caregivers across all education levels demonstrated **moderate to high satisfaction with physiotherapy treatment**.

**Table 4: Mean and Standard Deviation of Total Satisfaction Score**

Variable	Mean	Standard Deviation
Total Satisfaction Score	97.30	14.52



### Interpretation

The mean total satisfaction score was  $97.30 \pm 14.52$ , indicating that the majority of caregivers reported **high satisfaction with physiotherapy services**.

The analysis of the data indicates that **most caregivers demonstrated high satisfaction levels with physiotherapy treatment**. The majority of participants reported satisfaction between **80–100%**, suggesting that physiotherapy services were well accepted. Additionally, no statistically significant difference was found in satisfaction levels between **male and female caregivers**.

### DISCUSSION

The present study was conducted to evaluate the satisfaction level for physiotherapy treatment among caregivers of cerebral palsy children. Caregiver satisfaction is an important indicator of the quality of healthcare services and plays a significant role in the overall rehabilitation process of children with cerebral palsy.

In this study, a total of 36 caregivers of children with cerebral palsy who were attending physiotherapy treatment sessions regularly were included. The Caregiver Satisfaction Questionnaire for Cerebral Palsy Children (CSQCP) was used to assess caregiver satisfaction across various domains, including coordinated care, delivery of information, respectful and supportive care, partnership, and treatment response.

The results of the present study demonstrated that the majority of caregivers reported high satisfaction levels with physiotherapy treatment. According to the satisfaction criteria levels, 69.44% of caregivers reported satisfaction levels between 80–100%, which indicates satisfaction to a very great extent. Additionally, 27.77% of caregivers demonstrated satisfaction levels between 60–79%, representing satisfaction to a great extent. Only 2.77% of caregivers reported satisfaction between 40–59%, and none of the participants reported satisfaction levels below 40%. These findings suggest that physiotherapy services provided to children with cerebral palsy were well perceived and appreciated by caregivers.

The high satisfaction levels observed in the present study may be attributed to several factors such as effective communication between physiotherapists and caregivers, supportive interactions, coordinated care, and active involvement of caregivers in the rehabilitation process. Physiotherapists often educate caregivers regarding therapeutic exercises, proper handling techniques, and home-based management strategies, which can improve caregiver confidence and satisfaction with treatment services.

The results also showed that most caregivers belonged to higher educational levels, with 50% categorized under Grade 5 and 36.11% under Grade 4. Caregivers with higher education levels demonstrated comparatively higher satisfaction percentages. Specifically, Grade 5 caregivers showed the highest satisfaction level (88.36%), followed by Grade 1 (81.03%) and Grade 4 (79.97%). These findings suggest that caregivers with higher educational backgrounds may have better understanding of rehabilitation processes and treatment goals, which may positively influence their perception of physiotherapy services.

An unpaired t-test was conducted to compare satisfaction levels between male and female caregivers. The mean satisfaction score among male caregivers was  $91.00 \pm 18.23$ , whereas the mean score among female caregivers was  $100.33 \pm 11.23$ . The calculated t value was 1.47 with a p value of 0.15, indicating that the difference between male and female caregivers was not statistically significant. This suggests that caregiver gender did not significantly influence satisfaction with physiotherapy treatment in the present study.

The findings of the present study are consistent with previous research emphasizing the importance of family-centered care in pediatric rehabilitation. Studies have shown that caregivers value healthcare services that provide clear communication, emotional support, coordinated care, and active involvement in treatment planning. When caregivers feel supported and informed, they are more likely to participate actively in the rehabilitation process and adhere to therapeutic recommendations.

Furthermore, several studies have reported that caregivers of children with disabilities often experience emotional stress and increased caregiving responsibilities. Therefore, providing supportive and collaborative physiotherapy services can help reduce caregiver stress and improve their overall satisfaction with rehabilitation programs.

Overall, the findings of the present study highlight that physiotherapy services for children with cerebral palsy are associated with high levels of caregiver satisfaction, which may contribute to better rehabilitation outcomes and improved quality of life for both children and their families.

## LIMITATIONS OF THE STUDY

Despite providing useful insights into caregiver satisfaction with physiotherapy services, the present study had certain limitations:

### 1. Small Sample Size

The study included only **36 caregivers**, which may limit the generalizability of the findings to a larger population.

### 2. Convenient Sampling Method

Participants were selected using **convenient sampling**, which may introduce sampling bias and may not accurately represent the entire population of caregivers of children with cerebral palsy.

### 3. Limited Geographical Area

The study was conducted only in **Dehradun city**, therefore the findings may not be applicable to other regions or populations.

### 4. Self-Reported Questionnaire

The caregiver satisfaction questionnaire relied on **self-reported responses**, which may be influenced by personal perceptions, recall bias, or social desirability bias.

### 5. Cross-Sectional Study Design

The study assessed satisfaction levels at **one point in time** and did not evaluate changes in caregiver satisfaction over a longer duration of rehabilitation.

### 6. Limited Variables Considered

Factors such as **socioeconomic status, severity of disability, and duration of treatment** were not extensively analyzed, which could also influence caregiver satisfaction.

## RECOMMENDATIONS FOR FUTURE RESEARCH

Based on the findings and limitations of the present study, the following recommendations are suggested for future research:

### 1. Larger Sample Size

Future studies should include a **larger sample size** to improve the reliability and generalizability of the results.

### 2. Multi-Center Studies

Research can be conducted across **multiple rehabilitation centers and hospitals** in different cities to obtain more representative data.

### 3. Longitudinal Studies

Long-term studies may be conducted to evaluate **changes in caregiver satisfaction over time during the rehabilitation process**.

### 4. Evaluation of Additional Factors

Future research should examine the influence of **socioeconomic status, caregiver stress levels, severity of cerebral palsy, and duration of physiotherapy treatment** on caregiver satisfaction.

### 5. Comparison of Rehabilitation Approaches

Comparative studies may evaluate **different physiotherapy interventions or rehabilitation programs** to determine which approaches produce higher caregiver satisfaction.

### 6. Caregiver Education and Support Programs

Studies may also investigate the effectiveness of **caregiver training programs and counseling services** in improving caregiver satisfaction and rehabilitation outcomes.

## CONCLUSION

The present study was conducted to assess the satisfaction level of caregivers regarding physiotherapy treatment for children with cerebral palsy. Based on the results obtained from the study, it can be concluded that the majority of caregivers demonstrated high levels of satisfaction with physiotherapy services.

Most caregivers reported satisfaction levels between 80–100%, indicating satisfaction to a very great extent, while a smaller proportion reported satisfaction between 60–79%. Only a minimal number of caregivers demonstrated moderate satisfaction levels, and none reported low satisfaction.

The study also found that caregivers with higher educational levels generally demonstrated higher satisfaction percentages, suggesting that education may influence caregivers' understanding and perception of rehabilitation services. However, the comparison of satisfaction levels between male and female caregivers did not show a statistically significant difference, indicating that caregiver gender did not significantly affect satisfaction levels.

Overall, the findings suggest that physiotherapy treatment services provided to children with cerebral palsy were well accepted by caregivers, and the rehabilitation programs were perceived as effective and supportive. These results emphasize the importance of maintaining family-centered care, effective communication, and caregiver involvement in physiotherapy rehabilitation programs.

Such approaches can help improve caregiver satisfaction and may contribute to better treatment adherence and improved rehabilitation outcomes for children with cerebral palsy.

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