



Characterization of Therapy Services for Children with Cerebral Palsy

Robert Palisano, PT, ScD, FAPTA

Drexel University, Philadelphia, PA

Sarah McCoy, PT, PhD, FAPTA

University of Washington, Seattle, WA

Doreen Bartlett, PT, PhD

Western University, London, Ontario

Lisa Chiarello, PT, PhD, PCS, FAPTA

Drexel University, Philadelphia, PA





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Barb Galuppi, study coordinator

Co-Investigators:

Alyssa Fiss, PT, PhD, PCS, Mercer University

Lynn Jeffries, PT, PhD, PCS, University of Oklahoma



The amount and focus of therapy services for children with cerebral palsy (CP) are complex issues.

Motor function, age, and family needs for the child are considerations for decision making.

The purpose of this study was to characterize the amount and focus of therapy, and parent perceptions of services.



Participants

Convenience sample of 692 children with CP, 18 months to 12 years, and their parents residing in the USA and Canada.

Children were grouped by:

- Age (≤ 59 months; ≥ 60 months)
- Gross Motor Function Classification System (GMFCS) level (I, II/III, IV/V).



Measures & Procedure

GMFCS level - obtained through consensus of parent and therapist

Services Questionnaire – completed by parents

- Number of physical therapy sessions in past 12 months
- **8 items on the focus of therapy**
 - primary & secondary impairments
 - activities & participation
 - assistive technology/environment modifications
 - self-awareness / motivation
 - health & well-being



Services Questionnaire

12 items on therapist family centered practices

- Obtain information on family routines
- Recommendations for activities for child's daily routines
- Assist in finding community resources
- Involve child & family in deciding focus of therapy visits

4 items on the extent services met child & family needs

- Motor abilities
- Self-care
- Participation in play, leisure, recreation
- Overall health



Services Questionnaire

Rating Scale: 5 response options

1= Not at all

2 = To a small extent

3 = To a moderate extent

4 = To a great extent

5= To a very great extent

Parents provided a single rating of focus of PT, OT, ST the past 12 months & extent services met needs



Data Analysis

Two-way ANOVA - effect of **age** and **GMFCS level** on **number of PT sessions** in the past 12 months

One-way ANOVAs - effect of **GMFCS level** on the:

Focus of therapy interventions

Extent services were **family-centered**

Extent services **met child & family needs**

Multiple comparisons were performed using the Least Significant Difference test



Results





Wide variation in number of sessions during past 12 months

Number of Sessions	Number of Children	Percentage
0	38	5.5%
1-11	176	25.4%
12-25	150	21.7%
26-51	160	23.1%
52-104	108	15.6%
≥ 105	60	8.7



Effect of Age on number of sessions of PT in past 12 months

	N	Mean	Standard Deviation
Children < 59 months	265	40.8	40.4
Children ≥ 60 months	418	39.7	48.3

$F(1, 677) = 0.41; p = .52$

There was no difference in the mean number of PT sessions between younger and older children



Effect of GMFCS level on number of sessions PT in past 12 months

	N	Mean	Standard Deviation
Level I	223	22.8	30.5
Levels II / III	234	42.5	43.9
Levels IV / V	235	55.2	51.8

$F(2, 677) = 30.8; p < .001$

Post Hoc Analysis:

Children in levels IV/V received the most sessions ($p < .001$)

Children in level I received the fewest sessions ($p < .001$)



Focus of Therapy

Therapy for children in level I focused more on activities compared to children in levels II/III

Therapy for children in levels IV/V focused more on primary impairments, assistive technology and environmental modifications, and structured play, recreation, and leisure

There were no differences in focus on secondary impairments, self-care, self-awareness / motivation, or health and well-being



Family Centered Practices

Parents rated that therapists engaged in 8 of the 12 family-centered practices a ***moderate to great extent*** (M=3.2-3.9)

Therapists interacted effectively with the child a ***great to very great extent*** (M=4.6)

Therapists:

- Assisted the family in finding community resources (M=2.9)
- Used the child's toys and natural environment (M=2.7)
- Provided therapy in community settings (M=1.7)

small to moderate extent



Extent Needs Met

Parents rated that needs related to their children's:

- Motor abilities (M=3.8)
- Self-care (M= 3.2)
- Participation (M=3.4)
- Overall health (3.8)

moderate to great extent



Conclusions

- Children with greater limitations in gross motor function received more PT sessions
- Children less than 5 years and children 5 years and older did not differ in number of PT sessions
- Wide variation in number of sessions suggests that factors other than age and in addition to motor function influence decisions on amount of PT



Conclusions

- The focus of therapy differed to some extent based on children's GMFCS levels
- Overall, parents reported that therapists engaged in family-centered practices and therapy services met family needs for their children



Clinical Relevance

- Decisions on amount and focus of therapy for children with CP are based, in part, on gross motor function.
- Therapists are encouraged to consider community resources, the child's environment, and collaborate with families to make decisions about the amount and focus of services.



Thank you

