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CanChild



BACKGROUND AND AIMS

Physical (PT), occupational (OT), and speech (ST) therapy service decisions for children with cerebral palsy (CP) are important from many perspectives (i.e., efficacy, time management, cost of services, etc.)^{1,2}

Our aims were, as children aged:

- To compare changes in parents' report of amount and focus of PT, OT and ST, rating of the extent to which services met their children's needs, and the frequency of children's participation in family, community, recreation and leisure activity.
- To examine correlations of service amount, focus and meeting needs to children's participation in family, community, recreation and leisure activity.

METHODS

SAMPLE

- 77 children with CP; 41 male, 36 female
- 61 white; 14 non-white; 2 not reported
- GMFCS level I = 20; II = 23; III = 7; IV = 10; V = 17
- Reside in USA = 40; reside in Canada = 37
- Families' income (USA dollars): up to \$74,999 = 33.8%; >\$75,000 = 55.9%; missing = 10.4%

INSTRUMENTATION

- Services Questionnaire¹
 - # of PT, OT, ST intervention hours in past 12 months
 - 6 items on the focus of therapy:
 - primary impairments
 - secondary impairments
 - activity
 - environment modifications
 - self-care
 - play
 - 3 items on the extent services met child's needs in:
 - Motor abilities
 - Self-care
 - Participation in play, leisure, recreation
 - Rating scale (focus, needs met):
 - 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
- Child Engagement in Daily Life³
 - 6 activities on family and community life participation
 - 5 items on leisure & recreation participation
 - Rating how often child participates in activity as:
 - 1 = Never
 - 2 = Almost never
 - 3 = Once in a while
 - 4 = Often
 - 5 = Very often

PROCEDURES

- When children were 1.5-4.6 years old, their families participated in the *Move & PLAY* study (2006-2009) and when children were 6.3-11.1 years age, their families participated in the *On Track* study (2012-2017).
 - Mean younger age: 2.9 yrs (SD=.9); older age: 8.7 yrs. (SD=1.1); Mean difference = 5.8 years (SD=.6)
- Parents completed the Services Questionnaire and the Child Engagement in Daily Life measure in each study.

ANALYSIS

- Parent estimated hours/year of services of PT, OT, and ST from each time period were compared using Wilcoxin signed-rank tests due to skewed data.
- Parent average ratings for each therapy focus item and average rating for extent to which parents perceived that services met their children's needs for each time period were compared using paired t-tests.
- Correlations between parents' average ratings of participation frequency to service amount, focus, and extent that children's needs were met were calculated.

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RESULTS

Comparison of services amount, extent services met children's needs, and participation frequency at younger and older ages

	PT hrs/yr Median (min/max)	OT hrs/yr Median (min/max)	ST hrs/yr Median (min/max)	Extent needs met Median (min/max)	Participation Median (min/max)
Younger age	48 (0-192)	24 (0-168)	15 (0-108)	4 (2-5)	3.7 (1.8-5)
Older age	12 (0-156)	10 (0-102.5)	3 (0-118.5)	3.33 (1-5)	4 (2.1-5)
Comparison p value*	<.001	<.001	<.001	<.001	.001

*Compared using Wilcoxin sign rank tests

Comparison of service focus at younger and older ages

	Primary Impairments Mean (SD)	Secondary Impairments Mean (SD)	Activity Mean (SD)	Environment modifications Mean (SD)	Self-care Mean (SD)	Play Mean (SD)
Younger age	4.0 (0.8)	3.1 (1.1)	3.5 (1.2)	2.8 (1.1)	2.2 (1.2)	3.6 (1.3)
Older age	3.6 (1.3)	3.7 (1.4)	3.5 (1.4)	3.2 (1.3)	2.4 (1.4)	2.8 (1.3)
Comparison p value*	.01	.001	.77	.02	.26	<.001

*Compared using paired t-tests

Correlations* of participation frequency to service amount, extent services met children's needs, and focus at younger and older ages

	PT amount r_s (p)	OT amount r_s (p)	ST amount r_s (p)	Extent needs met r (p)
Younger age participation	-.16 (.16)	-.05 (.68)	-.18 (.12)	.26 (.02)
Older age participation	-.06 (.60)	-.16 (.17)	-.19 (.10)	.40 (<.001)

	Primary Impairments r (p)	Secondary Impairments r (p)	Activity r (p)	Environment modifications r (p)	Self-care r (p)	Play r (p)
Younger age participation	-.18 (.12)	.05 (.68)	.27 (.02)	-.09 (.43)	-.07 (.58)	-.11 (.35)
Older age participation	-.10 (.40)	-.08 (.52)	-.09 (.48)	-.12 (.30)	.04 (.72)	-.02 (.90)

*Spearman's correlations used for services amount, Pearson's for needs met & focus.

CONCLUSIONS

As children aged, parents' ratings of:

- PT, OT and ST amounts and extent to which children's needs were met decreased.
- Therapy focus showed that: 1) primary impairments decreased, 2) secondary impairments and environmental modifications increased, 3) activity, self-care, and play did not change.

Correlations of children's participation frequency to services amount, extent to which children's needs were met, and focus were significant for:

- Ratings of extent services met children's needs at both ages, and activity focus at the younger age.

CONSIDERATIONS FOR PRACTICE

- Because parents' rating of the extent to which their children's needs are met lowered as children aged, and the positive correlation of this rating to children's participation frequency, future research should examine this issue in more detail.
- Service providers and families should have conversations about children's needs and the outcome of participation in order to facilitate all stakeholders' understanding and assist in collaborative decision making for service amount and focus.⁴

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