# A Survey on Parent-Conductor Relationship: Unveiling the Black Box

## Schenker, R.,

Tsad Kadima, The Association for Conductive Education, Israel

#### Rigbi, A.,

Department of Behavioral Sciences, Kinneret Academic College on the Sea of Galilee,

Beit Berl Academic College Research Authority, Kfar Sava, Israel,

Parush, S.,

#### Yochman, A.

School of Occupational Therapy, Hadassah and the Hebrew University,

## **Faculty of Medicine, Israel**

#### Abstract

Teacher's perceptions and attitudes regarding working with parents are critical factors contributing to family-centered service. This survey provides an in-depth understanding of the

components perceived by conductors (teachers in Conductive Education settings) as being cornerstone of successful parent-conductor relationships. The Conductors and Parents Questionnaire of children with disabilities was administrated to thirty-seven conductors (97% consent rate). Conductors identified working with parents, exploring parent goals, degree of parental investment and instilling a sense of confidence in parents as the most significant factors enabling a child's progress. Evidence of significant factors contributing to successful partnerships emphasize delivering services in a wider context, in which families and not just children are the focus for support

**Keywords**: cerebral palsy; family-centered service; conductive education; family - professional relationships

#### Introduction

"No man is an island, entire of itself, every man is a piece of the continent, a part of the main" (JohnDonne,1624).

Contemporary conceptualization of family-centered service (FCS) views the family as an inseparable part of the child's development, whose responsibility is to cope with the multifaceted challenges associated with child's life long management. (King & Chiarello, 2014). This perspective, supported by the framework of the International Classification of Functioning, Disability and Health (WHO, 2001), expands our view to include the child's family in the educational and interventional process, and promotes family-professional collaboration as the context of intervention (Dunst, 2002; Rosenbaum, 2007, 2008). Family-professional collaboration refers to mutually supportive interactions between families and professionals,

focused on shared goals, meeting the needs of children and families, and characterized by a sense of equality, positive communication, respect and trust (Hanna & Rodger, 2002; King, King, & Rosenbaum, 2004; Summers et al., 2005; Keen, 2007; An et al., 2015). While stressing the importance of parent-professional collaboration, accumulating research reveals discrepancies between professionals' and parents' beliefs regarding collaboration and its implementation into actual practice. Findings indicate that while professionals provide parents with knowledge and skills related to their child's intervention, there is less emphasis on parent concerns and needs (Bamm & Rosenbaum, 2008; Hinojosa, Sproat, Mankhetwit, & Anderson, 2002). Furthermore, Bezdek, Summers, & Turnbull (2010) found indications of professionals' dissatisfaction with parent partnerships, particularly regarding their lack of follow-through by the parents. They also noted that despite professionals' verbalized commitment to family-centered principles, in practice they tend to take a controlling approach. In addition, concern has been raised that empowering parents to assume more responsibility results in a loss of focus on the development of true collaborative relationships between families and healthcare providers (Leiter, 2004; MacKean, Thurston, & Scott, 2005).

Explanations for this discrepancy vary, and include indications that professionals' place less emphasis on parent concerns and needs (Bamm & Rosenbaum, 2008; Hinojosa., et al., 2002) do not see parents are not seen as equal partners, continue to maintain control (Blue-Banning, Summers, Frankland, Nelson, & Beegle, 2004); and fail to operationally define the construct of partnership and develop meaningful accountability. Also lacking are preparation programs and strategies for professionals to promote collaboration (Dunst, 2000; An & Palisano, 2014; Sewell, 2012).

In accordance with these findings, Raghavendra, Murchland, Bentley, Wake-Dyster, & Lyons (2007) call for further exploration of families, (Hinojosa, Anderson, & Ranum, 1988; Hinojosa et al., 2002). It may therefore be of great value to illuminate this multidimensional process.

In understanding such views, the specific nature of the intervention program has been shown to be significant (Tang, Chong, Goh, Chan, & Cho, 2011). One such program is Conductive Education (CE), a worldwide comprehensive system for educating children (mainly those with cerebral palsy) and adults with physical disabilities. (Schenker, Parush, Rosenbaum, Rigbi, & Yochman, 2016).

Conductive Education (CE), developed originally in Hungary by *András Petö* and followers, is a comprehensive educational system for raising and educating children and adults with physical disabilities. Its underlying premise is that children's development and learning are distorted due to the effects of the manifestations of neurological impairment upon body function and through this, upon individuals' transactions with the social and material environments, through which learning and development occur. This counterproductive learning process may lead to the development of non-use at the physical level and learned helplessness at the psycho-social level, and may restrict children's ability to adapt to changing environmental conditions and become active participating autonomous persons (Sutton, 1988; Kozma, 1995; Bourke-Taylor, O'Shea, & Gaebker – Spira, 2007; Feuerstein, 2008; Schenker, Capelovitch, Sutton, & Rosenbaum, 2010; Lotan, Schenker, Wine, J, & Downs, 2012). Based on the belief that child development is active, reciprocal and transformation in nature if provided with appropriate learning conditions, CE offers a unified process of teaching and learning that merges the various developmental domains (e.g. emotional, cognitive, motor, communicative) through a unique integrative pedagogy of

social and psychological mediation (conductive pedagogy), led by a broadly-trained teacher specialist known as a 'conductor', in an appropriate organizational structure.

Tsad Kadima (TK) (Hebrew for 'a step forward'), is the Association for CE in Israel, established as a collaborative educational initiative of parents and professionals, providing nationwide services to children and adults with CP in educational and community settings. Conductors delivering the conductive pedagogy are the primary workers in the trans-disciplinary team working with the child and are therefore the main figures to collaborate with parents (Schenker, et al., 2016).

As part of a comprehensive study to evaluate the family-centeredness of Tsad Kadima as a FCS (Schenker, et al., 2016), the aim of this survey was to unveil the components, which comprise the parent-conductor relationship, perceived by conductors as being cornerstones of family-center service. To the best of our knowledge, such close examination of the unique characteristics of parent-conductor relationships has never been explored.

Our survey seeks to explore conductors' perceptions regarding the following: (1) views about working with parents; (2) enabling and restricting factors in working with parents; (3) issues important to parents (4) conductors' roles with parents; and (5) positive and negative feelings characterizing parent-conductor interactions.

#### Methods

**Participants** 

Thirty-seven out of thirty-eight conductors (97% consent rate) working in TK's conductive education settings nationwide (nurseries, kindergartens, schools, and day care centers)

participated (mean age 36.1 years, range 23 to 49 years), all but one were women, the majority married with children, all working full-time. About two-thirds (24) had earned a bachelor's degree in Education/Special Education and one-third (13) a master's degree. Almost 50% had worked more than 10 years in TK. The majority of the conductors (97%) had taken courses on family-centered service.

Instruments of evaluation

"Conductors and Parents of Children with Disabilities" (CPCD) is the adapted Hebrew version of the "Occupational Therapists and Parents of Preschool Children with Disabilities Questionnaire" (Hinojosa, et al., 1988, 2002). The original questionnaire was reported to have face and content validity. Reliability for the first two sections, using Cronbach's alpha coefficient, was found to be 0.77 (Hinojosa, et al., 2002). The questionnaire consists of 59 items, divided into eight sections, which vary in format, featuring both continuous and categorical variable as well as some openended questions. Following approval by the developers, the questionnaire was translated into Hebrew followed by the standardized procedures required for back-translation. adaptation of the CPCD was discussed in a multidisciplinary group of experts, with minor linguistic and content adaptations, and was found to be culturally adaptable. Table 1 presents reliability analysis of the translated questionnaire sections composed of continuous variables. The analysis revealed moderate to good internal reliability coefficients ranging from  $\alpha$ =0.62 to  $\alpha$ =0.83.

Table 1: Reliability analysis of questionnaire continuous sections

Survey sections

Reliability (Cronbach α)

A: Conductors' views about working with parents 0.62<sup>a</sup>

of children with disabilities

B: Conductors' views about obstacles that limit 0.75<sup>b</sup> working with parents of children with disabilities

D: Feelings that may characterize parents'- 0.63 (all items)

conductors interactions 0.78 (positive feelings items)

0.63 (negative feelings items)

F: Importance of factors when treating children 0.83

with disabilities

**Procedure** 

Following approval from the Ethical Committee of the Association for Conductive Education in

Israel, the participants received written invitations to participate in the survey, describing its

purpose, and a blank copy of the CPCD questionnaire. Consent was indicated by submission of

the questionnaires. Participants sent the questionnaire to the setting's secretariat who transferred

it anonymously to the chief researcher. As return packages were anonymous, an effort was made

to optimize response rates by sending two reminders to all participants (after two weeks and after

a month).

Statistical analysis

Summary statistics for continuous variables are presented as means with standard deviations.

Summary statistics for categorical variables are presented as counts and percentages.

**Results** 

Results are presented according to the survey aims as indicated in the Introduction. Tables are

presented either as full rating scales, or as two joint categories.

1. Conductors' views about working with parents of children with disabilities

Respondents ranked their agreement with statements related to their views about working with

parents (Table 2.). The vast majority of the conductors (97%) agreed that they work most

effectively when parents appear invested in their child's progress, and that working with parents

393

has a greater impact than any other aspect of intervention (95%). Furthermore, the majority (95%) disagreed that Conductive Education with a focus on the child's development of physical and cognitive skills, is more important than working with the parents. In addition, they reported that conductors' basic professional education adequately prepares them to work with parents (84%), and that they reported that conductors' basic professional education adequately prepares them to work with parents (84%), and that they have enough time to spend with parents (73%).

Table 2: Descriptive findings of conductors' views about working with parents of children with disabilities

<u>Item content</u>	Agree (3,4)	Disagree (1,2)
	n (%)	n (%)
Conductors work most effectively with parents who appear	36 (97%)	1 (3%)
invested in their child's progress.		
Working with parents has a greater impact on a child with	35 (95%)	2 (5%)
disabilities than any other aspect of intervention.		
The importance of working with parents of children with	14 (38%)	23 (62%)
disabilities has been overemphasized.		
Parent's feelings towards their child's disabilities interferes with	10 (27%)	27 (73%)
intervention objectives.		
Conductors do not have enough time to spend with parents.	10 (27%)	27 (73%)
Parents do not understand the roles of conductors.	8 (22%)	29

#### 2. Conductors' perceptions of enabling and restricting factors

Table 3: Descriptive findings of conductors' attributes for enabling factors in working relationships with parents

Item content	1 Most Important	2	3	4	5	6	7 Least Important
	n	n	n	n	n	n	n
	(%)	(%)	(%)	(%)	(%)	(%)	((%)
-Instilling a sense of confidence	31	3	2	0	1	0	0
	(84%)	(8%)	(5%)	(0%)	(3%)	(0%)	(0%)
-Being a good listener	4 (11%)	13 (35%)	10 (27%)	4 (11%)	5 (14%)	1 (3%)	0 (0%)

-Showing empathy with parents' situation	3 (8%)	6 (16%)	12 (32%)	12 (32%)	3 (8%)	1 (3%)	0 (0%)
and stressors	0	7	7	4	9 (220/)	E (140/)	
-Being knowledgeable	0 (0%)	7 (19%)	7 (19%)	4 (11%)	8 (22%)	3 (14%)	6 (16%)
about the effects							
of the disability			_				_
-Being	0 (0%)	4 (11%)	3 (8%)	10 (27%)	8 (22%)	9 (24%)	3 (8%)
responsive to the needs of the	,	,	,				
parents							
-Following	0	2	4	8 (22%)	10 (27%)	9 (24%)	4
through with	(0%)	(5%)	(11%)				(11%)
commitments							
-Having a good	0	0	0	0	2	11 (30%)	24
sense of humor	(0%)	(0%)	(0%)	(0%)	(5%)		(65%)

Tables 3 and 4 describe the conductors' perceptions of enabling and restricting factors in working with parents. Regarding perceptions of enabling factors, from a list of seven characteristics, conductors were asked to rank-order what they believed would develop enabling and effective working relationships with parents. As can be seen from Table 3, "Instilling a sense of confidence" was ranked as the most important characteristic (84% agreement rate), whereas "having a good sense of humor" was ranked as the least important (0% agreement rate).

Regarding issues perceived as potential obstacles that may restrict working with parents, Table 4 shows that "Insufficient time to talk with parents" and "Parental over-involvement" were perceived as being major obstacles in working with parents (73% and 62% agreement rates, respectively).

Table 4: Descriptive findings of issues perceived as obstacles that may restrict working with parents

Major to moderate Minor to no obstacle (3,4) obstacle (1,2)

Item content

	n (%)	n (%)
Insufficient time to talk with parents	27 (73%)	10 (27%)
Parental over-involvement	23 (62%)	14 (38%)
Child's developmental limitations	21 (57%)	16 (43%)
Lack of appropriate skills to deal with parents	18 (49%)	19 (51%)
Parent financial limitations	17 (46%)	20 (54%)
Parental non-involvement	17 (46%)	20 (54%)
Personal conflicts with the value system of the facility	15 (41%)	22 (59%)
Lack of clarity of the role of occupational therapists in working with parents	12 (32%)	25 (68%)
Lack of support services for parents	11 (30%)	26 (70%)
Administrative limitations	11 (30%)	26 (70%)
Difficulty adjusting to parents' cultural values	10 (27%)	27 (73%)

Perceptions were also measured qualitatively using two open-ended questions: (1) What are the most difficult issues that you have had in working with parents? and (2) What are the most satisfying experiences that you have had in working with parents? Both difficult issues and satisfying experiences varied. Among difficult issues mentioned were coping with unrealistic parental expectations regarding the child's progress, parents' coping with transitions from kindergarten to school settings, parents stress, non-involvement and over-involvement with their child. Among satisfying experiences, conductors mentioned parental gratitude and appraisal, parental presence and cooperation, respect and satisfaction, hope and excitement.

#### 3. Issues important to parents

From a list of eight issues relevant to having a child with disabilities, conductors were asked to rank three issues that most commonly arose during their interaction with parents. Altogether, when looking at those issues ranked first, second and third most common were; "*The child's progress/lack of progress*" (65%/48%), followed by "*Parent's individual difficulties*" (52%), and

"Adjusting to their child's disabilities" (49%). "Parental decisions regarding the child's life" and "The cause of the child's disability" were ranked as the least common issues.

In addition, conductors were asked to rank their perceptions of parental concerns related to six areas of the child's progress from 'most concerned' (1) to 'least concerned' (6). The three most concerning issues were "ambulation" (43%), "speech/language" (22%), and "independence in ADL" (16%). The concerns ranked least important were "future concerns about their child's ability to manage" (32%) and "reducing negative behaviors" (49%).

#### 4. Roles of conductors with parents

Conductors rated, on a 4-point scale from 'not important' to 'essential', the importance they ascribe to eight roles related to working with parents (Table 5). The majority (above 90%) ranked about two-third items as 'important' (e.g. "Providing information to parents as to what their child can do", "exploring parent goals"). About two-thirds of these items were ranked by approximately 50% of the respondents as 'essential' (e.g. "providing the parents with support and encouragement when there is no progress"), whereas "Explaining the causes of the child's disabilities" was perceived by two-thirds of the respondents (65%) as 'least important'.

Table 5: Descriptive findings of roles of conductors when working with parents of a child with disabilities

<u>Item content</u>	Not to somewhat important (1,2)	t Very important to essential (3,4)
	n (%)	n (%)
Providing information to parents as to what their child can do	1 (3%)	36 (97%)

Providing the parents with support and	1 (3%)	36 (97%)
encouragement when there is no progress		
Helping parents to understand their roles in the	2 (1%)	35 (95%)
education process		
Instructing parents on a home - program	3 (8%)	34 (92%)
Exploring parent goals	3 (8%)	34 (92%)
Providing parents with information on advocacy	10 (27%)	27 (73%)
programs and support groups		
Providing parents with information on alternative	13 (35%)	24 (65%)
forms of treatment/ intervention		
Explaining to the parents the causes of the child's	24 (65%)	13 (35%)
disabilities		

Respondents were asked to estimate, from a fixed list, the percentage of time they spent in selected activities with parents (see Figure 1). The list included mostly child-focused activities (e.g. "teaching active learning methods", "reviewing home instruction programs") together with several parent-focused activities (e.g. "engaging in social/personal discussions", "discussing parent's needs and feelings"). Combined percentages reflect that conductors spend most of their time (77%) instructing parents about the care of their child and less time (27%) on parent-related concerns.

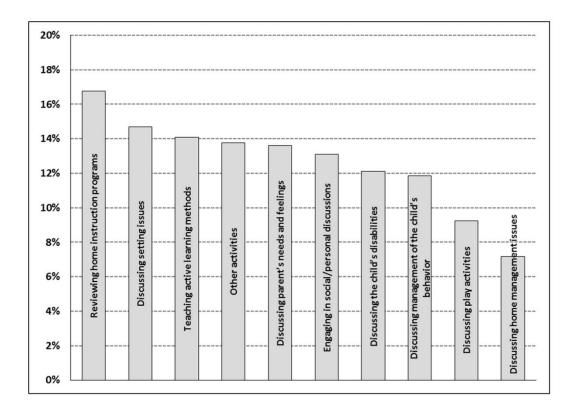


Figure 1: Estimated percentage of time conductors spent with parents in selected activities

## 5. Positive and negative feelings that may characterize parent-conductor interactions

Conductors were presented with a list of 16 items regarding parental feelings (7 positive and 9 negative), and were asked to rank how often they had to deal with these feelings when interacting with parents (Table 6). Our findings reveal that conductors experienced both positive and negative feelings regarding parents. The most frequent positive feelings were "hopefulness", "appreciation", and "acceptance and gratitude" (49%, 43%, and 41% respectively). The most frequent parental negative feelings were "defensiveness" (84%), "helplessness" (59%), and "fear" (51%).

Table 6: Descriptive findings of feelings that may characterize parents'-conductors' interactions

Item type	Item content	Rarely to sometimes Frequently to alwa (1,2) (3,4)		
		n (%)	n (%)	
Neg.	Parent Defensiveness	6 (16%)	31 (84%)	
Neg.	Parent Helplessness	15 (41%)	22 (59%)	
Neg.	Parent Fear	18 (49%)	19 (51%)	
Pos.	Parent Hopefulness	15 (41%)	18 (49%)	
Pos.	Parent Appreciation	21 (57%)	16 (43%)	
Pos.	Parent Acceptance	22 (59%)	15 (41%)	
Pos.	Parent Gratitude	22 (59%)	15 (41%)	
Pos.	Parent-Therapist	24 (65%)	13 (35%)	
Neg.	Parent Denial	25 (68%)	12 (32%)	
Neg.	Parent Noninvolvement	27 (73%)	10 (27%)	
Pos.	Parent Enthusiasm	29 (78%)	8 (22%)	
Neg.	Parent Over-involvement	30 (81%)	7 (19%)	
Neg.	Parent Resistance	31 (84%)	6 (16%)	
Pos.	Parent Relief	32 (86%)	5 (14%)	
Neg.	Parent Guilt	34 (92%)	3 (8%)	
Neg.	Personality Conflicts	33 (89%)	2 (5%)	

#### **Discussion**

Family-professional collaboration has been proposed as a primary aspect of family-centered service (FCS) (Rosenbaum, King, Law, King, G, & Evans, 1998; King, et al., 2004), and is a key concept in service provision to children with cerebral palsy and their families. Accumulated empirical evidence strongly supports the efficacy of the FCS model and its positive influence on parents' psychological well-being and their satisfaction with intervention, as well as improved children's outcomes such as skill development and psychological adjustment (Cunningham & Rosenbaum, 2014; King & Chiarello, 2014).

Service providers' views, beliefs and attitudes about working with parents are considered important precursors to development of successful collaborative relationships with parents (King, et al., 2003). In line with results of Hinojosa, et al. (2002) and others (Hanna & Rodger, 2002; Raghavendra, et al., 2007), it seems that in general conductors view relationships with parents very positively, and regard parent collaboration as essential to the benefit of the child. Furthermore, the majority of the conductors perceive parents' non-involvement as a possible obstacle that could be detrimental to the interventions they offer.

Yet, unlike Hinojosa's findings, the majority of the conductors in the current study reported having a favorable setting to implement their views in practice, and having enough time to spend with parents. These findings can be explained by the fact that family-centered practice is embedded into a core conductor curriculum, as well as the organization's culture, both theoretically and in practice. Such embedding is considered to be vital in professionals' preparation programs. Therefore, in-service training is necessary in order to increase the implementation and effectiveness of family-centered practice (Bruder, Mogro-Wilson, Stayton, & Dietrich, 2009; Murray & Mandell, 2004, 2006, Sewell, 2012). Furthermore, the adequate time resource reported may be explained by the fact that as teachers, conductors have greater contact with parents in comparison to health professionals.

Beyond views and attitudes towards working with parents, there are other factors that either support or hinder professional-parent relationships. Dunst, Trivette, & Hamby (2007) describe two dimensions of help-giving practices: relational and participatory. Relational help-giving includes practices typically associated with good clinical practice (e.g., active listening, empathy and respect) and positive beliefs about a family's strengths and capabilities. Participatory help-giving is more action-oriented and includes practices that are individualized, flexible, and

responsive to family concerns and priorities. In our survey, conductors ascribed importance to relational help-giving, such as instilling a sense of confidence, being a good listener and interpersonal attributes-such as empathy. In general, it has been noted that professionals practice relational help-giving more often than participatory help (Dunst & Trivette, 2005). Taking into consideration that a central problem in the development of partnerships is failure to establish trusting and empowering relationships between families and professionals (Blue-Banning et al., 2004), our findings imply that these difficulties have been overcome in CE practice.

With regard to restricting factors, parental over-involvement was the most notable. Indeed, the 'goldilocks' perception is mentioned in the literature as a barrier of effective partnerships (Bezdek, et al., 2010). This idea refers to the perception that parents may be involved too much, too little, or just enough. Being a parent-professional association, parents in TK are involved in all aspects of the association's functioning and therefore, although this finding is not surprising, it was interesting to see that this over-involvement, when occurring on a daily basis, was not necessarily perceived by conductors as an enabling factor.

An additional restricting factor of working with parents, identified by conductors, was insufficient time to talk with parents. Interestingly, this finding seemingly contradicts conductors' previous reporting of having enough time to spend with parents. When interpreting these results with the conductors themselves, they suggested that spending enough time with parents does not necessarily mean having sufficient time to talk with them individually, since spending time together in this setting is mostly being engaged in group activities with the children, their parents and the conductors. Yet, although allocated time for individual talk with a parent is provided, it seems that this is perceived as never being enough.

The qualitative data we gathered regarding enabling factors shed light not only on help-giving, but also on relational help-receiving, and revealed three main parental themes perceived by conductors: parents' satisfaction (e.g. gratitude, appreciation), parents' inner resources (e.g. hopefulness, confidence), and parents' cooperation (e.g. involvement of the whole family, parents' contribution to the benefit of all).

As expected, when asked what the parents' most important issues and concerns were, conductors reported their beliefs that parents consider their children's progress/lack of progress to be critically important, and that ambulation followed by speech and language are primary concerns. We know from experience and from the literature that parents of children with CP are most concerned about whether their child will walk and talk (Iversen, Shimmel, Ciacera, & Prabhakar, 2003; Missiuna, et al., 2006; Rosenbaum, 2003; Thompson, et al., 1997). These findings are also in line with OTs' perceptions (Hinojosa, et al., 2002). They are logical, taking into account that parents expect their children to progress following intervention, and as parents of children with CP, they focused their children's primary impairments. are on We also found that "Parent's individual difficulties", and "Adjusting to their child's disabilities" are among the most common issues conductors face in interacting with parents. While the "child's progress/lack of progress" is a child-related issue, the others are parent-related issues. Difficulty in adjusting to the child disabilities was reported in previous studies as preventing parents' involvement in therapy and parental cooperation with the staff (King, et al., 2004; Piggot, Hocking, & Paterson, 2003). Although the majority of the conductors agreed that the time they spent with parents had a greater impact on the child than any other aspect of intervention, and that meeting parents' needs is essential to meeting the child's needs, in practice, they spend most of their time (77%) instructing parents about the care of their child, and less time (27%) on parent-related concerns. Although this may reflect the conductors' acknowledgment of the importance parents' place on understanding their child's disability and progress, these results emphasize the significance of delivering family-centered service in a wider context, in which the families and not just the children are the focus for support and intervention (King & Chiarello, 2014).

Overall, the data from this study provide evidence of the knowledge, beliefs, and attitudes of conductors toward working with parents - characteristics that form the basis of family-center service. These findings have been validated in a complementary study that examined the actual practices of family-centered service delivery (Schenker, et al., 2016). Evidence from that previous study showed that TK was perceived and experienced by both parents and conductors as a family-centered service. The results from the present study allow us to look at what comprises family-centered service in a higher resolution, and therefore more thoroughly at its building blocks. This exploration inevitably sheds light on the demanding complexity of working with parents. It is evident that conductors have to cope with, among other things, a kaleidoscope of parental feelings, from hopefulness, appreciation and gratitude on one hand to helplessness, denial and fear on the other. As if this were not complex enough, parents differ from one another in a variety of ways, and cannot be considered as a homogeneous group. This complexity is not unique to conductor-parent interactions but is a shared experience of other professionals as well (Hinojosa, et al., 2002; MacKean, Thurston, & Scott, 2005; Bezdek, et al., 2010; An, et al., 2015).

Since the specific nature of the intervention program (Tang, et al., 2011), as well as the professional specialization (Dyke, Buttigieg, Blackmore, & Ghose, 2006) have been shown to be significant factors influencing FCS (Tang, et al., 2011), this information will hopefully encourage

professionals from a variety of disciplines and programs to reflect on their own experiences in their relationships with parents.

## Limitations of the study and future research

The data of the current survey were based on the conductors' perspectives. Yet parent-professional relationships should be seen as an 'interaction paradigm' entailing the developing of reciprocal relationships. Widening our perspective by surveying the perceptions of parents of children with CP on the very same issues would allow us to encompass a more complete perspective of both sides of the coin.

In this survey, parent-conductor relationships have been analyzed. However, with the growing influence of family systems theory and family-centered service, there is a call to better embrace not only the parents within the relationship but the whole family (King, et al., 2004). Future research should therefore explore the family-conductor relationship and its qualities from the perspectives of both parents and conductors.

Altogether, underlying parent-conductor relationships, partnership, and family-centered service in practice, would provide a meaningful multidimensional picture of the complex parent-conductor collaboration in a conductive education setting. As suggested by Blue-Banning, et al., (2004), the quality of partnerships between families and professionals should be conceptualized as one additional outcome for which programs should be held accountable.

#### Acknowledgment

The authors wish to thank Prof. Peter Rosenbaum for his valuable input on this manuscript.

#### **References:**

- An, M., Palisano, R.J., Dunst, C. J., Chiarello, L. A., Chung-hwi, Y., & Gracely, E.J. (2015).
  Strategies to promote family-professional collaboration: two case reports. *Disability and rehabilitation*, 38, 1844-1858.
- An, M., & Palisano, R. J. (2014). Family-professional collaboration in pediatric rehabilitation: a practice model. *Disability and Rehabilitation*, *34*, 434-440.
- Bamm E.L., & Rosenbaum, P. (2008). Family-centered theory: origins, development, barriers, and supports to implementation in rehabilitation medicine. Archives *of Physical Medicine and Rehabilitation*, 89, 1618-1624.
- Bezdek, J., Summers, J. A., & Turnbull, A. (2010). Professionals' attitudes on partnering with families of children and youth with disabilities. *Education and Training in Autism and Developmental Disabilities*, 45, 356-365.
- Blue-Banning, M., Summers J., Frankland, H. C., Nelson, L.L., & Beegle, G. (2004).

  Dimensions of family and professional partnerships: constructive guidelines for collaboration. *Exceptional Children*, 70, 167-185.
- Bourke-Taylor, H., O'Shea, R. & Gaebker Spira, D. (2007). Conductive education: A
- functional skills program for children with cerebral palsy. *Physical & Occupational Therapy in Pediatrics*, 27, 45-62.
- Bruder, M. B., Mogro-Wilson, C. M., Stayton, V. D., & Dietrich, S. L. (2009). The national

- status of in-service professional development systems for early intervention and early childhood special education practitioners. *Infants and Young Children*, 22, 13-20.—
- Cunningham, B. J. & Rosenbaum, P. L. (2014). Measure of processes of care: a review of 20 years of research. *Developmental Medicine & Child Neurology, 56*, 445-452.
- Dunst, C. J. (2000). Revisiting 'Rethinking early intervention'. *Topics in Early Childhood Special Education*, 20, 95-105.
- Dunst, C. (2002). Family centered practices: birth through high school, *The Journal of Special Education*, *36*, 139-147.
- Dunst, C. (2002). Family centered practices: birth through high school. *The Journal of Special Education*, *36*, 139–147.
- Dunst, C. J., & Trivette, C. M. (2005). Characteristics and consequences of family-centered helpgiving practices. *CASEmakers*, *1*(6), 1-4.
- Dunst, C. J., Trivette, C. M.., & Hamby, D. W. (2007). Meta-analysis of family-centered helpgiving practices research. *Mental Retardation and Developmental Disabilities*\*Research Reviews, 13, 370-378.
- Dyke, P., Buttigieg, P., Blackmore, A. M. & Ghose, A. (2006). Use of the Measure of Process of Care for families (MPOC-56) and service providers (MPOC-SP) to evaluate family-centred services in a paediatric disability setting. *Child: Care, Health and Development*, 22, 167-176.
- Feuerstein, R. (2008). Conductive education and structural cognitive modifiability. Recent

- Advances in Conductive Education, 7, 5-8.
- Hanna, K., & Rodgers, S. (2002). Towards family-centred practice in paediatric occupational therapy: A review of the literature on parent-therapist collaboration. *Australian Occupational Therapy Journal*, 49, 14-24.
- Hinojosa, J., Anderson, J., & Ranum, G. W. (1988). Relationships between therapists and parents of preschool children with cerebral palsy: A survey. *Occupational Therapy Journal of Research*, 8, 285-297.
- Hinojosa, J., Sproat, C., Mankhetwit, S., & Anderson J. (2002). Shifts in parent-therapist partnership: twelve years of change. *American Journal of Occupational Therapy*, 56, 556-563.
- Iversen, M. D., Shimmel, J. P., Ciacera, S. L., & Prabhakar, M. (2003). Creating a family-centered approach to early intervention services: Perceptions of parents and professionals. *Pediatric Physical Therapy*, *15*, 23-31.
- Keen, D. (2007). Parents' families, and partnerships: issues and considerations. *International Journal of Disability, Development and Education*, *54*, 339-349.
- King, G., Kertoy, M., King, S., Law, M., Rosenbaum, P., & Hurley, P. (2003). A measure of parents' and service providers' beliefs about participation in family-centered services. *Children's Health Care*, 32, 191-214.
- King, S., King, G. & Rosenbaum, P. (2004). Evaluating health service delivery to children with chronic conditions and their families: development of a refined measure of

- processes of care (MPOC-20). Children's Health Care, 33, 35-57.
- King, G., & Chiarello, L. (2014). Family-centered care for children with cerebral palsy: conceptual and practical considerations to advance care and practice. *Journal of Child Neurology*, 29, 1046-1054.
- Kozma, I. (1995). The basic principles and current practice of conductive education.

  European Journal of Special Needs Education, 10, 111-123.
- Leiter, V. (2004). Dilemas in sharing care: maternal provision of professionally driven therapy for children with disabilities. *Social Science and Medicine*, *58*, 837-849.
- Lotan, M., Schenker, R., Wine, J. & Downs, J. (2012). The conductive environment enhances gross motor function of girls with Rett syndrome. A pilot study. *Developmental Neurorehabilitation*, 15, 19-25.
- MacKean, G., Thurston, W., & Scott, C. (2005). Bridging the devide between families and health professionals' perspectives on family centered care. *Health Expectations*, 8, 74-85.
- Missiuna C, Moll S, Law M, King S., & King, G. (2006). Mysteries and mazes: parents' experiences of children with developmental coordination disorder. *Canadian Journal of Occupational Therapy*, 73, 7-17.
- Murray, M.M., & Mandell, C.J. (2004). Evaluation of a family-centered early childhood

- special education preservice model by program graduates. *Topics in Early Childhood Special education*, 24, 238-249.
- Murray, M.M., & Mandell, C.J. (2006). On-the-job practices of early childhood special education providers trained in family-centered practices. *Journal of Early Intervention*, 28, 125-138.
- Nijhuis, B. J. G., Reinders-Messelink, H. A., De Blecourt, A. C. E., Hitters, M. W. C. G., Groothoff, J. W., Nakken, H., & Postema, K. (2007). Family-centered care in family-specific teams. *Clinical Rehabilitation*, *21*, 660-671.
- Pickering, D., & Busse-Morris, M. (2010). Disabled children's services: how do we measure family-centred care? *Journal of Child Health Care*, *14*, 200-207.
- Piggot, J., Hocking, C., & Paterson, J. (2003). Parental adjustment to having a child with cerebral palsy and participation in home programs. *Physical and occupational Therapy in Pediatrics*, 23, 5-29.
- Raghavendra, P., Murchland, S., Bentley, M., Wake-Dyster, W. & Lyons, T. (2007). Parents' and service providers' perceptions of family-centred practice in a community-based, paediatric disability service in Australia. *Child: Care, Health and Development, 33*, 586–592.
- Rosenbaum, P. (2003). Cerebral palsy: what parents and doctors want to know.
  - British Medical Journal, 326, 970-974.

- Rosenbaum, P. (2007). The environment and childhood disability: opportunities to expand our horizons. Editorial. *Developmental Medicine & child Neurology*, 49, 643.
- Rosenbaum, P. (2008). Families of children with chronic conditions: opportunities to widen the scope of pediatric practice. *Journal of Pediatrics*, *153*, 304-305.
- Rosenbaum, P., King, S., Law, M., King, G., & Evans, J. (1998) Family-centered service: a conceptual framework and research review. *Physical and Occupational Therapy in Pediatrics*, 18, 1-20.
- Schenker, R., Capelovitch, S., Sutton, A. & Rosenbaum, P. (2010). Conductive education and NDT Bobath: Experts discussion on history, development and current practice. *The Israeli Journal of Occupational Therapy, 19*, E31 E52.
- Schenker, R., Parush, S., Rosenbaum, P., Rigbi, A., & Yochman, A. (2016). Is a family-centred initiative a family-centred service? A case of a Conductive Education setting for children with cerebral palsy. *Child: Health, Care and Development*, Advance online publication. DOI: 10.1111/cch.12354
- Sewell, T. (2012). Are we adequately preparing teachers to partner with families? *Early Childhood Education Journal*, 40, 259-263.
- Summers, J. A., Poston, D. J., Turnbull, A. P., Marquis, J., Hoffman, L., Mannan, H., & Wang, M. (2005). Conceptualizing and measuring family quality of life. *Journal of Intellectual Disability Research*, 49, 777-783.

Sutton, A. (1988). Conductive education, Archives of Disease in Childhood, 63, 214-217.

- Tang, H. N., Chong, W. H., Goh, W., Chan, W.P., & Choo, S. (2011). Evaluation of family-centred practices in the early intervention programmes for infants and young children in Singapore with Measure of Processes of Care for Service Providers and Measure of Beliefs about participation in family-centred service. *Child: Health, Care and Development*, 38, 54–60.
- Thompson, L., Lobb, C., Elling, S., Herman, S., Jurkiewicz, T., & Hulleza, C. (1997).

  Pathways to family empowerment: Effects of family-centered delivery of early intervention services. *Exceptional Children*, *64*, 99-113.
- Van Schie, P. E. M., Siebes, R. C., Ketelaar, M., & Vermeer, A. (2004). The measure of process of care (MPOC): Validation of the Dutch translation. *Child: Care, Health and Development*, *30*, 529-539.
- World Health Organization. (2001). *International Classification of Functioning, Disability* and Health ICF. World Health Organization. Geneva, Switzerland