Defining Dimensions of Family-Oriented Services in Early Childhood Intervention

By Carina Carlhed

Abstract: The aim of this study was to examine process dimensions in a model regarding family-oriented services in early childhood intervention. The purpose was to capture a broad picture of Swedish habilitation services from a professional point of view. Professionals in habilitation from different parts of Sweden participated (n=237). A hypothesized model was tested with confirmatory factor analysis and structural equation modeling procedures. The resulting hierarchical model had two main dimensions, the first having to do with relationships, and the second concerning involvement/information-exchange. The process of intervention comprises efforts in building relationships, enhancing effective information exchange between parents and professionals, and finding different ways of involving parents/families. The findings of this study call for multiple perspectives in order to work effectively in a family-oriented way, and they also call for a distinction between relational and participatory elements when referring to family-oriented services.

Introduction
The most common intervention style of support and services to children with disabilities and their families, both in the United States and in European countries such as Sweden, has been child-centered practices; i.e. interventions directed mainly towards the child. Today, the importance of a family-oriented intervention style is emphasized and its practice is more widespread (Björck-Åkesson, Granlund & Simeonsson, 2000; Granlund & Björck-Åkesson, 1996; Simeonsson, 2000). The underlying assumption behind family-oriented services is systems theory, thus it is not sufficient to focus interventions only on the child with a disability. The development of the child is seen as "...a product of the continuous dynamic interactions of the child and the experience provided by his or her family and social context" (Sameroff & Fiese, 2000, p 142). Sometimes, it may be more effective to focus interventions on the environment, the whole family or family members, rather than only the child with a disability. With a family-centered approach, the well-being of the whole family is an important aim, and interventions at different levels could be helpful in many ways. "The definitions of success will be different for each family" (McWilliam, 1996, p 3).
Carina Carlhed

In the field of early intervention practice and research, in Sweden as well as in the United States, there are several seemingly synonymous concepts for family-oriented services, including terms such as: family-centered intervention, family-focused intervention, and family-driven intervention. This lack of consensus on terminology most likely reflects the ongoing discussion about conceptual matters in the field (Bailey et.al. 1998; Dunst, 2000; McWilliam, Tocci & Harbin, 1998). According to Guralnick, this change in practice and philosophy can be conceptualized as first and second generation research in early intervention (1997). First-generation research focused on the child’s impairment and disability. Interventions were designed to correct and improve the child’s functioning compared with normal development. The focus of second-generation research was broader and included the child’s everyday functioning and interplay with the immediate environment. Dunst describes this change in early intervention programs as a paradigm shift. Thus, the way of conceptualizing and implementing early intervention has transitioned from a traditional paradigm to a new paradigm (2000). In Sweden, assessment and service delivery for children with disabilities is conducted through habilitation centers (Bille & Olow, 1999; Björck-Åkesson & Granlund, 1997). Habilitation services have been aimed at improving ‘quality of life’ for children with disabilities and their families, through facilitating functioning and communication for the child (Björck-Åkesson et al, 2000). According to Swedish legislation in this area (Support and Service Act, SFS 1993; and the Health and Medical Services Act, SFS 1982), habilitation services should be family-oriented with greater opportunities for the family to take active part in the collaboration process with professionals. The legislation in Sweden emphasizes the family’s right to take part in the decision-making process and the implementation of intervention. Many families have the opportunity to take an active part in collaboration, while others do not. To prepare parents for this collaboration, it is often necessary for professionals to encourage and support families to take an active part in the process. This approach is related to the concept of empowerment, which in this context means supporting families to increase their involvement in, and their control over, the habilitation-process (cf. Dunst, Trivette & Deal, 1988).

The Swedish legislation regarding this topic is not very helpful in clarifying intentions, as the wording is rather vague and may be interpreted in many ways. There seems to be a lack of clear definition in related areas of research as well, for example research concerning partnerships between parents and professionals (Dunst, 2000), and in research about professional training programs (Wadsworth, Dugger & Noah, 1994).
Dunst, Johanson, Trivette and Hamby (1991) have brought some clarity to these definitional issues. In their study about how family-oriented services were expressed in policies and practices, they conducted a meta-analysis using a multi-method and multi-source approach. They presented family-oriented services as a super-ordinate concept and used commonly mentioned terms from the literature to describe family-involvement: family-centered, family-focused, family-allied, and professional-centered services (fig. 1).

In figure 1, the arrow describes a continuum of degrees of family empowerment. For example, on the left side of the continuum, the family-centered model is found. It is consumer-driven, the interventions are almost entirely designed to increase the family’s power and competence, and professionals are seen as agents for support (high level of empowerment).

On the other side of the continuum is the professional-centered model, where professionals are seen as experts determining the needs of the family (low level of empowerment). In accordance with Dunst et al (1991) the family-centered model is the most consumer-driven model, where professionals maximally promote family decision-making and the families’ own strengths (promoting empowerment). Still, several questions remain. How do families become empowered? And in what way is empowerment measured as an outcome, when evaluating family-involvement? Bailey et al (1998) have contributed to this area with a framework for program evaluation and efficacy research. They contend that some discussions have addressed desired outcomes, but very few have focused on measuring pathways to desired outcomes in early childhood intervention.

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**FAMILY ORIENTED SERVICES**

- family-centered
- family-focused
- family allied
- professional-centered

**Figure 1. Models of family-oriented services in conjunction with degree of family empowerment (adapted from Dunst, Johanson, Trivette and Hamby, 1991)**
In efforts to understand family involvement in services, many studies tend to focus on different aspects of the collaboration process, e.g. building good relationships between professionals and parents (cf. Bjerre, 1998; Carlhed, 1998; Dinnebeil, Hale & Rule, 1996; McWilliam, Tocci & Harbin, 1998; Stenhämmer & Ulfhil, 1998; Weston, Ivins, Heffron & Sweet, 1997). For example, good relationships help the collaboration run smoothly. Some studies aim to evaluate outcomes of family-oriented services in early intervention, but often it is family-orientation in terms of good relationships which is regarded as the only result of the collaboration process (cf. Bjerre, 1998; Wadsworth, Dugger & Noah, 1994). Outcomes such as a high level of parent activity and influence in the collaboration process (empowerment) often seem to be forgotten. Outcomes of services have often been measured with parent satisfaction measures, which can at first glance be seen as appropriate and easily accessible. Interpreting the meaning of the responses of satisfaction measures may however be difficult, because parents often have no grounds for making comparisons with other service programs. They may then have to judge the available service in contrast to receiving no service at all (Simeonsson, 1988). In fact, these evaluations only deal with the process in collaboration with parents. For some goals, it is relevant to evaluate the process itself, but if the goal is increased family activity, questions about activity as an outcome must also be addressed. If professionals seek to work in a family-centered style, there must be awareness that the parents have power and that they influence goal setting, deciding and implementing methods, and defining desired outcomes. Then parents should be active in the process. The relationship between family activity and satisfaction is not an immediately obvious one. Satisfied parents do not necessarily need to be active in the process. At the same time, active parents are not necessarily satisfied with the intervention process and outcomes. There is clearly a need for strategies to measure different outcomes of family-centered services. Bailey et al (1998), who represent an organizational perspective, argued that parent satisfaction with services should be evaluated including parent-professional relationship, but that it is necessary to evaluate specific practices and avoid overall satisfaction measures. Some of the evaluations of good practice in habilitation centers in Sweden (cf. Bjerre, 1998) have been based only on satisfaction measurement (Granlund, Björck-Åkesson & Steénsson, 1999). Granlund et al meant that this measurement approach defines satisfaction as an outcome, i.e. whether a parent is satisfied with the collaboration and friendly treatment, etc. Granlund et al (1999) emphasized that other measures must be used in order to draw conclusions about effective outcomes. They concluded that it is impossible to make statements about “good” interventions unless the desirable outcome
has been specified. This discussion is further developed in Björck-Åkesson, Carlhed & Granlund (1998) who presented a model of process and outcome dimensions in early intervention. The process dimensions in this model are tested in the study presented in this article, which has a general professional perspective. The aim is to capture a broad picture of process dimensions in habilitation services from the professionals' point of view. A professional perspective can be considered interesting because it represents the habilitation organization, which is responsible for organizing intervention services for children with disabilities and their families. This study, which tries to define dimensions in the work of organizing services, may shed some light on the underlying ideas which influence the collaboration between professionals and parents. Although the professional view is in focus here, a parent perspective is also necessary to fully understand dimensions in family-oriented services in early childhood intervention.

Presentation of a model of process and outcomes

The following model is based on a series of studies (Björck-Åkesson & Granlund, 1995, 1997; Granlund & Björck-Åkesson, 1993, 1996; Granlund, Philipsson, Björck-Åkesson, Olsson, Steénsson, & Terneby, 1993) and defines a set of relationships that differentiate process and outcome dimensions (Björck-Åkesson et al, 1998) in family-oriented services in early childhood intervention.

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**Figure 2. A model of process and outcome dimensions in family-oriented services developed by Björck-Åkesson, Carlhed and Granlund (1998). Process dimensions are in focus in this study.**
In this model, a set of process and outcome dimensions have been identified through different measures, which are described in detail in Granlund & Björck-Åkesson (1996) and Björck-Åkesson & Granlund (1995) (for an overview, see table 1).

Table 1. Measures used to investigate process and outcome dimensions included in the model developed by Björck-Åkesson et al (1998, p 13). The measures are further described in publications named below.

| Process measure | Involvement and Activity | Information exchange and knowledge gain | Family professional relationship and Security |
|-----------------|--------------------------|----------------------------------------|-----------------------------------------------|
| BrassTacks      | Rating material with which professionals rate their practice and interaction with parents as family-centered (McWilliam & Winton, 1991) | Logical coherence | Rating scales with which parents rate their satisfaction with 1) collaboration with professionals 2) the intervention plan and 3) family-focused interventions (Granlund & Björck-Åkesson, 1996) |
| Family involvement | Rating material with which parents rate their active involvement in the decision making process (Björck-Åkesson & Granlund, 1995) | Knowledge gain | Consultant rating | A rating scale with which parents rate the behavior of the consultant during meetings (Granlund & Björck-Åkesson, 1996) |
| Outcome measure | Perceived activity | A self-rating scale with which parents rate how they have prepared before meetings and how active they are during meetings (Granlund & Björck-Åkesson, 1996) | Family needs survey | A survey with which parents rate their perceived need for help and support in six support areas (Granlund & Björck-Åkesson, 1996) |
Defining Dimensions of Family-Oriented Services in Early Childhood Intervention

The relationships between the process dimensions (involvement, information exchange and relationship) are weak or non-existent (fig. 2). Arrows between different process and outcome dimensions imply an interrelationship, such as for example that between family involvement and perceived activity. Relationship-building between professionals and parents is related to the family’s perceived security in the collaboration process. This implies that parents who are satisfied with relationships do not necessarily need to be active parents. For example, if parents are complaining, they may not be satisfied with their collaboration with the professionals, but they are nevertheless active and involved parents. Thus, one can say that satisfaction measures are not valid regarding conclusions about parental activity (Björck-Åkesson et al, 1998).

It seems that the process dimensions have little to do with each other, while on the other hand they are related to certain outcomes. In other words, depending on which process dimensions are in focus, the outcomes will differ. The discussion above indicates that there are several dimensions in family-oriented services, and that some seem to be contradictory in nature.

The present study aims to closely examine the nature of, and relationships among, these dimensions. The three process dimensions in the model reflect involvement, information exchange, and relationships. This study was designed to investigate whether there was support for these dimensions as unique aspects of process in the model of family oriented services.

Method

A sample of convenience was used with professionals involved in in-service training courses on family-oriented habilitation. The participants were a total of 237 professionals belonging to eight habilitation teams from different parts of Sweden. Nine disciplines were represented in the sample (occupational therapy n=24, social work n=32, speech therapy n=12, medicine n=5, nursing n=3, psychology n=28, physical therapy n=62, special education n=52, youth recreation leader n=19). Data were collected over a period of 36 months in conjunction with pre-course assessment by the team-members. The measure 'Brass Tacks' (McWilliam & Winton, 1991) was selected as a way to assess the extent to which professionals perceived their practice and interaction with families to be family-centered. The Brass Tacks measure has clinical utility in that professionals have the opportunity to reflect on their own way of working with families. The Swedish translation of Brass Tacks was used (Björck-Åkesson, 1994) in the data collection phase. Brass Tacks contains 71 items organized in four areas. Reliability estimates for the four areas (Cronbach's alpha) were: (1) First encounters with families (α=.74), (2) Identifying goals for intervention (α=.89), (3) Intervention planning for children and families (α=.83), (4) Day-to-day service.
provision (α=.82). Examples of items are shown in table 2.

Table 2. Examples of items in the Brass Tacks measurement. The original version developed by McWilliam & Winton (1991) is presented in the table. In the present study, an adapted version was used (translated and adapted to Swedish conditions by Björck-Åkesson, 1994).

| POLICY OR PRACTICE                                                                 | How often? | How important is this practice? |
|------------------------------------------------------------------------------------|------------|---------------------------------|
|                                                                                    | Never      | Usually                         | Not important | Somewhat important | Important | Very important | Critical |
| Do you refrain from asking families sensitive and personal information that is not directly related to the child's status or family's concern? | 1 2 3 4 5  | 1 2 3 4 5                       |               |                   |           |               |         |
| Do you emphasize to parents what their children can do rather than what they cannot do? | 1 2 3 4 5  | 1 2 3 4 5                       |               |                   |           |               |         |
| Do you use information and ideas provided by parents in the development of the intervention plan? | 1 2 3 4 5  | 1 2 3 4 5                       |               |                   |           |               |         |
| Do you make it convenient and enjoyable for fathers and other extended family members and friends to be involved in the children's intervention programs (e.g. making use of their special skills, convenient scheduling of meetings, home or center visits)? | 1 2 3 4 5  | 1 2 3 4 5                       |               |                   |           |               |         |

Confirmatory factor analysis with the AMOS estimation program (Arbuckle & Wothke, 1999) was used to test theoretical relationships for the model described above (fig. 2). The STREAMS modeling environment (Gustafsson & Stahl, 1999) was used in the analysis. Confirmatory factor analysis is a structural equation modeling procedure and the purpose of using it was to estimate the degree to which independent variables influence the
Defining Dimensions of Family-Oriented Services in Early Childhood Intervention

dependent variables and other model parameters (Maruyama, 1998). In this case, confirmatory factor analysis describes the internal structure in the Brass Tacks measurement and tests the existence and relevance of the three process dimensions in the model. In other words, is the model a ‘good’ description of process dimensions in family-oriented services, using Brass Tacks as an operationalization in the analysis?

Confirmatory factor analysis as used in this study is a structural equation modeling technique, which amounts to specifying factors (latent variables) a priori (Maruyama, 1998). It is a theory-driven approach with an evident hypothesis-testing character, which is one of the reasons why this technique was chosen in this study. Structural equation modeling is designed to handle complex patterns of interrelationships among variables, and to estimate the strength of the hypothesized theoretical relations (Maruyama, 1998). Without theory it is however possible to specify several different models originating from the same data, with different consequences. Analysis with a theoretical grounding however is the recommended way of using structural equation modeling techniques. The Brass Tacks measurement was in this case intended to function as an operationalization of the concept of family-orientation in habilitation work. The process dimensions and their internal structure suggested from the model developed by Björck-Åkesson et al (1998) became the hypotheses, which were then tested with confirmatory factor analysis, that is, how well did the theoretical model fit the data.

There is an advantage of this straightforward way of hypothesis testing in confirmatory factor analysis, as compared with explanatory factor analysis. According to Maruyama (1998), explanatory factor analysis is commonly used in order to answer questions such as: What are the factors? How many factors are there, and what do they represent? As Maruyama writes: "... confirmatory factor analysis or CFA, namely, techniques in which the items defining each factor and the relationships among factors are specified a priori rather than letting the factor analytic methods define factors" (1998, p 131). In addition, when using explanatory factor analysis there is a risk of inaccurately labeling the factors, as well as problems in interpreting them. Maruyama refers to Cliff (1983, in Maruyama, 1998, p 135) who called this "the nominalistic fallacy; naming factors does not make them what they are labeled". Thus, the notion of latent variables is helpful in trying to measure underlying patterns between and among the parts of the construct.

Another strength of using confirmatory factor analysis is the opportunity to partitioning variance related to the construct of interest and isolate error variance (Maruyama, 1998). Separating
residual variance from true common variance and true unique variance is highly important, because there is always a gap between a measure and the construct which it represents (Maruyama, 1998). Visualizing the residuals may also open for discussion of the sources of error variance, for example omission of variables, which may lead to serious bias (Pedhazur & Pedhazur Schmelkin, 1991).

The procedure of specifying the hypothesized test model involved a qualitative approach at the start. The four areas of Brass Tacks describe the intervention process chronologically, but since the aim was to uncover the underlying structure of content, a transformation of the structure was necessary. Therefore, all 71 items in Brass Tacks were separated and mixed. This was done in order to transform the temporal structure of the measure. The items were then sorted with a content review approach into three categories, which represent the three process dimensions of the model described above (relationship, information exchange, and involvement). Within the categories, the items were then sorted into sub-categories following the content review approach. The three dimensions and their sub-dimensions were specified as three higher-order latent variables with subordinate latent variables. The items build the constructs of dimensions in a reflective hypothesized test model, or in other words, "the dimension is operationalized through observed measures" (Maruyama, 1998, p 139). In the analysis, the tests of the models were carried out in a stepwise fashion. First, three minor test models were specified according to each of the three hypothesized process dimensions and their related items and were tested one at a time. As the last step, the three minor test models were joined. The complete test model (the joined model) was specified as a hierarchical model, which means that second-order influence first-order latent variables. The suggested level for a 'good model fit' is an RMSEA of less than .05 (Maruyama, 1998). In the present study the level for a good model fit was set at a p-value for the Test of Close Fit (PCLOSE) greater than 0.01 (Arbuckle & Wothke, 1999).

Results

The analysis was performed in different steps. In the first step, three separate minor test models were specified, each reflecting a process dimension. The models were then tested separately, and the model fit is described in table 3.

| Model describing dimension | RMSEA | p-value for Test of Close Fit (PCLOSE) | X² | df |
|----------------------------|-------|---------------------------------------|----|----|
| model 1 Relationship (REL) | .053  | .34                                   | 219.29 | 132 |

Table 3. Model fit for the minor test models. ML-solution (maximum likelihood)
Defining Dimensions of Family-Oriented Services in Early Childhood Intervention

| Model     | Dimension                      | Relation | Openness and flexibility (OP) | Caring and understanding attitude (CA) | Everyday life adjustment (EV) | Decision-making (DE) | Information exchange (INF) |
|-----------|--------------------------------|----------|------------------------------|----------------------------------------|-----------------------------|----------------------|--------------------------|
| Model I   | Relationship dimension (REL)  | 0.053    | 0.25                         | 713.67                                 | 431                         | 0.050                | 0.48                     |
| Model II  | Involvement (INV)             | 0.050    | 0.48                         | 259.48                                 | 163                         |                      |                          |

In **Model I**, the relationship dimension (REL) captures the professionals' efforts to build good relationships with parents. It consists of two subordinate dimensions:

- **Openness and flexibility (OP)**. This factor comprises items that are about open communication patterns between parents and professionals. Parents have opportunities to influence the intervention process, professionals do not make moral judgments about the family's beliefs, and they try to understand the culture the family represents.

- **Caring and understanding attitude (CA)**. Professionals show that they care, and try to understand what parents are saying. Professionals have a positive stance toward parents, show their interest in the family, and actively listen to parents.

In **Model II**, the Involvement dimension (INV) embraces aspects of family involvement such as everyday adjustment, family-in-focus and aspects of parents' opportunities to participate in situations which involve decision-making. It consists of three subordinate dimensions:

- **Everyday life adjustment (EV)** is about adjustment of the intervention to the family's everyday life. Professionals involve the two parents and other family members in the intervention process in order to use their knowledge and special skills. Professionals use parents' own words when writing the intervention plan, and they use material from the home for assessment and intervention if appropriate.

- **Family in focus (FOC)** is about professionals showing interest in the family, and formulating goals that involve the whole family. Efforts are made in order to assess the family's resources and opportunities for social support. Professionals give information about new legislation that concerns the family, as well as information about changes in the family's opportunities to receive support. Professionals spend time talking about things that are going well in the family.

- **Decision-making (DE)** focuses on professionals encouraging parents to take an active part in the collaboration, both in decision-making and in carrying out interventions. They let parents decide which issues to discuss in meetings. Professionals listen more than they give advice, and help parents to sum up family needs.

In **Model III**, the information exchange dimension (INF) consists of four sub-dimensions representing different aspects of information exchange between parents and professionals.
Parents' activity in providing information (PA). Parents are given opportunities to provide information about changes in family needs since the previous meeting, their view of the child's opportunities for development, and what they have done thus far to achieve goals for the child and family.

Professionals' activity in providing information (PE) concerns professionals' explanations of the purpose, tools and measurements in the assessment process, preparation of parents as to what is going to happen during the assessment process, and what they can expect from it. Results from the assessment are discussed in a way that allows parents to ask questions.

To provide a good setting (SETT). Professionals give parents information before the first encounter in order to give them opportunities to plan. Parents are asked for permission from professionals to obtain information about the child from other professionals/institutions. Professionals ask parents what their needs are before giving any information.

Assessment specific factors (ASSESS). This dimension attempts to capture variance that emanates only from the assessment situation.

As the final step, testing of the complete test model yielded a two-factor hierarchical model (figure 3), with a relationship dimension (REL) and an involvement/information exchange dimension (INF/INV). The model fit for the complete two-factor model is .051 (RMSEA) and PCLOSE value for RMSEA is 0.22, which indicates a good fit with the data ($X^2 = 3680.70$ and $df = 2266$) (Maruyama, 1998; Arbuckle & Wothke, 1999). Thus, the hypothesized structure of the final test model can be considered a relevant description of the process dimensions in family-oriented services.

Figure 3. A simplified description of the complete two-factor model, reflecting two dimensions in family-oriented services, relationship- (REL) and information exchange/involvement-dimension (INF/INV). In the figure describing the model, covariance between latent variables are described by the arrow. Latent variables are depicted in circles. All estimates are standardized.

The data provide support for two superordinate dimensions, which are strongly
Defining Dimensions of Family-Oriented Services in Early Childhood Intervention

The aim of this study was to examine the structure in a model of family-oriented services in early childhood intervention. A hypothesized model was specified based on three process dimensions (REL- INV- and INF-dimensions) in the model. Methods used in the analysis were confirmatory factor analysis and structural equation modeling techniques. The model of process dimensions was tested and was found relevant although two of the process dimensions could not be totally separated statistically. However, the results show a clear distinction between the REL-dimension and the INF/INV dimension (see figure 3). The lower-order latent variables are intact and illuminate the different sub-dimensions (the sub-dimensions belonging to the previous INF-dimension is shadowed in the figure). The results support all process dimensions in the model as relevant. Thus, the process of intervention comprises efforts in building relationships, enhancing effective information exchange between parents and professionals, and finally different ways of involving parents/families. The results are consistent with other findings, for example, the distinction between relational and participatory elements in family-centered help giving (Dunst, 2000).

Family-oriented services in the habilitation process mean that parents are involved through participation in assessment through collaborations in information exchange between parents and professionals. Family involvement

interrelated (.73) in the model. The REL dimension contains different aspects reflecting professionals’ efforts in building good relationships with parents. The INF/INV dimension reflects information exchange, where parents and professionals alternately are active in sharing information required to provide a good basis for collaboration. It also reflects dimensions relating to information exchanged in specific assessment situations and reflects different forms of involvement where professionals have focused on the whole family, such as intervention adjusted to everyday life and giving parents opportunities to influence the intervention process. As figure three shows, all estimates are strong, especially the estimate for the DE-factor (1.03). This implies that the DE-factor (parents having influence in situations that enables them to make their own decisions) and the general INF/INV-factor share a high degree of common variance, which means that they are aspects of the same phenomena. It resembles the two sides of a coin: it may be desirable to separate the dimensions for purposes of clarification and analysis, but in reality, they are interwoven. To conclude, family-oriented services are focused on building relationships and involving families through the assessment where information is exchanged. Finally, an important factor is opportunities for parents to make own decisions.

Discussion
can be seen as a frame component, reflecting the manner in which professionals create conditions for collaboration with parents. The information exchange dimension is a question of building a common frame of reference and making family concerns and problems more explicit for both professionals and parents. It is also about building a common knowledge base, which constitutes the basis for collaboration, that is, the content. In conjunction with the discussion of frames and content in the intervention process, the relationship dimension could be seen as a way to accomplish and smoothen the process. The relationships between parents and professionals serve to accomplish common goals.

As outcomes differ as a function of which process dimension is in focus, professionals have to be flexible in intervention styles depending on which goal is being addressed (Björck-Åkesson et al, 1998). Some outcomes may warrant a child-centered intervention, whereas others may call for a family-focused intervention. In other words, involving parents means encouraging parental activity and making it possible for parents to influence the intervention process, thereby increasing their control of their situation. Building good relationships with parents and providing emotional support can make parents feel more secure. On the other hand, involvement in the decision-making process with many possible divergent solutions may cause parents to experience insecurity. It may be confusing to realize that there is more than one possible solution and that experts sometimes have different opinions. In that case, parents may feel insecure. One important issue is whether parents are satisfied with their level of activity and with their sense of security. These issues reinforce the importance of examining the relationship between interventions and related outcomes.

Further analysis has to be done in order to examine outcome dimensions. In the continuing work with refining the model of process and outcome dimensions in family-centered services, several questions remain. Identification of effective outcomes of intervention depends upon establishment of the desired outcomes. Useful pathways in evaluating desirable outcomes can be the suggested relationships between process dimensions and outcome dimensions in the model developed by Björck-Åkesson et al (1998). In evaluating outcomes of interventions, it is important to bear in mind which outcome is desirable. If the desirable outcome is that parents are active participants, one will need to ask about parental involvement. If one want to know about parents' perceptions of relationships with professionals, one can ask questions about whether they are satisfied with relationships in the collaboration process. In evaluating and measuring the impact of interventions, there is a need to take into account the relationships between parent satisfaction of relationships and parents' perceived
Defining Dimensions of Family-Oriented Services in Early Childhood Intervention

security, and between parental activity and family involvement. Some parents need a great deal of emotional support at a particular point in time. Their contact with the professionals is characterized by their need for security. They may not raise many issues; they want professionals to tell them what to do with their child and how to think. At another point in time, the same parents may want to be actively involved and make their own decisions about their child and about how intervention affects their everyday life. They may raise many issues and may not be satisfied with their relationship with professionals, but it is possible that they are nevertheless satisfied with their level of involvement, if that is the desired outcome of the intervention. If good relationships are an explicit goal of a family-oriented intervention style, it should naturally a target for evaluation. Evaluation of relationships between parents and professionals is indeed an important part of the process (Bailey et al, 1998).

The challenge for researchers and professionals in early intervention is to agree on basic assumptions and to build a common base of knowledge (Bruder, 2000; Simeonsson, 2000; Weston et al, 1997). The desired outcomes for family-oriented early intervention services can be accomplished in various ways, for example combining child-centered intervention or family-centered intervention with a functional perspective or a developmental perspective. In other words, multiple perspectives are needed in order to work effectively in a family-oriented way and with the family making the choice. It is the parents who are the real experts on the everyday experiences with their child, their everyday life and priorities (McWilliam, 1996, Björck-Åkesson et al, 2000; Dunst, 2000). In this study, only professionals were asked to participate, and the results reflect this singular perspective. To fully understand dimensions of family oriented services, it is therefore highly important to also consider parents' perspectives. However, it is the professionals who are responsible for arranging opportunities for family participation in the interventions process. Thus, it was considered as a logical starting point to ask professionals about family-oriented services.

Confirmatory factor analysis and structural equation modeling techniques were shown to be an effective method in analyzing complex patterns of relationships, although the result is a generalized picture of a complicated process between professionals and parents in the intervention situation. The Brass Tacks measurement has been useful in operationalizing the concept of family-oriented services, although one has to remember that all measurement is about numbers, which represent aspects of objects and not the objects themselves. The complexity of objects in socio-behavioral sciences implies the need of choosing relevant aspects of the objects under study, and this could
appropriately be accomplished within a particular theoretical perspective. The relations between these aspects and objects could be compared with the correspondence between a map and a geographic region (Pedhazur et al, 1991). In this light, the model could be a suggestion of process dimensions in family-oriented services. However, there is probably some blank spots on this "map" that need to be identified and clarified.

Weaknesses in this study include the convenience sampling procedure and the risk of respondent effects such as self-presentation or self-desirability and acquiescence (Pedhazur et al, 1991). All professionals in habilitation are probably familiar with the ongoing official debate about how to define "good" habilitation services. This could affect their responses, for example a tendency in answering the questions in ways considered desirable. Another weakness in this study is that the analysis only comprises the process dimensions in the model, and the results could have been more useful if outcome dimensions were represented as well.

The most important conclusion in this study is that professionals in their work with families must consider the difference between process dimensions. Family-oriented services means more than just good relationships with parents. Having good relationships is important, but it is not enough. Strong participatory elements must be included in the process, otherwise the intervention is not family-oriented.

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The Author:

Carina Carlhed has a Master in Social Sciences, and is currently a lecturer in Education in the Department of Social Sciences, Mälardalens University, Västerås. She is a doctoral student in the Department of Educational Sciences, Gothenburg University, Sweden.

*e-mail:*  
Carina.Carlhed@mdh.se

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