Parenting a Child With a Cochlear Implant: A Critical Incident Study

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This study aimed to describe and categorize the attributes that parents of young children with cochlear implants (CIs) consider as facilitating their parental coping experience. I interviewed 15 hearing mothers and 13 hearing fathers (including 12 married couples) whose children had CIs, using the critical incident technique that asked parents to describe significant incidents (observable behaviors, thoughts, feelings) that facilitated their parenting experience. A total of 430 critical incidents were documented and sorted into 20 categories. Further analyses supported the suggested categorical system’s validity and reliability. Results indicated various sources of influence on parents’ coping experience, associated with social contextual aspects (e.g., professionals’ support, sharing experience with others, family’s/friends’ consistent involvement, intervention services), with the parent himself or herself (e.g., taking action, personal resources, incorporating deafness into daily life), and with the child (e.g., child characteristics, identifying progress and success).

The current research substantiates the soundness of implementing early intervention models such as the developmental system model (Guralnick, 2001) and the support approach to early intervention (McWilliam & Scott, 2001), which coincide with ecological theory and recognize that families need various combinations of resources, social support, information, and services to help them address the stressors associated with parenting in general and parenting a child with special needs in particular.

The identification of a child’s hearing loss is a distressing time for parents, often eliciting intense emotional responses to the diagnosis (Koester & Meadow-Orlans, 1990). Following these initial responses, parents must undergo a process of adaptation to the various challenges uniquely associated with raising a child who is deaf, which include modifying communication strategies, becoming involved in medical and educational decision making, working with professionals across a range of disciplines, learning about technological supports, obtaining appropriate intervention programs and services, and dealing with additional financial and childcare pressures (Calderon & Greenberg, 1993; Meadow-Orlans & Sass-Lehrer, 1995).

Today, one of the first rehabilitation decisions that parents must face is whether or not to select a cochlear implant (CI) as the sensory aid of choice for their child who is deaf—an increasingly common pediatric rehabilitation option (Spencer & Marschark, 2003). Following the stressful, taxing decision to implant their child (Incesulu, Vural, & Erkam, 2003; Li, Baind, & Steinberg, 2004; Ruben, 1995; Spencer, 2004), these parents confront other unique challenges. They must cope with considerable anxiety and fear prior to and during their child’s surgery (Chute & Nevin, 2002; Perold, 2000), followed by an extremely demanding rehabilitation process that requires extensive parental involvement (Christiansen & Leigh, 2002; Chute & Nevin, 2002). Parents must also gain knowledge about CIs’ maintenance and troubleshooting (Incesulu et al., 2003).

In a recent study, parents reported various stressors that they face in conjunction with caring for their implanted child: adjusting to the needs and behaviors of the implanted child; time and effort demands; childrearing demands that cause marital stress; difficulties in obtaining formal childcare; the...
need to make changes in employment patterns; associated costs, efforts, and stress induced by the child’s intervention program; and difficulties in obtaining supportive services (Sach & Whynes, 2005). These multiple parenting challenges may lead to increased parental stress. Hence, parents need to find adaptive ways to cope with the various demands in their parenting role, which in turn will promote their own adjustment and functioning and lead to better child outcomes. In line with research promoting human strengths and parents’ quality of life, with the goal of shaping health professionals’ training for effective prevention (Hintermair, 2006), research is vitally important to identify factors that promote successful coping with the demands faced by parents of a child with a CI.

Accounts by parents of children with CIs have been of interest for some time. Yet, previous studies examining parents’ evaluations have concentrated largely on parents’ views and satisfaction regarding their children’s outcomes following cochlear implantation (Archbold, Lutman, Gregory, O’Neill, & Nikolopoulos, 2002; Campisi, James, Hayward, Blaser, & Papsin, 2004; Incelsulu et al., 2003; Nunes, Pretzlik, & Ilicak, 2005; O’Neill, Lutman, Archbold, Gregory, & Nikolopoulos, 2004). These evaluations, generally using closed-format questionnaires, pertained to issues like children’s communication skills, social relationships, and general functioning. The majority of parents expressed high satisfaction with the implant’s various outcomes (Beadle, Shores, & Wood, 2000; Chmiel, Sutton, & Jenkins, 2000; Christiansen & Leigh, 2002; Meadow-Orlans, Mertens, & Sass-Lehrer, 2003). These findings coincide with research on parental expectations, which indicated that parents tend to hold relatively high expectations regarding the implant’s outcomes for their child (Nikolopoulos, Lloyd, Archbold, & O’Donoghue, 2001; Richter et al., 2000; Zaidman-Zait & Most, 2005).

Research on the needs of the parents themselves has shown that parents of children who are implant candidates or recipients expressed a strong need for a wide range of information pertaining to medical, educational, technical, communication, and other concerns as well as a need for emotional support and psychosocial interventions (Most & Zaidman-Zait, 2003; Nunez & Ceh, 2001; Spahn, Richter, Zschocke, Löhle, & Wirsching, 2001).

This diversity of parental needs reflects the broad variety of stressors associated with parenting a child with a CI. Previous research has demonstrated that parents of children with CIs experience more psychological distress than parents of children with normal hearing (Quittner, Steck, & Pouiller, 1991) or parents of children with conventional hearing aids (Burger et al., 2005; Spahn, Richter, Burger, Löhle, & Wirschang, 2003). Psychological distress levels also differ at various points in time over the course of the child’s treatment (Beadle et al., 2000; Perold, 2000; Purdy, Chard, Moran, & Hodgson, 1995; Quittner et al., 1991; Richter et al., 2000; Spahn et al., 2003; Zaidman-Zait & Most, 2005), with peaks noted when receiving information about the CI, during the presurgery examination, during surgery, and at the first appointment to adjust the implant (Burger et al., 2005; Spahn et al., 2001). As mentioned above, making the decision to implant was reported to be one of the most stressful and taxing steps for parents (Incelsulu et al., 2003; Li et al., 2004). In addition, the fact that parents’ stress did not necessarily decrease postoperatively was attributed to unrealized expectations, the necessity of parental involvement in rehabilitation, and restrictions in parents’ pursuit of their own personal activities (Quittner et al., 1991; Richter et al., 2000). Zaidman-Zait and Most (2005) found that mothers’ higher stress levels correlated with more communication difficulties with the child and with less satisfactory relationships with professionals. Furthermore, parents of children with CIs report concerns related to speech and language development, possible device failure, and maintenance of the implant equipment (Incelsulu et al., 2003).

Although previous research has explored the difficulties and challenges associated with parenting a child with a CI, very little is known about parents’ coping experience and about the factors that may reduce their psychological distress and promote their effective functioning as parents. Coping is best understood as a process that enables the individual to reduce the emotional reaction that the stress induces and to manage its imposed behavioral demands (Lazarus & Folkman, 1984). Coping efforts are oriented at either altering the situation itself (problem-focused coping)
or managing the negative emotional reactions that accompany such situations (emotion-focused coping). In addition, in their coping efforts, individuals draw upon social and personal resources (Pearline & Schooler, 1978), which may also be described as external and internal resources (McWilliam, 2005). Personal, internal resources include parents’ psychological characteristics and strengths (e.g., self-efficacy, optimism) that promote effective coping. Social, external resources include the formal and informal sources of support that parents receive from their social network (e.g., friends, professionals, other parents). External resources also go beyond social resources, to include the availability of services, community activities, materials, and informational resources. Resources presumably contribute to individual differences in stress-related experiences, coping efforts, and outcomes (Holahan, Moos, Holahan, & Brennen, 1997; Ptacek, Pierce, & Ptacek, 2002). A resource-based approach has been used in early intervention to map out the assets available to families (Dunst, 2001). Furthermore, recent models of stress and coping have underscored the importance of understanding the physical, psychological, and social contexts in which coping efforts occur (Berg, Meegan, & Deviney, 1998; Park & Folkman, 1997; Ptacek et al., 2002; Somerfield & Curbow, 1992). A resource-based approach has been used in early intervention to map out the assets available to families (Dunst, 2001). Furthermore, recent models of stress and coping have underscored the importance of understanding the physical, psychological, and social contexts in which coping efforts occur (Berg, Meegan, & Deviney, 1998; Park & Folkman, 1997; Ptacek et al., 2002; Somerfield & Curbow, 1992). A resource-based approach has been used in early intervention to map out the assets available to families (Dunst, 2001). Furthermore, recent models of stress and coping have underscored the importance of understanding the physical, psychological, and social contexts in which coping efforts occur (Berg, Meegan, & Deviney, 1998; Park & Folkman, 1997; Ptacek et al., 2002; Somerfield & Curbow, 1992). A resource-based approach has been used in early intervention to map out the assets available to families (Dunst, 2001). Furthermore, recent models of stress and coping have underscored the importance of understanding the physical, psychological, and social contexts in which coping efforts occur (Berg, Meegan, & Deviney, 1998; Park & Folkman, 1997; Ptacek et al., 2002; Somerfield & Curbow, 1992). A resource-based approach has been used in early intervention to map out the assets available to families (Dunst, 2001). Furthermore, recent models of stress and coping have underscored the importance of understanding the physical, psychological, and social contexts in which coping efforts occur (Berg, Meegan, & Deviney, 1998; Park & Folkman, 1997; Ptacek et al., 2002; Somerfield & Curbow, 1992).
different studies in a variety of disciplines (e.g., Alfonso, 1997; Bedi et al., 2005; Borgen & Amundson, 1984; Borgen, Hatch, & Amundson, 1990; McCormick, 1994). Noted for its rigorous validation procedure, the CIT offers a rich, comprehensive category system to represent the information gathered.

In sum, the experiences of parents of children with CIs have been of interest for some time, but research to date has heavily emphasized the exploration of the challenges and the stress parents are experiencing while to some extent disregarding the variables fostering parents’ coping processes. Furthermore, most research has used quantitative evaluations that limit our understanding to a restricted set of variables.

Thus, the current research utilized the CIT qualitative, holistic inquiry method to provide detailed data permitting analysis of multiple aspects within the topic studied. This study aimed to qualitatively investigate the phenomenological experience of parenting a child who is deaf and has undergone cochlear implantation and to develop a comprehensive categorical system that represents the facilitating resources that parents identified and attributed to their parenting coping experience. By utilizing CIT, this study asked: What attributes facilitated mothers’ and fathers’ coping with this parenting experience?

Methods

Participants

Participants comprised 15 hearing mothers and 13 hearing fathers (including 12 married couples) whose children had undergone cochlear implantation surgery. Mothers’ average age was 34.46 years (SD = 5.01) and fathers’ was 35.50 (SD = 4.97). Regarding parents’ education level, 20% of mothers and 46.7% of fathers had one or two years of higher education; 53.3% of mothers and 33.3% of fathers had university degree. Most mothers (73.3%) and fathers (71.4%) were born in Canada. The remaining parents immigrated: $M = 18.5$ years earlier for mothers ($n = 4$) and $M = 12.75$ years earlier for fathers ($n = 4$). Families resided in urban areas (55.3%) or rural areas (44.7%). Regarding family size, 40% had only one child—the child with hearing loss. Most of the remaining families had two children (53.3%). Two families reported having a second child with hearing loss; three families reported other family members with hearing loss.

Children were 7 boys and 8 girls who were deaf and had undergone cochlear implantation, with a mean age of 3.53 years (SD = 1.06) at the time of the study. This sample ($n = 15$) was relatively large in light of the number of pediatric surgeries undergone per year in British Columbia (Juck, 2005). All the children had at least a severe to profound degree of hearing loss, which was diagnosed at $M = 12.37$ months (SD = 5.61). Mean age at implantation was 2.22 years (SD = 1.01). Only one family reported complications associated with the CI surgery, namely, the healing of the scar. According to parent reports, only one child had been diagnosed with an additional problem other than hearing loss, namely, a weakened hamstring in one leg. The average age at onset of educational–rehabilitational intervention was 14.86 months (SD = 7.64). Regarding communicational modality at home, the majority of parents (60%) reported using simultaneous communication (speech and signs) with their children, 13.3% of parents reported using speech with some signs to support spoken language, and 26.7% reported using speech only.

Measures

Background questionnaire. This questionnaire tapped family demographics (parents’ education level, number of children, place of residence, and hearing status of siblings and parents), information about the child (degree of hearing loss, age, gender, etiology of deafness, communication modality, educational setting, age at onset of intervention, and additional problems), and information on the cochlear implantation (date of surgery and complications).

Retrospective parental experience questionnaire. This open-format self-report asked parents to recall specific incidents in their parenting experiences that helped their coping. This questionnaire was developed for the purpose of this study in order to prepare parents for the upcoming critical incident interview based on retrospective report of incidents and experiences. In addition, completion of this questionnaire was expected
to allow parents to consider what they would feel comfortable disclosing during the upcoming interview. Each mother or father completed this questionnaire separately.

Critical incident interview. Each participant was individually interviewed by the researcher using a semi-structured format following Woolsey’s (1986) critical incident interview protocol. The interview includes two parts, an orientation and an elicitation of facilitating experiences. The orientation involved establishing rapport, explaining the purpose of the study, addressing confidentiality issues, and describing the interview procedures. In the elicitation portion, participants were first presented with the aim and context of the activity: “Please focus on your coping during the experience of raising a child who is deaf and has a cochlear implant, from the time of diagnosis to the present.” Second, to elicit participants’ recall of significant incidents (including behaviors, thoughts, and feelings) that had facilitated their experience, the researcher asked: “What helped you cope with the experience of parenting/raising a child who is deaf? Please describe particular incidents or experiences in this period of time that facilitated your coping with parenting your child. Take your time to think of a specific incident or an experience in as much detail as you can.” This question was followed by probing questions, along the interview, to encourage participants to provide maximal information and detail regarding their experiences, such as: “What was happening to you after this incident/experience?” “What were the general circumstances leading up to this event?” “How did you feel about it?” “What were you thinking?” This process continued until the parent was no longer able to recall any other experiences.

Procedure

The study was reviewed and approved by the university’s research ethics board. Parents were recruited from two early intervention centers for children who are deaf and their families in British Columbia and from the Cochlear Implant Services at the British Columbia Children’s Hospital (BCCH). Program coordinators in these three settings distributed information about the study to parents who met the following criteria: normal hearing in mothers or fathers of a child 5 years old or younger who had received a CI in the last 2 years. Mothers and fathers who were interested in participating received a parental consent form from the early intervention centers’ directors detailing the purpose of the study, the interview questions, the criteria for participant selection, information regarding confidentiality, and contact information if they had questions. Completed consent forms were returned to the researcher. Next, the background questionnaire and the retrospective parental experience questionnaire were sent to each interested parent, and an interview was scheduled for each parent (100%) who had demonstrated initial interest in the study. Interviews were conducted in the participants’ home or at the early intervention center/hospital in accordance with parents’ convenience. In cases where couples were interviewed, the interviews were conducted consecutively, in random order, without the spouse present, and with no time for conversation between the two interviews. Each interview lasted approximately 60-90 minutes. All interviews were audiotaped and orthographically transcribed.

Data Analysis

The written responses to the self-reported retrospective parental experience questionnaire as well as the audiotaped/transcribed interviews were subjected to extraction of critical incidents using NVIVO software. To extract incidents from the interviews, I read the transcripts while listening to the audiotapes, to avoid losing vocal nuances.

Criteria for extraction of parenting incidents followed Flanagan’s (1954) two criteria: (a) the incident must comprise an actual and detailed behavior reported and judged to be critical by the participant and (b) the behavior must be relevant to the general aim of the activity, which, in the present case, was parenting a child who is deaf. However, Flanagan emphasized the need to observe only manifest behaviors that accomplish a specific aim, whereas this study extended Flanagan’s criteria to the observation not only of external behaviors but also of internal processes that included emotional and cognitive states.
Each incident was extracted and coded for three features: (a) its source—who was involved and what the event’s context was, (b) the action taken—what happened that was helpful, and (c) the outcome—the incident’s effect. Next, each incident was given a descriptor to capture the meaning of that unit, in other words, to describe the helpful, facilitative action. In cases where the participants returned to the same incident more than once in the course of the interview, the incident was extracted and counted only once. To test the reliability of the extraction procedure, an independent researcher (a third year doctoral student specializing in measurement, evaluation, and research methodology in educational psychology) separately analyzed a random sample of 25% of the interviews. An interrater reliability of 87.8% was achieved in extracting and describing the critical parenting incidents.

Another recommended validity measure for raters’ extracted critical incidents was participants’ cross-checking (Butterfield, Borgen, Amundson, & Maglio, 2005), also referred to as testimonial validity (Stiles, 1993) or as a credibility check (Elliot, Fischer, & Rennie, 1999; Maxwell, 1992). This examination assessed the agreement between the raters’ interpretation of the collected data and the participants’ intended descriptions of their experiences. A randomly selected 50% of the participants received a summary report describing the extracted critical incidents that facilitated their coping with their parenting experiences, based on the interview and on the self-report. Participants were asked to review the summary report; to determine the accuracy of the critical incidents’ descriptions; and to add, delete, or amend the incidents as needed. All participants stated that the report represented their parenting experiences accurately. Two participants added information to the recorded incidents to enhance their accuracy.

Next, the extracted incidents were subjected to an open-ended, inductive process of categorization to develop a comprehensive map of mutually exclusive categories (Flanagan, 1954; Woolsey, 1986) that would provide a rich description summarizing experiences across participants while indicating the facilitative attributes, their meaning, and their consequences, in line with the recommendations made by Alfonso (1997) and McCormick (1995). In this categorization process, as described above, after the incidents were extracted and coded for source, action, and outcome, the incidents were sorted into similar groups according to the facilitative action taken. Participants may have identified similar facilitative actions but have affiliated them with different consequences. This phenomenological, holistic, comprehensive category map can be used for development of theory, for test construction, for practical programs, and for further study of the categories (McCormick, 1995). According to the CIT qualitative methods, the purpose of the reported findings was to provide a comprehensive map of the category system (source, action, and outcome). After the development of the categorization, three additional recommended credibility checks (Butterfield et al., 2005) were conducted—indepedent sorters, participation rate, and expert validation—as described in the results section.

Results

A total of 430 critical incidents were elicited concerning what facilitated these 28 hearing parents’ coping with the experience of raising a child who is deaf and has received a CI. The categorization procedure produced 20 categories. Table 1 presents the incidents’ distribution among the categories, as well as the percentages of participants (mothers, fathers, and overall) who identified at least one incident in the categories. The following section presents each category based on parents’ descriptions, explanations, and attributions of meaning to their experiences, using excerpts from their interview transcripts and their self-reports. Then, the categorization validation procedures will be presented.

20 Categories of Facilitating Incidents

1. Identifying progress and success. This category, the only one mentioned by 100% of the parents, referred to parents’ identification of their child’s progress and accomplishments throughout the rehabilitation process, especially noted after child had undergone the CI surgery. When the surgery was successful (without complications) and/or the implant was successfully activated, parents described strong emotional responses and a sense of relief. Later, parents expressed
amazement at their child’s reactions to sounds and appreciated their child’s progress in speech perception, speech production, and language skills (even though these were lengthy processes). Subsequent to such facilitatory events, parents felt that all their investment efforts had been worthwhile and felt confident in their decisions, actions, and goals. In addition, parents expressed gratification when their child demonstrated satisfaction from using the CI and learned to independently point out problems.

Example: The audiologist gave us such a good idea of the kind of sounds that he was getting that it made us feel very confident about how it was working for our child. And then with all the therapy we were getting, we were getting more and more confident that he actually was hearing. That he could hear all those sounds . . . It was outstanding . . . it was quite exciting to start getting the feedback.

2. Sharing experiences with similar others. This category, mentioned by almost all (92.6%) the parents, addressed making connections and communicating with similar others—that is, with parents of children who are deaf. Parents established connections with other parents through support groups, the Internet, and contact lists provided by the early intervention center. Parents reported that other parents offered the kinds of support that best matched their emotional and practical needs. Specifically, they noted other parents’ trustworthiness and firsthand experience in the daily childrearing of a child who is deaf (24 hours a day), as well as their freedom from political or organizational agendas that might influence the information they delivered (in contrast to professionals). Parents expressed curiosity regarding other children’s progress and other parents’ actions, and they appreciated hearing other

<table>
<thead>
<tr>
<th>Category description</th>
<th>% Participants who mentioned incidents</th>
<th>Incidents per parent</th>
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<tbody>
<tr>
<td>Total (n = 28)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Identifying progress and success</td>
<td>Total: 100 (Mothers: 100, Fathers: 100)</td>
<td>% of incidents given for category: Range, M</td>
</tr>
<tr>
<td>2. Sharing experiences with similar others</td>
<td>92.6 (Mothers: 93.3, Fathers: 91.7)</td>
<td>0–2, 0.6</td>
</tr>
<tr>
<td>3. Professionals’ support</td>
<td>92.6 (Mothers: 93.3, Fathers: 91.7)</td>
<td>0–7, 2.1</td>
</tr>
<tr>
<td>4. Family/friends’ consistent involvement</td>
<td>74.1 (Mothers: 73.3, Fathers: 75)</td>
<td>0–4, 1.2</td>
</tr>
<tr>
<td>5. Intervention services</td>
<td>70.4 (Mothers: 80, Fathers: 58.3)</td>
<td>0–3, 1</td>
</tr>
<tr>
<td>6. Taking action</td>
<td>70.4 (Mothers: 66.7, Fathers: 75)</td>
<td>0–3, 0.9</td>
</tr>
<tr>
<td>7. Personal resources</td>
<td>63 (Mothers: 53.3, Fathers: 75)</td>
<td>0–4, 1</td>
</tr>
<tr>
<td>8. Gaining perspectives on deafness</td>
<td>56 (Mothers: 53.3, Fathers: 58.3)</td>
<td>0–2, 0.7</td>
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<tr>
<td>9. Professionals’ guidance</td>
<td>55.6 (Mothers: 73.3, Fathers: 33)</td>
<td>0–2, 0.8</td>
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<tr>
<td>10. Belonging to early intervention community</td>
<td>55.6 (Mothers: 46.7, Fathers: 66.7)</td>
<td>0–1, 0.5</td>
</tr>
<tr>
<td>11. Utilizing sign language</td>
<td>48.1 (Mothers: 46.7, Fathers: 50)</td>
<td>0–2, 0.6</td>
</tr>
<tr>
<td>12. Observing children with CIs</td>
<td>44.4 (Mothers: 40, Fathers: 50)</td>
<td>0–1, 0.5</td>
</tr>
<tr>
<td>13. Supportive workplace</td>
<td>44 (Mothers: 33.3, Fathers: 58.3)</td>
<td>0–2, 0.6</td>
</tr>
<tr>
<td>14. Incorporating rehabilitation into daily life</td>
<td>37.1 (Mothers: 40, Fathers: 33.3)</td>
<td>0–2, 0.6</td>
</tr>
<tr>
<td>15. Child’s characteristics</td>
<td>33.3 (Mothers: 33.3, Fathers: 33.3)</td>
<td>0–2, 0.6</td>
</tr>
<tr>
<td>16. Marital partnership</td>
<td>33.3 (Mothers: 20, Fathers: 50)</td>
<td>0–1, 0.5</td>
</tr>
<tr>
<td>17. Supportive childcare setting</td>
<td>29.6 (Mothers: 40, Fathers: 16.7)</td>
<td>0–2, 0.5</td>
</tr>
<tr>
<td>18. Connection with adults who are deaf</td>
<td>25.9 (Mothers: 33.3, Fathers: 16.7)</td>
<td>0–2, 0.5</td>
</tr>
<tr>
<td>19. Parental confidence in decisions</td>
<td>22.2 (Mothers: 20, Fathers: 25)</td>
<td>0–2, 0.6</td>
</tr>
<tr>
<td>20. Financial support</td>
<td>18.5 (Mothers: 20, Fathers: 16.7)</td>
<td>0–2, 0.5</td>
</tr>
<tr>
<td>Total</td>
<td>—</td>
<td>430</td>
</tr>
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families’ stories and sharing their own experiences with others. Thus, communicating with other parents provided an opportunity to share information, knowledge, and resources; to collaboratively think through concerns and face challenges; and to discuss potential solutions and ideas. Parents felt that peer support helped them gain practical parenting skills, acquire new perspectives, and become better equipped for the future. In addition, they reported that such opportunities were encouraging and reduced their anxiety level and concerns. Other families also functioned as a social group that contributed to parents’ sense of belonging, which also reduced their sense of loneliness and normalized the experience of parents and children dealing with deafness.

Example: You’re actually talking to somebody who’s been through it, or is going through it. I mean, your friends and family are awesome, but they’re not the one with the child, and they’re not the one who lives all day long with a child with a hearing loss... These people can actually feel with you, and understand with you. Give advice and give a good pat on the shoulder. They understand. ... I don’t know what I would do sometimes without the parent support group because after, you know, a couple of weeks of not seeing them, it’s like, oh good, I get to talk to somebody about this, this, this and this, and right now we’re in the potty training stage, and it’s like oh my god, I don’t know what I’m doing.

3. Professionals’ support. This category, mentioned by almost all (92.6%) the parents, comprised parents’ receipt of support from different professionals such as surgeons, speech language clinicians, teachers for the deaf and hard of hearing, and so on in the following functional domains: emotional, tangible, and informational support. Emotional support referred to incidents where professionals calmed parents during stressful situations (e.g., before the child’s surgery), cared for parents, showed empathy, listened to parents’ concerns, expressed understanding of their situation, and encouraged parents throughout the process of diagnosis, surgery, and rehabilitation. Tangible support referred to incidents where professionals monitored children’s progress and reported it to parents, thus reassuring parents that their child was “on the right track” and progressing as expected. Informational support referred to incidents where professionals provided parents with information and advice that helped parents make decisions, answered parents’ questions, provided explanations, and presented parents with numerous resources. Informational needs appeared to change over time, with the most critical period described as the time following diagnosis when faced with the decision of whether or not to choose cochlear implantation. In all, professionals’ diverse supports were evaluated as decreasing parents’ levels of stress and anxiety and as helping parents gain knowledge and experience a sense of control and competence.

Example: I remember one of the teachers from the intervention center phoning me after I had gotten home, which was very nice. She just phoned because she realized that my wife and the kids were going away and we had just found out about our child’s hearing loss, and so she called me at home just to see how things were going. So that was good, having emotional support.

4. Family’s/friends’ consistent involvement. This category, mentioned by 74.1% of the parents, addressed parents’ receipt of support from family members and friends in the following functional domains: informational, tangible, emotional, and rehabilitation support. Informational support referred to incidents where friends and family members took an active part in obtaining information about hearing loss, intervention options, and the CI. Parents appreciated others’ involvement in the information-seeking process, especially following the child’s diagnosis and before making the decision about cochlear implantation when parents lacked experience and knowledge related to deafness and faced the challenge of absorbing a considerable amount of new knowledge in a short period of time. Collaboration with family and friends helped the parents think through options, concerns, and decisions as well as construct their cognitive appraisal of the child’s deafness and needs. Tangible support referred to incidents where family members and friends helped parents maintain daily life tasks. Childcare by these
family members and friends freed parents to manage various tasks like attending medical appointments and gave parents “a break” at stressful times. Emotional support referred to incidents where family members’ and friends’ involvement provided a source of emotional support. Caring, encouragement, and companionship were valuable (e.g., the company of close family during the child’s surgery). It was also important to parents that their extended family and friends gain understanding of what was involved in raising a child who is deaf and that they acknowledge parents’ difficulties. Rehabilitation support referred to incidents where family members and friends became directly involved in the child’s rehabilitation, such as participating in therapy sessions or working with the child on specific learning tasks.

Example: I went back to working two days a week. It’s busy, but D. goes to my mom and dad’s house. My mom has done a few sessions with her speech therapist and so she’s got a good idea of, you know, what we kind of do and what our philosophy is. She tries to keep that going, those two days.

5. Intervention services. This category, mentioned by 70.4% of the parents, comprised services that parents received for their child and family, such as speech language therapy; supportive sign language services (like home classes and guidance for the day care setting); and CI-related services like easy access to parts, candidacy for surgery at an early age, and a shorter waiting list for surgery due to increased health funding. Parents noted that service provision in the family home was convenient in terms of scheduling, enabled both parents and other family members to participate, and helped them learn how to work with their child in their everyday home context.

Example: Having the signing class available to us in our home was very helpful, even if it was just once a week. It took a lot of the burden off. And in fact it allowed the family to participate. Family members sort of felt they were more welcome, they’d have tea so it was a bit of a social thing as well as learning sign. So it made it a little easier than having to go out to night class every Wednesday or Tuesday.

6. Taking action. This category, mentioned by 70.4% of the parents, involved parents’ decisions to engage in a problem-solving approach and to take active steps toward learning how to best support their child. These parents described how they had intentionally decided not to be held captive by their intense emotional reactions to their child’s deafness but rather to respond practically and rationally. Parents’ actions included extensive research and information procurement from multiple sources (e.g., Web sites and online discussion forums) to increase their knowledge base concerning hearing loss, rehabilitation options, CIs, as well as the early intervention context of children with hearing loss (e.g., politics, different philosophical approaches, biases), and so forth. As a result, parents gained better understanding, which, in turn, informed their decision making, oriented them toward the future, empowered them, and gave them a sense of control in facing something over which they had no control—their child’s disability.

Example: We were at the point where we just wanted to do whatever we could for our child and whatever it takes . . . We just dove in and made decisions, figured out what needed to be done and started . . . It was very hard, but we are the type of people who, instead of dwelling on it and getting upset, too upset or feeling too sorry for yourselves, we do whatever we can for our boy . . .

7. Personal resources. This category, mentioned by 63% of the parents, depicted parents’ personal resources such as their profession (e.g., a physician), previous knowledge (e.g., about child development), previous experience (having another child with hearing loss), religiosity, time available, and family composite (e.g., having one child).

Example: We go to church and this gives me a lot of strength. This helps me so much. I just pray lots. And I knew that a lot of people prayed for us . . . in our church, we depended on it.

8. Gaining positive perspectives on deafness. This category, mentioned by 56% of the parents, addressed parental cognitive appraisals of their child’s deafness that facilitated parents’ coping with the experience of
raising a child who is deaf. Parents described that they had accepted the fact that their child had a hearing loss and its consequences. Some were relieved when they compared deafness to other medical conditions and felt blessed that deafness is not a life-threatening disability, that their child had no additional severely disabling conditions, and that their child would be able to have an independent future life. Parents described a holistic view of their child, referring to their child’s hearing loss as only one aspect of the child’s uniqueness and, hence, they treated the child as any other child. Some parents felt enriched by the experience of raising a child with deafness and felt it introduced a new meaning and perspective to their lives.

Example: It was a traumatizing diagnosis, but it wasn’t, like . . . I mean, I’d much rather her have this than be autistic, and that was our comfort throughout. Like, thank god she’s deaf, that’s what we kept saying.

9. Professionals’ guidance. This category, mentioned by 55.6% of the parents, involved parents’ benefit from professionals’ direct and indirect guidance. Direct guidance was provided regarding the complex tasks of raising a child who is deaf in domains such as communicating with the child, working on language development, and troubleshooting with the CI. Indirect guidance was given to other service providers (e.g., preschool teachers) or individuals in contact with them or their child, regarding how to work with their child, to manage their assisted listening devices, and to support their child’s intervention goals and language development. Parents reported that receiving guidance and feedback increased their sense of self-efficacy and their confidence and self-esteem in their parenting roles and skills and promoted and motivated their participation in their child’s rehabilitation.

Example: All the guidance from the infant development worker and the teacher for the deaf through the intervention center . . . sort of set up my life for me because I didn’t know what to do and I had another child and I thought how much can you do for one, and yet our whole life was focused on communicating in a new way and learning sign language.

10. Belonging to an early intervention community. This category, mentioned by 55.6% of the parents, comprised participation in an early intervention program as a helpful resource in two domains of functioning: social and instrumental. In terms of social functioning, the intervention center served as a meeting place and provided opportunities to establish social connections with other families. This, in turn, promoted a sense of belonging and supportiveness. Coming to the center, parents felt they were part of a community who understood them; they no longer felt alone or lost. The parent support groups at the center also facilitated the promotion of social connections between families. In terms of instrumental functioning, the early intervention program provided a central source of professional services and resources to parents, such as sign language classes, a resource library, and speech therapy.

Example: We were fortunate; this facility here has been great. When we found out that she had a hearing problem, all the staff started coming, almost overwhelmingly, and everybody said, “You’ve got to get the ball rolling.” It was great, to have this service set up and provided for you. Without it, as a parent, I wouldn’t know what to do.

11. Utilizing sign language. This category, mentioned by 48.1% of the parents, addressed incidents related to use of sign language for communicating with the child (It appeared from parents’ descriptions that “sign language” actually refers to the use of signs, rather than a distinct sign system or American Sign Language). The incidents parents relayed suggested that the first priority in parents’ minds was finding a way to communicate. Parents expressed great satisfaction, relief, and motivation when their child started to comprehend parental communicative intent and to respond and produce signs. Parents reported that they found it helpful to start using sign language following diagnosis, especially due to the fact that they did not know yet if their child would be a suitable candidate for implantation or if the implant would help their child. In addition, even following the cochlear implantation when parents aimed to establish oral communication with their child, they found it helpful to continue using signs in three ways: as a bridge during the lengthy
transition to oral communication, when the child could not use the implant (e.g., in the bathtub, swimming pool, park, in bed at night), and to prevent frustration during communication breakdowns.

Example: We decided to use sign language because . . . we weren’t [yet] sure if T. was going to be a candidate for an implant, [after getting] meningitis. We weren’t sure how extensive the damage was to his nerves. We immediately started signing . . . he acquired signs very quickly. I mean, by the time we left the hospital we could get him started on signs like “light on,” so it was extraordinary to see that and . . . very comforting to know that he would be able to communicate with us.

12. Observing children with CIs. This category, mentioned by 44.4% of the parents, comprised parents’ benefit from observation of children who already have CIs, mostly in incidents that occurred preoperatively. Observing other children influenced parents’ perceptions of the implant as an efficient rehabilitation option for their child. It established parents’ expectations regarding their child’s outcomes, helped them set rehabilitation goals, and gave them hope that their child would be capable of listening and speaking. These incidents influenced parental decision-making processes and increased parents’ confidence in their decision. Parents felt encouraged, optimistic, and less concerned regarding their child’s future adjustment.

Example: We met a bunch of these kids who were three or four years old and had cochlear implants for a little while, and I was talking to a four year old and I didn’t even know he had one because he had big moppy hair. And you see this kid, he’s talking, he’s listening to me and then he’s got this little wire hanging down and you think, hey, this thing will work, you know. And so you get this real big hope, that’s where you start to feel . . . everything might, I think this will be good.

13. Supportive workplace. This category, mentioned by 44% of the parents, dealt with parents’ work schedule flexibility, as well as employers’ and coworkers’ support and thoughtfulness. These factors enabled parents to take time off to attend their child’s various medical and/or intervention appointments, a parent support group, a sign language class, etc. In some cases, mothers left their jobs altogether or moved to part-time positions. Parents attributed such decisions as facilitating management of their child’s daily schedule and improving outcomes following cochlear implantation due to the mothers’ increased availability to work with the child. Parents appreciated when work colleagues were empathetic, expressed interest in their child, and tried to encourage them.

Example: All these appointments and assessments, especially before the implant, and meetings and looking for interventions, are so time consuming when you work full-time. I was lucky to be working at that time in a job where people would understand if I needed to take some time off and go to appointments and so on. So that wasn’t a stress at all to, you know, missing work and so on. I had that flexibility.

14. Incorporating rehabilitation into daily life. This category, mentioned by 37.1% of the parents, touched upon integrating the child-related activities into the family’s daily routine. Parents appreciated mundane daily activities (e.g., exercising sound discrimination while riding in the car or cooking dinner) as opposed to structured ones that promoted their child’s language and communication skills. Parents expressed the goals of making language practice enjoyable and not restraining the family’s routine. Siblings’ involvement in language activities and interactions with the child with hearing loss were identified as contributing significantly to the child’s progress and therefore supporting parental goals. Parents did not want to feel stressed about promoting their child’s outcomes.

Example: Her brother helped her a lot. I think it was always a game. We sat together, we three, and did the games. Or when my husband had time, we all four sat together and played the games or looked at the animal pictures.

15. Child’s characteristics. This category, mentioned by 33.3% of the parents, encompassed parents’
identification of aspects of their child’s personality, behavior, attitudes, and other specific characteristics that helped them adjust to the situation and make the rehabilitation process easier.

Example: J. has always been a fighter; he’s always bounced back from everything. He helped us, honestly. What really got us through that dwelling on the “why me?” was him. His positive attitude, his personality, that’s what really got us through. The fighter inside him to just keep going every time they knocked him down with a test or an operation, a needle, whatever, he just, you know, looked at you and got up again. He didn’t just curl up in a shell and . . . feel sorry for himself . . . he would just get up fighting every time. So we said how can we be upset and look at him, he’s doing great through everything.

16. Marital partnership. This category, mentioned by 33.3% of the parents, dealt with incidents concerning the marital relationship. Parents indicated the importance of having each other at stressful time points (diagnosis, surgery), during challenging situations (difficult interactions with the child), and throughout the demanding rehabilitation process. They described the benefit of jointly making crucial decisions, working together toward their goals, sharing responsibilities, and communicating with the health care system. This unity, in turn, enabled both parents to be involved in their child’s intervention, increased their self-confidence, eased the adjustment process, reduced stress, and even brought them closer. For some fathers, the joint understanding that the mother was taking a leading role in meeting the child’s special needs and in delivering information to the father was reassuring. In sum, a cognitive, emotional, and practical sense of collaboration and partnership was reported as an essential resource for parental coping with the child’s deafness.

Example: We didn’t have anything like . . . other couples [who said]: “My husband wanted the cochlear implant and I didn’t, so we had to . . . get through that together as a couple before we could even move on.” Whereas, I guess we were really blessed that we just kind of both thought the same way [about the implant] . . . we were on the same page. I can’t imagine not seeing this the same way as my husband and having to convince him, or him having to convince me. That would have just been such a strain, you know, on our marriage.

17. Supportive childcare setting. This category, mentioned by 29.6% of the parents, comprised parents’ satisfaction with their child’s educational setting (e.g., day care, preschool). Parents expressed high appreciation of the settings’ support for their child’s needs and encouragement of their child’s inclusion in mainstream tracks. Support included teaching other (hearing) children to use some signs, collaborating with the child’s speech language pathologist, supporting the child’s intervention goals, and working with the child to promote language development.

Example: The preschool was willing to do whatever we needed to help J. They bent over backwards, made a lot of changes, hung signs up, taught the other children some sign language. He is the only hard of hearing one, there are 20 other children in the preschool and they all are learning sign.

18. Connection with adults who are deaf. This category, mentioned by 25.9% of the parents, depicted the opportunity to meet and establish relationships with adults who have hearing loss (with or without CIs). Parents met adults who are deaf through the intervention center, through professionals who worked with their child, or via the Internet. Parents who had the opportunity to learn from these adults’ experiences and hear their life stories reported that it increased their understanding of what it is like to live with deafness and to use a CI. Adults who are deaf supported parents’ efforts to learn sign language, helped parents improve their interaction patterns with their children, and, in some cases, served as a role model. They gave parents hope for the future.

Example: An adult woman who is deaf came and hung out with me and my kid, taught me some basic sign language. It was just to see a productive, active person with this disability. We’ve maintained a friendship ever since. It’s amazing to know
that a person who has a hearing loss can actually grow up and succeed. It helped when I was able to speak with an adult who is deaf, and she was able to describe what it’s like.

19. Parental confidence in decisions. This category, mentioned by 22.2% of the parents, consisted of parents’ self-confidence regarding their decisions (e.g., regarding implantation, rehabilitation approach) and their espousal of a positive future orientation. When parents felt they were giving their child the best chances to succeed in life, they reported that their self-confidence increased their commitment toward their child’s rehabilitation process as well as their feelings of excitement and encouragement toward the future.

Example: We were confident about our decision that this was the right thing to do. Ah, I think any parent wants to be able to give their child the best life they can have. And, to be able to give R. the ability to hear, although not as you and I hear, but hear nonetheless—it our responsibility to give that to her.

20. Financial support. This category, mentioned by 18.5% of the parents, addressed parents’ appreciation of financial support that helped cover their child’s treatment and related expenses. For instance, financial aid helped families living in remote areas, who had to travel with their child to reach preoperative medical appointments, to attend mapping sessions (especially during the first year after surgery) and to access intervention services.

Example: We have the support of our community, which is well aware that we travel up and down the island. And my husband’s work office has been wonderful. They have handed over money a few times now for us to pay for our gas to get down to Vancouver.

Categorization Validation Procedure

Three recommended credibility checks (Butterfield et al., 2005) were conducted after the categories were established: participation rate, independent sorters, and expert validation.

Participation rate. As seen in Table 1, to determine the representation of each category among the study participants, participation rate (the percentage of participants who mentioned incidents) was examined. Categories with a high endorsement (e.g., identifying progress and success, with a 100% participation rate, or professionals’ support, with 92.6% endorsement) can be considered to have a broad level of relevance. However, categories with a low level of endorsement (e.g., parental confidence in decisions, with only a 22.2% participation rate, or financial support, with only 18.5% endorsement) should not be considered invalid but rather signify that the incidents comprising this category are less typical and may be extreme or highly idiosyncratic (Andersson & Nilsson, 1964).

Independent sorters. Interrater reliability was examined by two judges’ categorization of a random 10% sample of the incidents from each category. Thus, each judge categorized 43 incidents. The judges first received a brief written description of all 20 categories as well as the set of 43 transcribed incidents presented randomly on 43 separate index cards. The judges were asked to write down which of the 20 categories suited each card (only one category per card). The percentage of agreement for categorizing the incidents was 97.72% between the researcher and the first judge and 93.18% between the researcher and the second judge, providing an overall average interrater reliability of 95.45%. It has been suggested that a category system should attain at least 75% agreement (Andersson & Nilsson, 1964; Flanagan, 1954).

Expert validation. To determine whether or not these categories were valid and useful in the context of the field (Butterfield et al., 2005; McCormick, 1994), a summary of the category system was submitted to two experts in the field of early intervention for children who are deaf and their families. The first expert was the educational director of an early intervention center’s preschool program over the last 30 years, and the second expert was the director of a program for the deaf and hard of hearing over the last 22 years with experience in research work in early intervention. The experts were asked to separately review each category description and to
comment on whether it was manifested in the practical context of early intervention. The experts confirmed each of the categories as useful and valid to therapeutic practice. This examination provided a link between research and practice.

Discussion

Study results indicated that the coping experience of parenting a child with a CI was determined by various sources of influence associated with social contextual aspects, with the parent himself or herself, and with the child. This pattern of findings is consistent with conceptual ecological models of parenting, such as Bronfenbrenner’s (1979) ecological approach, which outlined multiple factors that may influence parenting, and Belsky’s (1984) process model that provided a framework for addressing three domains of determinants of parental experience and functioning, including contextual sources of stress and support, parents’ personal psychological resources, and the child’s characteristics. The findings of the study will be discussed according to these domains.

Findings of this study were also consistent with findings from meta-analyses examining the most significant factors in the coping process among parents of children with disabilities (Scorgie, Wilgosh, & McDonald, 1998; Yau & Li-Tsang, 1999). Those studies summarized that relevant factors relate to the parent and family characteristics and status (e.g., appraisals, marital relationships, time schedules, problem-solving skills, family composition), the child characteristics (e.g., temperament, degree of disability), and external resources (e.g., social network support, collaboration with professionals).

Contextual Sources of Support

The significant role of social and emotional sources of support stems largely from the unique challenges and demands associated with parenting a child who has a CI. Regarding social support to parents of children who are deaf, the current findings whereby parents received support from multiple sources, both formal and informal, corroborated previous research (Beadle et al., 2000; Calderon & Greenberg, 1999; Hintermair, 2000; Lederberg & Golbach, 2002; Meadow-Orlans & Steinberg, 1993; Quittner, Glueckauf, & Jackson, 1990). These sources included friends, extended family, intimate relationships, co-workers, other parents, adults who are deaf, professionals, and the community. In addition, similarly to the current findings, these prior studies found that perceived social support was a beneficial resource for parents and was associated with parental well-being and adjustment. Notably, in these quantitative studies, social support was mainly defined as social network characteristics (availability, size, frequency, and satisfaction). In contrast, this qualitative study provided in-depth descriptions of the unique functions of social support for this group of parents. Functional domains of social support refer to the degree to which interpersonal relationships serve particular functions (Sherbourne & Stewart, 1991). In citing social supports, parents in this study most often mentioned functional domains such as emotional or instrumental aid or tangible information and advice, companionship, and validation (Krause & Markides, 1990; Sherbourne & Stewart, 1991).

In many facilitating incidents, parents described types of support that facilitated their parenting experience along with the unique source of support that each relationship was able to offer. In other words, other parents, professionals, family members, adults who are deaf, and other sources in the parental social context each offered special features that supported parents in their coping processes.

Sharing with other parents of a child who is deaf uniquely offered a source of compassion, full understanding, and a level of mutual trust that was not reported for parents’ other supporting relationships. As a result, other parents were considered a reliable ally for sharing relevant information and community resources, furnishing tools for comparison and learning, and providing good partners for collaborative problem solving. These findings from this study co-incide with those of Ainbinder et al. (1998), who found comparable qualities of support from other parents of children with special needs, including perceived sadness, comparison that enables learning and growth, round-the-clock availability of support, mutuality of support, and personal growth. Similar outcomes were also suggested by Barnett, Clements, Kaplan-Estrin,
and Fialka (2003) among parents of children with special needs. Moreover, parents of children who are deaf (both with hearing aids and with CIs) have highlighted the importance of making connections with other parents in similar situations (Dromi & Ingber, 1999; Hintermair, 2004; Most & Zaidman-Zait, 2003; Nunez & Ceh, 2001) and of such contacts’ positive effect on parental emotional experience (Dunst & Trivette, 1990; Hintermair, 2000; Shonkoff, Hauser-Cram, Krauss, & Upshur, 1992). For example, similarly to the current findings, Hintermair (2000) found that meeting other parents of children who are deaf reduced parents’ social isolation, strengthened emotional bonds with their child and acceptance of their child, and improved interactional responsivity in child–parent interaction.

Another unique source of support reported by parents was professionals. Findings indicated that parents appeared to rely on professionals mainly for informational support, advice, and guidance. Receiving information from professionals appeared to be a valuable resource for parents. The present outcomes confirmed previous research reporting that parents of children who are deaf (both with hearing aids and with CIs) expressed a strong need for a wide range of information (Bernstein & Barta, 1988; Dromi & Ingber, 1999; Most & Zaidman-Zait, 2003). In addition, as was also indicated by others researchers (Meadow-Orlans, Mertens, Sass-Lehrer, & Scott-Olsen, 1997), information plays an important role in parents’ coping process and adjustment to their child’s hearing loss.

Professionals’ practical guidance was also reported here as helpful for parents. As reported previously, the present mothers of children who are deaf expected to receive guidance regarding a range of practical matters and direct instruction with regard to communication and interaction skills in order to advance their children in the process of learning language (Dromi & Ingber, 1999; Dromi & Ringwald-Primerman, 1996; Horowitz & Sfatia, 1987; Pipp-Siegel et al., 2002). Moreover, the positive effect of parental guidance on parents’ coping ability and on self-confidence in the parental role also emerged in previous research (Able-Boone, 1993; Fallon & Harris, 1991; Laughton, 1994). Zaidman-Zait and Most (2005) attributed the correlation found between parent–child communication difficulties and parents’ lower level of satisfaction from professionals to the latter’s lack of direct guidance for parents on how to develop better communication strategies with their child who is a CI user. In addition, consistent with previous findings (e.g., Dromi & Ingber, 1999), parents in this study also expressed a need for guidance delivered to others in the community, such as teachers who work with their child. The current findings support the notion that raising a child with hearing loss does not occur in social isolation; in many cases, parents play an advocacy role in which they must campaign for services for their child or educate other people who have contact with their child (Spencer, 2004).

It appears that parental satisfaction from professional informational support and guidance was not simply a matter of the delivered content but also the manner it was delivered. The importance of professionals’ counseling qualities indicated by the parents (e.g., empathy, honesty, openness to parents’ ideas, acceptance of parental decisions, willingness to listen, caring) was also found in previous studies that explored mothers’ expectations and perceptions about their interaction with professionals in the field of deafness (Dromi & Ingber, 1999; Sjoblad, Harrison, Roush, & McWilliam, 2001). Moreover, similar to the importance of various help-giving characteristics reported previously (Dunst, Trivette, & Hamby, 1996), parents in this study identified significant help-giving characteristics that lead toward empowerment outcomes such as supporting decision making, promoting competence, trustworthiness, information sharing, useful advice giving, honesty, and understanding of concerns. It seems that the consequences of professionals’ counseling practice reported by parents are consistent with the concept of effective help giving, that is, a process that provides individuals with opportunities to learn skills and develop a sense of control, leading to solutions for problems and concerns (Dunst, Trivette, & LaPointe, 1992). Likewise, the association described by parents between help-giving practices and parents’ sense of control was also reported by Judge (1997).

Parents described ways in which family members, spouses, friends, and other parents not only supported their coping efforts but were also actually involved in
a collaborative coping effort, where the child’s deafness was perceived as a property of a social unit. This finding reflects Berg et al. (1998) thesis that stressors occur within a social context and are appraised and managed in collaboration with other individuals. As described by Berg et al., others’ participation in parents’ coping occurred by means of joint problem solving, collaborative thinking, division of labor, mutual influence, and dialogues. Examples from the current findings included parents coconstructing the meaning of having a deaf child together with others and parents sharing childrearing tasks such as seeking information related to CIs, taking care of their child, and promoting their child’s outcomes following the cochlear implantation. In addition, parents solved problems related to their child’s deafness in a collaborative manner and had others involved in their decision-making process.

Parents’ Personal and Psychological Resources

Another group of attributes that parents found relevant to their effective parental coping experience when raising a child with a CI reflected parents’ personal resources (e.g., coping style, sense of competence) and parents’ cognitive appraisals. According to some parents in this study, it was helpful to adopt an active problem-focused coping style that included efforts that were oriented at responding to and altering the situation itself, that is, the child’s deafness. Parents’ problem-focused coping mainly included parents’ active information- and solution-seeking behavior related to various issues surrounding their child’s condition and the CIs. According to parents’ reports, information-seeking behavior was an effective coping strategy. The positive contribution of parents’ active style of acquiring information about CIs was also found in previous research (Spencer, 2004), where it was associated with parents’ satisfaction with their decision to choose a CI for their child and with the children’s postimplant performance. Similarly to the current findings, Sach and Whynes (2005) found that some parents went further than the information received from professionals by undertaking their own research.

The multiple sources of information from which the current parents sought information were also reported by Christiansen and Leigh (2002) and included other parents of children with CIs, implanted children and adults, and health professionals such as pediatricians, audiologists, speech/language pathologists, and the Internet. Overall, the results of this study suggest that parents appeared to go through a great deal of information gathering and fundamental thinking processes before deciding on rehabilitation options for their child (Li et al., 2004; Sach & Whynes, 2005; Spencer, 2004).

Parents’ actions were also intended to regulate the intense negative emotions they were experiencing. One of the process that helped parents in altering their negative emotions included parents’ intrapsychic process. Parents’ appraisals of their child’s deafness were modified over time and gained new meanings. Parents gradually began to feel that their child’s deafness was manageable and even enriched their life experience. According to parents’ reports, changes in their perceptions and thoughts regarding their child’s deafness were modified by the interactions they had with others. As indicated by Berg et al. (1998), a dynamic process of appraisals and reappraisals occurs while individuals engage with the people in their social network.

Parents’ confidence in their decisions and choices and their positive consequences were another helpful attribute mentioned by parents. One example of helpful choices that parents mentioned was the utilization of sign language to establish communication with the child following diagnosis or even for occasional or transitory uses (e.g., at bedtime or bath time). Greenberg (1983) reported that mothers who were part of an intervention program that supported total communication expressed less stress than mothers who relied solely on oral communication. Parents’ motivation to incorporate sign language, even when choosing the CI for their child and aiming for oral communication, in some cases stems from uncertainty about the potential cochlear implantation outcomes. This uncertainty is probably related to the reported variability in outcomes (Dowell, Blarney, & Clark, 1997; Svirsky, Robbins, Kirk, Pisoni, & Miyamoto, 2000), limited generalized research evidence (Nicholas & Geers, 2006), and conflicting opinions among professionals. The acquisition of spoken language abilities following CI takes time (see review in Nicholas & Geers, 2006),
during which an alternative mode of communicating can be beneficial. In addition, parents’ description of children’s decrease in production of signs and increase in production of spoken words is similar to preliminary evidence reported by Yoshinaga-Itano (2006).

Child’s Characteristics

Parents described their child’s personality characteristics and progress as fundamental to their experience. The current parents’ reported satisfaction from CI outcomes is consistent with previous parent satisfaction levels (Beadle et al., 2000; Chmiel et al., 2000; Christiansen & Leigh, 2002; Meadow-Orlans et al., 2003; Sach & Whyne, 2005; Zaidman-Zait & Most, 2005) and with recent research demonstrating successful speech and language outcomes following cochlear implantation (for a recent review, see Nicholas & Geers, 2006).

Perceived Positive Outcomes of Existing Coping Resources

Consistent with previous research, it appears that the parents of children with CIs in this study experienced stress (Burger et al., 2005; Quittner et al., 1991; Richter et al., 2000; Spahn et al., 2003). Particularly stressful experiences reported by the parents included the child’s diagnosis, obtaining information, decision making, and the surgery. The current findings repeatedly demonstrated how various personal, social, and external resources such as social support, personal psychological characteristics, child’s progress, and the existence of services led to a decrease in parental stress, suggesting that high levels of stress are not inevitable and are linked to the availability of resources. Similarly, previous research also reported the influence of various resources on parental stress, including the amount of educational support children and parents received (Lederberg & Golbach, 2002), children’s progress and communication abilities (Chaffee, Cunningham, Secord-Gilbert, Elbard, & Richards, 1990), parent psychological characteristics (Hintermair, 2006), and social support (Hintermair, 2004; Lederberg & Golbach, 2002; Meadow-Orlans, 1994; Pipp-Siegel et al., 2002; Quittner et al., 1990).

Adequate social services resources were reported as leading to additional cognitive and self-perception outcomes such as parental sense of competence, self-efficacy appraisal, and sense of control. These qualities have been associated with parents’ descriptions of empowering outcomes following helpgiver–helpseeker exchanges (Dunst et al., 1992). By receiving information, guidance, and emotional support from multiple sources (e.g., other parents, professionals), parents in this study reported having opportunities to learn new skills and to develop a sense of empowerment, leading to resolution of concerns, solutions of problems, and the achievement of desired goals (Dunst et al., 1992; Zimmerman & Warschausky, 1998). In addition, according to parents’ descriptions, it seems that these outcomes (parental self-efficacy and sense of competence) become, in turn, self-resources for parents, demonstrating that resources are both an end and a means (McWilliam, 2005). Research examining the affect of different cognitive coping resources among parents of children who are deaf found that maternal problem solving was associated with child adjustment (Calderon & Greenberg, 1999); sense of coherence reduced parental stress (Hintermair, 2004); and, in mothers of children with CIs, perceived knowledge and competence in their children’s speech–language development was associated with strategies employed during mother–child interactions (DeJardin, 2004). Overall, parents engage in dynamic processes of coping, where the utilization of resources promotes parental coping and fosters the acquisition of new resources and appraisals, which, in turn, lead to improved parental functioning and adjustment in response to the challenges of raising a child who is deaf.

Study Limitations and Future Research

The categorization system developed in this study should be considered as a preliminary set of categories that describe coping as understood by parents. Because of the relatively small sample size, the current numerical results (i.e., percentage of participants mentioning at least one incident in a category, and incidents’ distribution and range within categories) are probably less stable than the categories themselves and may not be generalizable. Nevertheless, a previous...
large-sample study examining parental perceptions about their child with a CI revealed findings resembling those of prior studies with very small sample sizes (Sach & Whynes, 2005). Replication studies using larger sample sizes could establish the reliability of the current categories, identify new categories, and perhaps permit the examination of differences between mothers’ and fathers’ coping processes. In addition, knowing what assists parents in their coping processes does not completely reflect the obstacles that parents face. Hence, it is important to examine, too, what hinders parental coping process. Knowing the positive and negative aspects of parenting experiences will be useful in planning effective preventions and services for deaf children and their families.

Furthermore, recent outcomes and advances in implant technology and implementation of newborn screening may affect parents’ coping experience. Hence, future research should continue to examine parental experiences and their implications for practice. Moreover, the current complex set of findings raises multitude future research questions such as how parents’ reported coping experiences reflect their actual behavior and its association with the child’s progress over time. In addition, future research should adopt recent theoretical models of coping in social contexts and integrate perspectives of coping and social support when exploring family adjustment. Finally, research should employ various qualitative approaches to advance the understanding and consequences of parenting a child with a CI and to highlight issues that require researchers’ and practitioners’ attention.

The current research substantiates the soundness of implementing early intervention models such as the developmental system model (Guralnick, 2001) and the support approach to early intervention (McWilliam & Scott, 2001), which are consistent with ecological theory and recognize that families need various combinations of resources, social support, information, and services to help them address the stressors associated with parenting in general and parenting a child with special needs in particular. Early intervention programs that strengthen parental perceptions of control, support, and coping are likely to be successful at helping parents provide the types of behaviors that will support the development in their children.

Note
1. BCCH, founded in 1988, is the only CI program operating in British Columbia. In January 2004, British Columbia Ministry of Health funding was increased from only six pediatric cochlear implantation surgeries to up to 30 surgeries per year (Juck, 2005).

References


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