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Laura Fehrmann

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A Longitudinal Study of One Cochlear Implant Recipient From Baseline to Twelve Months, Following a Group-Based Rehabilitation Program

by

Laura Fehrmann

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Approved by: Nancy Tye-Murray, Ph.D., Independent Study Advisor

Introduction

Cochlear implants have been established as having a profound impact on individuals with hearing impairment. Improvements in recognizing acoustic events, speech perception abilities, and enhancement of speechreading have been well documented (Dowell et al, 1986; Waltzman et al, 1986; Gantz et al, 1988; Cohen et al, 1993; NIH, 1995). Although promising, audiologic benefit is quite variable in cochlear implant adults. Several explanations for this variability have been proposed by the National Institutes of Health (1995): etiology of the hearing loss; age of onset of deafness; age at implantation; duration of deafness; residual hearing; electrophysiological factors; and other device factors.

Hearing impairment is often associated with specific difficulties in psychosocial function, emotional status, and psychological issues. Negative self-image, depression, social anxiety, isolation, interpersonal distress, and extreme loneliness have been associated with hearing loss (Knutson and Lansing, 1990; Knutson et al, 1991; Getty et al, 1993; Knutson et al, 1998). Hogan (2001) adds mistrust, role confusion, incompetence, shame, and despair to the list of psychological issues deafened adults face. Lormore and Stephens (1994) found through an open-ended questionnaire that 20% of respondents reported psychosocial difficulty, because of giving up certain clubs, activities, or employment because of their hearing loss. "In essence a whole part of the patient's everyday life has been eliminated" (p.88).

In social situations, some adults even deny the actual presence or severity of the physical hearing loss. Social incompetence is often chosen over being acknowledged as a hearing impaired person (Getty and Hetu, 1991; Hetu, 1996). Waridel (1993) interviewed women with hearing impairment who admitted to covering up their hearing losses outside the home. They felt that the hearing impairment was seen as a sign of lack of intelligence, mental health

problems, disability, old age, and they felt less feminine. Their social identity was threatened by their hearing loss. Concealment of hearing loss to protect social status and sense of belonging is very common in hearing impaired adults (Hetu, 1996). One reason for concealing hearing loss was proposed by Stephens and Hetu (1991). They suggested that the issues of anxiety and a negative self-image could result from a fear of not being able to successively orient him/herself in certain social situations. Hetu et al (1993) described the issues about hearing impairment as "the frustration from not understanding what is being said, missing out on family conversations and being isolated" (p.373). Isolation when in the presence of others, even family members, is an emotion often felt by the hearing impaired person. This social integration handicap affects the patient's ability to communicate and participate in normal social contact (Stephens and Hetu, 1991).

Psychological benefit and quality of life after being implanted have been documented to show an increase in happiness, independence, confidence, and greater relaxation post-implant (Knutson et al, 1991; Spitzer et al, 1992; Tyler, 1994; Maillet et al, 1995). Knutson et al (1991) suggests that any audiological benefit through the cochlear implant by a deafened adult is a psychological improvement in their quality of life. Maillet et al (1995) showed that patients were aware of significant improvement in their ability to communicate after being implanted, and that quality of life was a perceptible improvement. Being able to hear acoustic signals allows for the implant patient to participate in daily activities regarded as normal. "Implantation is about being normal again, where being normal means that one does not have to think constantly about being deaf" (p. 238, Hogan, 1997).

Hogan (1997) summarized cochlear implant outcomes as being able to enhance the user's ability to communicate. His subjects reported that cochlear implants can potentially reduce the

socially isolating effects of hearing impairment and improve their social outlook, significantly reduce communication difficulties with family and friends, enhance their social confidence and independence, and they could enjoy the “everyday activities that hearing people enjoy” (p. 239, Hogan, 1997).

Psychosocial Intervention

Hearing rehabilitation extends beyond fitting the patient with a cochlear implant or hearing aid. It is widely accepted that there is a necessity for an intensive and sustained habilitation/rehabilitation program after implantation. Although cochlear implants serve to correct the physical hearing loss, intervention is needed to assist the emotional and psychological damage of hearing loss. Conventional programs have included behavioral components such as speechreading and auditory training. Other approaches include the individualist approach (focusing on the hearing impaired individual), the collectivist approach (which includes the various settings in the environment that make it difficult for the hearing impaired person), and the ecological approach (which places an emphasis on the sociosphere) (Noble and Hetu, 1994). A majority of the methods available fail to address the psychological and psychosocial impact of hearing loss on the patient and their family (Hogan, 2001).

The psychosocial domains of identity and belief could be changed as a result of a hearing impairment. Through rehabilitation, the patient can learn strategies “to reduce the stress of social interactions, to enhance their communication skills and to manage problematic communication settings” (p.73, Hogan, 2001). A psychosocial approach to rehabilitation aims at: improving the general quality of life for the patient and family, reducing the patient’s hearing handicap, providing access to the appropriate hearing technologies, and considering suitable cost-effective

methods for these services. Often this approach includes group-based interventions, the hearing impaired individual along with their spouse or significant other, a peer education model, and an outcomes evaluation (Hogan, 2001). According to Hetu (1996), "Sharing experiences of hearing difficulties and the resulting painful social interactions helps people to realize that blame, friction, tensions, and unsatisfactory communication are the result of hearing loss" (p.20). This sharing in a group setting is an advantage of the psychosocial approach. "Providers of psychosocial interventions are holistic in their approach to rehabilitation since they are concerned with the whole life experience of the client, including the need for technologies and assistive devices where appropriate" (p.78, Hogan, 2001).

One example of a psychosocial approach is the program developed by Getty and Hetu (1991). This program focused on problem-solving communication difficulties in a facilitated group-based setting. Six groups of 8 male workers with acquired hearing loss and their spouses took part in the intervention over four separate meetings and one follow-up meeting three months post-intervention. The authors included three types of interventions: psychosocial support for the hearing impaired individual and their spouse; information about the hearing impairment itself; and development of new skills to cope with the hearing loss. Topics included in the program were: basic function of the ear; difficulties resulting for noise-induced hearing loss; stress effects of noise and hearing loss; relaxation; assistive listening devices; hearing aids; role-playing; speechreading; and assertiveness training. The authors found significant improvement in psychosocial function following the program.

Hallberg and Barrenas (1994) supported Getty and Hetu (1991) by performing a similar group program. They found that group rehabilitation decreases the perceived handicap of the hearing impaired person and increases awareness of the causes of communication difficulties

within the family. Based on their results, they suggest that group programs should include spouses and should be a continuous, repetitive process.

Hogan (2001) proposes a similar psychosocial intervention program that seeks to assist clients in understanding the impact of deafness in their lives and on their identity, to begin to identify the internalized negative ideas about deafness, and to realize how these ideas hold them back from living a full life. He also suggests using groups of 6-8 people with their partners, four 2-hour workshops, with a follow-up workshop three months post-intervention. A basic overview of Hogan's program includes: explanation of the audiogram; role-playing; relaxation; effects of deafness on the body; managing difficult listening situations; assertiveness; identity awareness exercises; assistive listening devices; managing hearing loss; taking responsibility for communication needs; and work situations.

A group-based psychosocial research study was conducted at Central Institute for the Deaf and Washington University. The program was structured similarly to Hogan's (2001) and Getty and Hetu's (1991) studies. The theory behind the CID/Washington University workshop was to determine why communication strategies aren't being used or used effectively, what situations are difficult and why are they preventing the use of communication strategies (Binzer and Mauze, personal communication, 2003). Thirty-three cochlear implant recipients and fourteen spouses participated in a two-day psychosocial rehabilitation group, which was aimed at overcoming the communication and psychosocial handicaps that frequently accompany hearing loss. The recipients and spouses were administered baseline pre-group intervention measures, which were re-administered at three months, six months, and twelve months. The measures included Dyalog, a computer-based program used to measure functional communicative performance objectively, and subjective tests administered in the form of questionnaires,

measuring communication handicap, stress, depression, anxiety, and strategy use. A questionnaire regarding major life changes after participating in the group program was also administered at the three-, six-, and twelve-month intervals. A complete outline of the CID/Washington University program is available in the Appendix A.

Purpose

Preliminary studies suggest that psychosocial intervention is effective at least for some patients (Binzer and Mauze, personal communication, 2002). The goal of this investigation was to examine in depth the experiences of one patient who participated in the psychosocial group program at Central Institute for the Deaf and Washington University and who appeared to receive good benefit. This patient was identified by the workshop's clinicians as demonstrating significant positive change during the course of a year following her participation. Experimental measures, designed to examine the effects of the workshop, supported the clinicians' impressions. Using an interview format, we determined a) her overall impressions of the workshop and its efficacy and b) the extent to which the workshop and/or other external factors were perceived as influencing her change in psychosocial status.

Methods

Subject

This study included one cochlear implant recipient, 'K', who took part in the CID/Washington University psychosocial group study. Subject K is a 39-year-old single female who has had a severe to profound hearing loss since the age five, was implanted in January of 2000, and who had worn her cochlear implant for two years prior to the workshop. This subject

was identified by the workshop's clinicians as demonstrating significant positive changes both during the course of a year following her participation, and through clinical impressions of the subject's performance within the group. Experimental measures, designed to examine the effects of the workshop, supported the clinicians' impressions (Binzer, Mauze, 2002). Measures such as *The Communication Profile for the Hearing Impaired*; *Dyalog*; *Rathus Assertiveness Scale*; *Depression, Anxiety, Stress Scale 21*; and a questionnaire regarding a challenging situation for communication were examined prior to selection of the subject.

Procedure

“Qualitative research is the product of interactions between individuals and a researcher who has an interest in a topic” (p.235, Hogan, 1997). The goals of qualitative research is to address the views and concerns stemming from certain issues in a particular individual or group – in this study the views of one individual about the experiences of a group-based psychosocial workshop. Results for this study were obtained in a similar fashion to that of Hogan (1997), who developed an evaluative method to describe and measure the effectiveness of cochlear implants by shifting the focus from the researcher's perspective to that of the subject. The subject was interviewed in an informal conversational style, in a quiet room, and the interview was videotaped and the transcribed. The objective was to understand and interpret significant factors of the individual's experiences and reactions. The semi-structured interview was divided into three pre-determined areas: experience with the group rehabilitative workshop; follow-up procedures succeeding the workshop; and outside experiences not related to the group. The interview began with introductions and a brief review of the topics to be covered, which allowed

for some time to build a comfortable atmosphere for the subject, so that she would feel free to discuss her experiences. A copy of the structure of the interview is available in Appendix B.

Analysis

The outcome of qualitative analysis is a reflection of a meeting of people in a particular place and time, which is a representation of a person's individual life experiences (Hogan, 1997). Within the qualitative method, interviews are transcribed and analyzed. For this study, the content of the interview was transcribed, and then analyzed for recurrent themes that could be broken into categories.

Results

Table 1. General Reactions to the Psychosocial Intervention

REACTION	COMMENTS AND QUOTES
Emotions Involved	<ol style="list-style-type: none"> 1. Frustration, sadness, anger, totally overwhelmed 2. "Crying the whole way home" 3. "I was tired and frustrated."
Susceptibility for Leadership	<ol style="list-style-type: none"> 1. She asked everyone to sit in a circle for easier communication. 2. Felt a "need to be a leader and an example for others", but she "didn't always want to be the leader" 3. "I wanted to show them how to do it, take them under my wing and tell them over and over, 'it's ok you can do it, you can be like me', but I found myself holding back, I didn't want to be a therapist." 4. "Someone was very impressed that I used the phone, I helped her and showed her how to do it." 5. "After six months, I found that the other adults were doing much better and that was a very big boost for me."
She is not alone	<ol style="list-style-type: none"> 1. "It surprised me that others that were implanted longer than me were still struggling." 2. "Don't know why I connected with a couple of people, I wanted to see how they were doing, any new information about them." 3. "Gave me a chance to interact with others with cochlear implants."
Effects of	<ol style="list-style-type: none"> 1. "It was a learning experience, to see where I had been and

Interactions with Classmates	<p>where I am now.”</p> <ol style="list-style-type: none"> 2. “I realized how far I’d come. It was strange to look at someone who wouldn’t ask for help, and thought they were being a burden.” 3. “It was valuable in that it showed how my hard work had paid off.” 4. “It was a huge eye opener for me to see what I used to be like, where I’d come and where I could go.” 5. “Those people are where I’d been, it opened my eyes.” 6. “I want that for them, what it’s done for me.”
Specific Outcomes	<ol style="list-style-type: none"> 1. “My self confidence is one hundred times better.” 2. “I advocate for myself more because I feel better about myself.” 3. “I learned that it’s ok to ask for things needed. By doing that, it helps to come out of depression and become good at functioning in the hearing world.” 4. “I did learn how important it is to use [the communication strategies], making them valuable to me and creating more confidence in myself.” 5. “I know that I deserve to have the best, but that there are steps to accomplish that and get me there.” 6. “I have a right to be a part of the conversation.” 7. “I automatically ask people to talk slower.” 8. “Before the workshop, people would say, ‘never mind’. Now I use a strategy because it’s infuriating.”

Table 2. Areas of Improvement Following Psychosocial Intervention

AREA	COMMENTS AND QUOTES
Group Situations	<ol style="list-style-type: none"> 1. “I am much better in groups, I am not afraid of groups, dinners, parties. I let my needs known (talk slower, raise my hand, one at a time, reminding them of my hearing loss) and others will help me out if they forget.” 2. “I will start off the group by explaining my hearing loss and tell them to talk slower and that I want to hear everything. If they forget, that’s when I’ll say, ‘time out’.” 3. “Sometimes I’ll ask my neighbor if I’m not that far behind or I’ll let it go, especially when I’m tired.” 4. “Group situations have come a long way.”
Telephone Improvement	<ol style="list-style-type: none"> 1. “My ability to talk on the phone has been a big change in the past year.” 2. “I’m not afraid of the phone anymore, I call strangers all the time.” 3. “I used to depend on my caller ID, but now I’m not afraid to

	<p>talk on the phone, even to strangers. I'm not afraid to pick up the phone and call people."</p> <p>4. "When tele-marketers call I mess with them and say, 'I'm sorry, I have a hearing loss, I can't hear you', and if they won't slow down I just hang up."</p>
Meeting Environments	<p>1. In a structured meeting or learning environment, she'll say, "slow down please."</p> <p>2. "If the FM system is not working, I'll ask or let them know about it, I'm not afraid to ask anymore."</p> <p>3. "Now my hand is always up."</p>
Talking to Strangers	<p>1. "In the past I didn't like to talk to strangers, I was afraid. I'm not as afraid to talk to strangers anymore."</p> <p>2. "I approach people rather than waiting for people to approach me."</p> <p>3. "I used to be shy, wait for people to come to me, but not anymore. It's tiresome, always talking constantly."</p> <p>4. "I talked to my neighbor on the plane for four hours. I started up the conversation and at the first moment that I didn't understand what she said, I asked her to please put the window down so I could see her face, that I had a hearing loss, and to talk slower. We had a wonderful conversation the whole plane ride."</p> <p>5. "Every time I took a cab I hoped the driver couldn't speak English so I wouldn't have to talk and ask them to repeat, their accents are sometimes so thick. I would just sit in back and hide."</p> <p>6. "In Chicago at 5 am taking a cab, I didn't want to talk, to have to work at listening, so when the cab driver started a conversation I said, 'I have a hearing loss...' and we surprisingly ended up talking the entire hour."</p>

Table 3. Other Factors/Experiences That May Have Affected Her Communication

EXPERIENCE	COMMENTS AND QUOTES
Emotional Issues Associated With Her Hearing Loss	<p>1. "I hate 'hard-of-hearing', my mom says that."</p> <p>2. "My mom tries to hide the lapel mic at dinner." "My fear and embarrassment comes from my mom."</p> <p>3. Throughout growing up, "I felt isolated, picked on," and afraid to answer questions all the way through college.</p> <p>4. "I didn't want to be 'stupid', I was afraid to answer questions because I might have missed something someone had said."</p> <p>5. Following implantation – "I was severely depressed because I couldn't focus. I was grieving for what I'd missed growing up,</p>

	angry that people hadn't taken time to include me, forgetting to talk slower or repeating for me. I was getting over that I wasn't a burden. It helped to build confidence and lift the emotional burden."
Experience with Dad	<ol style="list-style-type: none"> 1. "I was afraid to ask him [to use the lapel microphone], I didn't want to embarrass him." 2. "If I could use it with him, I could use it with others."
Duke Wellness Program	<ol style="list-style-type: none"> 1. "I felt trapped in my job, in my relationship, in life in general. I felt guilty because I thought I couldn't leave my job or relationship. I learned to take care of myself first, if I didn't, I'd continue to eat and my blood pressure would still be high." 2. "I learned how to take better care of myself so I'm happier as a person." 3. "I lost 50 pounds, my blood pressure is down, and my depression is better." 4. "It was a part of the process."
Job and Relationship Transition	<ol style="list-style-type: none"> 1. "It's my dream job, I get to share my joy with others." 2. "I have more responsibility at work, I'm travelling a lot." 3. "I ended a relationship and am in a new one now."

Table 4. Conclusive Reactions to Psychosocial Intervention and Outside Experiences

REACTION	COMMENTS AND QUOTES
Self-image and Communication	<ol style="list-style-type: none"> 1. "This whole year has been about self-confidence, liking myself and not limiting myself." 2. "Communication and self-image are separate, but connected in a small way. I am who I am, no matter what size I am, my personality is this and I have the ability to communicate and I'm just going to do it." 3. "I have no more feelings of limitation. I used to think that because I was hearing impaired, I could only work with hearing impaired people, but now I realize I could get a job anywhere." 4. "95% of success with a cochlear implant depends on me. The journey to hear has changed my life."
Understanding the Impact of Her Experiences	<ol style="list-style-type: none"> 1. "The cochlear implant has changed my life." 2. Ranking her experiences - "I can't rank them, they're all so critical together. The group was so short and to compare nine months (of rehabilitation) to three days is hard. The group gave me a chance to interact with others with cochlear implants, it showed my own progress and made such an impact. I want to say the group first. My outside experiences were a result of what I learned in therapy and with the group. My dad triggered my progress and it was a turning point for my confidence. The

	<p>experience with my dad occurred before the group, my confidence grew and the group expanded on that. It was all a huge process, you couldn't do the group first, and learning the communication strategies should come first with the group setting reinforcing the strategies.”</p> <p>3. “Everything together affected my communication. The rehab is the most critical part of getting the cochlear implant. Therapy is so important, and even working with a counselor for old issues that you may not know about.”</p> <p>4. “The group was about using those strategies consistently and wanting to advocate for myself. I wanted to show everyone else that they could do it too and that there were no consequences, but also wanting to back away because I was the only one who was doing it. I wanted to go back into my shell of being like everyone else, not the leader, not standing out. I struggled with that because, no, I didn't want to go back there, didn't want to be like that. I wondered why they wouldn't contribute and share their experiences, wondered why they wouldn't talk. I had to find the balance of keep moving forward and meeting my needs, but not making the group about me.”</p>
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Discussion

Exploration and Examination of Her Emotions and Ideas Concerning Her Hearing Loss

A group psychosocial intervention workshop is sometimes an intense and emotional experience. For K, it tapped into some emotions that she did not realize she was feeling. Sadness, anger, frustration, being overwhelmed all resulted from listening to other cochlear implant adults. She even found herself “crying the whole way home.” One emotional experience with the group entailed a struggle with the chair arrangement. K was the first to suggest moving the group into a circle in order to help with communication, but soon felt frustration when the group resorted back to the difficult arrangement after a break. K remarks, “It was hard in the first place to ask, I was already tired.” These emotions and experiences that

surfaced in a group-based setting are some that had not appeared in individual rehabilitation settings for K.

Effects of Interacting With Other Cochlear Implant Adults

Through the group experience, K automatically felt the need to be a leader to the other adults. She quickly realized that there was a difference between her communication abilities and the abilities of the other adults. It surprised her to realize how much further she had progressed than some of the other adults who had been implanted for the same amount of time or for some even longer. She was compelled to “take them under my wing and tell them over and over, ‘it’s ok you can do it, you can be like me’.” This tendency to become a leader was quickly met with frustration. Frustration for others who were not willing to stand up for themselves, frustration that some could not use their abilities. When the group took part in a role-playing exercise, they had to decide if they would attend a party that would be very difficult to communicate. Many of the adults said, “No, they would not attend.” K, on the other hand, said she would go, and at the same time experienced sadness for the lack of experience of others that she connected with. Although she did not want to be the “therapist”, she did show one adult how to use the phone. Six months later when that same person was using the phone, K felt good about herself for helping to make that happen.

Outcomes of the Group Experience

Interactions between members of the group are invaluable to psychosocial intervention. In the case of K, interacting with other cochlear implant adults allowed her to realize how far she had come. She rated the group setting as a “powerful experience”, one that showed her own

improvement and how much her hard work had paid off. The subject noted that she actually started to see a change in her answers to the experimental measures as a result of the group. "The group showed me how far I'd come because I'm so hard on myself that I didn't realize how far I'd actually come." This eye opening experience is one that K recommends for everyone, she wants each person to experience what she did through the group.

Another outcome of the psychosocial group intervention was a boost in the subject's confidence level. K reported that she could attribute some changes in her self-esteem to the workshop. More confidence and a greater sense of self-image are evident in her being able to advocate for herself, and also in being able to ask for things in order to function in the hearing world. She now understands that she has a right to be a part of the conversation and that she deserves the best.

Exploration and Examination of Her Improvements Following Psychosocial Intervention

Following the group psychosocial intervention, the subject noticed that several communication situations became easier for her. Group situations were the most apparent. When K finds herself in group situations, she uses the strategy of, "time out", or she'll raise her hand and say, "I'm not able to understand you, slow down". The group will then take over with remembering these strategies before the end of the discussion. Group situations have become much easier for K, in part because of her increased confidence levels and feeling more comfortable with herself, but also because her ability to ask for things in order to communicate better.

Another situation that has proven to be less difficult for the subject following the psychosocial intervention is through communication on the telephone. She is not afraid to talk to

or call strangers, she doesn't rely on caller ID before answering the phone, and even went through hours of frustrating phone calls to connect her home phone. Her self-reported biggest accomplishment yet is the time spent on the phone with AT&T customer service installing a new phone line.

Meeting environments can be difficult where there are several people, important information is being discussed or relayed, and often in large meeting rooms. This is often a difficult situation for hearing impaired adults. K finds herself in these situations frequently with her job, but is not afraid to ask about the FM system or to raise her hand if she's not sure what was being said. When K is working in Australia where accents are thick, English is spoken faster, and they use different words, K frequently finds herself asking for repetition and for coworkers to talk slower. At one training meeting a game of Jeopardy was played. K's team won and she attributes most of that win to her newfound ability to raise her hand helping her in communicating.

Those with hearing loss often avoid talking with strangers. With a greater sense of self-confidence, K is no longer afraid to approach strangers for information or just for conversation. Two examples illustrate her ability to communicate with strangers – one four hour conversation with a neighboring passenger on the flight home, and an early morning hour long talk with an unfamiliar cab driver. Her ease of communication in both of these situations can be in part attributed to her increased self-reliance.

Exploration of Other Factors That Might Have Affected Her Communication

In the interview, K describes growing up with a hearing loss, how difficult it was to try to be "normal" with a hearing loss. While she was in school, she had a fear of raising her hand to

answer questions. She was afraid of not hearing someone else answer the question, then try to answers that very same question that had already been answered. Growing up she would find the answers to things she missed during school when she got home. This fear of raising her hand followed her all through college. The only interaction she remembers is with her speech trainer. An emotional attachment to her trainer was evident when K described the impact her speech therapist had on her. "I owe so much to her. She just talked to me, interacted with me."

After K was implanted, she had an emotional experience with her father that K credits some of her increased confidence. They were having Father's Day dinner at a busy restaurant and were in the middle of a private discussion involving their family business, straining to hear each other. K nervously informed him of her lapel microphone and how it might help them better, asking him if he wanted to try it. Her dad was excited and very willing to try the microphone, making the subject's confidence level increase, especially when asking others to do things to accommodate for her hearing loss.

Another experience that shaped her ability to communicate was through a wellness program at Duke. K was feeling the stress of unhappiness in her job, relationship and in life in general. She saw this program as a way to learn how to take better care of herself, by dropping her weight, blood pressure, and depression. The self-confidence she gained from this workshop allowed her to explore other career options and end the relationship she was so unhappy in.

Conclusion

When asked to rank her experiences in how they affected her ability to communicate, K was sure of a few things. Her experiences were all one process, everything together affected her communication. The group was so important in showing her how to advocate for herself and

how much progress she had made, but couldn't have without her intense rehabilitation after being implanted. The group also expanded on the confidence she had gained by asking her father to wear the lapel microphone. She was also sure that because of her experiences, she has no more feelings of limitation, and that the journey to hear has changed her life.

This study has been a documentation of one cochlear implant recipient's experiences over one year following a group-based psychosocial rehabilitation program. Her experiences over the twelve months following the program were detailed and shown to have a positive effect on her overall ability to communicate.

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APPENDIX A

Group 5 Workshop Outline November 15, 2001

Day One

Introduction

Explanation of the FM system

Rules of the workshop

- Talk one person at a time

- Raise hand when speaking

- Confidentiality

- "I" statements

- Be attentive to one another

- Speak as would like others to speak to you

- Finishing up signal

- Right to pass

Icebreaker

- Introducing each other

Discussed expectations of the workshop

Discussed the worst thing about living with a hearing loss

Collage: how others see them, how they see themselves, and how they want to be seen

Choices (Don't go, Go-probably won't have a good time, Go-find a quiet corner-
maneuver, Go-uncertain about situation)

Role playing – Is it ok to make exceptions for just one person?

- BBQ

- Party with loud music

- Wheelchair (visible) vs. hearing loss (invisible)

- Symphony

- Facilitator has a sore throat

Consequences of making accommodations for one person

- Not being invited

- Being rejected by friends

Discussed how the workshop went today

Day Two – November 16, 2001

Brief review of the rules

"I" Statements addressed

The use of "I'm sorry" discussed

Problems and problem solving

- Identify the problem

- Generate possible solutions

- Select one solution

- Try it

- Evaluate/review

Examples of problem solving

Making requests

Role-play – making specific requests

Being aggressive, passive, and assertive

Break

More examples of problem solving

Review of how to problem solve on their own

Wrap-Up and Comments

APPENDIX B

Interview Format for Subject K

- I. Discuss the three topic areas of the interview
 - A. The group rehabilitation workshop last year
 - B. Follow-up procedures over the last year
 - C. Outside experiences

- II. Workshop at CID
 - A. Why did she attend
 - B. What was memorable/remember the most
 - C. Goals/expectations from the workshop
 - D. Where did she see herself a year ago

- III. Experiences over the last year
 - A. Talking with the other cochlear implant adults
 - B. What changes has she made in the past year
 - C. Met goals set in the beginning
 - D. Where does she see herself now

- IV. Outside experiences
 - A. How did they affect her ability to communicate
 - B. Self-image changes

- V. Challenging situation
 - A. How has this improved/declined
 - B. What can she attribute to the change overall