IMPLANTES COCLEARES: IMPLICAÇÕES NA IDENTIDADE DOS SURDOS

Cochlear Implants: Implications for Deaf Identities

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ABSTRACT

This article focuses on the role that cochlear implants may play in psychosocial/identity development. It also explains the concept of identity, how it evolves, and what deaf-related identities mean. The important message in this article is that the cochlear implant is merely a tool. It does not define a person. How the person with a cochlear implant is defined depends both on his/her internal resources, personality, and how welcoming and supportive is the environment.

Key words: Cochlear implants. Deaf identities. Psychosocial.

INTRODUCTION

How can a certain piece of technology influence one's identity? In the case of cochlear implants, what is the relationship between having it and one's identity development? We will attempt to address this by exploring the concept of identity, how it evolves, what deaf-related identities are all about, the various perceptions of cochlear implants, and their role in psychosocial/identity development.

First of all, what is identity? When asked about that, people tend to answer: "Identity is who I am." When we explore further, we discover that identity is a construction that reflects multiple aspects that define who a person is. Specifically, identity reflects a composite of the biological (including race, gender, age, physical characteristics), psychological (cognition, competencies, motivations, self-awareness), social (cultural influences, social roles and relationships), and religious/spiritual aspects (TATUM, 1997). Not only that, identity changes throughout the lifespan. It is easy to recognize that each of the aspects just mentioned will evolve in terms of one's awareness of his/her race or ethnicity, emerging intellectual development, changing social roles - ranging from childhood to adulthood -, and expression of religion, for example. Even further, identity aspects can change from situation to situation, as individuals modify their self-perceptions to fit specific situations. In this case, interactions with different types of people can influence psychological motivations, and perceptions of the self may be reshaped depending on different situations (KEGAN, 1982). In this article, however, we will focus specifically on identity aspects that may be affected by whether one has a cochlear implant or not.

For many who are uninitiated, it may be baffling to consider that a piece of equipment, specifically a cochlear implant, has the power to convey an identity, or influence one's identity. An understanding of what the cochlear implant represents and how it can influence one's interaction with his or her social environment will serve to address this baffling relationship. But first, we will explore the concept of D/deaf identities and how these reflect different ways of living with hearing differences.

DEAF IDENTITIES

Deaf identities have a long history, starting with reports of people in ancient Egypt, Greece, and Rome, as well as during the Old and New Testament periods, who could not hear and who communicated differently (ABRAMS, 1998; BAUMANN, 2008b; ERIKSSON, 1993; MILES, 2000; MOORES, 2001; RÉE, 1999; VAN CLEVE & CROUCH, 1989). Whether these individuals were accepted or rejected depended in great part on how their respective societies framed the meaning of disability and not hearing. How these individuals themselves defined their identities is lost to history.

Descriptions of approaches to educating children who were deaf began appearing in the 1500s and beyond (see MOORES, 2001; RÉE, 1999; VAN CLEVE & CROUCH, 1989, for reviews). To read about the "Paris Banquets" of post-revolutionary France is to recognize the presence of a proud Deaf group capable of independent and intellectual thinking who held forth in expressing their perceptions of what it meant to be part of a Deaf constituency (MOTTEZ, 1993; QUARTARARO, 2008). This discourse was aimed not only at contradicting hearing authority figures who focused on deficiency and disability (BRANSON & MILLER, 2002), it also presaged the emergence of formal studies related to what it meant to espouse a Deaf identity, an identity forged through centralized education of deaf children within residential schools for the deaf. In these schools, deaf children developed and reinforced social relationships with deaf peers. These relationships led to socialization parameters as these children transitioned away from the educational sphere; these parameters emerged as Deaf cultural ways of being (BURCH, 2002; RÉE, 1999; VAN CLEVE & CROUCH, 1989).

So, exactly what is a culturally Deaf identity? This identity actually has been around for the last two centuries at the very least, but has been subsumed within the terms "deaf community" or "Deaf-World" (BURCH, 2002; LANE, HOFFMEISTER, & BAHAN, 1996; MILES, 2000; RÉE, 1999; VAN CLEVE & CROUCH, 1989; WOLL & LADD, 2003). Essentially, as deaf people found each other, they created a Deaf center that relied on language and thought expressed through visual relationships incorporating body movements, eye contact, facial expressions and other markers of signed languages. In short, as Bahan (2008) conceptualizes it, they became a "visual variety" of the human race. With increased focus on academic study of deaf lives, authors such as Carol Padden and Tom Humphries (1988) led the way to the popularization of the term "Deaf culture" as a way of describing who Deaf people are, based on a Deaf form of normality and a common understanding of how Deaf people live, relate with others, love, and work. The key component is the use of the eye in daily interactions. Auditory components of daily living, including the use of spoken language, were not seen as important, relatively speaking, since Deaf people felt they have deciphered visual equivalents to auditory events surrounding their environment.

But not all deaf people claim Deaf culture identities and not all necessarily organize their world around their use of vision. Some of them gravitate towards spending a significant amount of time within the hearing society surrounding them. They feel at home using spoken language and in interconnections with hearing peers. They are comfortable relying on whatever auditory skills they can develop and depend on technology to enhance their ability to interpret sound and linguistic inputs. They feel "culturally hearing" (LEIGH, 1999, 2009) and attempt to conform to norms for spoken language. Those who experienced a loss of hearing after having internalized spoken language and become "late-deafened" are more likely to be culturally hearing. Others who fall into this category include those who grew up with severe to profound hearing levels, were not exposed to sign language, and as a result developed spoken language. For the culturally hearing, their sense of belonging, however, can be tenuous, depending on communication ease, background noise, and the patience of those hearing people who are interacting with them. At times they still may desire to be "with their own kind" (deaf people like themselves – other "oral" deaf people) (BAIN, SCOTT, & STEINBERG, 2004; LEIGH, 1999; 2009; OLIVA, 2004).

These different perceptions of deaf lives have given rise to various theories of deaf identities and how these are internalized. The description of the culturally hearing as described in the preceding paragraph falls into the first of Neil Glickman's (1996) four categories of deaf identities. His categorization has become the standard in the field, much used by researchers (e.g., BAT-CHAVA, 2000; MAXWELL-MCCAW, 2001, MAXWELL-MCCAW & ZEA, 2011) to try to understand how deaf people categorize themselves and at times transition from one identity category to another. His theory, based on racial identity development theories, is primarily a psychological theory in terms of how oppressed minority groups can evolve to develop a positive identity based on their interactions both within their own group and with the majority group. Thus, identities in this case are shaped by the psychological impact of social interactions.

The second category covers cultural marginality. Glickman (1996) describes individuals that fall into this category as not fully identifying with or having a sense of belonging with either Deaf or hearing groups. These individuals fall into two types. The first type is the individual with inadequate access to spoken or signed languages, which exacerbates social marginality and heightens psychological marginality in terms of confusion regarding identity, poor understanding of differentiated self and other, and difficulties with self-regulation of emotions and behavior (GLICKMAN, 1996). The other type reflects linguistically-competent individuals who are in the process of actively exploring their sense of identity as culturally hearing or culturally Deaf.

The next category is that of identification as culturally Deaf. Glickman (1996) refers to this category as that of immersion. Deaf identity and Deaf culture are uncritically embraced. These individuals often fit the prototypical type of deaf person: they are fluent in American Sign Language (ASL) or their native signed language, they typically marry a deaf spouse, work within the deaf world, and socialize primarily only with other deaf people.

Lastly, the fourth category represents an integrative awareness that one can be bicultural. In this category, the individual can integrate the values of both Deaf and hearing cultures and comfortably navigate either one as the situation demands. Multiple studies have indicated that individuals who fall into the bicultural category appear to be the most optimally adjusted psychosocially (CORNELL & LYNESS, 2004; HINTERMAIR, 2008; JAMBOR & ELLIOTT, 2005), though Maxwell-McCaw (2001), found both deaf immersed and biculturals were optimally adjusted.

How do people gravitate towards these identity categories and internalize who they are? And how does this impact on one's identity? Social connections and exposure to specific groups are clearly one factor that figures prominently in how deaf individuals configure their identity descriptions. Shared and effective ways of communicating with peers, whether via spoken or signed languages, will facilitate the strengthening of social relationships, and of social identities with specific groups for which they have affinity. This has been demonstrated by a variety of studies investigating social relationships (e.g., BAT-CHAVA, 2000; KLUWIN & STINSON, 1993). Generally, individuals who prefer signed languages will identify with those who also use their language, while those preferring spoken language will identify with like-minded peers. Today, more and more deaf/hard-of-hearing individuals are identifying themselves as bicultural, preferring to gravitate between various social environments and shifting language use as needed.

The concept of acculturation provides an additional pathway to the understanding of how deaf identities evolve. Similarly to groups immigrating to America and navigating between their home culture and the new American culture, Deaf people must navigate their membership between two very different cultures, deaf and hearing cultures (MAXWELL-MCCAW, 2001; MAXWELL-MCCAW & ZEA, 2011). As a result, there are several factors in addition to social influences that can ultimately shape the acculturation process to both deaf and hearing cultures. These factors include: the level of psychological identification to deaf and hearing cultures, the degree of cultural involvement, preferences for one culture or the other, competence in the language used, and knowledge of the cultures. By assessing one's process of acculturation to each group, we can examine how one adjusts to these groups according to each situation. Assumptions about the psychological impact of different identities are removed from the measure. For example, Hintermair (2008), using the Deaf Acculturation Scale, which was translated into German, found that those participants who actually preferred to be marginal, and not defined by cultural status-quo (via Deaf or hearing cultures), actually demonstrated positive psychological resources facilitating their adjustment. So, in this case, marginalization doesn't necessarily assume maladjustment as many racial identity theories suggest. Nevertheless, if a deaf spoken language user is new to Deaf culture and its relevant signed language, that person still can be marginal if she/he does not identify fully with hearing peers, but with increased exposure to Deaf cultural ways of being and mastery of the signed language, that person is said to be acculturating to Deaf culture. For individuals with a cochlear implant, a complex constellation of issues come into play, particularly since Deaf and hearing cultures often have contradicting attitudes towards the implants, with hearing cultures most typically seeing the implant as a great technology intervention to restore the lost sense of hearing.

In addition to the impact of socialization on identity, one factor not accounted for in the above theories is the simple impact of biology – or degree of hearing loss –, on identity. In other words, what is it that ultimately determines whether the deaf person becomes primarily a visually-oriented person or primarily auditorially-oriented? One author (MAXWELL-MCCAW), progressively deafened since early childhood and implanted with a cochlear implant in adulthood, makes an interesting observation on how one's primary orientation to the world may impact on and shape identity. Ironically, as a child, Maxwell-McCaw always needed to use her eyes to help make sense of her auditory world. As a result, learning ASL came easily and intuitively because it just "made sense" to her visually. She was already very used to "organizing" her world through her eyes. Thus, her transition into Deaf culture was eased by the sense that even as an oral deaf person, the ultimate tie that bound her with other deaf signing deaf people was that she too, used her eyes to navigate the world. Now, as an implanted adult, and a "high-end" user at that, able to talk on the phone and interact more easily with hearing individuals often without lipreading, she slowly feels her "orientation" shifting. The technology actually makes it possible, for the first time in her life, to really "navigate" the world more auditorially. Her primary reminder that she is deaf comes at moments when her battery dies unexpectedly or in large group settings. Yet socially, she still prefers her deaf friends because she is still most at ease and relaxed when she is in signing environments. Perhaps this is partly due to a long history with them, though understanding speech in groups and in noisy environments is still difficult with a CI. Still, she asks herself - what if this technology had been available to her as a child? Then, would she have organized her world primarily visually or auditorially? Who would have been her "reference" group? Would she be seeking out other implanted peers? Signing deaf peers? Or hearing peers who have similar interests as herself? She is not sure. So, what about today's children who are being implanted at such an early stage in their development, especially at an age when their brains are highly plastic? One possible answer might be the use of a bimodal approach.

Although many factors may influence how variations in deaf identities may be shaped and formed, cochlear implants – being as it is a technology that could be capable of altering one's very way of being in the world, whether a person of the "eye" or the "ear," lend additional complications in this process. Indeed, cochlear implants have ideologically come to represent two very different and often contradictory constructs in Deaf and hearing cultures.

THE PASSION SURROUNDING COCHLEAR IMPLANTS

Cochlear implants were developed with the goal of restoring hearing where none existed, or where hearing was lost. The medical profession saw the issue of hearing restoration as a critical one for research and development (CHRISTIANSEN & LEIGH, 2002/2005). The first to undergo cochlear implantations in the 1960s and 1970s were individuals who desperately wanted to hear, and were willing to undergo experimental surgery. Many in the scientific community were skeptical about the potential effectiveness of cochlear implants, viewing efforts to develop this technology as misguided efforts to stimulate already dead nerves (HOUSE, 1995; CHRISTIANSEN & LEIGH, 2002/2005; SCHINDLER, 1999). As time went on and research proceeded against all odds, including difficulty in obtaining financial support, not only the scientific community but also the Deaf community began to take note.

Deaf people in France and Australia were among the first to protest this new development, with those in the United States chiming in somewhat later (BLUME, 1999; LANE, HOFFMEISTER, & BAHAN, 1996; CHRISTIANSEN & LEIGH, 2002/2005). The focus of their protest was centered on their claim that they were happy with their identities as Deaf people, viewed themselves as functioning satisfactorily in society, and saw no reason to be "fixed". They viewed implantation as a process of invading a healthy body and creating an artificial modification when one could easily be happy following a culturally Deaf way of life. Their fundamental principle was that having grown up deaf, they are the experts on how deaf people can maneuver through life. Yet, hearing society has tended to view Deaf people in general as less intelligent, less capable or competent, and with limitations that bar them from full participation in society rather than assessing how existing barriers make it difficult for Deaf people to achieve. This has led to frustration, the fermenting of a visceral reaction to what a number of Deaf people perceive as the imposition of a technology on their people or another potential threat of cultural genocide, and a battlefield mentality. The tenor of this opposition started off as strong, and has continued to this day amongst various segments of the community. This opposition has also made a critical number of parents leery of reaching out to Deaf informants to get answers to questions about life for their deaf child, fearing that they would be denigrated for even considering the cochlear implant (CHRISTIANSEN & LEIGH, 2002/2005).

Despite the protests of notable members within the Deaf community, cochlear implant research proceeded to clinical trials in the 1980s with the result that increasing numbers of individuals were implanted, particularly deaf children (CHRISTIANSEN & LEIGH, 2002/2005). Because it involved surgery, parents typically struggled with this decision to implant their child and in most cases decided to proceed, feeling that the potential for spoken language was worth the procedure. It is important to note that 95% of these parents are hearing with little knowledge or contact with Deaf culture. Initially, pediatric candidates for the procedure were those who had previously lost their hearing or had no benefit from existing auditory amplification. Whether they were viable candidates was subject to question, but as time went on, data supporting their improvement in open set tests of speech recognition began to appear. As technology has continued to improve, data continues to reveal improvement, not only in speech recognition, but also in speech production and spoken language development, particularly in comparison to deaf children who use hearing aids. However, it must be kept in mind that variability in improvement was present early-on, and continues to be present to this day. The specific factors contributing to this variability are multiple and probably interactive, which makes it difficult to pinpoint the reasons for the variability.

The increasing number of cochlear implantees has led the Deaf community to recognize that vehement opposition and highlighting Deaf culture success stories have not resulted in any significant dent in the inexorable increase of people getting the cochlear implant, even including those who are culturally Deaf, and the trend towards bilateral implantation is beginning to gain momentum (see CHRISTIANSEN & LEIGH). As indicated in the results of the Christiansen and Leigh survey, there is an increasing, albeit for some, grudging acceptance of this technology, coupled with ongoing concern about the increased use of pediatric implantation without the consent of the children involved. This has generated a shift in focus towards evaluating the attitudes of the cochlear implantees regarding Deaf culture and Deaf identities. Additionally, how to combine the focus on audition with the focus on vision has become the linchpin of attention at this time. Such a focus is particularly critical as educational systems grounded in residential/day schools for Deaf children that incorporate the use of signed languages in the curriculum grapple with increasing numbers of children with cochlear implants and with parents, both hearing and deaf, asking for comparatively more focus on the use of spoken language alongside the signed language component. These are culturally Deaf parents who ARE comfortable with the use of a signed language, but do not want to minimize any opportunity for exposure to and internalization of spoken language (MITCHINER & SASS-LEHRER, 2011). Nevertheless, results from the Christiansen and Leigh (2008) study do show increasing levels of endorsement by Deaf respondents for the idea that Deaf people can have both CIs and a deaf identity compared to the earlier (2000) study.

IMPLICATIONS FOR IDENTITY

In the 1980s and 1990s, deaf adults who decided on getting the cochlear implant faced the fury of Deaf protesters who considered them beyond the pale, and ostracized them from the community as people who wanted to be “hearing” and therefore rejecting of Deaf culture values (CHRISTIANSEN & LEIGH, 2002/2005). These Deaf protesters railed against the perception that theirs was a spoiled, defective identity rather than a normal variety of the human race (CHERNEY, 1999; CROUCH, 1997; LANE, HOFFMEISTER, & BAHAN, 1996; TELLINGS, 1996). They felt that inserting a piece of technology into a human being created a so-called cyborg that hearing people deemed to be better than a Deaf person relying on vision to accommodate to the world. This creation of an apparent artificial hearing identity appears to run the danger of creating “outsider” status for some cochlear implantees, who can never be fully a part of hearing culture due to the technical limitations of implants in replicating normal sound, nor of Deaf culture due to the focus on auditory sounds and spoken language that typically accompanies implantation (LADD, 2007; LEIGH, 2009).

The cochlear implant issue even divided Deaf families, as exemplified by a set of Deaf parents going as far as to disown their culturally Deaf adult daughter after she opted to get a cochlear implant, wanting access to environmental sounds (LEIGH, 2002). Eventually, the parents recognized that their daughter was still their beloved culturally Deaf daughter and reconciled with her. Closure in situations such as this create an atmosphere for the increased acceptability of cochlear implantation, but this is interposed with Deaf individuals accusing Deaf parents of betraying their culture when they decide on cochlear implantation for their deaf child. Clearly, all these perceptions suggested the need for research to examine claims of harm and rejection, psychological adjustment and identity, particularly since Deaf people mentioned their worry about potential long-term educational and mental health implications such as language delay, confusing identity issues (am I Deaf or hearing?), social difficulties, and possible psychological trauma related to denying one’s true self as a Deaf person.

STUDIES OF PSYCHOSOCIAL FUNCTIONING

There is a small but growing corpus of research on the psychosocial functioning of children, youth, and adults with cochlear implants in addition to the rapidly expanding database on receptive and expressive spoken language. A group of studies covering information on psychosocial functioning was gathered from parents who provided their perceptions on how their cochlear-implanted children functioned. In general, these studies indicated that parents perceive their children as demonstrating improved quality of life, greater self-esteem, confidence, and outgoing behavior compared to the time prior to implantation. Nonetheless, even though they generally felt that social well-being was positive, age-appropriate socialization experiences with hearing peers was not guaranteed because of issues with spoken communication skills, limited access to communication in groups due to noise and difficulties in following the course of conversations, and hearing peer attitudes (BAT-CHAVA & DEIGNAN, 2001; BAT-CHAVA, MARTIN, & KOSCIW, 2005; CHMIEL, SUTTON, & JENKINS, 2000; CHRISTIANSEN & LEIGH, 2002/2005; KLUWIN & STEWART, 2000; NICHOLAS & GEERS, 2003).

Very satisfactory perceptions of social well-being were reported by parents of 62 Danish cochlear implanted children (PERCY-SMITH, et al., 2006). In a follow-up study investigating factors that affect the social well-being of 167 children with cochlear implants based on information derived from structured interviews with their parents, similar positive results were obtained (PERCY-SMITH, et al., 2008a). There was stronger social well-being evidence for those children who were implanted prior to 18 months and those using spoken language compared to those who were implanted after 18 months and used sign supported systems or signs only. However, due to the wide age range of 1-year to 18-years of age and the lack of any breakdown by age, it is not possible to determine if the results for older participants were similar to those of younger participants (PERCY-SMITH, et al., 2008a). Percy-Smith, et al. (2008b) also compared the social well-being of 164 kindergarten and school children with cochlear implants, this time based on parent questionnaires, with a larger cohort of hearing peers. They reported no difference between the two cohorts in overall self-esteem, number of friends, confidence, independence, social aspects, and happiness.

While parent perceptions provide valuable information, observation studies and studies that directly ask children with cochlear implants about their experiences can provide more nuanced information. The observation studies reviewed for this text indicate that children with cochlear implants being observed in group situations or classroom discourse with hearing peers struggle in their attempts to become active participants (e.g., BOYD, KNUTSON, & DAHLSTROM, 2000; KNUTSON, BOYD, REID, MAYNE, & FETROW, 1997; PREISLER, TVINGSTEDT, & AHLSTRÖM, 2005).

In looking at the children themselves, a variety of studies demonstrate positive psychosocial adjustment, either via interview, questionnaire studies, or psychological measures. In the Nicholas and Geers (2003) study of 181 children with cochlear implants, the researchers noted that these children tended to appear competent, well-adjusted in the cognitive, physical, socio-emotional, school performance, and communication domains as based on self-reports. Interestingly, younger children and those using the most updated speech processors gave themselves higher ratings, therefore leading to the question of whether these would be maintained in adolescence when there is greater awareness of difficulties in communicating, particularly in noisy group situations (e.g., SHERIDAN, 2008). In another study of 37 children with cochlear implants who were spoken language users and in mainstream education, Schorr, Roth, and Fox (2009) used a self-reported quality of life questionnaire and found that children reported significant improvement in their quality of life.

In another quality of life investigation of 150 children with cochlear implants divided into three groups aged 4-7, 8-11, and 12-16 who rated their physical, social, and emotional quality of life, the youngest group rated themselves higher than their parents did (LOY, WARNER-CZYZ, ROLAND, & TOBEY, 2009). The middle group also rated themselves positively, but interestingly, in the group of children aged 12-16, their parents tended to view their children's school quality of life higher than the adolescents themselves did. This again suggests the possibility that the complex issues of adolescence might make adolescents perceptions of their quality of life less idealistic and reminds us that parent-child perceptions do not always match. Otherwise, the results were similar to those of the younger groups and to non-deaf children, thus attesting to the resilience of these children.

A study of the psychosocial adjustment of 57 adolescents with and without cochlear implants suggested that despite some differences in background characteristics between the two groups, there were no differences between them on the psychosocial variables assessed in this study, as indicated on measures of self-perception, satisfaction with life, and loneliness (LEIGH, MAXWELL-MCCAW, BAT-CHAVA, & CHRISTIANSEN, 2009). Considering that the adolescents without cochlear implants who participated in this study were primarily in schools for the deaf and preferred signed language, while adolescents with cochlear implants were primarily spoken language users and in the mainstream, the study strongly supports the earlier-mentioned studies affirming psychosocial health. For example, in terms of loneliness, the adolescents in this study were no more lonely than the hearing sample used for the loneliness measure. This result is also supported by Schorr (2006), who found that loneliness levels among her 37 children and youths with cochlear implants were similar to levels noted in hearing peers, even with variability factored in. These participants were spoken language users.

To conclude regarding psychosocial health, contrary to what some Deaf persons predicted, cochlear implants per se are not necessarily creating maladjusted individuals, although the possibility of frustrating communication situations does exist. Supportive environments and individual attributes, including resilience, are factors that need to be considered in ensuring positive psychosocial stability. But since many of the participants with cochlear implants in the studies mentioned earlier rely on spoken language, this raises questions about how they label themselves in the deaf-hearing identity domain.

STUDIES OF IDENTITY

The focus of the information presented by cochlear implant centers in their informed consent documents is primarily on medical, audiological, communication, and educational aspects (BERG, IP, HURST, & HERB, 2007). In this study, less than half of the 121 centers responding to a nationwide survey included information on Deaf culture and ASL. This strongly suggests a focus on developing hearing acculturated identities. Whether this identity continues to be paramount depends on the individual attributes of the children themselves, the environment in which they are reared, and the quality of their social interactions with peers.

In terms of language choice, a number of studies indicate that parents tended to be practical regarding the necessity of using signed languages, particularly prior to implantation, and as needed post-implantation (CHRISTIANSEN & LEIGH, 2002/2005; WATSON, HARDIE, ARCHBOLD, & WHEELER, 2008; ZAIDMAN-ZAIT, 2008). This would most certainly appear to set the stage for at least acceptance of bilingualism in cochlear implant users, thereby suggesting the possibility that children with cochlear implants should not be automatically inferred to function solely using a spoken language mode.

Wald and Knutsen's (2000) study of 45 deaf adolescents with and without cochlear implants not surprisingly found that hearing identity, as measured by Glickman's (1996) Deaf Identity Development Scale (DIDS), was more frequently endorsed by adolescents with cochlear implants compared to those without implants, possibly in part because of improved socialization with hearing peers. Interestingly, both groups similarly endorsed marginal, immersion, and most particularly, the bicultural category. This similarity reappears in the Most, Weisel, and Blitzer (2007) study in which 115 deaf Israeli adolescents participated, with only 10 of these having cochlear implants. Specifically, the two groups did not significantly differ in terms of DIDS classifications. The authors consider the endorsement of a bicultural identity for these implanted adolescents as allowing for the potential to benefit from this technology without having to sacrifice the Deaf experience.

Also, in the U.S. preliminary questionnaire study of 57 deaf adolescents with and without cochlear implants mentioned earlier (LEIGH, MAXWELL-MCCAW, BAT-CHAVA, & CHRISTIANSEN, 2009), results from an acculturation-based measure, the Deaf Acculturation Scale (DAS, MAXWELL-MCCAW & ZEA, 2011) indicated that most of the adolescents with cochlear implants were in mainstream settings and affirmed hearing-oriented identity. Yet, the number of cochlear implanted adolescents with bicultural identity results was similar to those in deaf settings, again affirming the salience of this identity for the cochlear implant group.

Most of the 14 adolescent and young adult cochlear implant users interviewed in the Christiansen and Leigh (2002/2005) study reported viewing themselves as deaf and had deaf friends while also desiring contact with both deaf and hearing peers. In another interview study, this time with younger children, Preisler, Tvingstedt, and Ahlström (2005) noted that these children saw the implant as a natural part of their lives, and used signed as well as spoken languages. This suggested to the authors that the children would be better off claiming bicultural identities. In a semi-structured questionnaire interview study involving 29 British young adolescents aged 13 to 16 with cochlear implants who were in both mainstreamed and specialized educational settings, it was found that most participants were flexible in terms of communication mode (spoken and signed languages) and endorsed a deaf identity that was neither culturally Deaf nor strong hearing (WHEELER, ARCHBOLD, GREGORY, & SKIPP, 2007). There was no clear relationship between identity status and educational environment.

Finally, it has been noted that increasing numbers of deaf students with cochlear implants attend specialized college programs for deaf students (BRUEGGEMANN, 2008; LADD, 2007). This adds credence to the value attributed to bicultural identities and the need to explore the deaf part of oneself, particularly in relevance to entering environments with significant numbers of deaf peers.

In sum, all of the data presented here suggest that it is time to end the "either-or" paradigm: either cochlear implantee or culturally Deaf (HINTERMAIR & ALBERTINI, 2005). Despite pockets of resistance as mentioned earlier in this text, it appears that the fusion approach has some credibility. This is affirmed by Lisa Herbert (2008), who writes, "I'm grateful for the opportunities my cochlear implant offers me and I see it as completely compatible with being a signing Deaf person" (p. 139). Additionally, hearing parents often view the potential of cochlear implantation as a means of creating possibilities and not necessarily precluding the option of entering the Deaf community (BERG, HERB, & HURST, 2005; CHRISTIANSEN & LEIGH, 2002/2005). In contrast, they may see the refusal to implant their deaf child as limiting the opportunity to participate in the world of their hearing families.

CONCLUSION

The information in this text suggests that children and adolescents with cochlear implants generally demonstrate positive psychosocial adjustment, whether their affirmed identity is bicultural, culturally Deaf, or culturally hearing. Cochlear implantation is not necessarily creating children stuck between the deaf and hearing worlds; they can and do often have a clear identity, and can shift between identity categorizations as the situation demands. This ability to shift appears to be conducive to psychosocial health. These findings have implications for professionals who work with cochlear

-implanted children. Specifically, professionals who are flexible, parent-centered, and comfortable with D/deaf/hard-of hearing role models and the different identity possibilities for children with cochlear implants tend to be more appreciated by parents (CHRISTIANSEN & LEIGH, 2002/2005; MEADOW-ORLANS, MERTENS, & SASS-LEHRER, 2003).

This flexibility will also allow for more positive self-images on the part of these children themselves as they explore who they are in terms of identity. This also has the potential to create better opportunities for parents to move from a dysfunctional child image to a more affirmative image of unique identity & positive self-esteem

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AUTHOR'S NOTE

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