

Identity Issues for Hard-of-Hearing Adolescents Aged 11, 13, and 15 in Mainstream Settings

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This study examined identity issues and aspects of the health behaviors of mainstreamed hard-of-hearing (HOH) students aged 11, 13, and 15 compared with their peers. A sample of 52 HOH students was matched with 470 peers of the same age, gender, and ethnicity. A survey based on the World Health Organization Health Behaviours of School Aged Children was administered and the results of the hearing and the HOH groups compared. Although there were few statistically significant differences, there were indications that the HOH students more often experienced a sense of loneliness than their hearing peers did. The majority of HOH students (55.8%) did not self-identify as having a hearing disability. When examined by the willingness to self-identify, the reported frequencies of loneliness and bullying were statistically significant. These findings support the view that the school experience of a significant number of mainstreamed HOH students is not supportive. Those students who do self-identify are physically and psychologically more at risk. The reluctance to self-identify may reflect the prevalence of negative stigma.

Recent research indicates that students with self-reported disabilities exhibit attitudes and behaviors similar to those who are alienated from their school communities (Hogan, McLellan, & Bauman, 2000). These attitudes and behaviors include greater likelihood of smoking, drinking alcohol, or being drunk more often than other students. Students with disabilities also report more difficulties on psychosocial factors.

Schools represent microcosms of society and pro-

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vide opportunities for children to develop and use skills that are necessary for a healthy lifestyle (Booth & Samdal, 1997). In a review of the literature on belonging, Osterman (2000) concluded that the sense of belonging to a school community is extremely important and has far-reaching implications for motivation and behavior. A body of evidence indicates that there is a positive relationship between academic performance and psychological adjustment (Hishinuma et al., 2001). Subjective well-being appears to be critical to adjustment (Lashbrook, 2000; McCullough, Huebner, & Laughlin, 2000; Murray & Greenberg, 2001; Resnick et al., 1997). Diener, Sapyta, and Suh (1998) maintain that subjective well-being “is an essential component of positive well-being and health” (p. 34). Subjective well-being is taken to be a person’s evaluation of his or her life and can be in terms of cognitive states or of ongoing affect. Ash and Huebner (2001) found evidence supporting the hypothesis that both acute and chronic experiences independently contribute to the experience of positive satisfaction. In a study of the participation of students with disabilities Simeonsson, Carlson, Huntington, McMillen, and Brent (2001) note that psychological adjustment and quality of life were not related to a given health condition but were the product of the interaction of the student with their social and physical environment. The school environment is therefore an important setting for primary health care. For young people confronting the challenge of building and maintaining a competent self in a social or educational context, “inherent parts of the self can either be owned and embraced or

else, as is too often the case, actively disowned” (Kaufman & Raphael, 1984, p. 239). This subjective sense of shame regarding a feature of the self impinges on identity development. Kaufman (1989) asserts that shame is more disturbing to the self and more central to a sense of identity than other affect is. Furthermore, Kaufman (1989) states that “the primary affect of adolescence is shame” (p. 44). In view of modern Western cultural expectations (that acceptable individuals compete for success, conform to expected standards, and are independent, self-sufficient, and popular), the likelihood is increased that adolescents who have special needs or are different may register a sense of shame or inadequacy.

Deaf children and adolescents are noted to be at risk of alienation and a range of adverse outcomes including low academic achievement, delays in cognitive and social-cognitive processing, social maladaptation, and psychological distress or disorder (Fitzgerald, 2000; Greenberg, Lengua, & Calderon, 1997). Some studies report negative aspects of the experience of mainstreamed hard-of-hearing (HOH) students (e.g., Gresham, 1986; Hocutt, 1996; Israelite, Ower, & Goldstein, 2002; Stinson, Whitmire, & Kluwin, 1996; Warick, 1994). Commonly these are related to poor social relationships. However, there are suggestions that in a Scandinavian society traditionally committed to compensatory interventions for HOH children social competence and behavioral problems as assessed by parents and teachers of hearing-impaired 7- to 12-year-old children are little different from those of children with normal hearing (Andersson, Olsson, Rydell, & Larsen, 2000). This position is qualified by the consideration that the identity seeking and peer group affiliation that characterizes adolescence may influence behaviors. The findings of Musselman, Mootilal, and Mackay (1996) differ from those of Stinson et al. (1996) by noting that both participation and relational bonds increased as a function of mainstreaming, and they reported that “hearing status was not a factor in adjustment” (p. 60). Clearly there are aspects of the experience of mainstreamed HOH students that need clarification. It may be that these diverging views reflect the point Meadow-Orlans (2001) makes when she recommends further research of children who have mild or moderate hearing losses, deaf children from non-Caucasian or mixed-race families, and deaf children not enrolled in special education classes.

The “school community” for most hearing-impaired students is a mainstream local school. This reflects inclusive educational philosophy and the belief that such settings are likely to enhance educational achievement and personal and social adjustment. Schildroth and Hotto (1996) confirm from their study of approximately 45,000 students that the majority of deaf students are educated in mainstream classes in local schools. The continuing increase in the number of mainstreamed deaf students in the United States is partly due to legislative change but also to the increasing proportion of students with less severe hearing losses. Hocutt (1996) reports that HOH students do not perform academically as well as normal-hearing students and that the difference increases with age. She also observes that HOH students may gain some academic advantage but suffer regarding self-concept in mainstreamed classes. Commenting on the National Deaf Children’s Society 1989 survey, Connor (1997) observes that parents of deaf children are mindful that a child’s ability to cope in a mainstreaming setting is not necessarily the same as receiving a meaningful and challenging education. Stinson and Antia (1999) observe that those students who cannot easily participate in social activities with peers due to communication difficulties may also begin to identify themselves as helpless individuals and avoid participating in school activities. This tends to confirm the view of Musselman et al. (1996) that communicative competence is related to social adjustment. This latter study also reports that the social adjustment of deaf girls is more influenced by educational setting than that of deaf boys, possibly because the greater intensity of girls’ peer relationships may increase the necessity for effective communication. However, just as it has been established that personal perceptions rather than audiological measurement better predict the personal impact of a hearing loss (Kerr & Cowie, 1997), so too has the degree of hearing loss been shown not to be a key factor in determining the extent of social relationships (Cappelli, Daniels, Durieux-Smith, McGrath, & Neuss, 1995). The perception of being “left out” or undesirable is a characteristic of the social relationships of HOH students. Stinson et al. (1996) suggest that the influence of self-perceptions is such that they may help identify the particular educational settings in which HOH students are more likely to enjoy peer acceptance.

The importance of the self-perceptions of HOH students is captured qualitatively by Kiff and Bond (1996), who cite the memories of a young deaf adult:

When I was young and realized that I was deaf and different from other children I felt that there was a communication barrier between us. I was bullied and taunted by hearing children. . . . I was isolated and lonely with no hearing friends. . . . I felt rather oppressed by hearing people. . . . I became more and more frustrated. Eventually I built up frustrations over a long period and exploded and walked out. It took some time, but I realized that I was not part of the group and felt very angry and isolated with those [students] for making my life hell. (p. 19)

Additionally, the prevailing negative social stigma of deafness may influence the individual personal perceptions of deafness common among young people (Blood, 1997), further increasing the likelihood of isolation. Motivation, peer relationships, and identity are areas in which deaf young people are particularly vulnerable (Stinson & Whitmire, 2000). These elements are of considerable importance in the light of Deater-Deckard's (2001) conclusion that rejection by peers (especially in conjunction with other negative social indicators) "is strongly implicated in the development of psychopathology" (p. 574).

The school experience of young people may also be particularly important in that environmental life events or the cumulative effect of minor events is significantly related to adolescents' global self-concept, positive affect, and negative affect (McCullough et al., 2000). Resnick et al. (1997) state that of all the forces that influence adolescent health-risk behavior, "the most fundamental are the social contexts in which adolescents are embedded; the family and school contexts are among the most critical. Yet, how adolescents' connections to these contexts shape their health-risk behaviours is poorly understood" (p. 823). A contextualized understanding of the identified needs may also enhance efficient use of resources.

The purpose of this study was to compare the health behaviors of HOH young people with those of normal hearing peers, paying particular regard to psychosocial elements that might indicate barriers to optimal subjective well-being in school contexts. It was hypothesized

that HOH students would be more likely to report negative experiences than their hearing peers.

Method

Subjects

The study was conducted in 18 different schools in different geographical locations in New Zealand. The regions selected included urban and rural schools, large schools (over 1,500 students), and smaller schools (fewer than 400 students). The overall sample approximated the ethnic and socioeconomic representation of New Zealand schools as published in the Ministry of Education School Statistics (*Education Statistics of New Zealand*, 1999, 2000). The students in the HOH group were all enrolled in mainstream classes in regular schools.

The HOH group. The HOH group ($N = 52$) consisted of 44.2% girls and 55.8% boys. There were 14 students aged 11 years, 24 students aged 13 years, and 14 students aged 15 years. There were no statistically significant differences between the comparison group and the HOH group in age or gender.

Because it was not feasible to obtain audiological assessments on the national sample, the students in the HOH group were selected on the basis of educational and/or audiological records, such as being listed on Advisor of Deaf Children case lists or audiological notes on school records. The Advisors of Deaf Children in New Zealand provide support to young people, their families, and their schools when hearing loss is diagnosed. The adolescents on their case lists are typically moderately to severely HOH students or in some instances students who are profoundly deaf (with or without cochlear implants). The audiological notes on school records are usually provided by public health nurses who carry out screening for hearing problems or by audiologists who have assessed referred children. These procedures provided a sample of HOH young people who had at least a moderate hearing loss and who required an assistive hearing device (even if it was not used). Clear evidence of a hearing loss (as in audiological reports or inclusion on Advisor of Deaf Children case lists) was explicitly required in the administration protocol. The etiology and specific levels of hearing were not recorded.

The students enrolled in a special school or special class for HOH or Deaf children were excluded from the study. The students were required to be functioning adequately in their mainstream classes and proficient in English. Support was available to all students completing the survey in the form of having the questions either read or explained to them. There was no time limit on the completion of the survey to ensure that any difficulty with language was accommodated.

The comparison sample. The comparison group ($N = 470$) consisted of 49.1% girls and 50.9% boys. Eleven-year-old students comprised 26.2% of the total; 13-year-old students 41.7%, and 15-year-olds 32.1%. The comparison group was not tested for hearing levels but given a prevalence of severe hearing loss in comparable samples of between 1.5% and 3%, it is unlikely that the hearing levels would materially influence the results.

Measure

Health Behaviour in School-Aged Children

The Health Behaviour in School-Aged Children (HBSC) study sponsored by the World Health Organization aims to increase understanding of health-related attitudes and behaviors and the context in which they develop (King, Wold, Tudor-Smith, & Harel, 1996). This cross-national study considers school to be a crucial setting for the physical and psychosocial development of young people; indeed, it notes that feelings of alienation at school are associated with health-compromising behavior. The HBSC questionnaire has been used since 1982 to assess the health behaviors of young people in a substantial number of countries (King, Wold, Tudor-Smith, & Harel, 1996). The questionnaire accommodates developmental differences by targeting three age groups (11-, 13-, and 15-year-olds) and is likely to promote knowledge of the behaviors and attitudes in early adolescence and midadolescence. A second feature of the measure is the assessment of health outcomes, including behaviors such as smoking, alcohol abuse, dental care, physical activity; and psychosocial states, such as loneliness, life satisfaction, and somatic complaints. Some minor adaptations were made to the HBSC, most notably the inclusion of a question relating to the use of marijuana.

The adapted version consisted of 48 items using semantic differentials to gather students' responses to the questions or statements. Examples of the questions are included in the Appendix.

Procedure

The study was approved by the National Office of Specialist Education Services, the New Zealand Federation of Deaf Children, indigenous advisors, and regional Specialist Education Services managers. Specialist Education Services field staff contacted the schools of identified HOH students and obtained approval to work in the schools. Consent forms were issued and returned through the school systems. The senior management of all participating schools gave informed consent to the project. The selected students were invited to participate, and parental or caregiver consent was obtained. Once consent was provided, the field staff administered the survey.

The HOH participants were matched with peers of the same age, gender, and ethnicity—usually students from the same class. The survey was administered to small groups of each age cohort in settings other than the classroom in order to emphasize the separation of the study from school routines. The groups included both HOH students and their hearing peers so that there was no obvious focus on the HOH students. The field staff usually read the survey questions, although in some instances the students preferred to work unsupported. Explanations of items were provided if needed. None of the HOH students needed sign language support. There was no time limit for completing the survey but most students did so in less than 30 min. No school personnel were asked to be involved in the administration of the survey to protect the confidentiality of the students. The completed surveys were posted to the researcher for analysis.

Results

Nonparametric correlations of hearing impairment with ethnicity and socioeconomic status produced significant results (Kendall's tau_b = .166, $p = .0001$ for ethnicity and .160, $p = .0001$ for socioeconomic status). Maori (New Zealand's indigenous people) to-

taled 42.3% of the HOH students, which is more than double either the Ministry of Education school statistics (20.1%) or the Maori representation in the whole sample of this study (18.1%). New Zealand European HOH students were underrepresented, as evident in Table 1.

Students from schools in lower socioeconomic areas constituted 5.1% of the sample but 24.5% of the schools attended by HOH students. Conversely, the higher ranking socioeconomic areas were disproportionately underrepresented among the HOH students.

The means and standard deviations for a range of parametric variables on the HBSC instrument are presented in Table 2. As indicated, three items reached statistical significance in the comparison of the health behaviors of hearing students with HOH students: number of people in the household; somatic symptoms; and feelings about school.

The HOH students more frequently reported living

in larger family groupings. This feature remained consistent regardless of ethnicity. For example, although 54.5% of the Maori HOH students came from families of six or more, only 29.2% of the Maori hearing students did. For the New Zealand European HOH students, 22.4% came from families of six or more but only 8.5% of the New Zealand European hearing students did.

The somatic complaints for which the HOH students differed significantly from their hearing peers were reports of dizziness and asthma. Although 30.8% of the HOH students reported feeling dizzy daily, only 11.8% of the hearing students did. Asthma was reported to be a daily difficulty for 36.5% of the HOH students compared with 17.9% of the hearing students. The survey question used the term *asthma*, therefore the students' response was to a specified condition. Because Maori are overrepresented in asthma statistics for the general population, a comparison of Maori HOH and Maori hearing students was made. Asthma was a daily complaint for 36.4% of the Maori HOH students but for only 16.4% of the Maori hearing students.

The most prominent feature of the difference in the reported feelings about school was the more positive responses of the HOH boys in this sample. Over half of them (51.7%) reported that they "like school a lot" compared with 26.8% of their hearing peers. Conversely, no HOH boys indicated that they "don't like school at all" compared with 4.5% of their peers. Fe-

Table 1 Ethnicity/HOH students

Ethnicity	% of Total survey	% of HOH students
NZ European/European/Pakeha	50.4	34.6
NZ Maori	18.1	42.3
Pacific	16.2	15.4
Other	15.3	7.7

Table 2 Means and standard deviations for student health behaviors

Variable	HOH ($N = 52$)	Hearing ($N = 470$)	T ($df = 520$)
Number of cohabitants	5.27 (1.97)	4.16 (1.98)	3.85*
Perceived teacher beliefs	15.15 (3.48)	14.64 (3.19)	1.10
Perceived teacher opinion of student	2.96 (.82)	2.80 (.77)	1.39
Somatic symptoms	23.18 (9.99)	20.12 (6.72)	2.91**
Feelings about school	3.31 (.73)	3.04 (.78)	2.39**
Current smoker	1.37 (.84)	1.30 (.80)	.56
Current marijuana user	1.10 (.45)	1.15 (.50)	-.70
Became drunk	1.54 (1.00)	1.49 (.94)	.34
Physical education attitude	4.92 (1.26)	4.67 (1.28)	1.33
Perception of health	2.39 (.69)	2.28 (.62)	1.19
Perception of life	3.33 (.65)	3.27 (.68)	.58
Loneliness	1.96 (.97)	1.74 (.77)	1.91
Sense of belonging at school	3.82 (1.24)	3.76 (1.06)	.42
Students accepting	3.83 (1.08)	3.85 (.99)s	-.17
Been bullied	1.79 (1.13)	1.76 (1.13)	.20
Have bullied	1.73 (.95)	1.67 (.91)	.44

* $p < 0.0001$; ** $p < 0.05$.

male HOH students were also positive about school with 44.2% reporting that they “like school a lot” compared with 32.0% of their hearing peers, although 4.3% of the HOH girls did “not like school at all” compared with 3.9% of their hearing peers. These results are considered in more detail later in this article.

The reported loneliness of HOH students approached statistical significance ($p = .057$), which prompted further exploration. It was notable that in this study 55.8% of identified HOH students did not self-identify as having a disability. Item 48 of the survey was the basis for determining self-identification of a disability (see Appendix). Those students who did identify themselves as having a hearing disability reported statistically significant levels of feeling lonely or experiencing being alone. These two variables were collapsed into a variable, *loneliness*. An independent samples t test indicated there was a significant difference in loneliness scores for the students who self-identified ($M = 4.13$, $SD = 1.60$) and the students who did not self-identify, $M = 3.14$, $SD = 0.99$; $t(50) = 2.6$, $p = .014$. The magnitude of the differences in the means was large ($\epsilon^2 = .12$). This is illustrated in Figure 1.

Further consideration of the differences between the HOH who self-identified and those who did not produced a correlation between self-identifiers and reports of having been bullied ($r = .273$, $p = .050$). The differences in the experience of being bullied are illustrated in Table 3. Reexamination of the reported positive feelings about school also indicated a significant difference in the responses of the HOH boys (but not the girls). Male HOH students who did not self-identify reported they “like school a lot” more than did the male HOH students who did self-identify (66.7% compared with 33.3%). Of the comparison group of hearing boys, 23.5% reported they “like school a lot.” For the boys the variance was statistically significant, $F(2, 265) = 6.103$; $p = .003$; $\epsilon^2 = 0.31$. The girls in the sample showed little difference in their reported feelings about school. Those who indicated that they like school a lot constituted 32% of the hearing group, 36.4% of the self-identifying HOH group, and 33.3% of the nonidentifying HOH group. The variation was not statistically significant.

Within the HOH group there was no significant difference for either gender or year level.

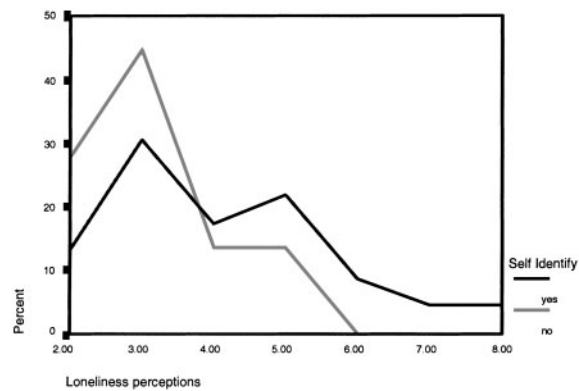


Figure 1 Self-identification and loneliness.

Discussion

The purpose of this study was to examine the health behaviors of mainstreamed HOH students in comparison with their hearing peers. The data from the whole sample provide a backdrop against which to compare the reported behaviors of the target group. The pattern of the results for the whole sample tends to support other studies that have investigated various risk behaviors (e.g., the incidence of bullying; the trend of female smoking; the relationship between being bullied and being a bully). There are numerous possibilities that could be explored further, for example, the extremely high correlations ($p < .0001$) of a number of risk behaviors with subjective factors such as perceptions of teachers' opinions, sense of personal agency, and feelings about school indicates that these issues have substantial relationships with specific negative activities. These dimensions are relevant to mainstreamed HOH students.

Some health behaviors of mainstreamed HOH young people aged 11, 13, or 15 are significantly different from their peers, and awareness of them may prompt constructive intervention. In this study it is very evident that the indigent population is overrepresented in the HOH group. The higher socioeconomic schools are generally disproportionately underrepresented among the HOH students. This suggests that HOH is linked to socioeconomic groupings and raises questions regarding access to services and early intervention. Consistent with this feature, HOH students are more likely to live with large families. Although this may suggest a cultural preference (such as the strength of Maori kinship), the

analysis accounting for ethnicity still indicates a significant difference.

Maori young people are disproportionately over-represented in the number of those who are HOH. The figure of 42.3% of the HOH total is more than double either the Maori representation in the whole sample of this study (18.1%) or the New Zealand Ministry of Education school statistics (20.1%). This may reflect the influence of lower socioeconomic status on children's health.

Not surprisingly, HOH students reported significant correlations with experiencing dizziness. The function of the inner ear in providing balance indicates the strong possibility of instances of dizziness among those with inner ear problems. That could be disconcerting for the individual suffering imbalance and could conceivably have an impact on motor activities or the motivation to participate in some activities with high demand on affected abilities. Another health condition significantly correlated with those who were HOH was asthma. Because Maori are known to be overrepresented among asthma sufferers, a comparison was made in this study of Maori HOH and Maori hearing students. The results indicate that the Maori HOH students were more closely matched to the overall HOH grouping than to the Maori grouping in terms of having asthma. Although the underrepresentation of the higher socioeconomic schools made comparison unreliable, there was an indication that the prevalence of asthma was associated with socioeconomic status more than with hearing status. Certainly the higher incidence of poor health indicators confirm this view.

The HOH students on average feel more positive about school than do their hearing peers (particularly boys). However the data suggest that this difference was skewed by the particularly enthusiastic response of male HOH students who do not self-identify as having a hearing disability. By contrast, the responses of the male HOH students who do self-identify were similar to the response pattern of the male hearing students. The female responses (both those who identify and those who do not) were comparable with their hearing peers. The markedly positive responses of the nonidentifying boys invite further research. It may be that some male HOH young people have unrealistic perceptions of the sup-

port or opportunities offered by the school, or perhaps they are engaging in overcompensatory behaviors.

There was evidence that HOH students are more prone to be lonely than are their hearing counterparts. The result was marginally short of the statistical significance measure but was sufficiently close to merit further investigation. Moreover, finer grained analysis of the HOH group indicated other factors that are very likely to have a substantial influence on loneliness. Of the HOH students sampled (i.e., students identified by medical, audiological, or school personnel as having a confirmed hearing impairment), the majority did not identify themselves as having a hearing disability.

The term *disability* is contentious for a number of reasons. Among the Deaf community there is a strong belief that Deaf is not disabled. There are clear justifications for regarding those who are Deaf as being a cultural and linguistic community. However, only one of the students added the comment that although she had a hearing problem she did consider herself to be disabled. The concept of being culturally Deaf is more likely to be understood by students involved with a school for the Deaf than by those in mainstream settings. The social construction of disability is evident in the International Classification of Disability, Impairment and Handicap (2001) and provides a philosophical framework to dispute the inclusion of the term *disability* in the survey. There was no indication in the raw data that any students were familiar with that perspective. It is possible that some students did not know what a disability is and therefore did not consider themselves as having one. It is also possible that some students may be aware of a hearing difficulty but do not rate it as a disability. A further possibility is that students may know they have substantial difficulties hearing but do not want to admit to having them, that is, they do not want to identify themselves as being less than normal. From the results of this study it is evident that there may be a psychological (not to say physical) risk for those students who identify themselves as HOH. The results indicate that those who self-identify as having a hearing disability are more likely to report feeling lonely or experience being alone than those who do not self-identify. In the light of the literature (e.g., Blood, 1997; Hocutt, 1996; Musselman et al., 1996; Stinson & Antia, 1999) it seems reasonable to

postulate that identifying oneself as HOH continues to be socially undesirable for mainstream adolescents. This finding confirms the view of Israelite et al. (2002) that HOH students are reluctant to identify themselves. This feature also may be a reason why many HOH boys appear overly enthusiastic in their feelings about school.

Israelite et al. (2002) underscore the necessity for HOH individuals to establish an identity distinct from those who are culturally Deaf but one that also accommodates their particular needs. The evidence of this study suggests that a substantial number of known HOH students do not identify themselves as having significant features that differ from their hearing peers. It may be that they do not perceive an attractive alternative to identifying with the dominant hearing culture. Alternatively, those students who self-identify are more likely to be lonely—by implication not sufficiently involved in a social network that validates their sense of identity. Osterman (2000) notes that for many students schools are “alienating institutions,” and some students do not sense their own importance nor can they rely on peers or teachers to meet their needs. She further comments that although such students “may have a shared emotional connection and recognize the group’s importance to them, their needs to experience relatedness are not always addressed” (p. 360). The results of this study appear to indicate that the experience of a number of mainstream HOH students supports this view. It is important to note that the survey item asked the students to identify whether they had a disability and not whether they were hard of hearing. The negative perception of deafness (e.g., Blood, 1997) may indeed be a socially constructed disability with its roots established before adolescence. To counter the formulation and transmission of negative stigma would require long-term, persistent education of teachers, parents, and students to “normalize” hearing impairment; the creation, resourcing, and systemic support for networks that promote the identity of mainstream HOH young people; and the fostering of research to identify pertinent features and validate interventions. The social and health correlates of deafness suggest that such a strategy would need to operate across sectors and with particular regard to the indigent and the indigenous.

A difficulty in studying the target population is locating HOH students in the school population. As this

study found, many HOH people do not readily acknowledge themselves as having a disability. Because the HOH students in this study had an established record and because HOH students tend to be associated with lower socioeconomic strata and large families, one wonders how many more unidentified HOH students are “hidden.” Research by Stika (1997) suggests that the onset of deafness is earlier than generally believed. This indicates that there are likely to be considerably more HOH students in mainstream schools than educators are aware of. Enhancing the identity of HOH students may encourage increased disclosure. The tendency to self-select out of the HOH population not only reinforces negative stereotypes about the condition but also impedes meaningful research.

Replication of this study with greater numbers of HOH participants would be useful. A further limitation of the current research was the lack of specific audiological data to enable a definitive comparison of psychological features with measured hearing loss. It would be informative to investigate the respective views of Kerr and Cowie (1997) and Cappelli, Daniels, Durieux-Smith, McGrath, and Neuss (1995) that the degree of loss is not the main factor in either the personal impact of deafness or the extent of social relationships. Quantitative studies may also examine the possibility that degree of loss or other factors act as moderators on identity development.

It would be informative to use qualitative methodology to illuminate the experience of HOH youth in mainstream educational settings, particularly for those who do not identify themselves as HOH. The current study provides some correlational data only, and additional research is needed to develop interventions that are effective in specifically addressing the self-concept issues implied; careful experimental design studies would be useful.

Appendix: Survey Examples

Item 7

How do you feel about school at present?

- I like it a lot
- I like it a bit
- I don't like it very much
- I don't like it at all

Item 26

Do you ever feel lonely?

- Yes, very often
 Yes, rather often
 Yes, sometimes
 No

Item 38

Have you been bullied in school this term?

- I haven't been bullied in school this term
 Once or twice
 Sometimes
 About once a week
 Several times a week

Item 48

Do you have a disability?

- Yes
 No

If yes, what disability do you have?

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