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## **EMPLOYMENT AND QUALITY OF LIFE IN ADULTS WHO ARE DEAF**

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### **Abstract**

Research shows that work is closely related to self-esteem (Walter, 1993). Yet many young people who are deaf or hard of hearing (D/HH) are choosing not to work. How does this affect their self-esteem and overall quality of life? Quality of life (QoL) is the satisfaction one feels about his current situation. Using the Comprehensive Quality of Life Scale-Adult (ComQoL-A5) (Cummins, 1997), the perceived QoL of eleven pairs of matched participants (N=22) from a State School for the Deaf was measured. Data were used to analyze the impact that employment had upon their perceived QoL. The results indicated no significant differences in the two groups. The unemployed participants appeared to be just as happy as those who were employed. This was an unexpected finding, and possible reasons for these results are discussed. Several significant correlations were found between the seven life components of QoL. Suggestions for future research are offered.

Work is a fundamental expectation in the American society. It is our means of financial independence, a large part of our social identity, and our access to other people in the community. In general, adults define themselves by their careers. They depend upon work to support their lifestyle and to provide a place to develop friendships (Kiernan, 2000). Research shows that an individual's professional life is closely related to self-esteem (Walter, 1993). Yet many young people with disabilities never develop careers and the opportunities and benefits that accompany them. In the year 2002, almost 85% of adults in the United States without disabilities were employed, compared to 30% of those with disabilities. The number of employed adults with disabilities is steadily declining (Houtenville, 2005). This is equally the case for individuals who are deaf or hard of hearing (D/HH) (El-Khiami, 1993).

How are deafness and unemployment related? For a good number of deaf and hard of hearing people, the effects of a hearing loss are life-long, limiting one's ability to speak intelligibly, acquire language, and to communicate effectively. Academic achievement is usually delayed. Consequently, acquiring a high school diploma is very difficult for students who are D/HH. The Individualized Education Program (IEP) diplomas most of them earn are almost useless in today's labor market. Job rehabilitation for clients who are deaf is scarce and hard to acquire, due to limited facilities and professionals trained to work with the population. Even minimum wage

jobs require communication skills and employers are hesitant to hire those who cannot relate to the customers (Bowe, 2004).

Little research has been done on the work experiences over time of those who are D/HH (El-Khiami, 1993), but it is certain that this segment of the population is facing serious challenges in the area of employment. The National Center for Health Statistics (1990, 1991) reported that more than 19 million adults in the U.S. are D/HH. Only about 8 million of them are employed. Many young people who are D/HH lose their jobs after a very short work experience and sometimes never return to the work force. Others are choosing not to work at all, drawing government benefits for long periods of time (Ozawa, 2002).

Many D/HH youth who are in transition from high school to work expressed a reluctance to work, lacked enthusiasm for their jobs, and expressed apathy when experiencing failure in the workplace. If work is such an important factor in a positive lifestyle (Kiernan, 2000), then what is life like for the D/HH who do not work? To investigate this problem, we looked at a population of young adults from the theoretical perspective of Quality of Life (QoL) (Huebner, 1994).

## **Review of the Literature**

Quality of life is a multidimensional construct used to describe life satisfaction (Huebner, 1994). Researchers have studied life satisfaction extensively in the hearing population, yet little is known about life satisfaction among students with disabilities, and particularly students who are D/HH (Gilman, Easterbrooks, & Frey, 2005).

## **Life Satisfaction and Work**

Quality of life, or one's happiness with his/her life, has received a great deal of attention in literature in the past decade, with an emphasis on promoting the well-being of individuals (Gilman & Huebner, 2000). QoL is the satisfaction an individual feels about his current situation. Many QoL measures have been developed to measure life satisfaction. These assess how one is doing in a wide range of situations (Greeley, Greenberg, & Brown, 1997), and cover both positive and negative experiences (Gilman & Huebner, 2000).

Research shows that QoL tends to be a trait that is fairly consistent across one's lifetime; although a life crisis can temporarily change one's feeling of well-being (Heal, Khoju, Rusch, & Harnisch, 1999). Octogenarians reported that spirituality and hard work played an important part in their overall life satisfaction (Neal, 2004). A good fit between personality and type of work led to greater life satisfaction in workers across a variety of occupational fields (Lachterman & Elchanan, 2004). Not only does work ability have an impact on life satisfaction, but the associated self-confidence and mood generalizes to physical health and well-being as well (Sjogren-Ronka, Ojanen, Leskinen, Mustalampi, & Malkia, 2002). This is consistent with other findings that negative life satisfaction predicted subsequent work disability pension due to psychiatric and non-psychiatric causes. In a nationwide sample of Finnish twins, dissatisfaction with the job made the dissatisfied twin unhealthy (Koivumaa-Honkanen, Koskenvou, Viinamaki, Keikkila, & Kaprio (2004). In general, studies have found that if one's competence at work were improved, his perception of quality of life improved as well (Heal, Khoju, Rusch & Harnisch, 1999). This has implications for life satisfaction among the disabled population.

### **Life Satisfaction and Work Among Individuals with Disabilities**

Currently, there is not enough research to determine how youth with disabilities perceive their quality of life. All parents want their children to be healthy, have friends, and lead productive adult lives (Helm, 2000). This is no different for those who have children with disabilities. However, these children have barriers that come with their disability that makes attaining goals more difficult or even impossible. They carry a sense of being different, which interferes with their confidence in taking charge of their life and making the choices they want. This can have an influence upon their satisfaction with their life. Students with severe emotional disturbances (Griffin and Huebner, 2000) and students with mild mental disabilities (Brantley, Huebner, & Nagle, 2002) tended to be less satisfied with their friends than non-disabled students.

There exists a large body of evidence demonstrating that employment is an important factor in life satisfaction for individuals with disabilities (Burkhauser, Haveman, & Wolfe, 1990; U.S. Bureau of Census, 1997). Yet in 2000, the National Organization on Disability (NOD) found that only

three out of ten (32%) working age (18-64) adults with disabilities were employed, as opposed to 8 out of 10 (81%) of those without disabilities. The National Council on Disability (NCD, 2002) reported that there are still significant barriers for people with disabilities who try to participate fully in our society and that they tend to attain lower levels of education, are poorer, and more likely to be unemployed than those without disabilities. Being disabled is a strong negative predictor of employment status, and that the more disabled a person is, the less likely he is to be working (Randolph, 2004).

Berry (2000) studied employment and young adults with disabilities, ages 18-29 by examining the 1994 and 1995 National Health Interview Survey on Disability Supplement (NHIS-D) and found that adults with disabilities who had finished more than a 12th grade education were twice as likely to be employed as those who dropped out of school. The odds of employment were reduced by one-half if the individual was drawing Supplemental Security Income (SSI).

Kaye (2001) reported that there was no gain in the employment rate for people with disabilities during the 1990s, even with the passage of the American with Disabilities Act (ADA). In fact, he found that their rate of employment declined somewhat, from 24% in 1994 to 22% in 1999. Success at competitive employment may not be measured by one's ability to produce alone. One's level of satisfaction and the extent to which he is included in the social and cultural aspects of the job also play essential roles in job success as well (Kiernan, 2000).

### **Life Satisfaction and Work Among Individuals Who are Deaf and Hard of Hearing**

The data available on the relationships among work, life satisfaction or QoL, and hearing loss are scanty, as collecting longitudinal data on one specific group over a period of time is difficult and costly ( El-Khiami, 1993). However, it is certain that deafness results in difficulties in communication, or one's ability to attain and relate information (Gilman, Easterbrooks, & Frey, 2004). Difficulties in communication may increase one's psychological anguish leading to deficits in social relationships and fostering a lower quality of life (Brubaker & Szakowski, 2000; and Munoz-Baell & Ruiz, 2000).

Gilman, Easterbrooks, and Frey (2004) compared the life satisfaction of 159 students, ages 8 to 18 years. They administered the Multidimensional Students' Life Satisfaction Scale (MSLSS) (Huebner, 1994) to 71 non-D/HH students, as well as 23 students from a day school for the D/HH and 25 students from a residential school for the D/HH. Their study showed that the hearing youth consistently reported greater satisfaction across all domains measured by the MSLSS. The results from the study indicated qualitative differences in family satisfaction between the D/HH and their hearing peers. The two groups also reported major differences in quality of social support and peer relations. For the D/HH group, life satisfaction and living environment were significant predictors of global satisfaction. Most of the variance in life satisfaction was accounted for by living environment. The D/HH students in the residential schools were happier than those in the day school. Gilman et al. (2004) wrote, "It may be the case that because D/HH youth in residential environments have limited interactions with their families, they ascribe feelings of 'family' to the school, its staff, and the students." This article suggests that one must have a community in order to be happy. Antia, Stinson, and Gaustad (2002) supported this view, saying that students with hearing loss who perceive themselves and are perceived as "members" in a classroom experience a greater sense of belongingness.

Some critics of segregated settings for the D/HH insist that placement in a school for the deaf severely limits the student's acquisition of social behaviors that are appropriate in the hearing world, thereby contributing to lower life quality across areas of their lives, including their relationships with parents and peers (Bat-Chava, 2000; Mertens, 1989). Warick (1995) pointed out that if the environment of the D/HH youth supports positive interactions with parents, peers and teachers, the young person might view his disability as less stigmatizing, therefore contributing to higher life satisfaction across a number of domains. Israelite, Ower, and Goldstein (2002), Leigh, Marcus, Dobosh, and Allen (1998) and Munoz-Baell and Ruiz (2000), agree that D/HH youth who are in supportive environments may view their hearing loss less as a "handicap" than a personal characteristic that contributes to their uniqueness.

Even when a person who is D/HH has a more positive attitude toward himself and his hearing loss, there still remains the repercussion of how he is viewed by others, especially if he has little or no speech and poor

communication skills. Low-functioning deafness, or LFD, (Bowe, 2004) is a term used in rehabilitation to specify a low level of functional communication due to early-onset deafness and the limitations imposed on the individual in terms of mastering the English language, speaking intelligibly, and achieving academically. The category includes individuals who have been deaf from birth or early childhood, read at or below second-grade level, have little or no intelligible speech, and do not have a high school diploma. They may also have other disabilities in addition to deafness. In 1999, the Institute on Rehabilitation Issues (IRI) estimated that there were 165,000 LFD adults in the U.S. (Dew, 1999).

### **Deterrents to Work**

The significant academic gap between those who are D/HH and their hearing peers puts the D/HH at a severe disadvantage in competing for jobs (Schildroth, Rawlings, & Allen, 1991). Delayed language development and depressed reading levels can be a direct result of a hearing loss. Low academic levels limit work opportunities and chances for additional academic or vocational training. Statistics consistently show that the rate of D/HH high school graduates with diplomas are considerably lower than their hearing peers (Allen, Rawlings, & Schildroth, 1989; Harnishch, Lichtenstein, & Langford, 1986). In 1989, only one in every five D/HH students leaving high school met academic requirements for a diploma (Allen et al., 1989). Since that time, many states have included a high school exit exam as a requirement for earning a high school diploma. This makes earning a diploma even more difficult for students who are D/HH.

Schildroth, Rawlings and Allen (1991) also pointed out that discrimination is common in the workplace and D/HH employees are often denied higher paying positions that they could successfully fill. The issue of communication is a major factor in acquiring and keeping a job. For minority students, an additional language barrier complicates a hearing loss, when parents speak a language different from English. Being a member of a minority group can also present an economic disadvantage, as minority families may live at or below poverty level. These families are not able to help their children find work, as they lack the educational background, economic status and the knowledge of how the system works. MacLeod-Gallinger (1992) reports that D/HH women may experience a “double handicap” (Egelston & Kovolchuk, 1975), with even lower employment

and fewer career opportunities available than hearing women and deaf men have.

Schildroth, et al (1991) also reported that school personnel often placed D/HH students in vocational training long before they had a chance to learn to read and write. This reduced the time for and emphasis on academic instruction. Consequently, some D/HH students arrive at high school with third grade reading levels. Today's jobs require high levels of literacy and mathematics. Since no school can offer a vocational program that actually prepares a student for a specific job, it is doubtful that this emphasis on vocational training rather than remediation of academic deficits is the best use of the student's time.

One factor that may be a deterrent to work for adults who are D/HH is their eligibility for Supplemental Security Income (SSI) payments. SSI is an income-support program, jointly funded by federal and state funds, available to the elderly and individuals with disabilities. SSI is designed to keep one above federal poverty level, which was about \$9,000 in 2002 for an individual with no dependents. That same year, the average federal SSI payment for recipients with disabilities was \$507 per month, or \$6,084 per year. An estimated 54,000 individuals whose primary disability was deafness were enrolled in the program (Bowe, 2004). This number is growing, with a very low number of SSI recipients ever entering the workforce (Ozawa, 2002). Burkhauser (1998) described some SSI applicants as being on an "unemployment path" and others on a "welfare path." Vocational rehabilitation from the state agencies was set up to help people with disabilities go to work. However, Berry (2000) reported that SSI recipients who received vocational rehabilitation services were no more likely to be employed than those who did not receive the services.

The purpose of this study was to provide some insight into how two groups of adults who are D/HH feel about their current life situation, and whether employment is an important correlation with life satisfaction. Does their feeling of self-worth come, even in part, from participating in productive employment? Do employed young adults who are D/HH perceive themselves to have a better quality of life than those who are unemployed?



## Methodology

### *Participants*

The study population consisted of graduates from a state school for the deaf, located in a suburban area of the southeast. The school serves approximately 200 students from 34 school districts, consisting of both rural and inner city populations. Most of the participants lived in a metropolitan area comprised of five counties. A small number of participants lived in surrounding rural areas, some up to 80 miles from the school.

At the time that the study began, approximately 55% of the students came from minority families, but at the completion of the project, this number had increased to approximately 75%. Almost 70% of the students qualified for free lunches. At least 60% had disabilities in addition to deafness, including learning disabilities, mental retardation, vision loss and other physical impairments, or behavior/emotional disabilities.

Participants were chosen from the pool of graduates of the school from 1992 to 2003, inclusive. All of the graduates were either deaf or hard of hearing, with a hearing loss of at least 55dB in the better ear, which was a mandatory requirement for enrollment in the school. Most of the graduates met criteria for “low-functioning deafness” (LFD) (Bowe, 2004) according to school records. The total number of individuals who either graduated or aged out during the study period was 87. One graduate was deceased. An evaluation of student records showed that 64 graduates met the criteria for participation in the study, which included an IQ above 55 and no psychological, psychiatric, or physical disabilities so severe that they would not be able to comprehend and respond to questions about their lives.

Two groups were compared: those employed and those unemployed. The objective for the number of participants had been 12 in each group. However, due to availability of participants, 11 of each group were interviewed and data were collected for this number (N=22). Thirteen men and nine women, ages 22-33, participated in this study and were matched in order from most recently to least recently exited high school. When no matches were available in a particular year, all non-working students' names were placed into a hat and drawn at random until all working participants had a non-working match.

Due to the dispersed nature of the participants and the limited means available by which to contact them (few had TTYs), it took one year to locate, contact, and interview the participants. Of the 29 located (16 of whom were working and 13 of whom were not), 5 refused to be interviewed and two failed to keep their appointments after numerous attempts.

### *Setting*

A quality of life questionnaire was administered to the participant at whatever location he or she chose for the interview. The primary interviewer drove to whatever destination the participant indicated would be convenient. Most of the participants requested that the interviewer come to their homes as many did not drive or have any form of transportation. Several interviews were conducted in restaurants, malls, public libraries, and at the state school for the deaf.

### *Design*

The study examined the difference between the perceived quality of life between the groups of working and non-working young adults. Correlational research was used to determine if there was a relationship between employment and perceived quality of life. Although correlation research cannot demonstrate why a relationship exists, it allows a researcher to measure both the direction and the degree of a relationship between two variables by calculating a correlation coefficient (Schloss & Smith, 1999). The Pearson product-moment correlation was used to analyze the strength and direction between employment and perceived quality of life.

The Comprehensive Quality of Life Scale-Adult (Cummins, 1997) was used to determine each participant's perceived quality of life. The questionnaire is easy to administer, does not require that the participant be able to read at a given level, and does not specify a time limit on taking/administering the scale (Cummins, 1997). Individuals who are deaf frequently require more time processing information than do those who are hearing (Livingston, 1997). The ComQol is a self-report questionnaire, with both an objective and subjective scale, which consists of 35 items across seven life domains: material well-being, health, productivity, intimacy, safety, place in society, and emotional well-being, each of which is rated in terms of perceived satisfaction and how important it is to the individual. The scale takes approximately 20 to 30 minutes to administer, depending

upon the amount of explanation necessary for the participant to understand the task, the rating scale, and the questions.

The ComQol scale is divided into three sections. The first one asks for personal information, which is recorded on a five-point Likert scale. Section Two asks how important the seven life domains are to the participant, whose responses are measured on a five-point Likert scale (could not be more important, very important, somewhat important, slightly important, and not important at all). Section Three asks how satisfied the participant is with each of the seven life domains and is answered on a seven-point Likert scale (delighted, pleased, mostly satisfied, mixed, mostly dissatisfied, unhappy, and terrible). To obtain the quality of life scores, item scores were summed, data were recorded, assigning a positive or negative number to each response (from +4 for delighted to -4 for terrible). Each domain was separately rated in terms of objective, importance, and satisfaction, and then overall scores were calculated for each domain and finally an overall score was assigned, as specified in the ComQol manual (Cummins, 1997).

Cronback's alpha for the seven domains estimates that the scale's reliability is 0.39 for the objective subscale, 0.65 for the importance subscale, and 0.73 for the satisfaction subscale, all of which are within the acceptable range of internal consistency reliability (Cummins & McCabe, 1994).

### *Procedures*

The primary author administered the ComQol individually, with no caregivers or persons other than the participant and the assistant, when appropriate, in the room. The participant was not required to read any part of the questionnaire. To ensure reliability, a simple dialog was used to administer the questionnaire. This dialog was developed to account for the different forms of communication used by the participants. Participants used either American Sign Language (ASL) or a variety of Conceptually Accurate Signed English (CASE) on a continuum of sign-supported speech to speech-supported sign. An assistant, who was a competent signer, accompanied the interviewer to 33% of the interviews to administer the ComQol. The assistant was trained to observe how the questionnaire was administered, assuring adherence to the designated script. The observer completed a reliability checklist during the interview, marking a plus (+) or minus (-) to indicate whether the information was presented as specified in the script. Procedural reliability was calculated, with a 93% reliability indicated. If a

lower than 90% reliability had been indicated, the dialog would have been reexamined and the types of errors determined. If procedural reliability had been threatened, questionnaires would have been re-administered.

The questionnaire was administered in either American Sign Language (ASL) or CASE, depending upon the participant's communication preference and the interviewer's assessment of his communication mode. The interviewer read each question and recorded the answers for each participant, regardless of his reading level. The interviewer had an intermediate plus rating on the Signed Communication Proficiency Interview (SCPI) and had previously worked with most of the participants in the school setting. A nationally certified Interpreter for the Deaf examined and signed each question of the ComQol in each signing preference (ASL and Signed English) with the interviewer prior to beginning the interviews, assuring that the language to be used with all participants would be equivalent from oral to English signs to ASL. In addition to the reliability checklist, the research assistant observed to make sure that the interviewer was using the signs agreed upon with the nationally certified interpreter.

### *Results*

Two types of data were derived from the results. The first is a set of ratings. The second is a set of descriptors. The ratings are presented as data tables.

### *Ratings*

Data were entered into the SPSS version 10.0 program on a Dell Inspiron 8000 computer. To examine whether various components of QoL differentiated between working and non-working young deaf adults, two-tailed tests of the means were conducted on the results of the seven domains (material well-being, health, productivity, intimacy, safety, place in society, and emotional well-being) in three categories:

1. perceived status relative to each domain
2. perceived importance placed on each domain
3. personal satisfaction with each domain

Tables 1 and 2 indicate data and levels of significance found. In the area of perceived status relative to the domain, results indicated no significant differences between six of the domains and a significant difference between working and non-working LFD young adults on productivity ( $t = 4.266$ ;  $p$

< .001). Productivity includes such experiences as amount of time engaged in productive activities, amount of time engaged in discretionary (spare time) activities, and amount of time watching TV. In the areas of perceived importance of each domain and personal satisfaction with each domain, no significant results were found. It appears that the working and non-working LFD students in this sample reported that they perceived all domains equally across categories (perceived status, importance, and satisfaction with the domain), with the exception of perceived status of productivity.

To examine the relationships among the seven components of QoL across the three categories, correlations among elements were computed using a Pearson Product-Moment correlation. Correlations were calculated across all seven domains (material well-being, health, productivity, intimacy, safety, place in society, and emotional well-being) within all three categories (perceived status, importance of, and satisfaction with the domain). Significant correlations were found in the following areas:

**Perceived status correlations (Table 3)**

1. perceived status of health correlated with perceived status of safety ( $r = -.468$ )
2. perceived status of health correlated with perceived status of emotional well-being ( $r = -.503$ )
3. perceived status of intimacy correlated with perceived status of safety ( $r = .433$ )
4. perceived status of intimacy correlated with perceived status of emotional well-being ( $r = .490$ )

**Importance correlations (Table 4)**

5. importance placed on health correlated highly with importance placed on productivity ( $r = .726$ )

**Satisfaction correlations with satisfaction (Table 5)**

6. satisfaction with material well-being correlated highly with satisfaction with intimacy ( $r = .599$ )
7. satisfaction with material well-being correlated with satisfaction with place in the community ( $r = .465$ )
8. satisfaction with health correlated highly with satisfaction with intimacy ( $r = .565$ )
9. satisfaction with productivity correlated with satisfaction with emotional well-being ( $r = .499$ )
10. satisfaction with intimacy correlated with satisfaction with place in the community ( $r = .498$ )

11. satisfaction with safety correlated with satisfaction with emotional well-being ( $r = .470$ )
12. satisfaction with place in the community correlated highly with emotional well-being ( $r = .572$ )

**Perceived status correlations with importance (Table 6)**

13. perceived status of productivity correlated with importance of intimacy ( $r = .480$ )
14. perceived status of place in the community correlated highly with importance of health ( $r = .571$ )

**Perceived status correlations with satisfaction (Table 7)**

15. perceived status of productivity correlated with satisfaction with intimacy ( $r = .489$ )
16. perceived status of intimacy correlated with satisfaction with material well-being ( $r = .423$ ), with satisfaction with health ( $r = .454$ ), highly with satisfaction with intimacy ( $r = .578$ ), and highly with emotional well-being ( $r = .576$ )
17. perceived status of safety correlated highly with satisfaction with safety ( $r = .594$ ) and with status of emotional well-being ( $r = .589$ )
18. perceived place in the community correlated with satisfaction with material well-being ( $r = .462$ ) and with satisfaction with place in the community ( $r = .531$ )
19. perceived emotional well-being correlated with satisfaction with material well-being ( $r = .518$ ), with satisfaction with intimacy ( $r = .490$ ), with satisfaction with safety ( $r = .533$ ), and with satisfaction with emotional well-being ( $r = .427$ )

**Importance correlations with satisfaction (Table 8)**

20. Importance of material well being correlated with satisfaction with health ( $r = .434$ ) and with satisfaction with productivity ( $r = .427$ )

*Descriptors*

The ComQol begins with the Material Well-Being domain, with participants indicating their income, type of accommodation, and number of possessions compared to other people they know (Cummins & McCabe, 1994). One participant indicated that he was living in his own house and two lived in their own apartments. Two rented a room with someone other than their parents. All of the others lived with one or both parents or a sister (N=17). Most participants indicated that they felt they had at least as much as other people, with only three saying that they had less than most people or

less than almost anyone else. Of the eleven participants who were working, only five reported an income of \$11,000 or more. Seventeen participants were receiving SSI, with an income below \$10, 999. It appears that as perceived place in the community and emotional well-being increase, so does the participants' satisfaction with material well-being.

The Health domain seemed to indicate that the participants enjoyed good health. Fourteen of them had not seen a doctor in the past three months, and only one had seen a doctor more than once in that time period. Four participants reported medical problems that required medication, and two of these took psychotropic medication for mental health problems, which had themselves since the participants left high school.

The Productivity domain asked how much time the participant spent working, going to school, or taking care of a child. Four participants reported having at least one child, and spend some time caring for him/ them. Two participants were attending college full-time. Eight worked at least 31 hours per week. Fourteen reported having very little spare time when they had nothing to do, and only six admitted that they watched six or more hours of television each day. Results showed that when satisfaction with productivity increases, so did satisfaction with emotional well-being, which would indicate some relation between the two domains.

In the Intimacy domain, six participants said that they communicated with a friend only one time per month or less, but fourteen said they always had someone who cared if they were sad or depressed (usually a parent). Most of them (N=13) said that they always or usually had someone who would accompany them to activities.

The Safety domain asked whether the participant slept well at night, felt safe at home, and if they were anxious during the day. Sixteen participants indicated no problem sleeping and nineteen always felt safe at home. Ten participants indicated that they never worry during the day.

Place in Community domain included how often the participants engaged in leisure activities, if they had an unpaid role of responsibility in a group or club and how often someone outside of their family asked for advice. Fourteen reported that they often participate in leisure activities, mostly eating out, going to a place of worship, or visiting family. Only one

had an unpaid duty in a group or club (teaching sign language at church), and nine reported that they were never asked for advice by someone outside their home. The majority of the participants rated this domain the least important of the seven.

The Emotional Well-Being domain asked how often the participant can do things he really wants to do, how often he wants to stay in bed all day, and how often he has wishes that he knows cannot come true. Eighteen participants indicated that they could do things they want to do at least sometimes. Eleven of them almost never want to spend the day in bed, and half of the participants had wishes that they knew could not come true. All except one participant reported that his or her own happiness was very important or could not be more important.

## **Discussion**

### *Quality of Life*

Most startling of all is the indication from the study that indicates that there is no correlation between work and the perceived QoL of this particular group of participants. This seems to be an important, and probably accurate, finding. Unlike the general population, these young adults, as a whole, do not value work or recognize its significance in one's life. There are many possible reasons for this. Heal, Knoju, Rusch & Harnisch (1999) stated that research on the general population has shown that one's subjective well being tends to be stable throughout one's lifetime, with only brief highs and lows due to crisis. However, some research on individuals with disabilities (Heal, Khoju, & Rusch, 1997) has shown QoL manifested by the competence of the individual, and therefore can be elevated through school programming. With this in mind, I will explore some of the areas that need to be addressed in order to prepare and assure that these young people go to work and find fulfillment there.

### *High School Graduation*

Graduating from high school is largely related to the academic level and communication capabilities of a student who is D/HH. The lower the student's achievement in school, the more likely he is to receive all or mostly vocational training in areas that pay minimum wage and offer little opportunity for advancement. Consequently, he does not satisfy requirements for a regular high school diploma. In the state of Georgia,



approximately 110 D/HH students took the High School Graduation Test (HSGT) for the first time in the 2003-2004 school year. Of these students, 70% failed at least one part of the test (Nesbitt, 2005). This compared to 29% of the students without disabilities taking the test for the first time that same year (Governor's Office of Student Achievement, 2003-2004). The High School Graduation Test is a minimum competency test required for diploma eligibility. Passing scores on all areas of the test (generally English, Writing, Math, Science, and Social Studies) are required before the student can be considered for a high school diploma. Two participants in the study had earned high school diplomas. These two had graduated recently from the School for the Deaf, as no graduates from the school had received a high school diploma since before High School Graduation Tests became a state prerequisite for graduation. There are no available statistics that show how many D/HH students actually graduate each year with a high school diploma (Nesbitt, 2005), but the number is very low. Is it realistic to expect students who are D/HH to pass tests using a language they struggle with every day? Do these tests really measure the student's knowledge and should they be the reason for closing doors to even the most gifted D/HH students who could otherwise be trained to do a job that would mean a fuller life for him and a chance to contribute to society? These are questions that need to be addressed.

### *Perception of Deafness*

We need to be careful to teach D/HH students that deafness is a uniqueness more than a disability. Randolph (2004) indicated that the more disabled a person is, the less likely he is to be working. Considering this and El-Khiami's study (1993) that found that graduates of a residential or day school for the deaf are more likely to think of themselves as being deaf, as opposed to hard of hearing, one might argue for the benefits of public school participation for all but the most disabled D/HH students. Perhaps higher academic expectations and daily exposure to standards of those who hear would have been beneficial in instilling work ethics and accomplishing realistic goals for these young people. Academic remediation should be the focus for the students for as long as possible, delaying vocational training and assigning life skills training to only those with severe multiple disabilities.

### *Isolation and Disenfranchisement*

The participants in the study had attended school from 15 to 19 years. Many of them left school and went home to sit indefinitely, with little or

no meaningful contact with anyone outside the home. Many of them were very excited about the interviewer's visit, since it was rare for them to see someone who could communicate with them through sign language. Why were these young people not prepared to lead productive lives as contributing members of society, as is fitting for an able-bodied person who is strong, healthy, and normal, with one difference—they can not hear? How did they miss being empowered with the knowledge that deafness does not take away their privilege to participate in work? It is easy to imagine how unfulfilling and frustration the work environment must be for them. They are socially isolated there, with little or no way to communicate with others, as most of them even have problems writing simple messages.

The high number of participants who live at home (N=16) is another significant factor in understanding why these young adults do not recognize the value of work. Apart from their hearing loss, they are experiencing their family's life style and feel they are not responsible for providing for themselves. The majority of the participants (all but five) were receiving SSI payments. Many who were working were earning so little that they were still able to maintain SSI benefits.

When interviewing the participants, any unhappiness or discontent was expressed by the participant or parent in terms of the participant lacking contact with others with whom he could communicate and socialize. Very few of the unemployed participants mentioned that they wanted to work. Those who were unemployed reported that they had not had any contact with their vocational rehabilitation counselor since high school.

### *Limitations of the Study*

There were several limitations of this study. One was that it cannot be generalized across the D/HH population. The study included only 22 graduates from one day school for the D/HH. The results are only relevant to this particular group of LF, D/HH young adults.

There is some indication that the ComQol might not have been the best instrument to use with this D/HH population. All domains should have been highly correlated, as in the scale's test population. This was not the case. There was also the problem that questionnaire did not specifically measure one's happiness with work or ask the participant how important work is to

him. The results might have been more conclusive if this had been a distinct part of the questionnaire.

### *Future Research*

In light of the current findings and scant amount of research done on the low-functioning D/HH population, work, and QoL, future research should be done with various age groups of the D/HH population, to ascertain whether their self-esteem is related to their work, as is the case in the hearing population. More follow-up research should be done with graduates of the day and residential schools for the D/HH, documenting how many graduates went to work after graduation, the role the school program might have played in employment, as well as the role of vocational rehabilitation and SSI. With a larger population of participants from a variety of schools in various areas, QoL measurements should be conducted and results carefully analyzed to determine possible solutions for the current poor participation of the D/HH population at work.

It would be interesting to interview parents and try to determine what role their view of work and their child's disability had upon the outcome of the graduate. It seems vital that research be done on students and graduates of special schools for the D/HH to determine if there is something that could be changed in these programs to help the students/graduates view their disability in a more favorable light, as a difference rather than a handicap that interferes with work. Finally, it would be interesting to determine what role the participant's communication level plays in whether D/HH young adults are hired and maintain employment, as well as in his perceived QoL.

### **Summary**

This study investigated the Quality of Life of eleven pairs of young low-functioning deaf/hard of hearing adults, one group who was working and one who was not working. Interviews were conducted in the participants' preferred language at a site they had chosen as being most convenient for them. Results indicated that there were no differences between the two groups regarding their perceived quality of life. One group appeared to be as happy as the other. Correlations across the domains of material well-being, health, productivity, intimacy, safety, place in the community, and emotional well-being and the categories of perceived status, the importance of each domain, and the participants' satisfaction with that area of their

life were calculated, showing several significant correlations. Additional studies to determine if the finding that non-employed deaf individuals were relatively as satisfied with their lives as employed deaf individuals should be conducted to see if this is a consistent perception or if was an anomaly with this particular group of participants.

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**Table 1****Means and Standard Deviations of Working and Non-working by Domain**

Domain	Work Status	N	Mean	Standard Deviation	Std Error of Measurement
Physical Well-being	Yes	11	5.5455	1.4397	.4341
	No	11	6.4545	1.9164	.5778
Health	Yes	11	11.2727	1.6181	.4879
	No	11	10.8182	1.9909	.6003
Productivity	Yes	11	12.0909	1.5136	.4564
	No	11	7.7273	3.0361	.9154
Intimacy	Yes	11	11.8182	2.7863	.8401
	No	11	11.0000	3.1305	.9439
Safety	Yes	11	12.3636	2.9077	.8768
	No	11	12.6364	2.5009	.7541
Place in Community	Yes	11	5.9091	2.3002	.6935
	No	11	7.5455	2.0181	.6085
Emotional Well-being	Yes	11	10.9091	2.8445	.8576
	No	11	9.1818	3.7099	1.1186

**Table 2**

**T-test of the Means of Working and Non-Working Young Deaf Adults Across Seven Domains of Quality of Life from Three Perspectives (Perceived Status, Perceived Importance, Satisfaction)**

Domain	t	df	Sig.	Mean Difference	Std Error of Difference
<b>Perceived Status</b>					
Physical Well-being	-1.26	20	.223	-.909	.723
Health	.588	20	.563	.4545	.774
Productivity	4.266	20	.000*	4.3636	1.023
Intimacy	.647	20	.525	.8182	1.264
Safety	-.236	20	.816	-.273	1.156
Place in Community	-1.774	20	.091	-1.64	.923
Emotional Well-being	1.225	20	.235	1.727	1.41
<b>Perceived Importance</b>					
Physical Well-Being	.388	20	.702	.182	.469
Health	.000	20	1.000	.000	.419
Productivity	-.210	20	.836	-9.09	.4322
Intimacy	1.41	20	.174	.455	.323
Safety	.265	20	.793	-.09	.343
Place in Community	.000	20	1.000	.000	.549
Emotional Well-being	.861	20	.400	.182	.211
<b>Satisfaction with</b>					
Physical Well-being	-1.31	20	.897	-9.09	.692
Health	1.30	20	.208	.455	.349
Productivity	1.097	20	.286	.727	.663
Intimacy	1.145	20	.266	1.181	1.033
Safety	-.714	20	.484	-.364	.509

**T-test of the Means of Working and Non-Working Young Deaf Adults  
Across Seven Domains of Quality of Life from Three Perspectives  
(Perceived Status, Perceived Importance, Satisfaction)**

Domain	t	df	Sig.	Mean Difference	Std Error of Difference
Place in Community	.094	20	.926	9.09	.972
Emotional Well-being	.499	20	.623	.364	.729

\* p<.01

**Table 3**  
**Correlations of QoL Indicators within “Perceived Status” Domain of Working and Non-working Young Deaf Adults**

Variable	Perceived Material Well-being	Perceived Health	Perceived Productivity	Perceived Intimacy	Perceived Safety	Perceived Place in Community	Perceived Emotional Well-being
Perceived Material Well-being	1.000	-.109	.223	.209	-.021	.256	.191
Perceived Health	-.109	1.000	.058	-.314	-.468*	-.020	-.503*
Perceived Productivity	.223	.058	1.000	.271	-.278	-.289	.190
Perceived Intimacy	.209	-.314	.271	1.000	.433*	.312	.490*
Perceived Safety	-.021	-.468*	-.278	.433*	1.000	.253	.422
Perceived Place in Community	.256	-.020	-.289	.312	.253	1.000	.127
Perceived Emotional Well-being	.191	-.502*	.190	.490*	.422	.127	1.000

\* Significant at the .05 level

\*\* Significant at the .01 level

Table 4

## Correlations of QoL Indicators within "Importance" Domain of Working and Non-working Young Deaf Adults

Variable	Importance of Material Well-being	Importance of Health	Importance of Productivity	Importance of Intimacy	Importance of Safety	Importance of Place in Community	Importance of Emotional Well-being
Importance of Material Well-being	1.000	.235	.037	.218	.097	.253	-.016
Importance of Health	.235	1.000	.726**	.029	.328	.180	.046
Importance of Productivity	.037	.726**	1.000	-.088	.376	.073	.107
Importance of Intimacy	.218	.029	-.088	1.000	.324	.192	.136
Importance of Safety	.097	.328	.376	.324	1.000	.1114	-.045
Importance of Place in Community	.253	.180	.073	.192	.114	1.000	.301
Importance of Emotional Well-being	-.016	.046	.107	.136	-.045	.301	1.000

\* Significant at the .05 level \*\* Significant at the .01 level

**Table 5**  
**Correlations of QoL Indicators within “Satisfied With” Domain of Working and Non-working Young Deaf Adults**

Variable	Satisf. with Material Well-being	Satisf. with Health	Satisf. with Productivity	Satisf. with Intimacy	Satisf. with Safety	Satisf. with Place in Community	Satisf. with Emotional Well-being
Satisf. with Material Well-being	1.000	.323	.379	.599**	.032	.465*	.314
Satisf. with Health	.323	1.000	.422	.565**	.167	.197	.372
Satisf. with Productivity	.379	.422	1.000	.185	.303	.207	.499*
Satisf. with Intimacy	.599**	.565**	.185	1.000	.119	.498*	.272
Satisf. with Safety	.032	.167	.303	.119	1.000	.035	.470*
Satisf. with Place in Community	.465	.197	.207	.498*	.035	1.000	.572**
Satisf. with Emotional Well-being	.314	.372	.499*	.272	.470*	.572**	1.000

\* Significant at the .05 level      \*\* Significant at the .01 level

Table 6

## Correlations of QoL Indicators between "Perceived Status" and "Importance of" Domains of Working and Non-working Young Deaf Adults

Variable	Importance of Material Well-being	Importance of Health	Importance of Productivity	Importance of Intimacy	Importance of Safety	Importance of Place in Community	Importance of Emotional Well-being
Perceived Material Well-being	-.386	-.058	.168	.322	.071	-.066	.281
Perceived Health	.329	.218	.104	-.005	-.134	.120	.236
Perceived Productivity	-.062	-.179	.078	.480*	.129	-.074	.367
Perceived Intimacy	.098	.023	-.152	.374	.029	-.107	-.223
Perceived Safety	.033	-.019	-.318	.035	-.172	.100	-.255
Perceived Place in Community	.202	.571**	.420	-.005	.099	.137	-.050
Perceived Emotional Well-being	-.089	-.062	.099	.255	.218	.155	-.163

\* Significant at the .05 level

\*\* Significant at the .01 level



Table 7

Correlations of QoL Indicators between “Perceived Status” and “Satisfaction with” Domains of Working and Non-working Young Deaf Adults

Variable	Satisf. with Material Well-being	Satisf. with Health	Satisf. with Satisf. with	Satisf. with Intimacy	Satisf. with Safety	Satisf. with Place in Community	Satisf. with Emotional Well-being
Perceived Material Well-being	.315	-.133	-.390	.386	.117	.237	.033
Perceived Health	-.207	.196	-.310	-.186	-.402	-.338	-.280
Perceived Productivity	.173	.136	.098	.489*	-.117	.056	-.112
Perceived Intimacy	.423*	.454*	.181	.578**	.368	.505*	.576**
Perceived Safety	.028	.183	.253	-.077	.594**	.319	.589**
Perceived Place in Community	.462*	.357	.109	.303	.176	.531*	.423
Perceived Emotional Well-being	.518*	.139	.208	.490*	.533*	.363	.427*

\* Significant at the .05 level \*\* Significant at the .01 level

Table 8

## Correlations of QoL Indicators between "Importance of" and "Satisfaction with" Domains of Working and Non-working Young Deaf Adults

Variable	Satisf. with Material Well-being	Satisf. with Health	Satisf. with Productivity	Satisf. with Intimacy	Satisf. with Safety	Satisf. with Place in Community	Satisf. with Emotional Well-being
Importance of Material Well-being	.137	.434*	.427*	.005	.034	-.052	.259
Importance of Health	.054	.331	-.023	.057	-.011	-.065	.221
Importance of Productivity	.335	.139	.014	.214	-.100	-.065	.221
Importance of Intimacy	.079	.104	-.100	.350	.237	.009	.113
Importance of Safety	.089	.281	.240	.349	.299	-.130	-.013
Importance of Place in Community	-.107	.095	-.084	.041	.079	.054	-.070
Importance of Emotional Well-being	-.089	-.011	-.158	.054	-.037	-.225	-.283

\* Significant at the .05 level \*\* Significant at the .01 level