Adjusting With Hearing Loss: Implications for Counsellors

by

Debbie Clelland
B.A., University of Victoria, 1988

A Thesis Submitted in Partial Fulfillment of the
Requirements for the Degree of

MASTER OF ARTS

in the Department of Psychological Foundations

We accept this thesis as conforming
to the required standard

[redacted]

Dr. M.R. Uhlemann, Supervisor (Department of Psychological Foundations)

[redacted]

Dr. J.L. Hill, Departmental Member (Department of Psychological Foundations)

[redacted]

Dr. F.A.S. Ricks, Outside Member (School of Child and Youth Care)

[redacted]

Dr. J. Parsons, External Examiner (Counselling Services)

University of Victoria

Supervisor: Dr. Max R. Uhlemann

ABSTRACT

The experiences of persons who are adjusting with the life long process of hearing loss are examined in order to gather more information regarding this adjustment process. Thirty one participants completed the Communication Profile for the Hearing Impaired (CPHI) and a Demographic Questionnaire, asking them specific and general information about their degree of psychological adjustment to hearing loss.

There were no significant differences in psychological adjustment level between the two groups under investigation using the CPHI: those participants who did not yet wear a hearing aid, and those who had been wearing a hearing aid for some time. However, using a direct self-rating question, those persons who had been wearing a hearing aid for some time were significantly more adjusted with their hearing loss. The specific questions on the CPHI were examined in order to determine which particular questions stood out as pertinent for a counsellor to ask a hard of hearing client. Questions which demonstrated high concern for participants who rated themselves as moderately adjusted and highly adjusted are presented, and the role of the counsellor is discussed.

Examiners:

[redacted]

Dr. M.R. Uhlemann, Supervisor (Department of Psychological Foundations)

[redacted]

Dr. J.L. Hill, Departmental Member (Department of Psychological Foundations)

[redacted]

Dr. F.A.S. Ricks, Outside Member (School of Child and Youth Care)

[redacted]

Dr. J. Parsons, External Examiner (Counselling Services)

TABLE OF CONTENTS

LIST OF TABLES

DEDICATION

To Terry, who inspired me

Cindy, who taught me

my thesis group and family, who supported me

James, who survived it all
and Duncan, who added a whole new dimension to this process.

CHAPTER 1

Introduction

Hearing loss is described as being very isolating. Gradually, or suddenly, the birds no longer sing, the wind no longer whistles through the trees, and communication with friends and family members is more difficult. Learning to adjust with this ever-increasing disability is often a difficult and ongoing process (Berry, 1992). Possibly because hard of hearing people are so isolated, there is relatively little assistance for those attempting to make this psychological adjustment (Kyle, Jones, & Wood, 1985; VonAlmen & Blair, 1989).

As the population ages, there is an increasing number of persons in our society who are becoming hard of hearing (Rodda, Gordon, & Hughes, 1992). Hard of hearing persons communicate orally, as opposed to deaf people who do not retain enough hearing to communicate through speech with the assistance of their residual hearing and speech. There is a range of population estimates of those who have a hearing loss which presents a barrier to their daily living. These estimates vary from 4% of Canadians being hard of hearing to 10% having some degree of hearing loss (Schein, 1992). Six percent of the general population are disabled enough by their loss to require assistance (Rodda et al., 1992).

Surprisingly, even though this is a fairly large portion of the population, there has been little research into the experience of psychological adjustment for hard of hearing persons. Some research has examined the effect of hearing loss on deaf persons and their families (e.g., Foster, Barefoot, & DeCaw, 1989; Harvey, 1989; Schwartz, 1987; Sussman & Stewart, 1971), and even fewer studies have focused on hard of hearing persons (e.g., Hanline & Daley, 1992; Orlans, 1987; Stone, 1987).

When hard of hearing adults search for information regarding adjusting with hearing loss, the majority of the written information they find comes from two sources. The first source is published personal accounts detailing the hard of hearing person's own adjustment process (cf. Carmen, 1977; Himber, 1989). The second source is through primarily clinical information, which is usually written for audiologists and other hearing professionals. This information often examines how to best develop a hearing (aural) rehabilitation program (e.g., Henroch, 1979; Sanders, 1982).

If hard of hearing persons chose to seek assistance from a counsellor, there are few counsellors with specialized training regarding hearing loss to consult (VonAlmen & Blair, 1989). Health and Welfare Canada

(1988) reported that helping someone who has acquired a hearing loss to adjust with this disability is a long term process. At present, however, persons with hearing loss may have two or three appointments with an audiologist, during which their hearing loss is measured, a specific aid is chosen and an ear mould is constructed. Clients generally receive little assistance in how to cope with the way their loss affects all aspects of their lives.

Those counsellors who are interested in working with hard of hearing clients will unfortunately find little research and information which will assist them in understanding their hard of hearing clients and their experiences of psychological adjustment. Neither the personal explanations, nor the clinical information currently available will satisfy this quest for understanding. What seems to be absent in the professional literature is research examining the life experiences of larger numbers of persons encountering hearing loss.

At the present time, research indicates there is a deficiency in service specific to psychological adjustment counselling (VonAlmen & Blair, 1989). The primary professional who assists hard of hearing persons is an audiologist. However, it has been reported that,on the whole, audiologists do not adequately cover the same time hard of hearing persons do not believe they receive enough explanation regarding their hearing loss and its effects from audiologists (Kyle et al., 1985). It appears that there is a demand for services which are not available to the hard of hearing regarding psychological adjustment to this loss.

Existing theories and research regarding psychological adjustment of hard of hearing persons indicate that seeking clinical assistance for one's hearing loss may adversely affect adjustment (Kyle et al., 1985). Persons who are losing their hearing usually become aware of this fact gradually, and automatically make many adjustments in order to compensate for this loss. It is often many years before hearing loss affects people's lives enough to seek clinical assessment. Kyle and his colleagues (1985) found that once this assessment is done, learning about the lifelong implications of hearing loss negatively affects adjustment. The intent of the research in this study is to gain additional information regarding hard of hearing persons' experiences of psychological adjustment to their hearing loss.

CHAPTER 2

Literature Review

In this review, information is presented regarding the process of psychological adjustment for hard of hearing persons. This examination of the literature will focus on the following areas: a) general adjustment issues which affect hard of hearing persons; b) the hard of hearing as a unique group; c) adjustment with hearing loss; and d) need for personal adjustment counselling.

General Adjustment Issues Which Affect Hard of Hearing Persons

There are two general areas of information which may expand our understanding of the psychological adjustment process through which hard of hearing persons proceed: a) adjustment to aging; and b) adjustment to physical disability.

A large portion of the hard of hearing population is over 65 years old (Rodda et. al, 1992). It has been found that hard of hearing persons often fear that they are getting "senile" (Rezen & Hausman, 1985). There is a commonly held concern among hard of hearing persons that they will be perceived as "old" by others in our society, regardless of their age at the time that they lose their hearing (Himber, 1989).

Aging persons often feel a strong need to be self-reliant. When older people realize this ability is increasingly beyond their capacity, they frequently become depressed (Fry, 1990). In addition, the opinions of those in society may contribute to the feeling of inadequacy. Fry (1990) has stated that aging persons believe they have less control over their lives both because their physical and mental capacities may be diminished, as well as a result of the prevailing bias of our culture towards youth. Other adjustments which aging persons need to make include becoming more selective in their activities and recognizing different goals (Fry, 1992). It has been suggested that counsellors need to help aging persons hold on to what is most important in their lives, and adapt to changes in their physical abilities in a healthy manner (Fry, 1992).

While many individuals who experience a decrease in their ability to hear are elderly, and consequently have to cope with both the hearing loss and the other losses associated with the aging process, it must be recognized that all persons with disabling conditions (e.g., loss of vision, loss of mobility) go through certain stages as they move from the state of being "normal" to that of being "disabled" - both in their own minds and in the minds of others. DeLoach and Greer (1981) have theorized persons with disabilities are profoundly affected by the stigma society attaches to the disability. This avoidance of social stigma may explain why so many hard of hearing persons choose to keep their hearing loss a secret.

According to DeLoach and Greer (1981), the self-state is a many-faceted assessment of the self, including the self-concept. The self-state is comprised of the physical self-state (i.e., how one views one's physical self), the independence-support self-state (i.e., the degree to which a person with a disability is able to care for him or herself), the interpersonal self-state (i.e., the ability to relate to others on a meaningful level), the industrious self-state (i.e., the capability of doing constructive activity), and the creative-relaxation self-state (i.e., the ability to participate in recreational diversions). These self-states evolve over the development of the person.

How well one adjusts with differing phases of disability depends on the self-state threshold. The level of this threshold determines how easy it is to include new ideas of self into the existing self-state. For example, DeLoach and Greer (1981) propose that immediately after realizing the implications of a disability (an example of what they refer to as disability-related stress), the self-state threshold is lowered, and anything which affects the self-state at this time will have a long term effect. Whichever self-state is being worked on when the disabled person realizes the full impact of the disability is greatly affected.

In addition to the individual's self-state, one must consider the "stigma" that is elicited in the minds of others (DeLoach & Greer, 1981). The notion of stigma incorporates both the physical disability, and the social disgrace which accompanies it.

DeLoach and Greer (1981) outline a three stage model of adjustment to disability. The first stage is referred to as "stigma isolation." During this stage individuals overuse their ego defense mechanisms in order to cope initially with the disability. Persons with a disability perceive stressors which are associated with the disability to be out of their control. They keep their stigma in isolation (i.e., separate from the self-states) in order to cope. However, these actions do not in fact help reduce the disability-related stress, because in reality the individuals are not actively doing anything about the situation.

The second stage, "stigma recognition," occurs when persons with disabilities realize that many of the disappointments and obstructions they are feeling are due to the disability. At this point they acknowledge their disability and begin to develop task-oriented strategies required in order to help reduce the disability-related stress.

The third and final stage, "stigma incorporation," occurs when the stigma of their disability becomes integrated into the majority of the facets of the self-state. By this time persons with a disability have developed many task-oriented strategies in order to reduce disability-related stress at their disposal. It is in this stage that individuals begin to think of their disability only after deciding what they want to accomplish. For example, in this stage persons with disabilities might make a decision to go the park, and after making this decision plan how to do so in a way that accommodates their disability. DeLoach and Greer (1981) liken this third stage to Maslow's self-actualization.

Several authors have agreed with the position of DeLoach and Greer (1981) that the greater adjustment a person with a physical disability has to attend to is living with the myths about and opinions towards persons with disabilities held by the rest of society (cf., Buscaglia, 1983; Crespi, 1988). Persons with physical disabilities report feeling shameful and inferior to other persons (Hallberg, Johnsson, & Axelsson, 1993). Frequently when their disability effects employability, persons with disabilities see themselves as helpless and consequently needing to depend on the financial provisions of society (Buscaglia, 1983). Turnbull and Turnbull (1978), when referring to children with disabilities, stress that doing too much for the child can lead the child to become more dependent on others.

Summary. How hard of hearing persons are affected by their hearing loss depends in a large part on the degree of their disability, and often on their age (or fear of being perceived as old). This section has reviewed the theory about disabilities put forward by DeLoach and Greer (1981) in order to provide a background for examining the literature regarding adjustment to hearing loss in particular. Hard of hearing persons may go through a process of stigma isolation, recognition and, finally, incorporation. The stigma attached to being disabled in societal terms can have a profound effect on the hard of hearing person. In addition, the opinions of others in society, and in particular the bias toward youth, complicate the adjustment process. For these reasons, it is not surprising to learn that a large number of hard of hearing persons may choose to hide their hearing loss (Stone, 1987).

The Hard of Hearing as a Unique Group

Often, professionals and laypersons do not distinguish between individuals who are deaf and those who are hard of hearing. There is, however, a considerable difference, and as a result it is important that research on one group not be applied to the other.

There are several physical factors which affect hearing loss (e.g., types of hearing loss, age of onset, and degree of hearing loss). In order to assist the reader to differentiate between hard of hearing and deaf persons these factors will be described briefly. For further information the reader is referred to Himber (1989) and Schwartz (1987).

There are three different types of hearing losses. The first type, conductive hearing loss, is due to an abnormality or disease within the outer or middle ear (e.g., fluid in the ear, malfunctioning of the bones in the middle ear). This type of loss can often be corrected by means of surgery and/or pharmacological therapy (e.g., the administration of antibiotics in order to treat an infection). The second type of hearing loss is sensorineural. A sensorineural hearing loss affects the transmission of sound within the inner ear and/or through the aural nerve to the brain. This type of loss is not currently treatable by means of surgery or drugs. The third type of hearing loss is combination of both conductive and sensorineural hearing losses. In a mixed loss, the outer, middle and/or inner ear may be affected as well as the ability to transmit the auditory message from the ear to the brain.

In addition to the types of loss, the age at which the hearing loss occurs (i.e. age of onset) must be considered. If the loss occurs at or before birth, it is referred to as a congenital hearing loss. Congenital hearing loss can affect the development of speech and language acquisition, especially if it is not discovered and treated early enough. If one develops a hearing loss after birth, it is called an acquired (or adventitious) hearing loss. Some believe that acquired losses should be differentiated into those occurring before the age of two (i.e., a prelingual loss - one that occurs before the development of basic speech) and those occurring after the age of two (i.e., a postlingual loss - one that has evolved after the development of basic speech).

The final physical factor to consider in hearing loss is the degree of loss. In the same manner that one can measure length or weight in terms of various units of measurement (e.g., inches, kilograms), sound can also be measured. The unit of measurement is referred to as a decibel (Db). A sound of 1 Db is just audible to a person with normal hearing, whereas a jet taking off may be measured at 150 Db. When referring to hearing loss, one measures the ability to detect sounds in an environment. A person with a 10 Db loss is able to hear most sounds and only has difficulty hearing those sounds that are very quiet (i.e., between 1 and 10 Db in volume). A person with a 50 dB loss can only hear those sounds above 50 dB in volume and has difficulty hearing sounds between 1 and 50 dB. Normal conversation is measured around 40-50 dB. Generally, the more decibels of hearing one has lost, the more difficult it is to hear and communicate with others.

Degree of hearing loss is divided into four categories. The first category, with the least amount of hearing loss, is referred to as a mild hearing loss. People with a mild hearing loss have lost approximately 16-35 dB of hearing. In most cases they can frequently still hear a conversation which is occurring 10 feet away from them. The next category is moderate hearing loss. With moderate loss, a person has lost 36-63 dB of hearing, and would generally need to be three and one half feet from a conversation to be able to hear it. A severe loss ranges from 64-90 dB of hearing loss, and means a person is usually unable to understand regular speech without amplification (i.e. hearing aid). In the final category, profound hearing loss, a person has over 91 dB of hearing loss, and usually considered deaf by those in the medical profession. What hard of hearing persons can hear is also affected by the frequency, or pitch of their hearing loss. However, what differentiates a hard of hearing person from a deaf person is more complicated than just an arbitrary cut-off point.

The first element which distinguishes hard of hearing persons from deaf persons is the method of communication utilized by the two groups (Foster, Barefoot & DeCaw, 1989; Harvey, 1989; Stone, 1985; Sussman & Stewart, 1971). Hard of hearing persons communicate primarily through vocal speech and hearing, whereas deaf persons mostly utilize sign language or written language.

Secondly, it has been reported that hard of hearing persons feel more handicapped by their hearing loss than persons who are deaf (Carmen, 1977). A hearing impairment (or disability) is defined as the physical manifestations of the hearing loss. A handicap, however, is defined as the way in which the disability is seen to affect the person's life. Deaf persons may have the disability of a hearing loss, but they do not necessarily find the hearing loss to be a handicap (e.g., they are able to communicate by means of American Sign Language). However, Carmen (1977) has stated that persons who are hard of hearing do feel a great deal of restriction due to their reduced hearing.

Thirdly, the hard of hearing do not communicate on a regular basis with people with a similar hearing loss, as is common in the deaf community (Foster et al., 1989). Hard of hearing persons are stuck between two worlds. They wish to communicate with hearing persons (Stone, 1985), yet the extent of their hearing loss neither makes them "less deaf", nor "almost hearing" (Harvey, 1989).

Although there has been research conducted with deaf persons, Carmen (1977) has pointed out that this research may only be applied to hard of hearing persons with great caution. As indicated above, the two groups of hearing impaired individuals have considerable differences among them. Therefore, there is a need for research specific to the hard of hearing population. It has been surmised that the reason there is a lack of research specific to this group may be due to difficulty in locating hard of hearing persons (Orlans, 1985). Hard of hearing people are hard to locate for two reasons. They have an "invisible disability," which they most often do not like to tell others about, and they are a very heterogeneous group.

<u>Summary</u>. There are several factors which distinguish hard of hearing persons from deaf persons. Physically, hard of hearing persons usually have a lesser degree of hearing loss, and would not include persons who had a 91 or greater decibel hearing loss evidenced either at birth or later in life. However, the issue is more

complicated than physical factors alone. Hard of hearing persons are also distinguished by the fact that they communicate with others by speaking and listening, they feel more handicapped by their loss, and they do not generally communicate with other persons who are hard of hearing. Research with hard of hearing persons has been sparse, however, due to the large number of hard of hearing persons in our population (Rodda et al., 1992), it is important to study this group.

Adjustment with Hearing Loss

Psychological adjustment to hearing loss has been found to be affected by several physical factors. Meadow-Orlans (1985) reviewed the literature on hard of hearing persons and reported the following. The age at which people begin to lose their hearing (i.e., age of onset) makes a great difference in the ability to adapt to the loss. As pointed out earlier, hearing loss and withdrawal from society are common aspects of aging (Fry, 1990; 1992; Rodda et al., 1992). However, if one begins to lose one's hearing at an earlier, less common point in life, it is more difficult to adapt. The impact of the degree of hearing loss (i.e., mild, moderate, severe, and profound) has been more difficult to determine. There have not been any consistent findings regarding level of loss with degree of adjustment. In addition, the speed with which hard of hearing persons lose their hearing can also affect adjustment. Personal accounts have shown some people who imagined it would be comparatively difficult to lose their hearing quickly; others imagined it would be better to learn to accommodate their loss slowly (Meadow-Orlans, 1985).

While these factors contribute to understanding the potential adjustment issues a hard of hearing person may face from a physical point of view, the amount of physical impairment does not necessarily explain how these components will affect the overall psychological adjustment with hearing loss (Frankel & Turner, 1983). Little information is available regarding adjusting psychologically with hearing loss (Kyle et al., 1985). In particular, information is lacking regarding adjustment from a non-clinical standpoint. Most information regarding hard of hearing adjustment addresses how to help people better use their hearing aids (e.g., Harvey, 1989; Kyle & Wood, 1984), as opposed to the psychological effect of the increasing difficulty in communicating within all hard of hearing persons' relationships.

There are contrasting theories as to what factors have an effect on psychological adjustment with hearing loss. Sanders (1982) stated that a person with a hearing loss needs to adjust to the reality of hearing impairment in order to effectively cope with the effects of hearing loss. This would be consistent with DeLoach and Greer (1981), who suggested that if people do not acknowledge their hearing loss, they will be stuck in the stigma isolation stage and thereby not be able to reduce their disability-related stress.

In contrast, Kyle and his colleagues (1985) theorized hard of hearing persons are looking for an increased ability to control their intake of information without violating social norms. This would include not telling everyone they meet about the reality of their hearing impairment as a way to adjust to hearing loss. This view could be consistent with DeLoach and Greer's (1981) second stage, stigma recognition. In this stage, hard of hearing persons acknowledge their disability and realize the societal stigma associated with hearing loss. DeLoach and Greer, however, would most likely agree that deciding to keep their hearing loss hidden in order to decrease disability-related stress would be one of many helpful strategies hard of hearing persons could use.

Knutson and Lansing (1990) explored accommodating _deafness_ from a more psychological viewpoint. These researchers asked persons seeking a cochlear implant to fill out several questionnaires. The participants had lost so much hearing that a hearing aid did not work for them any longer and consequently had to resort to surgical intervention. They found that profound acquired hearing loss may be related to depression, social anxiety, introversion, lack of assertion and loneliness.

Kyle and Wood (1984) focused primarily on the process their participants underwent while adjusting to their hearing aids. As part of the research project, they asked their participants how they felt at present, compared to when their hearing aid was first fitted. In general, these participants stated they felt less embarrassed about using their hearing aid after a period of time.

Finally, Frankel and Turner (1983) examined the relationship between psychological adjustment and the amount of social support a hard of hearing person had received. They found that psychological distress was negatively correlated with measures of social support and positively correlated with amount of handicap the hard of hearing person experienced. However, they did not find these factors to be correlated with the actual physical impairment of the participants' hearing. They also found that those persons with lesser hearing losses reported social factors to be of the most importance in assisting with their high degree of psychological adjustment.

Summary. Considering the considerable number of hard of hearing persons in our population, there is a surprisingly small amount of research examining the difficulties they experience with their disability. In particular, the area of psychological adjustment has been sparingly examined. The researchers who have looked at psychological adjustment with hard of hearing persons have found their participants to be less embarrassed about using their hearing aid over time, and that the amount of psychological distress which accompanies hearing loss is related to the amount of social support received and degree to which people feel handicapped by the loss.

Need for Personal Adjustment Counselling

In the clinical literature regarding hard of hearing persons, audiologists distinguish between two types of counselling: informational counselling and personal adjustment counselling. Informational counselling provides information to the client regarding the type of hearing loss and hearing aid performance (Flahive & White, 1981). On the other hand, personal adjustment counselling deals primarily with the psychological aspects of learning to cope with hearing loss.

VonAlmen and Blair (1989) conducted a survey of 231 audiologists in the United States to assess their views on who "does" and who "should" provide different aspects of informational counselling. Only questions related to informational counselling were asked due to the researchers' belief that audiologists were not comfortable providing personal adjustment counselling. Within informational counselling, the researchers ranked how often certain topics were covered by the audiologists in their discussions with hard of hearing persons. The two areas of information receiving the least amount of attention in discussions were vocational and psychosocial aspects of hearing loss. The audiologists believed counsellors and psychologists should provide information on the psychosocial aspects of hearing loss. However, the authors expressed a belief that counsellors and psychologists who do not have specific training regarding the effects of hearing loss may not have the specialized knowledge and experience to be helpful to hard of hearing persons.

In terms of personal adjustment counselling, several researchers have indicated that those persons with a hearing loss have not been able to obtain the services that they may need. The need for professionals to assist hard of hearing persons with the emotional (Rezen & Hausman, 1985; Stone, 1987) and psychosocial (Health & Welfare Canada, 1988; Sanders, 1982) aspects of hearing loss is common in the literature.

In surveying hard of hearing persons, Kyle and his colleagues (1985) found 42% of the subjects had received no explanation regarding the nature of their hearing loss from their audiologist. Of the 105 participants in the study, only 6% had personal adjustment counselling from their audiologist regarding the effects of hearing loss on work, home life, social life and communication.

Summary. Personal adjustment counselling has been identified by several researchers as a need of hard of hearing persons. However, hard of hearing persons and audiologists agree that the professionals the hard of hearing most often come into contact with, the audiologists, do not offer the personal adjustment counselling the hard of hearing persons need. There is also a concern that counsellors or psychologists trying to provide personal adjustment counselling with hard of hearing persons may not know enough about hearing loss to be helpful.

Summary

Hard of hearing persons encounter a unique set of circumstances when learning to adjust with their disability. Because their disability is invisible, they are more able to hide this disability from those around them. Due to the stigma society attaches to disabilities, and the bias our culture has towards healthy youths, it is not surprising that hard of hearing persons indeed often choose to hide their disability.

The literature which is available examining adjusting with hearing loss indicates the following. The amount of psychological distress experienced when adjusting with hearing loss is associated with the amount of social support hard of hearing persons have access to. The other determining factor appears to be the degree hard of hearing persons feel handicapped by their loss.

Rationale for the Study

It has been pointed out that a large portion of the hard of hearing population does not receive personal adjustment counselling for their hearing loss. The professionals who regularly work with these people, audiologists, generally do not provide this type of counselling. While counsellors could respond to the need for personal adjustment counselling for hard of hearing persons, there is little information which could help interested counsellors to become educated about the process of psychological adjustment with hearing loss. This study attempts to provide information regarding the psychological adjustment difficulties of hard of hearing persons.

Previous research has indicated there is a tendency for persons who have had a hearing loss for some time to be more adjusted to their disability than those who had recently learned from an audiologist of the lifelong implications of their loss (Kyle, Jones & Wood, 1985).

Based on this, the present study compares those persons who have recently had a hearing test and learned of those implications but do not yet wear a hearing aid, to those who have had a hearing aid for several years.

Some researchers have cautioned, however, that there is a possibility older participants are naturally withdrawing from society due to their age and level of functioning (Fry, 1992; Kyle & Wood, 1984). For this reason, those participants who were over and under 65 years of age were compared to determine if age was a confounding variable. It is intended that the results of this study will provide useful information for counsellors working with hard of hearing clients.

Hypothesis

The degree of psychological adjustment to hearing loss will be no different among persons using a hearing aid (hearing aid group) and those who do not yet use a hearing aid (no hearing aid group). Degree of psychological adjustment will be assessed in two ways - through the Personal Adjustment scales from the Communication Profile for the Hearing Impaired (Demorest & Erdman, 1987), and a self-rating of personal adjustment.

CHAPTER 3

Method

Introduction

In this investigation, the degree of adjustment of hard of hearing persons was examined by the means of two instruments. The first was the Communication Profile for the Hearing Impaired (CPHI) (Demorest & Erdman, 1987), on which the participants reported specifics about the experiences they were having regarding their hearing loss. The second was through a self-rating question that was included on the Demographic Questionnaire (Appendix D), which asked the participants to globally rate their adjustment level. Fourty three individuals agreed to participate, and were contacted either by Island Acoustics Hearing Services, or by word-of-mouth.

Participants

The majority of potential participants were contacted by staff at Island Acoustics. The invitation to participate to those 19 years of age and older was included in standard follow-up phone calls Island Acoustics staff routinely makes to their clients. The potential participants for the hearing aid group were those clients who had purchased a hearing aid from Island Acoustics. The potential participants for the no hearing aid group were those clients who had recently been in for a hearing test at Island Acoustics and showed a loss great enough to need a hearing aid, but who had not purchased a hearing aid. These persons would have recently learned of the implications of their hearing loss from an audiologist. In addition, potential participants included those who contacted the researcher after hearing about the study by means of word-of-mouth.

Procedure

Once a number of participants from each group agreed to participate in the study, the author contacted the participants by telephone. The participants were asked whether they would prefer to meet with the researcher while completing the questionnaire, or if they would prefer to receive the information through the mail. Two participants agreed to meet the author at Island Acoustics (one of whom arrived at the meeting). Three participants requested the author to meet with them at their homes. The remainder of the participants received the information through the mail. Contained in this information package were the following items: Letter of Introduction (Appendix A); Consent Form (Appendix B); an explanation of how to complete the Communication Profile for the Hearing Impaired (Appendix C); a Demographic Questionnaire (Appendix D); and a self-addressed, stamped envelope for the return of the information package. At approximately two week intervals after the original mailing, those participants who had not yet returned their package were contacted by telephone to ask if the author could be of assistance in completing the questionnaires.

Instruments

Communication Profile for the Hearing Impaired (CPHI). The CPHI was selected as the instrument to use in this study, due to its focus on the adjustment process for hard of hearing persons. Although the instrument is relatively new (Demorest & Erdman, 1986; 1987; 1989a; 1989b), it has received ample attention.

While the CPHI is considered to be the best instrument currently available in examining hard of hearing persons' communication in several social environments (Cox & Gilmore, 1990; Foster et al., 1989), its validity has been criticized by some. The CPHI was developed based on the responses of male military personnel with noise-induced (or sensory-neural) hearing loss. Consequently, its applicability to others (i.e., non-military males, females, those with other types of hearing loss) has been criticized by some (e.g., Schow & Gatehouse, 1990). However, as the instrument grows in popularity, it is being cross validated with other populations. Of particular interest to the present study, the CPHI was recently shown to be reliable when administered to 381 Canadians in the Toronto area representing a more comprehensive sample regarding ages and types of hearing loss than the military population (Hyde, Malizia, Riko, & Storms, 1992).

The CPHI contains 145 questions which provide information on 22 scales within 4 subject areas. The questions ask the participant to circle a number from one to five based on how frequently the situation referred to occurs, or how strongly they agreed with the statement. The participants in the present study completed the entire CPHI. In addition, demographic questions solicit information regarding the respondent (e.g., sex, marital status, employment status, previous use of a hearing aid).

The subject area of interest in the present research is the Personal Adjustment area. The questions for the Personal Adjustment area are spread throughout the CPHI. This area of the CPHI comprises nine scales containing a total of 54 questions on the following topics (for full listing of questions, see Appendix E). 1) The Self-Acceptance scale contains questions (n = 8)regarding feelings when hearing loss produces a potentially embarrassing situation. 2) The Acceptance of Loss scale (n = 8) asks whether or not the participants tell others about their loss. 3) The Anger scale (n = 6) asks if the participant gets angry about their loss. 4) The Displacement of Responsibility scale asks questions (n = 5) about whether participants blame others for the problems associated with hearing loss. 5) The Exaggeration of Responsibility scale (n = 6) asks if participants overly blame themselves for problems associated with hearing loss. 6) The Discouragement scale asks questions (n = 6) about whether participants feel "down" due to their hearing loss. 7) The Stress scale (n = 9) asks how stressed participants feel. 8) The Withdrawal scale (n = 7) asks to what degree participants remove themselves from situations where they would have to communicate.

The ninth scale of the Personal Adjustment area is the Denial scale. This scale does not measure psychological adjustment, rather it is designed to detect those persons who do not admit that they have a hearing loss. The questions within this scale include statements that all hard of hearing persons are expected to agree with. If the participant scores low on the Denial scale, the administrator of the instrument should be concerned that the information on the other scales in the Personal

Adjustment area could be skewed.

Low scores on the CPHI indicate areas of concern for the participant. When a participant's scores are lower than the mean of the population scores, these would be the areas to focus on regarding potential problems with adjustment.

Demographic Questionnaire. The Demographic Questionnaire (see Appendix D) primarily contains questions that ask participants about their personal background. For example, the participants were asked how old they were when they realized they had a hearing loss in order to determine age of onset. They were also asked the date of their first hearing test to insure that the persons allocated to the no hearing aid group had indeed recently discovered the ramifications of their hearing loss. In addition, the participants were asked what percentage of their waking hours they wear their hearing aid to insure that those allocated to the hearing aid group actually wore their aid.

Contained within the Demographic Questionnaire was a specific question asking the participants to self-rate their level of adjustment to hearing loss. This method of directly asking the participants the hypothesis under investigation was used by Murphy and Newlon (1987) in their research with loneliness and hearing impaired college students. The self-rating question followed a similar pattern to the questions on the CPHI. The participants rated themselves on a scale from one to five. On this scale, one represented "not at all adjusted," and five represented "completely adjusted" to their hearing loss.

Analysis of Data

The respondents marked their answers by circling numbers on the CPHI answer sheet. The researcher then entered these scores into a database (i.e., using dBase IV). The data from the CPHI was analyzed using the CPHI Database System (Demorest, 1987). This program scored the instrument (i.e., the answers on the Personal Adjustment scales were reverse-scored), then calculated a mean score for each of the nine scales within the Personal Adjustment area of the CPHI for each participant.

The participants from the two groups were then compared on each of the nine scales using a Student's t-test. The data for the two groups from the self-rating question was also compared using a Student's t-test.

Further Analysis

Three additional analyses were conducted with the data. First, research regarding aging persons and older hard of hearing persons has found age to be a confounding variable when compared to hearing loss (Fry, 1992; Kyle & Wood, 1984). An analysis was completed in order to examine whether age of the participants itself could be a confounding variable with how recently the participants learned of their hearing loss. Those participants over 65 years old were compared to those under 65.

Second, a correlational comparison was completed to determine if any relationships existed between the demographic variables and the measures of adjustment.

Third, the individual questions within the Personal Adjustment area were examined to determine if there were any particularly sensitive areas for the participants. The intent of this analysis was to see if the CPHI offers any pertinent questions for counsellors to ask persons who are hard of hearing. In order to determine if self-rated adjustment level may indicate certain sensitive areas, the participants were divided into two groups for this analysis. The "moderately adjusted" group answered 3 on the self-rating question. The "highly adjusted" group answered 4 or 5 on the self-rating question. If more than 60 percent of participants answered 4 or 5 to a particular CPHI question, that question was indicated as a potential area of concern for hard of hearing clients.

CHAPTER 4

Results

The purpose of this study was to compare the degree of psychological adjustment between people who wear hearing aids (hearing aid group), and those who have a hearing loss but do not yet wear hearing aids (no hearing aid group).

Response Rate

Fourty three individuals agreed to participate in the present study. The majority of participants (n=39) were informed about the study by the staff of Island Acoustics, of Victoria, British Columbia, a company that provides hearing aids to those living on Vancouver Island. The four remaining participants learned about the study through word-of-mouth. Of the participants who initially volunteered to participate through Island Acoustics, four withdrew from the study, and eight declined to return their questionnaires. All four of the participants who learned about the study through word-of-mouth completed and returned the questionnaire. A total of 31 responses were received from 23 men and 8 women.

Characteristics of Participants

The Demographic information for the hearing aid and no hearing aid groups is summarized in Table 1. There were several persons who did not complete all of the questions on the demographic sections of the questionnaires. For this reason, the numbers of persons who completed each question is also included in the Table.

There were no significant differences between the hearing aid and no hearing aid groups on the variables of present age, and age of onset of hearing loss. The hearing aid group had worn their hearing aids for several years ($\underline{M}$ = 11.57 years), and had worn their aids for a large portion of their day ($\underline{M}$ = 80.50%).

In addition to the information in Table 1, the participants revealed on the Demographic portion of the CPHI that 25.0% of the hearing aid group was employed, compared to 33.3% of the no hearing aid group. The participants also revealed that 81% of the hearing aid group were married, compared to 67% of the no hearing aid group.

Table 1

Demographic Information for Hearing Aid User and No Hearing Aid Groups

		Group		
Variable		Hearing Aid (n = 16)	No Aid (n = 15)	*t* value
Gender	male	12	11	
	female	4	4	
Age (years)	*M*	69.06	63.86	1.13 ns
	SD	13.84	11.37	
	Range	35-90	43-78	
	n	16	14	
Age When Realized Hearing Loss (Age of Onset)	*M*	47.07	50.64	-0.47 ns
	SD	21.43	16.81	
	Range	3-89	15-71	
	n	13	14	
Length of Time Using Hearing Aid (years)	*M*	11.57	NA	
	SD	11.10		
	Range	1-45		
	n	15		
Percentage of Waking Hours Aid is Worn	*M*	80.50%	NA	
	SD	25.92%		
	Range	30-100%		
	n	14		

ns - non-significant
NA - not applicable

Communication Profile for the Hearing Impaired

Table 2 contains the comparisons between the hearing aid group and the no hearing aid group on each of the nine subscales in the Personal Adjustment area of the CPHI. There were no significant differences between the groups on the nine scales. However, the pattern of scores between the groups on all scales except for the Withdrawal scale was in the direction consistent with the literature (i.e., the hearing aid group was more adjusted than the no Aid group).

The Denial scale was included in the CPHI in order to detect any persons who were not being realistic about their hearing loss. Because the authors of the CPHI warn that low scores on the Denial scale may indicate skewed scores on the other scales completed by that participant, the t-scores were recalculated without the persons who scored less than one standard deviation below the mean (according to the population data provided by the authors of the CPHI) on the Denial scale (Demorest, 1987). This resulted in the loss of two participants from each of the groups (hearing aid group, *n*=14; no hearing aid group, *n*=13). When comparisons on the eight scales between groups were made, no significant differences were found.

Table 2

Comparisons Between Hearing Aid and No Aid Groups On CPHI Personal Adjustment Scales

	Group		
Scale	Hearing Aid	No Aid	*t* value
Self-Acceptance Scale			
M	3.59	3.38	0.64 ns
SD	0.78	0.98	
Acceptance of Loss Scale			
M	3.75	3.34	1.21 ns
SD	0.87	1.03	
Anger Scale			
M	3.22	3.12	0.36 ns
SD	0.61	0.91	
Displacement of Responsibility Scale			
M	2.89	2.72	0.66 ns
SD	0.73	0.68	
Exaggeration of Responsibility Scale			
M	2.87	2.70	0.63 ns
SD	0.83	0.70	
Discouragement Scale			
M	3.34	3.10	0.81 ns
SD	0.67	1.02	
Stress Scale			
M	3.26	3.17	0.33 ns
SD	0.70	0.83	
Withdrawal Scale			
M	2.98	3.11	-0.45 ns
SD	0.54	0.94	
Denial Scale			
M	3.29	3.49	-0.76 ns
SD	0.59	0.86	

ns - non significant
Note. Scale from 1 to 5

Self-Rating Question

Table 3 presents the means, standard deviations and t scores for the hearing aid and no hearing aid groups for the self-report rating of degree of adjustment with hearing loss. A significant difference was found between the two groups on this rating, with the hearing aid group reporting a higher level of adjustment (M = 4.00) than those without a hearing aid (M = 3.38), $t(24) = 2.30$, $p < .05$.

Table 3

Self-Report of Adjustment Level for Hearing Aid User and No Hearing Aid Groups

		Group		
		Hearing Aid	No Aid	*t*
Self-report of Adjustment Level (1-5)	*M*	4.00	3.38	2.30 *
	SD	0.46	0.51	
	Range	3-5	2.5-5	
	n	14	12	

* $p < .05$

Note. 1 = not at all adjusted
5 = completely adjusted

Groups Divided by Age

When the participants were divided into those under 65 (n=12) and those over 65 (n=19), there was a significant difference on one of the eight scales that measure Personal Adjustment. On the Exaggeration of Responsibility scale the participants in the under 65 group had a significantly higher score (M = 3.69) than the over 65 group (M = 2.80), $t(29) = 2.88$, $p < .05$.

Correlational Comparison

The information on demographic variables obtained through the CPHI and the Demographic Questionnaire was compared to the adjustment scores on the CPHI scales and the self-rating question (Table 4). These comparisons demonstrate some fairly strong relationships.

The self-rating question had a significant correlation with the Self Acceptance scale ($r = .58$, $p < .05$), the Acceptance of Loss scale ($r = .54$, $p < .05$), and the Exaggeration of Responsibility scale ($r = .53$, $p < .05$).

Table 4

Correlational Comparisons Between Demographic Variables and Adjustment Scores

Scale	Variable Age of Onset	 Age	 Marital Status	 Employ. Status	 Self-Rate
SelfAcc.	.210	-.005	-.153	.086	.584*
Accept.	.012	-.052	.087	.109	.542*
Anger	.001	-.060	-.013	.080	.449
Displace.	.080	-.264	.123	.167	-.008
Exagger.	.163	.408	-.015	-.265	.529*
Discour.	.209	-.032	-.023	.131	.348
Stress	.301	.037	.042	.011	.472
Withdr.	.492	.058	-.008	-.016	.229
Denial	-.135	-.163	-.032	.118	-.502
Marital	-.137	.256			
Employ.	-.254	-.890	-.289		
SelfRate	.077	.135	-.250	.046	

Note. SelfAcc. = Self Acceptance; Accept. = Acceptance of Loss; Displace. = Displacement of Responsibility; Exagger. = Exaggeration of Responsibility; Discour. = Discouragement; Withdr. = Withdrawal.

* $p < .05$

Pertinent Questions

Individual questions within the Personal Adjustment area of the CPHI were examined in order to determine if any specific items stood out as areas of particular concern for the participants. There were four questions to which over 60% of the total sample marked a 4 or 5 (i.e., indicating a high degree of concern). These questions, listed in Table 4, demonstrate the participants' concerns about others mumbling, not wanting to bother others with their hearing loss, feeling discouraged, and feeling left out because they cannot understand.

In addition, those who rated themselves as moderately adjusted (i.e., 3 on the scale of 5) indicated some additional areas of concern (see Table 4). There were seven question to which over 60% of the moderately adjusted group marked a 4 or 5. These participants felt angry, sensitive, and self-conscious about their hearing loss; guilty about asking others to repeat, and impatient when they refuse; and they indicated they did not like asking for help regarding their hearing problems.

Table 5

CPHI Responses Which Indicate Concern

Total Sample

Scale	Question
Displacement of Responsibility	When people mumble, they shouldn't expect me to understand them.
Exaggeration of Responsibility	My hearing loss is my problem and I hate to bother others with it.
Discouragement	Not being able to understand is very discouraging.
Withdrawal	Sometimes I miss so much of what's being said that I feel left out.

Moderately Adjusted Group

Scale	Question
Self-Acceptance	I feel self-conscious because of my hearing loss.
Acceptance of Loss	I'm sensitive about my hearing loss.
Anger	My hearing makes me mad.
	I get impatient with people who aren't willing to repeat for me.
Exaggeration of Responsibility	I feel guilty about asking people to repeat for me.
	I hate to ask others for special consideration just because I have a hearing problem.
	I don't like to ask other people to help me with my hearing problems.

CHAPTER 5

Discussion

This study tested the hypothesis that there is no difference between the hearing aid and no hearing aid groups in terms of personal adjustment to partial loss of hearing. This hypothesis was found to be accurate according to the eight Personal Adjustment scales on the CPHI. On the self-report rating of adjustment to hearing loss, however, the hearing aid group reported a significantly higher level of adjustment than those in the no hearing aid group. In this chapter a discussion of the findings is presented in relation to the existing relevant literature.

Hypothesis

The hypothesis stated there would be no difference between the hearing aid group and the no hearing aid group on psychological adjustment to hearing loss. This hypothesis was tested by the use of two methods. The first method was to use the Communication Profile for the Hearing Impaired, and compare the results for each of the two groups on the eight subscales within the Personal Adjustment area. As indicated previously, there were no significant differences between the two groups on any of these subscales. The second way in which the hypothesis was tested was by following the example of Murphy and Newlon (1987), and asking the participants to rate themselves directly on their adjustment level. The results indicate that those participants with hearing aids viewed themselves as being significantly more adjusted than those without hearing aids.

The results in this study using the self-rating question are consistent with the findings in the literature. Those hard of hearing persons who have had a hearing aid for some time tend to be comparatively well adjusted to their hearing loss (Kyle & Wood, 1984), and those who are just discovering the lifelong implications of their disability have been found to be poorly adjusted (DeLoach & Greer, 1981; Kyle et al., 1987).

Perhaps the Communication Profile for the Hearing Impaired did not demonstrate similar results because it is not an effective instrument to distinguish between the hearing aid and no hearing aid groups. According to Dr. Martin Hyde of the Otologic Function Unit of Mt. Sinai Hospital in Toronto (personal communication, December 21, 1993), his staff is doing research with the CPHI using almost identical groups as were used in this study. Because Mt. Sinai has previously completed a very large study validating the CPHI, it would appear that they believe the CPHI is a valuable instrument to use in attempting to discern if there are any differences in adjustment level under these circumstances.

Perhaps the CPHI and the self-rating question of personal adjustment examined different components of adjusting with hearing loss. It would seem that the specific questions on the CPHI regarding thoughts, feelings and behaviours may measure something different than the global self-rating question. The CPHI asks for judgments on isolated pieces of the person's life. However, the self-rating question asks the participants to sum all of their experiences regarding their adjustment to hearing loss and indicate one overall impression of their adjustment. It is probable that these two forms of assessing adjustment are asking for different information from the participants.

A second possible explanation for the non-significant results between groups on the CPHI is the small sample size. Perhaps the complexities of the CPHI questions needed a larger number of participants in order to highlight differences between the groups. This argument is supported by examining the CPHI scores. Here we see that the pattern of the results on the CPHI was similar to the results from the self-rating question on all scales except the Withdrawal scale. Consistent with the self-rating results, the CPHI scores tended to show the hearing aid group was more adjusted to their hearing loss than the no hearing aid group. A larger sample size may have been able to demonstrate a significant difference between the hearing aid and no hearing aid groups if such a difference truly was present. Ideally, both groups would have been composed of 30 participants.

There are other possibilities as to why the CPHI did not indicate significant differences between the two groups. Perhaps the adjustment process with hearing loss is so continuous (Glass, 1985; Orlans, 1987; Sussman & Stewart, 1971) that expecting a difference between people at two different places on the continuum of hearing loss is too simplistic. Some authors have found the research into adjustment insufficient to make any predictions about levels of adjustment (e.g. Buscaglia, 1983).

DeLoach and Greer's (1981) theory offers another possible explanation for the CPHI scales not showing a difference. DeLoach and Greer state persons with disabilities eventually adjust to their losses, and move toward the third and final stage in their model of adjustment to hearing loss, "stigma incorporation." In this stage, the person's disability is no longer the primary focus. However, contrary to other persons with disabilities, hard of hearing persons have been quite successful at hiding their hearing loss from others (Stone, 1987). In order to continually hide their hearing loss, it is possible that hard of hearing persons need to continually focus on their loss in an effort to keep it hidden. This effect may result in hard of hearing persons at all places on the continuum of hearing loss having a similar level of adjustment. Additional possibilities for finding no difference between the two groups on the CPHI scales will be discussed in the limitations section.

Further research will need to be conducted in order to answer any of the previous questions regarding the dissimilar results between the two methods of testing the hypothesis. This will be discussed further under the Future Research section.

Demographic Information

Hearing Aid vs. No Hearing Aid Groups. There were no significant differences between the hearing aid and no hearing aid groups on any of the collected demographic variables. One way in which the hearing aid and no hearing aid groups were similar was the majority of participants in both groups were married (hearing aid group, 81%; no hearing aid group, 67%). According to Frankel and Turner (1983), having a spouse, and thereby most likely more support, may contribute to a higher degree of adjustment to hearing loss. It is possible that the high incidence of marriage in both groups contributed positively to participants' reported level of adjustment, and disguised other differences which were possibly present between the groups' adjustment levels on the CPHI scales.

Over 65 and Under 65 Groups. Based on the previously reported demographic information describing the hard of hearing population (Schein, 1992), it is not surprising to discover that the majority of participants in this study were over 65 years ($\underline{n}$=19). This fact may have affected the results in a number of ways. Fry (1992) points out that older persons are not as socially involved as younger persons. It is possible that older hard of hearing persons may find it easier to adjust to hearing loss and the resultant difficulty in communicating because they do not communicate as much as they used to based on their withdrawal from society. This point is supported by Kyle and Wood (1984), who found that there was less of a subjective need to hear among older participants.

Hard of hearing persons often do not work, and their circles of friends become quite small. Because sources in the literature cautioned that older (Fry, 1992) and older hard of hearing persons (Kyle & Wood, 1984) may have less subjective need to communicate, the participants in this study were re-divided into groups of those over 65 and those under 65 years of age. This age was chosen as a dividing point because 65 years old is a common age to retire and/or have less interactions with others.

Previous research indicated that increasing age would also show increasing levels of adjustment. Contrary to expectations from previous research, those under 65 years of age were significantly better adjusted to their hearing loss than those over 65 on the Exaggeration of Responsibility scale in the Personal Adjustment area of the CPHI. This finding suggested the under 65 group did not overly assume responsibility for problems associated with their hearing loss.

These results need to be examined cautiously. Because of the number of *t* tests conducted in this study, this one significant finding may be a type II error. In order to put the results into context, the results from this study can be compared to the Walter Reed population on which the CPHI was developed (Demorest & Erdman, 1987). When the means of the over 65 and under 65 groups are compared to the Walter Reed means, the significant differences take on a new appearance. The under 65 group, the one which would theoretically interact more with others and therefore find it harder to adjust to their hearing loss and have a lower adjustment score, approached one standard deviation above the Walter Reed mean (Walter Reed $M = 2.97$, 1 SD above $= 3.73$, under 65 $M = 3.68$). This indicates that the under 65 hard of hearing persons in this sample were exceptionally well adjusted on the Exaggeration of Responsibility scale.

When the groups are re-divided on the demographic information of age, the "younger" group is significantly more adjusted on the Exaggeration of Responsibility scale. This would indicate that these "young" people, who potentially interact more with others, do very well with not taking all the blame for any communication problems which arise. Perhaps due to the larger numbers of persons they communicate with, they are able to see their communication problems happen with everyone, and do not overly blame themselves. It is also possible that the higher score found in this study is due to the occupations of the participants. The Walter Reed population consisted of military personnel, who may be more likely than the average person to take full blame for not being able to communicate with others.

Correlational Comparisons

When the demographic information provided by the participants was correlated with the adjustment scores from the CPHI and the self-rating question on the Demographic Questionnaire, a few comparisons were worth noting. These significant correlational coefficients all arose when comparing the Self Rating question with the adjustment scales on the CPHI.

The Self Acceptance scale correlates moderately with the Self Rating question (*r* = .58, *p* < .05). Those persons who feel good about themselves with a hearing loss also scored highly on the Self Rating question. The Acceptance of Loss scale also correlates significantly with the Self Rating question (*r* = .54, *p* < .05). Those participants who find it easier to accept their hearing loss scored themselves higher on the Self Rating question. Finally, the Exaggeration of Responsibility scale and the Self Rating question correlated moderately (*r* = .53, *p* < .05). Those persons who did not misappropriately accept blame for communication problems rated themselves highly on the Self Rating question.

Implications for Counsellors

Although the present research did not indicate a significant difference between the hearing aid and no hearing aid groups on the CPHI, some valuable information was gained by examining the responses to the individual questions on the instrument. This information highlights some pertinent topics counsellors may want to address with clients who are hard of hearing. The following discussion includes the author's suggestions for the role a counsellor may play with a client who is hard of hearing. The pertinent questions on the CPHI to which the majority of the participants in this sample showed a high degree of concern are also examined.

The role of the counsellor can have two main areas of focus. One focus can be assisting persons who are hard of hearing by providing information. This can include supporting what hard of hearing clients already know, and linking them with new information sources. Counsellors can acknowledge and applaud the many strategies persons who are hard of hearing have developed before seeking assistance for their loss. Research has shown it can be up to 20 years between when people realize they are hard of hearing and when they seek assistance (i.e. a hearing test) (Kyle, Jones & Wood, 1985). During this time, persons who are hard of hearing make many adjustments in order to communicate with the rest of the world. For example, they might concentrate more on what people are saying in order to piece together the meaning from what they have heard. Clients would benefit from the counsellor talking with them about these coping mechanisms, and acknowledging the adjustments already made.

It would also be valuable for the counsellor to inquire if clients would like to have information about agencies which support persons who are hard of hearing. Many persons who are hard of hearing do not have sufficient information regarding all of the aspects of hearing loss and the devices which are available to assist. For example, many clients do not know of devices which will make a light in the house flash when the telephone is ringing. By referring clients to organizations such as the Canadian Hard of Hearing Association, counsellors can help clients access this valuable information.

The second main focus of a counsellor's role when working with persons who are hard of hearing can be to discuss adjustment issues with clients. The findings from the present research suggest several topics which could be addressed, and correspond with past research to indicate how common these concerns are for persons who are hard of hearing. This study found that those persons who answered the self-rating question indicating they were "moderately adjusted" to their hearing loss (3 on a scale of 5) were concerned about more issues than those who rated themselves as "highly adjusted" (4 or 5 on the scale).

A 60% majority of the present total sample indicated that the following topics troubled them. They felt left out and discouraged when they could not understand what was being said. Most of the participants felt uncomfortable bothering others with their hearing loss. They also felt others should not expect them to understand them when they mumble.

These are common concerns for persons who are hard of hearing (e.g., see Carmen, 1977; Harvey, 1989; Himber, 1989; Jones, 1987). However, persons who are hard of hearing are typically very isolated, and these clients may benefit from learning just how common these responses to hearing loss are, as well as discussing how relevant these issues are to their particular situation.

Those participants who rated themselves as moderately adjusted to their hearing loss raised additional concerns. These participants felt sensitive, self-conscious, and angry about their hearing loss. They felt guilty about asking others to repeat what was said, and they were impatient when others wouldn't repeat what they had said. They were also hesitant to ask others for help because of their hearing problems. Even when clients report that they are moderately adjusted to their hearing loss, it may be useful to introduce these topics, explaining other persons who feel moderately adjusted to their loss have similar reactions.

Persons who are hard of hearing have to put in extra effort in order to communicate with others. Their loss of hearing is often a gradual process, thereby creating a continual adjustment process. Interested counsellors who understand the common concerns of persons who are hard of hearing may help clients by means of discussing their concerns with them, and informing them of how common these issues are found among persons adjusting with hearing loss.

Limitations of the Study

Some limitations should be acknowledged in this study. This study included a small number of participants (N=31) who were divided into two groups for comparison. Ideally, this study would have involved 30 participants in each group.

This sample of participants was drawn from an adult population of hard of hearing persons through Island Acoustic Hearing Services. The sample was primarily over 65 years of age, and most participants were married. It is possible that a sample with a younger mean age may have differences in their degree of adjustment, because they are more actively dealing with society. Linked to this is the age of onset of hearing loss. Depending on the lifelong developmental stage of hard of hearing persons, it is likely a younger sample of participants will have different difficulties when adjusting with their loss. The number of years with hearing loss may affect the results, as it has been shown adjustment to hearing loss changes over time. Severity of hearing loss, and the level of hearing loss will also affect the generalizability of the results of this research.

Participants were asked to self-report their level of adjustment using the CPHI, which, by nature of the 'self-report,' may not be a completely accurate indicator of adjustment (Borg & Gall, 1989). It is possible that because the questions on the CPHI were asking hard of hearing persons to admit to some behaviours which would be considered socially unacceptable (e.g., pretending they do not hear someone when they do), they may not have reported these behaviours accurately.

In addition, because the people who participated in this study volunteered to do so, they may not be representative of all persons with hearing loss (Elmes, Kantowitz, & Roediger, 1985). They may be better educated, more co-operative, and better adjusted than the average person with a hearing loss.

The instruments were primarily administered through the mail; therefore, participants were generally left to understand the requirements of the instrument on their own (however, the writer indicated they could call if they had any questions). It is possible that participants did not completely understand the instructions on the instruments.

Suggestions for Future Research

In the future, it would be helpful to conduct a replication of this study with several modifications. Since previous research has found the CPHI to be a valuable instrument when assessing Personal Adjustment, it would be worthwhile to replicate the present study with a large sample of participants and control for age of onset, severity, and level of hearing loss.

It would be especially useful if a study could be conducted with persons between the ages of 19 and 65. These participants could perhaps be accessed through organizations for deaf and hard of hearing persons, such as the Canadian Hard of Hearing Association, or the Island Deaf and Hard of Hearing Centre. However, it would be valuable to combine this sample with hard of hearing persons who do not seek others like themselves so readily. This might be achieved through the co-operation of a hearing aid company such as Island Acoustics, and/or placing advertisements in local newspapers.

To answer the question of whether counselling is indeed helpful when adjusting with hearing loss, it would be helpful to conduct research comparing those hard of hearing persons who have received counselling and those who have not.

Finally, it would be valuable to include a qualitative component to any future research. More in-depth probing of questions like: "How do you cope with your hearing loss?", and "What kind of support from others do you find helpful?". Such qualitative data combined with quantitative information would provide a broader picture of the type and magnitude of difficulties experienced by hard of hearing persons in their psychological adjustment with the loss of their hearing.

Bibliography

Berry, J. O. (1992). Preparing college students to work with children and families with special needs. Family Relations, 41, 44-48.

Borg, W. R., & Gall, M. D. (1989). Educational Research: An Introduction (5th ed.). New York: Longman.

Buscaglia, L. (1983). The disabled and their parents: A counseling challenge. (rev. ed.). Thorofare, NJ: Slack.

Carmen, R. (1977). Our endangered hearing: Understanding and coping with hearing loss. Emmaus, PA: Rodale Press.

Cox, R. M., & Gilmore, C. (1990). Development of the profile of hearing aid performance (PHAP). Journal of Speech and Hearing Research, 33, 343-357.

Crespi, T. D. (1988). Coping in the dark: Counseling adults with visual impairment. Counselor Education and Supervision, 28, 146-152.

DeLoach, C., & Greer, B. G. (1981). Adjustment to severe physical disability: A metamorphosis. New York: McGraw-Hill.

Demorest, M. E. (1987). User's Guide to the CPHI Database System. Catonsville, MD: University of Maryland.

Demorest, M. E., & Erdman, S. A. (1986). Scale composition and item analysis of the Communication Profile for the Hearing Impaired. Journal of Speech and Hearing Research, 29, 515-535.

Demorest, M. E., & Erdman, S. A. (1987). Development of the Communication Profile for the Hearing Impaired. Journal of Speech and Hearing Disorders, 52, 129-143.

Demorest, M. E., & Erdman, S. A. (1989a). Relationships among behavioral, emotional and affective communication variables: A canonical analysis of the CPHI. Journal of Speech and Hearing Disorders, 54, 180-188.

Demorest, M. E., & Erdman, S. A. (1989b). Factor structure of the Communication Profile for the Hearing Impaired. Journal of Speech and Hearing Disorders, 54, 541-549.

Elmes, D. G., Kantowitz, B. H., & Roediger, H. L. (1985). Research methods in psychology. St. Paul, MN: West Publishing.

Flahive, M. J., & White, S. C. (1981). Audiology and counseling. Language Speech and Hearing Services in Schools, 20(1), 274-283.

Foster, S., Barefoot, S. M., & DeCaw, P. M. (1989). The meaning of communication to a group of deaf college students: A multidimensional perspective. Journal of Speech and Hearing Disorders, 54, 558-569.

Frankel, B. G., & Turner, R. J. (1983). Psychological adjustment in chronic disability: The role of social support in the case of the hearing impaired. Canadian Journal of Sociology, 8(3), 273-291.

Fry, P. S. (1990). The person-environment congruence model: Implications and applications fro adjustment counselling with older adults. International Journal for the Advancement of Counselling, 13, 87-106.

Fry, P. S. (1992). Social theories of aging. The Counseling Psychologist, 20(2), 246-329.

Glass, L. E. (1985). Psychosocial aspects of hearing loss in adulthood. In H. Orlans (Ed.), Adjustment to adult hearing loss (pp. 167-178). San Diego, CA: College-Hill.

Hallberg, L. R-M., Johnsson, T., & Axelsson, A. (1993). Structure of perceived handicap in middle-aged males with noise-induced hearing loss, with and without tinnitus. Audiology, 32, 137-152.

Hanline, M. F., & Daley, S. E. (1992). Family coping strategies and strengths in Hispanic, African-American and Caucasian families with young children. Topics in Early Childhood Special Education, 12(3), 251-266.

Harvey, M. A. (1989). Psychotherapy with deaf and hard-of-hearing persons: A systemic model. Hillsdale, NJ: Lawrence Erlbaum.

Health & Welfare, Canada. (1988). Acquired hearing impairment in the adult. Ottawa: Minister of Supply & Services Canada.

Henderson, G., & Bryan, W. V. (1984). Psychosocial aspects of disability. Springfield, IL: Charles C. Thomas.

Henroch, M. A. (1979). Aural rehabilitation for the elderly. NY: Grune & Stratton.

Himber, C. (1989). How to survive hearing loss. Washington, D.C.: Gallaudet University Press.

Hyde, M. L., Malizia, K., Riko, K., & Storms, D. (1992). Evaluation of a Self-Assessment Inventory for the Hearing Impaired. Toronto: Health and Welfare, Canada.

Jones, L. (1987). Living with hearing loss. In J.G. Kyle (Ed.), Adjustment to acquired hearing loss: Analysis, change and learning (pp. 126-139). Chippenham, Wiltshire, Britain: Antony Rowe.

Knutson, J. F., & Lansing, C. R. (1990). The relationship between communication problems and psychological difficulties in persons with profound acquired hearing loss. Journal of Speech and Hearing Disorders, 55, 656-664.

Kyle, J. G., Jones, L. G., & Wood, P. L. (1985). Adjustment to Acquired hearing loss: A working model. In H. Orlans (Ed.), Adjustment to adult hearing loss (pp. 119-138). San Diego, CA: College-Hill.

Kyle, J. G., & Wood, P. L. (1984). Changing patterns of hearing-aid use and level of support. British Journal of Audiology, 18, 211-216.

Meadow-Orlans, K. P. (1985). Social and psychological effects of hearing loss in adulthood: A literature review. In H. Orlans (Ed.), Adjustment to adult hearing loss (pp. 35-58). San Diego, CA: College-Hill.

Murphy, J. S.. & Newlon, B. J. (1987). Loneliness and the mainstreamed hearing impaired college student. American Annals of the Deaf, 132, 21-25.

Orlans, H. (1985). Reflections on adult hearing loss. In H. Orlans (Ed.), Adjustment to adult hearing loss (pp. 179-194). San Diego, CA: College-Hill.

Orlans, H. (1987). Sociable and solitary responses to adult hearing loss. In J.G. Kyle (Ed.), Adjustment to acquired hearing loss: Analysis, change and learning (pp. 95-112). Chippenham, Wiltshire, Britain: Antony Rowe.

Rodda, M., Gordon, C., & Hughes, P. (1992). Awareness training in hearing impairment for career consultants in Alberta career development. Edmonton, AB: University of Alberta, Dept. of Educational Psychology.

Rezen, S. V., & Hausman, C. (1985) Coping with hearing loss: A guide for adults and their families. New York: Dembner Books.

Sanders, D. A. (1982). Aural rehabilitation. Englewood Cliffs, NJ: Prentice-Hall.

Schein, J. D. (1992). Canadians with impaired hearing. Ottawa: Statistics Canada.

Schow, R. L., & Gatehouse, S. (1990). Fundamental issues in self-assessment of hearing. Ear & Hearing, 11(5)(S), 6S-16S.

Schwartz, S. (Ed.). (1987). Choices in deafness: A parents guide. U.S.A.: Woodbine House.

Stone, H. (1985). Developing SHHH, a self-help organization. In H. Orlans (Ed.), Adjustment to adult hearing loss (pp. 155-166). San Diego, CA: College-Hill.

Stone, H. (1987). Adjustment to postlingual hearing loss. In J.G. Kyle (Ed.), Adjustment to acquired hearing loss: Analysis, change and learning (pp. 113-124). Chippenham, Wiltshire, Britain: Antony Rowe.

Sussman, A. E., & Stewart, L. G. (Eds.). (1971). Counseling with deaf people. New York: Deafness Research and Training Centre.

Turnbull, A. P., & Turnbull, H. R. (1978). Parents speak out: Views from the other side of the two-way mirror. Columbus, OH: Bell & Howell.

VonAlmen, P., & Blair, J. C. (1989). Informational counseling for school-aged hearing-impaired students. Language, speech and hearing services in schools, 20(1), 31-40.

Wood, P. (1987). The world we have lost. In J.G. Kyle (Ed.), Adjustment to acquired hearing loss: Analysis, change and learning (pp. 156-162). Chippenham, Wiltshire, Britain: Antony Rowe.

APPENDIX A: Letter of Introduction

Dear

I am writing to you to provide you with information about, and the questionnaires to complete my study, now that you have agreed to participate. This study will be examining how people adjust their lives when they have hearing loss. I am sure you are aware that there is a lack of information available on the emotional and social aspect of adjusting with hearing loss. This study intends to expand our knowledge about these personal factors.

I would like to take a moment to let you know my motivation for doing this research. I am a graduate student in the University of Victoria Counselling program. I am not myself hard of hearing, but I have some close family members who are mildly and moderately hard of hearing. I have learned through them that adjusting with hearing loss is often frustrating, and demands dramatic changes. I have also learned from hard of hearing people through my work with a new counselling service which specialized in hard of hearing clients. I repeatedly heard of the lack of resources for this group of people.

Our understanding of adjustment with hearing loss can only come from the participation of persons like yourself who are going through the experience. The questions this study will ask you will be related to examining your hearing loss, and how it affects your life.

In order to assist with this study, I ask that you complete the two questionnaires which are included with this material. The questionnaires most likely will not take more than 30 minutes to finish. Once you have completed the package, I ask that you return the questionnaires in the self-addressed, stamped envelope provided.

If you would like further information while you are completing the questionnaires, or have other questions about this study, please feel free to telephone myself at **478-8741** (there is an answering machine on this line).

The next letter in this package is an official consent form, which is required in order to conduct any research at the University of Victoria.

Thank you for your time and consideration.

Sincerely,

Debbie Clelland, MA Student

APPENDIX B: Consent Form

Adjusting with Hearing Loss

I am requesting that you take part in this study, addressing hard of hearing adjustment. The knowledge gained from this information will be used to educate professionals providing service to hard of hearing persons, and for hard of hearing persons themselves. In order that the results of this study are representative of the wide variety of hard of hearing persons, it is important that each person who agrees to participate completes and returns this package. We also request that you give us permission to obtain a copy of your audiogram from Island Acoustics.

The answers you provide will not be identified by your name. You will be ensured of complete confidentiality through the following procedures. The questionnaire has an identification number in order that we may check your name off the mailing list once you have returned the questionnaire. Your name will never appear on the questionnaire, thereby allowing your anonymity. All questionnaires will be secured in a locked filing cabinet when they are not in the researchers' possession. The results will be written up as a summary of all the participants. Your particular questionnaire answers will not be identifiable.

This information is being used towards a Master's thesis, and will be useful to professionals you may encounter, and to hard of hearing persons, such as yourself. If you have any questions, comments or concerns regarding this study, please feel free to call Debbie Clelland at 478-8741, or Dr. Max Uhlemann at 721-7827. If you would like a copy of the results, please put your name and address on the back of the return envelope.

I would like to confirm that if at any time you wish to withdraw from the study, you are entirely free to do so. If you are interested in keeping a copy of this form, please make one for yourself.

If you are willing to participate, please indicate this by completing the two questionnaires, and returning them in the return envelope provided. Once we receive your completed package, we will assume that you have consented to participate in this study.

Thank you for your time and consideration.

APPENDIX C: Communication Profile for the Hearing Impaired Explanation

I would like to take a moment to explain the questionnaire you will complete. Please answer each of the questions in the following questionnaire to the best of your ability. You should mark your answers on the answer sheet provided. Some examples of how to answer the questions follow.

If you sometimes or often wear a hearing aid, answer the questions as you would usually find the particular circumstance. If possible, it would be best to complete the questionnaire in a quiet spot where you are free from distractions.

Examples of Answering Questions

Part I: For example, in answering question #7 "You're at an outdoor picnic," (1) first turn to the left-hand column on the answer sheet. If you find you occasionally communicate effectively in that situation, you would circle #2 in the left-hand column of the answer sheet. (2) Then look at the right-hand column on the answer sheet. If you feel communicating at an outdoor picnic is very important to you, you would circle #4 in the right-hand column.

Part II: For example, in answering question #30 "I interrupt others when listening to them is difficult," first turn to the answer sheet for Part II, and decide how often you do this. If you found you did this almost always, you would circle #5 (almost always) for question #30.

Part III: This part of the questionnaire asks you to rate how much you agree with the statements. For example, if you strongly disagree with the statement, you would mark #5 on the answer sheet.

APPENDIX D: Demographic Questionnaire

Finally, we would like to ask you some questions about yourself in order to interpret the results you are providing.

1. How old were you at the time you realized you had a hearing loss? _____ YRS. OLD

2. Please indicate the approximate date of your first hearing test MONTH/ YEAR _____/_____

3. Do you presently own a hearing aid? ____YES ____NO

4. What percentage of your waking hours do you wear your hearing aid? ____% OF WAKING HOURS

5. On a scale of 1 to 5, with 1 representing not at all adjusted, and 5 representing completely adjusted, how well adjusted do you feel you are to your hearing loss?

NOT AT ALL ADJUSTED COMPLETELY ADJUSTED

1 2 3 4 5

Please now put the two completed questionnaires (the Communication Profile for the Hearing Impaired and the Demographic Questionnaire) in the return envelope, and put it in the mail. Thank you again for your participation.

APPENDIX E - QUESTIONS ON THE PERSONAL ADJUSTMENT SCALES

	Item No.
<u>Self-Acceptance</u>	
I get bothered or upset when I'm unable to follow a conversation.	39
I feel stupid when I have to ask someone to repeat what they've said.	57
I feel foolish when I misunderstand what someone has said.	70
I get mad at myself when I can't understand what people are saying.	74
I feel embarrassed when I have to ask someone to repeat what they've said.	76
At times my hearing loss makes me feel incompetent.	99
Because of my hearing loss I have feelings of inadequacy.	118
I feel self-conscious because of my hearing loss.	136
<u>Acceptance of Loss</u>	
I try to give the impression of normal hearing.	24
I try to hide my hearing problem.	63
Sometimes I'm ashamed of my hearing problems.	83
I'm sensitive about my hearing loss.	105
I find it difficult to admit to others that I have a hearing problem.	108
I can't talk to people about my hearing loss.	120
I have a hard time accepting the fact that I have a hearing loss.	125
I'd rather miss part of a conversation than admit that I have a hearing loss.	140

	Item No.
Anger	
My hearing loss makes me mad.	82
I get aggravated when others don't speak up.	103
I get impatient with people who aren't willing to repeat for me.	117
Questions about my hearing loss really irritate me.	119
I really get annoyed when people shout at me as if I'm deaf.	134
I get angry when I can't understand what someone is saying.	143
Displacement of Responsibility	
People should be more patient when they're talking to me.	81
If people speak where I can't see them, they shouldn't expect me to answer them.	110
If people want me to understand them, it's up to them to speak more clearly.	126
Others should be more understanding about my hearing problems.	129
When people mumble, they shouldn't expect me to understand them.	137
Exaggeration of Responsibility	
My hearing loss is my problem and I hate to bother others with it.	79
I feel guilty about asking people to repeat for me.	89
I hate to ask others for special consideration just because I have a hearing problem.	92

	Item No.
I felt bad about the inconvenience I cause others because of my hearing loss.	116
I try not to bother anyone else when I'm having trouble hearing.	135
I don't like to ask other people to help me with my hearing problems.	144

Discouragement

I feel depressed as a result of my hearing loss.	107
I get discouraged because of my hearing loss.	112
The problems I have communicating with others really get me down.	121
When I can't understand people, sometimes I just don't care anymore.	123
I let my hearing problems get me down.	132
Not being able to understand is very discouraging.	142

Stress

I feel threatened by many communication situations due to difficulty hearing.	78
I'm not very relaxed when conversing with others.	85
I'm not very comfortable in most communication situations.	96
I get very tense because of my hearing loss.	101
When I have trouble hearing, I become nervous.	106
I worry about looking stupid when I can't understand what someone has said.	113
Straining to hear upsets me.	114
When I can't understand what's being said, I feel tense and anxious.	139

Withdrawal

	Item No.
I feel left out of conversations because I have trouble understanding.	80
I withdraw from social talk because of my hearing loss.	84
Because of my hearing loss I keep to myself.	104
Since I have trouble hearing, I don't enjoy going places with friends as much.	109
Sometimes I miss so much of what's being sad that I feel left out.	131
Feeling isolated is part of having a hearing impairment.	138
The difficulties I have with my hearing restrict my social and personal life.	145

VITA

Surname: Clelland

Given Names: Debra Ann

Place of Birth: Vancouver, British Columbia, Canada

Educational Institution Attended:

University of Victoria	1984 to 1988 1992 to 1995

Degrees Awarded:

B.A.	University of Victoria	1988

PARTIAL COPYRIGHT LICENCE

Title of Thesis:

Adjusting with Hearing Loss: Implications for Counsellors

Author [redacted]

Debbie Clelland
September 18, 1995