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A communication process training model for use by audiologists in counseling

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A COMMUNICATION PROCESS TRAINING MODEL FOR USE BY AUDIOLOGISTS IN COUNSELING

by

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ABSTRACT

Audiologists must assume the role of a counselor when providing interpretation of test results to patients and/or family members. A successful audiologist will rely on the knowledge of auditory disorders and rehabilitation and will be willing to form an effective relationship with the patient through communicative counseling. The purpose of this capstone project is to develop a training protocol for audiologists based on a communication process model. This capstone project discusses the process of designing counseling training sessions.

The basic principles of the Adler and Elmhorst (2002) communication process model were used to develop a dialogue and scenarios (role-playing activity) for the training model. The dialogue addresses the importance of verbal and nonverbal communication skills as enhancements for the communication process. The training sessions are followed by a research design that would use second-year audiology doctoral students (research subjects) who will be given two individual investigator-developed scenarios that address a hearing impairment.

The scenarios represent typical patterns seen in certain audiological disorders and are not actual individual audiological results. The research subjects will explain the type, degree, and configuration of the hearing loss, as well as the ramifications of the hearing loss, and treatment options to undergraduate Speech Communication majors

(standardized patients). The standardized patients will be given written instructions identifying their role in the study.

Each ten minute counseling session will be videotaped for review. The tapes will be randomly selected for coding by a secondary investigator who will rate the counseling sessions on an investigator-designed rating scale. The research subjects will have two, one-hour training sessions prior to administering the second scenario. The experimental treatment will be conducted by the secondary investigator. The standardized patients will not be the same participants from the first scenario; therefore, the research subjects will administer the second scenario to a different group of standardized patients. Data will be statistically analyzed (t-test for related measures) to determine the number of communication breakdowns and where they occurred in the communication process.

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Author Heather D. Chelette

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CHAPTER I

REVIEW OF LITERATURE AND STATEMENT OF THE PROBLEM

Review of Literature

Audiologists often have to assume the role of a counselor when providing interpretation of test results to patients and/or family members. This role begins when the audiologist gains rapport with the patient during the initial contact and continues throughout the session. The successful audiologist must not only rely on his/her knowledge of auditory disorders and rehabilitation but should also be willing to establish an effective relationship with the patient through communicative counseling. DeVito (1999) defined communication as the transmission of information from one person to another to achieve shared meaning. Message importance will be obtained when there is shared meaning among and between all individuals involved in the communication process.

Communicative interactions may be conveyed through verbal and/or nonverbal means. However, Beer (2003) reported that more than half of any information conveyed in a message is communicated through nonverbal channels. It is, therefore, imperative that the audiologist establish a trusting relationship through verbal and nonverbal communication to enhance the comfort level of the patient for a discussion of his/her

hearing status. In addition, establishment of a trusting relationship may contribute to shared meaning among and between the communication partners.

During the communicative counseling process, the time restraints faced by many audiologists can result in an incomplete investigation of the patients' wants and needs. In addition, information about the psychological and functional impact of a hearing loss may not be adequately conveyed. Inadequate and insufficient information may lead to a breakdown in communication further hindering the counseling process.

Since every hearing loss is unique, the counseling process should be individualized. When a supportive counseling environment is established, patients will be encouraged to communicate their feelings, verbally and nonverbally. A strong relationship between the patient and professional can lead to a greater understanding of the hearing deficit and intervention possibilities.

> The ultimate goal for counseling is to help people to recognize and accept their own internal worth, i.e., to integrate their learned habits of thinking about them- selves (their internal messages and images) and their learned behaviors (feelings physical responses and actions) to be congruent with whom they really are in their essence (beautiful loving people) (Santoro, www.allaboutcounseling.com, 1998, p. 1).

Effective counselor traits include empathy, respect, warmth, honesty, attentiveness, and understanding all used within a framework of confidentiality, an unbiased approach, and an unhurried approach to problem solving. A successful counselor (a) poses questions that are pertinent to the patients' health, (b) is an active listener, (c) summarize information for clarity, and (d) relays information using

terminology appropriate to the patient's educational status. It is appropriate for the audiologist to conceptualize counseling as an ongoing process because the hearing impaired individual and his/her family members may well travel through the stages of grief in reaction to the hearing impairment.

Hearing loss is idiosyncratic; everyone is not affected in the same manner emotionally or physically. The rehabilitation process will be far less stressful for the audiologist and patient when there is a positive acknowledgment of the impairment. Failure to acknowledge the impairment may lead to an even more stressful and painful grieving process. Kubler-Ross (1969) described five stages in the grieving process for understanding death and dying: denial, anger, bargaining, depression, and acceptance. These psychological stages are also experienced when an individual encounters pain or loss (e.g., hearing loss, divorce). For some, grieving may be a life long process and will vary based on the individual and his/her needs. Health care professionals are in a prime position to provide support and encouragement as the patient moves through the grieving process.

This review of literature will provide information on the grieving process. As communication breakdowns may occur within any communicative interaction, it is appropriate to review literature that reveals the nature of such breakdowns, possible reasons for their occurrence, and ways to prevent such communicative breakdowns with hearing impaired adults and families of hearing impaired children. In addition, counseling and counseling theories will be discussed and the review of literature will conclude with the importance of viewing communication as a process.

Grieving

Grief is a phenomenon which occurs in relation to a loss or a traumatic event which may be developmental (e.g., congenital hearing loss) in nature, related to a family event such as the death of a loved one, associated with loss of personal assets, or job-related. The reaction to a loss or traumatic event may be grief. In a therapeutic relationship, an individual's reaction may affect the direction and outcome of intervention. However, as Tanner (1980, p. 916) reminded us, "When the grieving process is facilitated properly, the speech or hearing-disordered individual will continue the rehabilitation program with equal or increased motivation". Grieving is a complex process that requires exploration of feelings associated with the loss and consideration of life-style modifications to allow an individual to cope with the loss that precipitated the grieving.

Kurtzer-White and Luterman (2003) provided a tutorial on ways parents cope with the stress associated with their child's hearing impairment and how the family unit may be affected. The authors stated that parents of children with hearing impairments may be overcome and somewhat incompetent in their initial attempts to cope with the hearing impairment which in turn may lead to frustration and anger. As Kurtzer-White and Luterman so eloquently stated, "Expectant parents hold dreams about their future lives as parents and their child based on assumptions, including the ability to communicate fully, effectively, and intuitively without barriers, just as their parents communicated with them" (p. 233).

The severity of a child's hearing impairment does not necessarily determine how parents will respond and cope with the impairment. For example, research studies have

demonstrated that some children with lesser degrees of hearing loss will respond inconsistently to auditory stimuli which results in a delay of acceptance by the parents (Pipp-Siegel, et al., 2002, & Hintermair, 2000, as cited in Kurtzer-White & Luterman, 2003). These same investigators found that parents compared the identification of their children's hearing impairment to a traumatic experience, for example death of a family member. Kurtzer-White and Luterman (2003) suggested that the grieving process of parents of hearing impaired children continues throughout their children's development. The implication of this suggestion is not only that the grieving process may begin at the time of diagnosis of the hearing impairment but that it may well continue for the duration of the child's growth and development. It is imperative that the hearing health care professional acknowledge the importance of parental acceptance of the child's deficit as this will have a significant influence on the child's success in a hearing world.

Kubler-Ross (1969) described five stages that are common to the grieving process: denial, anger, bargaining, depression, and acceptance. These stages have been applied to individual and parental reactions to the crisis associated with communication disorders.

Denial. According to Tanner (1980) denial can be an initial reaction to a loss such as a hearing impairment. During this stage, the individual and/or parent realizes that a communication problem exists but may believe that the impairment is not serious enough for intervention. The degree of denial and the amount of time spent in denial may be mediated by two factors.

According to Kubler-Ross (1969), the first factor concerns the extent of information relayed to the individual. The question becomes one of whether the

information given adequately addressed the disorder and whether the outcome was non-acceptance of and/or non-adjustment toward the disorder. The second factor involves the time required for the individual to overcome the loss. Kubler-Ross suggested that individuals who have minimal time, such as the terminally ill, may proceed through the grieving process at a faster rate than someone who is able to dwell on the issue and become fixed in one of the other stages such as anger.

Anger. According to Kubler-Ross (1969), anger, as a stage in the grieving process, results from an inability to remain in denial. A hearing impaired individual, for example, may express anger towards friends and family members by implying "you mumble and do not enunciate your words properly" leading to arguments and resentment. Further, the individual may resent the audiologist and challenge his/her credibility as a professional. The audiologist who fails to recognize this behavior as being part of the grieving process may experience difficulty interacting with the patient. Further, the patient may lash out at the professional and show resentment toward him/her which could lead to bargaining as a next step in the grieving process.

Bargaining. Bargaining occurs when an individual tries to prolong or minimize the impact of a loss. Tanner (1980) suggested that this stage is normal and desirable because it provides time for resolution. However, bargaining may interfere with the intervention process. An excessive amount of time spent in this stage may impinge on treatment as with a patient who bargains "If my hearing deteriorates anymore, then I will get a hearing test". In addition, an individual may become depressed and withdraw from social activities as a result of the hearing impairment.

Depression. When other strategies to cope with a loss have failed or been ineffective, the individual may enter depression as the fourth stage in the grieving process. At this time, there may be evidence of isolation from friends and families and a reluctance to engage in recreational activities. Kubler-Ross (1969) described depression as reactive or preparatory. Reactive depression deals with associated aspects of the loss as for example, the cost of hospital care, drugs, or hearing aids. In contrast, preparatory depression has to do with preparing the individual for the absolute worse as in death or deafness.

Acceptance. Kubler-Ross maintained that while the length of time spent in any one stage of the grieving process will vary and there will be individual variations in the sequence of the stages, acceptance should be the end result. Acceptance is the overall goal of the grieving process and brings an individual to terms with the loss. Kurtzer-White and Luterman (2003) suggested that it is at this point that an individual becomes a viable candidate for therapy and intervention possibilities such as amplification, assistive devices, and cochlear implants. Healthcare professionals, including audiologists, can play a critical role in supporting a family and/or individual through the grieving stages in order to reach acceptance.

Grieving and the Role of the Audiologist

The time spent in each stage of the grieving process will vary due to the uniqueness of individuals and the depth and breadth of the loss experienced. If an individual or family member remains in any one stage for a prolonged period of time, therapeutic intervention may have to be postponed, modified, or altered in some manner. In order for an audiologist to provide effective counseling and intervention, the

audiologist should be knowledgeable of the possible effects of the grieving process on clients and family members. This knowledge can be used to help a hearing impaired individual move through the stages to reach acceptance of the loss or reduction of hearing acuity.

For example, during the denial stage, an audiologist may provide demographic information about the etiology and prevalence of hearing loss. An individual or family who is in the anger stage may be given suggestions for the implementation of various strategies (e.g., get the hearing impaired person's attention before speaking) for communicating with the hard-of-hearing. When interacting with a patient who is in the bargaining stage, an audiologist may explain the benefits of amplification devices for daily communication. For an individual in the depression stage, an audiologist can share information about support groups and organizations such as *Hear Now* that provide funding assistance for hearing aids after considering household incomes. As the hearing impaired individual reaches the final stage, there may be more acceptance of the loss leading to use of available audiological services.

Luterman (1999) stated "to work with parents of newly diagnosed deaf children is to begin by working with grief" (p. 185). However, Luterman reported that he found the Kubler-Ross (1969) grief process model to be over-simplistic for a multifaceted procedure. The ultimate goal of counseling is that

> grief becomes a sadness that enables parents to appreciate what they have; anger becomes energy to make changes; guilt becomes a commitment; recognition of vulnerability becomes a means by which parents reorder their priorities; and the

resolution of confusion becomes a motivation for learning (Luterman, 1999, p. 194).

Grieving is an ongoing process that may never resolves in its entirety. Parents of a hearing impaired child are in likely to maintain continual collaboration with the audiologist as well as other healthcare providers. The parents need the audiologist to offer emotional support throughout the grieving process. Substance-based counseling which provides technical information about the hearing loss and intervention possibilities may not be successfully initiated until parents are given the chance to sort through their emotions. As Luterman stated, "when affect is high, cognition shuts off" (p. 186) leading to unsettled issues between parents and the audiologist. When these issues are not resolved, there may be a breakdown in communication which in turn, forms a barrier to counseling and acceptance of viable intervention procedures that could lead to a better quality of life for the adult and/or child.

Communication Breakdown

When a child is first diagnosed with a hearing impairment, assistance from a wide array of professionals is required. These professionals include physicians, audiologists, speech-language pathologists, counselors, educational diagnosticians, occupational therapists, physical therapists, psychologists, and educators. The prognosis for the child may be influenced by the ability of the family to cope with the loss. The methodology chosen by the professionals to present pertinent information will also be a factor in the process of accepting the child's hearing status.

Professionals often make assumptions about what, if any, negative effects the hearing deficit may have on the family unit (Blackard & Barsh, 1982; Bristol, 1984;

Gallagher, Cross, & Scharfman, 1981 as cited in Kroth, 1987). When unwarranted assumptions are made by professionals, families may not have the opportunity to formulate their own feelings and emotions. Further, the communication process between the parents and professionals may be hindered. Kroth (1987) maintained that the majority of professionals who deliver distressing information have typically received minimal, if any formal communicative counseling training. Kroth suggested that professionals should be taught to be "good" messengers. Therefore, training programs which teach professionals to deliver devastating information should teach these same professionals how to assist parents who are coping with a permanent impairment and any accompanying tribulations.

Researchers (Bernstein and Barta [1988]; Martin, George, O'Neal, and Daly [1987]; and Williams and Darbyshire [1982]) have concluded that some communication breakdowns do occur between professionals and patients. However, similarities are present and should be noted. As professionals become aware of the breakdowns, strategies to minimize or eliminate these breakdowns can be considered.

Bernstein and Barta (1988) developed a study to identify the educational needs of parents of hearing impaired children. First, Bernstein and Barta developed a questionnaire to compare parental attitudes and understanding of hearing impaired children with that of professionals. The questionnaire was mailed to a representative sample of parents and professionals. The investigators then implemented a pilot test to analyze responses to the questionnaires.

Bernstein and Barta's questionnaire was lengthy, but manageable and had four sections. Section One was used to gather demographic information from the participants.

In Section Two, the participants rated 90 questions on a seven-point Likert-type scale (1- very important, 2- important, 3- somewhat important, 4- neutral, 5- somewhat unimportant, 6- unimportant, 7- very unimportant, and 8- don't know). In Section Three, Bernstein and Barta used 13 topics to identify changes in parental perceptions as the hearing impaired child progressed through the developmental milestones associated with the pre-school, elementary, and high school years; the seven-point Likert-scale was used to rate responses to these items. Section Four had 59 questions designed to obtain information about the amount of detail given regarding the impairment and the frequency with which it was given. To obtain more details, Bernstein and Barta had the participants respond to the items by indicating *Specific, General, Both, Don't Know*, or *Not Needed* for the amount of detail they were provided. To measure the frequency with which the information was given, the participants reported *One Time, Repeated Over Months, Repeated Over Years, Don't Know,* or *Not Needed.*

Bernstein and Barta sent questionnaires to 200 parents of hearing impaired children who attended special state educational programs; the parents were randomly selected. Questionnaires were mailed to 120 professionals (speech-language pathologists, audiologists, teachers of deaf children, earn-nose-throat physicians, and pediatricians) whose names were randomly selected from listings for several cities and towns in the same state. The parents were asked to complete the entire questionnaire while the professionals only completed Section Two. Ninety (53 parents, 37 professionals) questionnaires were returned. Six of the 53 parent questionnaires were discarded because of missing data and invalid response patterns.

Data reported in the demographic section revealed that parents with a high school education or less, reported that the information on P.L. 94-142, management and development, and causes of deafness were more important than did the parents with a college-level or above education. In Section Two, the most often rated questions were about communication and education followed by those that addressed behavior management and discipline. The categories of speech, deafness, and hearing science or hearing aids were rated as having minimal importance to parents. In Section Two, the professionals rated communication as most important and information about the child's future and normal development was rated as least important. When compared to the parents, the professionals rated communication as most important while the parents rated education as most important. In Section Two, similarities were only noted for professionals and parents in the category for the child's age span (e.g., information on hearing aids, communication, and deafness).

Bernstein and Barta also addressed the important areas covered at the time of diagnosis for the age spans. During the early years, normal development was viewed by the parents as having moderate importance while in the elementary and high school years it was viewed as being least important. A child's future was also viewed as having minimal importance in the preschool and elementary years but as being most important in the high school years. Overall, audiology, deafness, hearing aids, and speech were rated with low importance, while communication and education were rated with high importance across the age spans by both parents and professionals.

The responses in the last section fell into the specific and/or general categories. The specific category had high levels of detail on causes of hearing impairment, detection

of improper functioning of hearing aids, treatment of hearing impairment, and types of hearing impairments. The general category addressed functional problems such as finding babysitters and teaching them to assist the hearing impaired child, and discussion of disciplinary actions. The parents' ratings revealed a preference for resources to be given over a period of months on communication, speech and language, management and discipline, and management and development. In contrast, they rated education and the child's future as information that should be provided over a period of years. In comparison, the professionals were of the opinion for items in Section Two that the information should be given to parents during the early childhood and middle years.

Bernstein and Barta's preliminary results could be interpreted as reassurance to parents and professionals that their perceptions are closely related on the topics of communication and education. Parents and professionals were of the opinion that this topical information should be provided at the time of diagnosis. Bernstein and Barta supported the need for further research to ensure that professionals are offering comprehensive, quality programs for parents of hearing impaired children. Bernstein and Barta also suggested that knowledge about the desires and needs of parents with hearing impaired children will facilitate the audiologists' role of counseling in that communication breakdowns may be avoided and more effective counseling strategies may be used.

Martin, George, O'Neal, and Daly (1987) investigated appropriate counseling strategies for parents of hearing-impaired children. Martin, et al. focused on parental expectations from counseling, when certain information is presented by the audiologist, and the appropriateness of the information about hearing impairments.

Martin and his associates mailed questionnaires nationwide to 500 parents of hearing-impaired children and 500 practicing audiologists who were randomly picked from membership lists of the Alexander Graham Bell Association for the Deaf and the American Speech-Language-Hearing Association. Two-hundred sixty eight parents and 85 audiologists returned the questionnaires. The questionnaire had multiple choice, fill-in-the-blank, and essay questions; respondents were encouraged to answer the essay questions in as much detail as possible. The information obtained from the survey responses was categorized according to diagnosis, parental reactions, memories, acceptance, information, approach, and counseling. Martin and his colleagues analyzed the questionnaire data based on the frequency of responses to the questions.

Parental responses to the category of diagnosis revealed that parents communicated their concerns to a professional in the first year of their children's lives. However, according to the parents, the professional diagnosis of the hearing impairment typically occurred when the children were between 13 and 24 months of age. Parental reports also revealed that both parents were present when the diagnosis was discussed. In contrast, the audiologists reported that the concern about a hearing loss was first voiced to a professional during a child's first and/or second year of life. According to the audiologists, formal audiological testing was not provided at the time the parents first voiced the concern, the actual diagnosis occurred between the ages of 19 and 24 months, and that only the mother was present at the time of diagnosis.

Martin and his associates found that the responses to the classifications of parental reactions, memories, and acceptance revealed that the parents reported feelings of sorrow while the audiologists' perceived denial as the first reaction to a child's hearing

impairment. The memories of the parents included minor details such as the child's attire that day, climate, etc. rather than specific information about the hearing loss. The parents reported that their acceptance was immediate after the child was diagnosed; four percent of the audiologists believed this to be the case.

Martin, et al. noted that when the parents were given information about the hearing impairment, they in turn shared their need for more information about availability of services, strategies for handling the condition, family adjustment, what to expect in the future, and ways to interact with families who had similar concerns about hearing impairments. In addition, the parents also reported that they understood the material presented about the hearing impairment. In contrast, the audiologists concluded that it took as long as a year for parents to completely understand the hearing impairment. The approaches to counseling were viewed by parents and audiologists as direct, nonjudgmental, and honest. The audiologists were perceived by both groups as being available to listen and both groups identified audiologist as the most appropriate professional to provide the technical information and provide counseling for the emotional reactions experienced by the parents.

Viewing the totality of their data, Martin and his colleagues concluded that there were discrepancies between the counseling requirements of parents and audiologists' perceptions of how these requirements are being met. Martin, et al. recommended that parental needs be given more consideration by audiologists primarily because parents believe that their needs should be given more emphasis. The suggestion was that audiologists allow opportunities for parents to express their feelings about their hearing impaired children to facilitate appropriate professional suggestions for coping strategies.

In addition, audiologists need to be aware of not only the importance of providing technical information but that there are appropriate techniques for communicating that information during counseling sessions with parents.

Williams and Darbyshire (1982) investigated parents' reports of how they were informed about their children's hearing impairment and their attempts to cope with the difficulties associated with the hearing impairment. Williams and Darbyshire used as subjects, 25 families with children who were diagnosed as deaf. The average age of the parents who participated in the study was 35 years.

Williams and Darbyshire asked each family to complete two surveys, one with three parts and another that contained four parts. The survey had a preliminary interview to obtain demographic information, a 70-item questionnaire, and a second interview with the parents of severely hearing impaired children which attempted to identify parental feelings and attitudes relative to the hearing impairment. The questionnaire items addressed parental knowledge about the child's difficulties related to the hearing loss and ways to minimize the difficulties, their initial suspicions about their child's hearing status, how the parents and professionals investigated the matter, parental reactions to the diagnosis, and parental views on available services.

Williams and Darbyshire found that the average age at which parents initially suspected that their child had a hearing loss was 28 months. Only 40% of the parents reported that they thought a hearing impairment was related to the child's overall difficulties. Sixty-eight percent reported that they initially consulted the family physician about their child's difficulties while others waited as long as nine months to seek outside help. The parents stated that even after voicing their concerns, on the average it was 14

months before the family doctor made a professional referral that resulted in a diagnosis of hearing loss. Williams and Darbyshire noted that the reactions of the parents to the diagnosis were negative; 80% of the reactions were described as being severe. Eighty-four percent of the parents stated that they did not understand the information given about the hearing impairment while 72% reported that they did not understand how the hearing impairment was going to affect the child. In addition, parents reported that the only professional relationship they had was with a home-visiting preschool teacher from the school for the hearing impaired.

The findings reported by Williams and Darbyshire supported the importance of the quantity and quality of services provided to parents of hearing impaired children. The results also suggested that the overall needs of parents of hearing impaired children are not being met. The implications call for improvement in the verbal and nonverbal communication techniques used by professionals who provide information provided to clients, parents, and family members who must then begin to cope with life-long changes associated with a disorder.

Approximately 60 to 65% of any message is transmitted through nonverbal channels (Griffith, Wilson, Langer, & Haist, 2003). Even though nonverbal and verbal communication are directly related, nonverbal communication "often anticipates, substitutes for, augments, accentuates, or most importantly, contradicts verbal communication and is a primary vehicle for expression emotion" (p. 170). Using this as their rationale, Griffith, et al. "examined the association of physician nonverbal communication with standardized patient satisfaction in the context of the 'quality' of the interview" (p. 170). The researchers hypothesized that when physicians used effective

nonverbal communication skills while transmitting information, standardized patient satisfaction would greatly improve.

Fifty-nine (24 female, 35 male) internal medicine and pediatric residents who were currently on less time-intensive rotations were recruited for the study. The subjects were asked to participate in three dissimilar standardized patient interactions. The three interactions were (1) a relatively straightforward, primarily 'medical' problem (e.g., chest pain), (2) an encounter that primarily involved counseling (e.g., HIV risk factor reduction) in which the provision of information would seem paramount, and (3) a patient with a more psychosocial overlay as for example, a depressed patient who, if questioned empathetically would be revealed as an adult survivor of sexual abuse (p. 171).

Each of the residents was informed that the purpose of the study was to identify any communication differences across three different standardized patient interactions. The standardized patients, all of whom were female, were given no information about the hypothesis of the study nor that the primary focus was on nonverbal communication skills. Each of the encounters was 15 minutes in length.

Griffith, et al. developed a checklist to collect information from the standardized patients about the communication interaction. The checklist items were case-specific and based on standards identified from the literature as usual educational practice with standardized patients. The checklist, with 40 to 60 questions and a response format of *Yes/No, Open-Ended,* or *Summarize*, was completed by the standardized patients immediately following the interview. The items on the checklist were organized in three areas; information obtained, information counseled (HIV counseling encounter only), and verbal communication skills (use of open-ended questions, etc.). A second checklist

completed by the standardized patients was to determine the general level of satisfaction reached by each standardized patient. A five-item checklist rated on a seven-point Likert scale (1 = strongly disagree to 7 = strongly agree) was used.

Griffith, et al. used seven items to identify nonverbal communication skills which were rated on a seven-point Likert scale. The nonverbal behaviors were facial expression (1=unexpressive, blank to 7=very expressive), amount of smiling, eye contact, and nodding (1=infrequent to 7=very frequent), body lean (1=backward to 7=forward), body posture (1=closed to 7=open), and tone of voice (1=unexpressive, monotone to 7=very expressive, emotional).

Griffith, et al. found that standardized patient satisfaction may be greatly enhanced with effective nonverbal and verbal communicative skills within any of the three patient encounters. In the chest pain encounter, a strong correlation was observed between verbal and nonverbal communication skills when compared to the other two encounters. An interesting finding was that when the ratings on the overall performance checklist were high, the satisfaction of the standardized patients decreased in the straightforward medical/chest pain encounters. However, the investigators reported that nonverbal communication was the most valid predictor of the satisfaction experienced by the standardized patients in each of the encounters. Griffith, et al. encouraged continued research to further investigate how verbal and nonverbal communication and information sharing interrelate when interacting with patients. All healthcare professionals should be mindful of the influence of nonverbal actions on patient satisfaction and shared meaning through communication interactions. Training of communication counseling would be

enhanced with the demonstration of appropriate strategies to use in a variety of situations such as those involving audiologists and clients with hearing impairments.

Counseling Strategies to Improve Communication Breakdowns. Kroth (1987) discussed the communication process and provided suggestions for professionals to effectively convey diagnostic information to parents. In the initial session, according to Kroth, professionals should guard against making any assumptions about the child's impairment or the familial status. Not only could such assumptions be erroneous, but unwarranted assumptions could create communication barriers between the professional and the parent(s). Since there is the potential for diagnostic news to be initially devastating, Kroth encouraged professionals to be sensitive, positive, and respectful while discussing the type and degree of the impairment. If the professional assumes the role of an active listener, this, according to Kroth, will provide an opportunity for the parent to reveal his or her apprehensions and to develop resolutions to the news.

It is helpful when professionals have prior knowledge about the attitudes, educational background, and communication abilities of the individuals to whom the information will be presented as these three factors can affect the encoding and decoding of messages. Kroth suggested that distortion and delay of acceptance of distressing information can be attenuated when the professional projects an attitude of sensitivity. In addition, a lack of sensitivity can result in a breakdown in the communication process. Familiarity with the nature of the subject matter to be presented will determine appropriate disclosure strategies. In some instances, there may be specially designed programs to provide additional information and support throughout the childhood years. Further, according to Kroth, professionals should acknowledge the families'

communication abilities. Every attempt should be made to present information to the family in their primary mode of communication (e.g., American Sign Language) and using verbal and written language appropriate to the educational background of the recipient of the information. It may be helpful to use a variety of communicative modes to reiterate the pertinent information discussed at the time of diagnosis. The three concepts discussed by Kroth should be carefully considered by professionals who deliver potentially distressing information to families. The goal is to ensure that the message was appropriately conveyed initially.

In addition to the above suggestions, the setting in which the news is to be delivered should be considered. A private and quiet room as free as possible from interruptions allows the parent to focus on the new, and perhaps technically complicated, information. Where possible, the mother and father should be present at the time of disclosure which should be immediately after testing. Lay terminology congruent with the educational level of the parents should be used in presentation of the information about the impairment. Parents of hearing impaired children and adults with hearing impairments encounter communication barriers because of the reduced hearing acuity. Therefore, Kroth's suggestions for consideration of attitude, educational status and communication abilities are viable for professionals committed to appropriate message conveyance.

Communication and Hearing Impaired Adults. Researchers have been interested in explaining communication breakdowns among hearing impaired adults. In order to ensure successful communication, it is imperative to recognize the barriers that occur within the communication process and investigate ways to eliminate such barriers.

Heine, Erber, Osborn, and Browning (2002) investigated communication and situational difficulties along with discourse needs of adults with hearing loss and their communication partners. Each of the subjects attended the Day Centre program at the Vision Australia Foundation in Kooyong, Victoria, Australia. The subjects were assigned to two cohorts (28 adults with sensory loss, 17 normal hearing communication partners). In addition, the sensory loss group reported being 'legally' blind; the communication partner group had mild vision deficits that were corrected with glasses. Data were collected from each cohort using a questionnaire designed to gather demographic, sensory, and communication information. Demographic data were used to determine the role of the subjects at the Vision Australia Foundation, their age, and how long they had attended the Centre. The sensory domain identified the type, degree, time of diagnosis, and hearing aid usage for the sensory loss group. The communication domain revealed the difficulties experienced when communicating with someone in difficult environmental settings.

Heine, et al. found that 68% of the sensory loss subjects reported difficulty communicating with normal and/or hearing impaired individuals, especially in group conversations and in the presence of background noise. Thirty-two percent of the sensory loss subjects revealed that conversing with a hearing impaired individual proved to be the most difficult while it was less difficult to communicate with friends (29%) and family members (25%). Eighty-nine percent of all of the sensory loss subjects asked the speaker to repeat statements for clarification.

In regards to situational improvements, Heine at al. reported that the sensory loss and communication partners suggested that communication could be enhanced if noise

was at a minimum (54%), the speaker was in close proximity (54%), the group size was reduced (50%), conversational rate was slower (50%), the intensity was increased (43%), and there was proper lighting (32%). However, the communication partner group alone reported that reduction in group size (29%), minimizing the presence of background noise (53%), closer proximity between the speaker and the listener (41%), increasing intensity (41%), and proper lighting (12%) could result in a more effective communication process. Overall, the communication partner subjects indicated that minimal difficulty was experienced when communicating with the sensory loss group. However, the sensory loss group encountered difficulty and reported that if the above-mentioned tactics were implemented, communication breakdowns would be greatly reduced.

Caissie (2000) investigated the incidence of barriers within the communication process as represented through topic shifting between normal hearing partners and hearing impaired individuals. Eleven adult males with bilateral acquired sensorineural hearing losses (mean pure-tone thresholds of 57.5 dB HL for the right ear and 47.9 dB HL for the left) participated in the study. Each of the participants was an active hearing aid user. Two females with normal hearing acuity were used to pose as unacquainted discourse partners. All conversations were videotaped for 20 minutes in a therapy room with background noise delivered from a cassette tape at 65 dB sound pressure level. The noise was used to mimic everyday communicative encounters. The first five minutes of the conversation were used to allow the dyadic participants to become familiar with one another; these interactions were not included in the data analysis.

In order to create a natural interaction between the hearing impaired participant and the partner, the communication partners were able to speak on any topic of their choice. According to Caissie, the topics of conversation included health, hobbies, hearing impairment, and grandchildren. Each of the conversations was analyzed in terms of four behaviors: topic initiation, topic shading (i.e., smooth transfer to a new topic), topic maintenance, and topic extension. Caissie referred to topic initiation and shading as topic shifting behaviors. Topic initiation also revealed how new topics were introduced within a conversational sample. Topic maintenance was noted when speaking turns maintained the current topic but with no additional information. Lastly, topic extension was coded when the partners contributed new information to the current topic. The four topic behaviors were tallied by Caissie based on the frequency of communication breakdowns.

Cassie found that 11% of the speaking turns were misinterpreted resulting in communication breakdowns. Forty percent of the breakdowns occurred after topic shading. While, 18% of the communication breakdowns occurred after topic initiation, 10% of the breakdowns occurred following topic extension. There were no communication breakdowns after topic maintenance. Therefore, the majority of communication breakdowns occurred when the topic was altered through shading or topic initiation.

Cassie concluded that audiologists should be aware that hearing impaired individuals need clear and concise speech to avoid communication breakdowns. As hearing health care professionals acknowledge that communication breakdowns do occur the likelihood of such breakdowns may be reduced. This could be facilitated by

presenting information using multimodality techniques. For example, speakers could be encouraged to use relatively simple syntax and to alert the hearing impaired listener that a topic change or expansion is about to occur.

When counseling a hearing impaired patient, consideration should be given to how a message is conveyed in order to facilitate effective decoding of that message. Researchers have demonstrated that the likelihood for communication breakdowns is high. However, when appropriate counseling strategies are used, breakdowns may be reduced and/or eliminated.

Martin, Barr, and Bernstein (1992) investigated the views of otolaryngologists and clinical audiologists in counseling adults with hearing impairments. One thousand, 18-item, questionnaires were mailed to otolaryngologists (500) and clinical audiologists (500) who were randomly selected for the study. The questionnaire items wee designed to gather demographic data, reports of the amount of time used in presenting diagnostic information, the amount of time spent with the patients on each topic, and the patients' perceptions of the level of counseling and the techniques used.

Martin, et al. found that on the average, audiologists spent 12.41 minutes presenting the results of hearing evaluations while otolaryngologists spent 11.95 minutes. The audiologists reported that the longest time spent was 26.94 minutes, with more emphasis devoted to the degree of hearing loss, assistive listening devices, and information about support or rehabilitation groups. Further, the audiologists used more verbal explanations and referrals to support groups when conveying the information. In contrast, the otolaryngologists reported that the longest time spent was 25.72 minutes and the information presented initially pertained primarily to the etiology of the hearing

impairment. In addition, the otolaryngologists used charts, pamphlets, and various reading materials to provide more details.

In addition, Martin and his colleagues found that the audiologists rated embarrassment and worry as emotional reactions from the patients more often than the otolaryngologists. The audiologists identified the frequently occurring emotions as acceptance (mean, 3.32), worry (mean, 2.59) sadness (mean, 2.34) depression (mean, 2.06), embarrassment (mean, 2.03), fear (mean, 1.96), and little or no reaction at all (mean, 2.23). In contrast, the otolaryngologists reported acceptance (mean, 3.47), worry (mean, 2.41), little or no reaction at all (mean, 2.26), sadness (mean, 2.23), depression (mean, 2.01), fear (mean, 1.85), and embarrassment (mean, 1.72) as the most frequently occurring emotions.

In terms of academic readiness for counseling, the audiologists reported practicum experiences as their primary source of education. The otolaryngologists stated that counseling preparation occurred during their medical residencies and fellowships. Further, the audiologists listed coursework in counseling, psychology, and role-playing and the otolaryngologists cited seminars, books, and pamphlets as sources of their academic preparation.

Martin, et al. reported that when audiologists and otolaryngologists were asked about their preparation and whether it was sufficient for counseling adults with a hearing impairment, 44.74% of the audiologists reported not being appropriately prepared while 40.23% stated they were prepared. However, 63.24% of the otolaryngologists reported adequate preparation and 24.26% reported inadequate training. Using these data, Martin et al. concluded that otolaryngologists appeared to be more suited for providing

counseling to adults with hearing impairments. However, the investigators interpreted the audiologists' responses as acknowledgement of the need for improvement in their academic preparation for hearing healthcare counseling.

It is obvious that audiologists and otolaryngologists should be sensitive to the manner in which verbal and nonverbal information is conveyed to their patients. The enhancement of verbal and nonverbal counseling communication skills may facilitate a decrease in stress levels of patients, parents, and family members as they are given suggestions for strategies to cope with a hearing loss. It is necessary for information to be presented in a logical and concise manner in order for patients to understand the hearing impairment and the intervention strategies that are suggested. However, the hearing health care professional hopefully will accomplish this with sensitivity to the potential reactions to what often may be perceived as distressing information.

Counseling Courses. Based on her investigation, English (2001) reported that a majority of audiology students expressed that it is not feasible or timely to add counseling courses to academic programs that are already full. However, the students did recognize the importance of using counseling techniques and were concerned about how to implement effective techniques into the work setting. To address this apprehension, English used four questions which, according to her, had not been addressed in previous studies. The questions were: (1) While taking the counseling course, were you concerned your practice setting would not allow "extra time" counseling might require?; (2) Six to twelve months after completing the counseling class did you still hold these concerns?; (3) Did you find counseling had to be "withheld" due to time constraints?; and (4) Did you find ways to integrate counseling into existing practices without using

additional time? (p. 248). In addition to answering these questions, the audiology students provided a concise explanation of the process implemented in integrating counseling techniques into their current practice.

Of the 108 questionnaires sent, 55 were returned via email. However, only 53 of the returned questionnaires were used as two of the respondents worked for hearing instrument companies at the time of the study. The respondents averaged 14.6 years of experience in audiology. The work environments were private practice (25%), university training programs (17%), school settings (17%), otolaryngologists' offices (13%), veteran's hospitals (11%), military settings (9%), and hospital settings (8%). Each of the respondents reported having completed a counseling course six to 12 months prior to the time of the study.

Approximately half the respondents reported being worried about the time required for implementing counseling techniques into their practice. However, the majority (70%) reported that with time and preparation, they found ways to use counseling strategies into their existing practices. Most of the respondents stated that they actually saved some time because they allowed the patient to lead the session. Ninety-four percent of the respondents noted that the process used to integrate counseling techniques was not as challenging as originally predicted. Fifty-four percent stated that it was hard to change the routine they were accustomed to for so many years.

English cautioned that this study used a small sample size and the participants were not randomly selected and thus generalization to the population of interest was limited. Even though English viewed this as a preliminary study, she concluded that implementation of effective counseling techniques can be accomplished efficiently.

In relation to the need for training in counseling techniques, English, Mendel, Rojeski, and Hornak (1999) investigated whether it was necessary for graduate students in audiology to take a formal academic course in counseling. English, et al. formulated two specific questions for their study: (1) "Do audiology graduate students provide technical information to patients' personal adjustment questions and comments?" and (2) "Is there a change in the proportion of informational and personal adjustment responses before and after taking a counseling course?" (p. 35).

English and her associates used 14 audiology doctoral (Au.D.) students to form two groups. Group One had two males and five females with a mean age of 24.8 years; Group Two was composed of seven female students who had a mean age of 25.2 years. English, et al. considered both groups to be identical with the exception of age and gender. Each Au.D. student had completed all the entry-level doctoral courses along with a counseling course.

As a pre-and post-test measurement, English and her colleagues used an eight-item test, administered on the first and last day of the semester in which the students were enrolled in the counseling course (the experimental treatment). This instrument was intended to reveal each student's potential to identify and reply appropriately to three types of facial expressions: limited understanding of technical verbalizations, individual anxiety, or a mixture of the two. No explanation was given for the expression categories nor was any rationale provided for the presentation of the facial expressions. The subjects used a five-point rating scale to qualify their responses as *very technical, somewhat technical, combination of technical and affective, somewhat affective*, or *very affective.*

The responses were scored by two audiologists and a counselor who specialized in hearing loss.

As the experimental treatment, English and her associates enrolled each of the participants in a counseling course in the fall of the third year of the audiology doctoral program. The goals for the course were to identify the distinction between professional and nonprofessional counseling services (e.g., psychotherapy vs. counseling), identify professional boundaries, and create an awareness of when recommendations for professionals counseling were warranted. The students were given four questions to consider: (1) "What are the psychosocial implications of hearing loss?; (2) How can the audiologist serve as a nonprofessional counselor?; (3) How can an audiologist transfer theory to practice?; and (4) How can we evaluate our effectiveness in counseling?" (p. 36). As part of the counseling course, in-depth discussions were provided that focused on these four questions.

English and her colleagues reported 336 responses for each group, 168 pre-test and 168 post-test. The post-test responses revealed a decrease in the technical response-rating category. Group One's responses for somewhat technical/very technical rating decreased by 60% from the pre- (88%) to the post-test (28%), while Group Two's decreased by 35% (60% pre-test, 25% post-test). English, et al. interpreted the decrease in scores as evidence that the students were aware of their use of technical terminology when counseling patients. English and her colleagues also found an increase in the affective response rating section, i.e., the students more readily identified with the patients' emotions. Group One increased in the somewhat affective/very affective

responses by 42% (9% pre-test, 51% post-test) while the responses from Group Two were and increase of 45% (12% pre-test, 57% post-test).

Based on their findings, English et al. reported that the participants did tend to provide technical information in response to the expressions of the psychosocial characteristics of the hearing loss. They noted that the course was designed to teach the psychosocial aspects of hearing loss and facilitate listening and responding abilities. When evaluating percentage of informational and personal adjustment responses, a significant change was reported for the affective responses given to the affective comments. Therefore, the training course seemed to enhance the participants facilitative listening skills and responding skills.

English, et al. stated that the comparison of pre-and post-test responses was considered inconclusive due to not having a control group for the study. These investigators recommended continued research to more fully determine if a formal academic counseling course resulted in changes in the behavior of audiologists.

While health care professional may have a natural ability for counseling this is a foundation that can be enhanced with further education and practice. Use of a communication process model may be an avenue to ensuring more successful intervention and counseling. Audiologists who use a communication process model may become more effective counselors which in turn will lead to a higher level of parental satisfaction with audiological services.

Parental Satisfaction. Meadow-Orlans, Mertens, Sass-Lehrer, and Scott-Olson (1997) surveyed parents of hearing impaired children to collect information regarding their level of satisfaction with services provided to them and their children. The survey

was used to gather the following data: (a) the age of the child at the time of diagnosis and when intervention was begun; (b) intervention techniques that were recommended, used, and acknowledged by the family; (c) the level of participation in the intervention by the parents, caregivers, and other family members; (d) parental satisfaction with the services provided; (e) the level of familial stress and professional support for that stress; and (f) parental reports of social and communicative development of their children.

Meadow-Orlans, et al. mailed the Gallaudet University's Center for Assessment and Demographic Studies (CADS) to parents of six and seven year old children enrolled in 500 educational programs. Of the 1,147 questionnaires mailed, 404 were returned from 39 states and the District of Columbia.

The CADS has seven sections: background information, services received, sources and degree of helpfulness, behavioral characteristics of the child, the child's communication abilities (language), parental reactions to the diagnosis of the hearing impairment, and family characteristics. In the families used in the study, 46% percent of the children had been diagnosed as deaf and the remaining were identified as hard-of-hearing.

Subject (parents) demographics revealed that 10% of the mothers and 11% of the fathers were deaf/hard-of-hearing. Ten percent of the mothers were married to husbands who were deaf/hard-of-hearing and 9% of the fathers were married to wives who were deaf/hard-of-hearing. The socioeconomic status of the parents ranged from lower to upper class. Sixty-seven percent of the subjects were Caucasian and one-third represented other ethnic backgrounds.

According to parental reports, Meadow-Orlans, et al., found a delay of at least five months between the time the parents voiced a concern about possible hearing problems in their children and the diagnosis. All the parents reported that they entered their children into some type of educational program following the diagnosis of the hearing impairment. The lag time before entry into an education program for deaf children was 15.9 months and the hard-of-hearing children was 11.2 months. The majority (60%) reported choices of which program was best suited for his or her child.

Meadow-Orlans, et al. found that the parents were provided beneficial information about their children's hearing impairment. Sixty-eight percent of the parents received information about their child's legal rights, 64% were given information about the development of their child, 59% received information about future educational options, 71% were given information on sign language instruction, 69% had group meetings available to them, and 43% received counseling. The parents positively evaluated the early services provided to them and identified teachers as providing the most helpful support.

Meadow-Orlans and her colleagues noted that the deaf/hard-of-hearing children of parents in this study tended to have higher behavioral ratings (e.g., acting out) because of the difficulties associated with their hearing impairments. For instance, they may have been identified as being disruptive due to the fact that they do not understand being reprimanded.

Meadow-Orlans, et al. also reported that the parents' hearing level, age at which their child was diagnosed with the hearing loss, and the mother's educational level did have both a positive and negative impact on the data. In addition, the researchers found

that the scores of parents of children with additional disabilities were significantly increased in all areas when compared with those of parents of children who were just diagnosed as having a hearing impairment.

The findings of Meadow-Orlans and her associates revealed that diagnosis of the hearing impairment was not immediate and that additional disabilities did have a negative effect on the parent and child. However, the researchers found that children with additional disabilities seemed to be diagnosed quicker than those who were just hearing impaired. The parents who had negative attitudes toward the hearing impairment did not receive as much support from professionals as did those parents who were judged to have positive attitudes. If the implication is that evidence of negative parental behaviors could hinder the intervention process, then audiologists should have the skills to attenuate the impact on the child and the family unit. Meadow-Orlans and her colleagues recommended additional research to gather more comprehensive information about parental perceptions relative to the topical areas used in this study.

Family. Mahoney and O'Sullivan (1992) investigated the relationship of family functioning to a child's disability and the wants/needs of the mothers for early intervention. The names of 1000 professionals were randomly selected from the Division of Early Childhood directory to receive questionnaires to distribute to parents of children with disabilities who ranged in age from infancy to six years; 527 questionnaires were returned.

Mahoney and O'Sullivan designed a questionnaire with four sections. Section one contained 90-items to assess 10 parameters of family functioning that reflected three typical dimensions of a family environment: relationship (the openness of family

members), personal growth (how family members encourage personal growth), and systems maintenance (emphasis on structure in family life). The second section used 12-items from the *Arizona Social Support Scale* to assess mothers' satisfaction with social support across six dimensions: openness of feelings, opportunities for loans, advice, recognition of ideas, assistance from others, and recreation. The third section was a 40-item *Family Focused Intervention Scale* with five subscales to assess the mothers' actual needs for early intervention. Section four was used to gather demographic information about the families.

According to Mahoney and O'Sullivan, their study reflected the views of middle class families; 5% were classified as minority, 9% were single-parent households, and 41% represented families from rural areas of the United States. Fifty-eight percent of the children in these families were boys and 42% were girls. Seventy-three percent of the parents reported having a child with a moderate to profound disability. The disabilities were represented as Down's syndrome (22%), cerebral palsy (20%), mental retardation (15%), developmentally-at-risk (10%), and sensory impairments (6%).

When Mahoney and O'Sullivan compared the responses of their subjects to the *Family Environment Scale* with the normative sample, they found a relative high degree of consistency. The exception was that the families of children with disabilities tended to participate less often in recreational activities and to have a stronger moral-religious orientation. Mahoney and O'Sullivan interpreted these differences as evidence that children with disabilities have adverse effects (e.g., stress, more disruptive lifestyle) on the overall family environment.

The findings from the *Family Focused Intervention Scale* also revealed that the mothers in this study had a high need for early intervention services, systems engagement (structured environment), and child information. Personal/family assistance was rated as being least needed. In addition, Mahoney and O'Sullivan reported that the need for intervention by the mothers was not in direct relation to the severity of the child's disability, socioeconomic status, or to any of the subscales of the *Family Environment Scale* with the exception of cohesion. Mahoney and O'Sullivan stressed that early intervention is a crucial aspect of the counseling process and may reduce apprehension the parents experience upon the diagnosis of a child's hearing impairment.

In a similar study, Meadow-Orlans (1995) investigated stress experiences of mothers and fathers of deaf infants and how this affects early intervention and support services. This longitudinal study was conducted with 40 families over a time period of two and one-half years.

Twenty of the families had infants with normal hearing and twenty had deaf or hard-of-hearing infants. All the infants with a hearing loss were diagnosed before the age of nine months. The parents were representative of urban, middle class, college-educated people who had access to health care. Mothers within the two groups were categorized by educational status (average education of 16.3 years). Infants were categorized according to gender (12 boys, 8 girls), and normal developmental status (*Physical and Self-Help Scales*; Alpern, Boll, & Shearer, 1980). Meadow-Orlans used *The Parenting Stress Index* (Abidin, 1986), *The Scale to Measure the Stress of Life Events* (Dohrenwend, 1973; Holmes & Rahe, 1967; Thoits, 1983), and a face-to-face interview to gather information about the stress experiences of parents. The *Parenting Stress Index*

has 101 items found under the headings of either Child or Parent Domains. The Child Domain (47 items) has six subscales: adaptability, acceptability, demandingness, mood, reinforcing parent, and distractibility/hyperactivity. The Parent Domain (54 items) uses seven subscales: depression, attachment, restriction of role, sense of competence, social isolation, relationship with spouse, and parent health. The *Scale to Measure the Stress of Life Events* is a list of 30 events thought to increase stress. The subscales contain items to assess stress levels related to personal relationships, care of a young child, health, finances, and work. Meadow-Orlans directly interviewed the mothers in a laboratory setting when the infants were nine, 12, and 18 months of age for updates on the developmental status of their children.

Responses to the parent domain items in the *Parenting Stress* Index revealed that the fathers of deaf or hard-of-hearing infants were less attached to their infants than the mothers, mothers of deaf or hard-of-hearing infants were more depressed than the fathers, and the mothers of both groups reported an increased amount of stress related to restriction of their roles and relationships with their spouse when compared to the husbands. In contrast, responses to the child domain section showed that the fathers of deaf or hard-of-hearing infants rated the children as less acceptable and more demanding than did fathers of hearing infants. Mothers and fathers of deaf and hard-of-hearing infants rated the children as more distractible and hyperactive than did the parents of hearing infants.

Meadow-Orlans found that the scores from *The Scale to Measure the Stress of Life Events* revealed that mothers of deaf and hard-of-hearing infants had higher stress levels than did their husbands or the parents of hearing infants. Stress scores of mothers

with deaf and hard-of-hearing infants were higher than those of their husbands and mothers of hearing infants on the subscales of care of a young child and health. Mothers of deaf and hard-of-hearing infants and mothers of hearing infants showed higher stress than did their husbands on the subscales that related to money and work.

Based on these results, Meadow-Orlans suggested that more attention should be focused on the needs of fathers of children who are deaf or hard-of-hearing because they seemed less attached to their children than did the mothers. However, she supported the need for the entire family unit to receive counseling throughout this child's development. Each family will have unique counseling needs and appropriately trained audiologists will be prepared to meet those needs, especially for families experiencing a new diagnosis of hearing impairment.

In addition to their technical skills, there is a need for audiologists to be adept in counseling. As health care providers, audiologists are encouraged not only to be aware of the stress associated with a hearing impairment or deafness but to implement strategies to help minimize the stress levels. Parents of children who are deaf or hearing impaired will not only be grieving but may also experience higher levels of stress as they manage a multiplicity of variables related to the hearing impairment. The role of the audiologist is to provide the best level of care possible for the family as a unit. Effective counseling skills will improve the services provided, limit communication breakdowns, and reduce the overall stress levels of the parents and patients.

Counseling

Counseling is defined in the American Heritage Dictionary (1994) as "the act of exchanging opinions and ideas; consultation; advice or guidance" (p. 198). Counseling

may be considered an interpersonal helping relationship. This relationship is initialized when a patient begins determining what he or she thinks and feels and what intervention techniques to seek for a better quality of life. The counseling process should begin immediately and in the initial session (Luterman, 1987). Clark and Martin (1994) stated that, through counseling, one is capable of developing and maintaining a strong patient-professional relationship. And, as suggested by Clark and Martin, "counseling is a recognized and vital component to the intervention services that we provide to our patients" (p.2).

Audiologists often feel uncomfortable counseling their patients because they may be unsure of how long and detailed the counseling process should be. Other reservations regarding counseling may stem from differences audiologists encounter between themselves and their patients, as for example differences in age, gender, physical anomalies, etc. It is therefore imperative that hearing health care professionals set aside their biases and identify the commonalities they may share with the patient.

According to McCarthy, Culpepper, and Lucks (1986) most of the uncertainty associated with counseling patients resulted from limited academic exposure to various counseling techniques. These authors surveyed directors of Educational Standards Board accredited programs to obtain information about training and preparation of students for client counseling. Only 12% of the directors reported that their graduate programs in communication disorders provided adequate preparation in counseling for students to appropriately meet the needs of their patients.

According to Clark and Martin (1994), the majority of counseling is provided by academically trained individuals such as audiologists, lawyers, educators, family

physicians, etc. A small percentage of individuals who need counseling seek the services of a professional counselor (e.g., social worker, psychiatrists, or psychologists). Even though audiologists may serve the counseling needs of their patients, the goal need not be to identify or resolve all the conflicts presented by those who receive audiological services. In an audiology practice, supportive counseling techniques may be used to create a foundation for changes in negative client perceptions. An overall focus is to help patients and families make needed but sensible adjustments in their lives. These adjustments should help them have a positive outlook about their own handicap, make decisions as to what assistive devices are appropriate, and manage difficulties they may experience after intervention.

Academically trained counselors are typically exposed to a wide range of counseling theories during their formal training. Of these available theories, healthcare professionals may find the person-centered, behavioral, and cognitive theories of counseling to be of particular benefit.

Person-Centered Theory. According to Clark and Martin, the person-centered theory is a nondirective approach with the underlying principle that the "patient knows best". The role of an academically trained counselor is to help patients identify their own assets to resolve their problems. The patient is challenged to take accountability for his or her life and place trust in internal resources while strengthening his or her understanding and self-acceptance. When the counselor accepts the patient's behaviors and attitudes, the patient will start to recognize his or her own inner resources for use in making decisions. As this takes place, self-worth increases. Two personal attributes of a

counselor that will foster counseling efforts are self-congruence and empathic understanding.

Academically trained counselors who are congruent with themselves act naturally. They have the ability to present information using lay terminology which in turn creates a less threatening environment for the patient. This trait allows a professional to remain calm, open, and willing to take suggestions and criticisms from the patient. Empathic understanding is the ability to be an active listener in order to understand, as fully as possible, a patient's wants and needs. Empathy allows a professional "to 'absorb the emotionally laden, poorly defined problem' as expressed by the patient and then reflect the problem back to the patient" (p. 8). The manifestation of self-congruence and empathic understanding empowers the academically trained counselor to guide the patient to reach the preferred outcome.

Behavioral Theory. The behavioral counseling theory is much more directive and is based on the principles of operant conditioning. Operant conditioning was defined as "a behavior is learned when followed by a circumstance that brings satisfaction to the individual" (Skinner, 1953 as cited in Clark & Martin, p. 9). Using the principles of this theory, the professional more directly guides the patient toward the desired goal. The professional and patient work side-by-side in environmental conditions that are purposefully designed to modify behaviors in ways that are rewarding to the patient. Thus, the emphasis is on changing learned behaviors.

Cognitive Theory. It is also important to address irrational thoughts or beliefs associated with certain behaviors. A cognitive approach allows the academically trained counselor to identify irrational beliefs that may hinder the intervention. These irrational

beliefs, if not addressed, can lead to negative feelings and behaviors that are counter productive for the intervention process.

A professional, such as an audiologist, who assumes a counseling role can be compassionate and intuitive to as he or she helps the patient to view experiences from a practical perspective. A cognitive theory emphasizes linguistic modifications. Therefore, the audiologist may ask direct questions about any assumptions expressed by the patient. For example, the use of the word *but* instead of *and* can infer two types of outlooks. For example, "I would wear my new hearing aids *but* they are too bulky" or "I wear my new hearing aids *and* they are too bulky". Attention to linguistic modifications allows a patient to take responsibility for his or her actions. When counseling the patient about linguistic modifications, the academically trained counselor must already have a strong and open relationship with that patient. Role-playing may be used to model for the patient why the thoughts are irrational and what thoughts and behaviors may be considered more rational and subsequently more practical. The use of analogies and humor are good tactics for building a stronger relationship with the patient.

Eclectic. Some academically trained and professional counselors believe it is more beneficial to use an eclectic approach which is a mixture of counseling theories. Since every patient is unique, this approach may allow the academically trained and professional counselor to more readily identify with their patients. It provides the counselor with an array of techniques and approaches. Therefore, if one method alone fails to result in improvement, a mixture of various methodologies may prove to be the most valuable since individual circumstances do tend to vary significantly. When

considering appropriate counseling techniques, consideration should be given to viewing communication as a process that has certain identifiable steps.

Communication and a Communication Process Model

DeVito (1999) defined communication as a natural phenomenon that involves the transmission of information from one person to another to achieve shared meaning. Communication is important simply because it encompasses all meaningful interactions among lifeforms. Two important concepts to consider when communicating are the spiral of silence and cognitive dissonance.

According to Jordan (2000), Elisabeth Noelle-Neumann proposed the spiral of silence concept in 1971 which is considered to be one of the most influential theories about the nature of public opinion. The spiral of silence refers to how individuals tend to remain silent when their views are in the minority. Noelle-Neumann contributed the spiral of silence to fear of isolation. Therefore, patients may tend to withhold information they fear will be negatively perceived by the audiologist. Therefore, an audiologist may need to establish the kind of counseling relationship that will be conducive to the patient's divulging pertinent information without fear of negative consequences.

Cognitive dissonance refers to an agonizing mental state where individuals find themselves doing things and/or having opinions that contradict their beliefs and values (Festinger, 2006). Therefore, healthcare professionals should consider that patients may be more open and trusting when they perceive similarities between themselves and the healthcare provider. Patients tend to be more accepting of information when that information is provided in a concise and empathetic manner. In addition, a professional's appearance may positively or negatively influence the perceptions of the patient.

Furthermore, the overall exposure level of the patient along with his or her preconceived notions toward the professional will influence the amount of useful information retained by the patient.

Nonverbal Communication. Communication is also a process that should be evaluated based on the communication context and not as an isolated event (Adler & Elmhorst, 2002). Messages be conveyed verbally and nonverbally and both modes of conveyance affect the communication process.

Adler and Elmhorst (2002) defined nonverbal communication as any message that is not divulged using linguistic means. Nonverbal communication can be expressed through any of the sensory channels, sight, sound, smell, touch, and taste. According to Adler and Elmhorst, nonverbal communication contains communicative values, is dominant, ambiguous, discloses attitudes, and is culture-bound. Nonverbal messages are sometimes presented unintentionally; however, all components of one's body image and language along with the nuance of one's voice have the potential to express some degree of meaning. The power of nonverbal communication is conveyed through one's overall impression of others based on their appearance and mannerisms. The majority of nonverbal behaviors tend to vary across cultures; however, facial expressions representing happiness, fear, anger, surprise, sadness, and disgust are universal among cultures.

In a face-to-face encounter, only a limited amount of the message is expressed through the words used. The majority of the message is portrayed through the paralinguistics of speech (voice, accent, speed, volume, and inflection). Further, nonverbal communication typically occurs simultaneously in numerous forms. For

example, appearance, paralinguistics of speech, facial expressions, posture and body movement, along with personal space and distance all contribute to the communication process.

Appearance. Our bodies are a valuable source for communication with others. Appearance plays a large role in how one is perceived by others. In addition, appearance affects how a communicator's message is comprehended in informal and formal communicative interactions. Appearance incorporates both physical and nonphysical factors. One's physical appearance such as size, shape, height, and overall attractiveness will influence the perceptions of others. Further, the way one dresses will also impact how others view him or her. Individuals who work in healthcare environments want to be perceived as knowledgeable and likable by their patients; therefore, they should dress in professional attire. Adler and Elmhorst suggested that when considering the type of wardrobe one should acknowledge what is around them, be flexible, know the difference between "casual" and "sloppy", and always dress for the job one is seeking. In addition to appearance, the messages being conveyed will rely heavily on the paralinguistic aspects of speech.

Paralinguistics of speech. An individual's voice, according to Adler and Elmhorst, has the ability to communicate in ways that have no link to the spoken utterance. For instance, when one overhears people communicating in a foreign language, the speaker's feelings (e.g.,, excitement, boredom, grieving, fatigue, etc.) may be obvious even though the words are not understood. Paralanguage encompasses an array of vocal characteristics that includes pitch (high vs. low), range (spread vs. narrow), articulation (precise vs. imprecise), rhythm (smooth vs. jerky), volume (loud vs. soft),

resonance (resonant vs. thin), tempo (rapid vs. slow), dysfluencies (um, er, etc.), and pauses (frequency and duration). These message characteristics have the potential to convey emotions. In addition, where a speaker uses stress within an utterance can affect the way that utterance is perceived by the listener. Facial expressions may also influence how a message is conveyed and perceived.

Facial expressions. Facial expressions along with eye movements are used to convey various emotions when speaking. A skilled nonverbal communicator has the ability to control both facial expressions and eye movements to get the reaction warranted from the listener. Eye contact alone is a prime indicator of how attentive and involved an individual is in a communicative interaction. According to Adler and Elmhorst, in the majority of one-on-one communication encounters the partners will look at one another approximately 50 to 60% of the time. Those who communicate with individuals from different ethnic backgrounds need to be aware of cultural variations for eye contact and facial expressions. For instance, some cultures view avoidance of eye contact as showing respect to others. In addition, one's posture and bodily movements have an impact on messages across cultures.

Posture and body movement. Posture and body movements influence message communication in a variety of ways. For example, posture can denote a level of interest in the message and suggest topical attitude. Five types of body movements have been identified: emblems, illustrators, affect displays, regulators, and adaptors (Ekman & Friesen, 1969; Knapp & Hall, 1996; as cited in DeVito, 1999).

Emblems refer to body movements which result in a direct word or phrase translation. For example, there is the thumbs-up symbol for "good job". On the other

hand, illustrators heighten the verbal message as when making a gesture to the right, one may illustrate this through a hand motion, head turn, and/or an entire body turn. Affect displays are facial movements (e.g., smiling, frowning) that are made along with movements of the hands and body (e.g., tensing, postural changes, etc.). Affect displays are used primarily to communicate emotional meanings and regulators are actual behaviors used to monitor and maintain the speech of others. For example, a head nod allows a speaker to know that a listener is intrigued and the message should be continued.

Adaptors are those individual gestures which appease a personal need as when the nose may be scratched to relieve an itch. Three types of adaptors have been identified. An example of a self-adaptor is pulling one's hair out of the eyes. Removing an eyebrow from a communicative partner's face is an example of an alter adaptor while doodling may be an object adaptor. Proxemics must also be considered when manipulating nonverbal communicative techniques.

Personal space and distance. Proxemics refers to spatial characteristics which influence various messages. Hall (1996) identified four distances that define one's personal space during communicative interactions. An intimate distance ranges from touching to 18 inches between the communicators. The personal zone ranges from 18 inches to four feet while the social distance ranges from four to 12 feet. The public zone is considered to be greater than 12 to 25 feet. Proxemics contribute to nonverbal communication and have a significant impact on how messages are perceived by listeners. To ensure shared meaning, these contributors have to be considered.

When the ultimate goal is to achieve shared meaning, consideration should be given to a communication process model. Both nonverbal and verbal messages will

influence the communication process. A communication process model is seen as a transactional process since each individual within a communicative encounter will serve as the speaker and listener simultaneously. Therefore, both verbal and nonverbal cues are important for any communication encounter. When the verbal and nonverbal messages are produced effectively and in conjunction with one another, shared meaning may occur.

According to DeVito, (1999), the transactional process views "the elements of communication as interdependent (never independent)" (p. 7). All the elements of the communicative process occur in reference to one another. Any change or alteration in one of the elements may result in an overall change in the communication interaction. DeVito stated, "through communication, people act and react on the basis of the present situation as well as the basis of their histories, past experiences, attitudes, cultural beliefs, and a host of related factors" (p. 7). In communication, the way a message is perceived is not necessarily a direct result of what was said but is also a product of the interpretation of that message.

In the transactional communication model, DeVito defined communication "as occurring when you send or receive messages and when you assign meaning to another person's signals" (p. 8). Human communication contains distortion (e.g., noise), is a process, happens within a context, results in an effect, and allows for feedback. Messages can be conveyed as a process within a communication process model.

Communication Process Model

Models are metaphors; they provide individuals with the ability to perceive one thing in relation to another. The purpose of a model, according to DeVito, is to predict and explain, pose questions, clarify intricacy, and seek innovative discoveries. The

communication process model proposed by Adler and Elmhorst (2002) has seven components: message, channel, encoder, receiver, decoder, feedback, and noise. The combination of these components combined make up a typical human communication interaction.

Message. A message is considered a signal transmitted by any means through one or more of the sensory organs of the body. Everything about a person is communicated in some form or another (DeVito, 1999). For example, how one is dressed, the way a person carries himself or herself, along with his or her facial expressions will have an impact on the message being conveyed. Again, shared meaning is influenced by the transmission of verbal and nonverbal messages.

DeVito discussed two types of messages. Metamessages are "messages that refer to another message" (p. 12) and verbal and nonverbal messages may be portrayed as metamessages. For example, asking someone "Do you agree with what I am saying?" is a verbal reference to communication. In contrast, a winking of the eye or crossing of the fingers behind the back may be a nonverbal message that a speaker is not being truthful.

Feedforward messages, according to DeVito, refer to information that is transmitted prior to the primary message. Feedforward messages signal what is forthcoming and may be verbal (e.g., "I have a funny story to tell") or nonverbal (e.g., prolonged silence).

Channel. A channel is a medium through which messages are transmitted and all communication messages will be delivered through a channel. Adler and Elmhorst (2002) maintained while the majority of messages are delivered through multiple channels, the individual delivering the message will choose the appropriate channel for

his or her message. A message may be communicated verbally (face-to-face), over the telephone (voice only), in written form (letter, memo), and/or mediated (e.g., newspaper).

Encoder. An encoder, according to Adler and Elmhorst, prepares the initial message by formulating ideas and thoughts which will result in a message. The message will be formulated in accordance with the listeners' understanding of the topic. In addition, the channel chosen to deliver the message will relate to the listener and the encoder's understanding of the subject. Through careful consideration of terminology, method of delivery, and the appropriate channel for transmitting the message, the receiver should have a clear and concise understanding of the topic. As a result, shared meaning has its beginning.

Receiver and Decoder. The receiver/listener detects the transmitted message and attaches meaning. The receiver and the decoder are closely related elements of the communication process since both are initially perceived as listeners. Once the message has been detected, the receiver decodes the message. That decoded message is then sent to the language center in the brain in order to achieve shared meaning. When the message has been properly decoded the receiver/decoder will respond to the information and the response may be a negative or positive one.

Feedback. DeVito (1999) defined feedback as "information that is given back to the source" (p. 416). Feedback occurs in two forms. The first form is self-feedback, which is accomplished through hearing and seeing what is verbalized and/or gestured from ones' own message(s). The second form of feedback is obtained from those receiving and listening to the message. Therefore, feedback results from sending and receiving a message and can be accomplished verbally or nonverbally. Feedback may

also be positive or negative or contains elements of each. As an example, noise is a sound source which may negatively impact the communication process and result in negative feedback.

Noise. Noise was defined by DeVito anything that will hinder or alter the message. Noise may also disrupt how the receiver receives the message and result in improper decoding of the message. There may be external or physical noise (e.g., people talking, cell phones ringing, etc.), physiological noise (e.g., hearing impairment, memory loss), and psychological noise (e.g., egotism, preoccupation, extreme emotionalism, etc.). DeVito also included a semantic noise source that may occur when listening to a foreign language, complex terminology, or colloquial speech. DeVito suggested that a semantic noise source may result in speakers and listeners assigning different meanings to the message. Regardless of the source, noise has to the potential to cause interference with the message being transmitted resulting in a communication barrier that does not allow shared meaning to occur.

Communication Contexts

The communication process can be altered according to the context in which it occurs. The physical context is responsible for the content and quality of interaction. For example discussing a grade on an assignment in the professors' office, in the hallway, or at a school gathering will influence the delivery and interpretation of the message. The social context for communication refers to the relationship between sender and receiver; the student and the professor may have no personal contact outside the classroom or they may have been friends for a long period of time. The chronological context has to do with the way time alters the interaction. Whether a communication exchange occurs as

the first one in the morning or the last one in the afternoon will again influence the content, delivery, and interpretation of the message. The ethnicity or nationality of the communicators constitutes the cultural context as may be evident in exchanges between southerners vs. northerners or speakers of Cajun French vs. speakers of native French. A healthcare provider who uses a communication model may be a more effective conveyor of messages.

Hantho, Jensen, and Malterud (2002) developed a model to explain the communication process for healthcare professionals in a medical setting. The model was based on theoretical inspirations, a synopsis of personal experiences, and an analysis of taped interactions in general practice settings. Hantho, et al. used 43 tape-recorded consultations with one male and one female medical doctor. During the recording, only the doctor and patient were present; following the consultation the tape was replayed for the two of them. A psycholinguistic then presented questions to the doctor and patient to probe their understanding of the content of the medical consultation.

Using the responses, Hantho et al. identified four domains of understanding: the framework (where communication occurs), subject, people actively participating in the conversation, and action (verbal and nonverbal communication). The framework was the structural conditions under which the physician and patient met and was considered to influence how the two interacted. The framework was considered to have four parts: (1) the setting (where the interaction took place); (2) the time aspect (time allotted for the interaction); (3) the social aspect (physician's role vs. patient's role); and (4) the cultural aspect (cultural background of the two participants). The second domain, the subject, refers to the matter(s) discussed in the consultation between the individuals participating

in the interaction (the third domain). Action, the fourth domain, was the actual interchange of the message with the goal of concisely conveying the message to reach mutual understanding. Hantho, et al. described these domains as interrelated so that if one domain is changed, the overall communication process is altered.

Hantho, Jensen, and Malterud concluded that medical doctors should become better active listeners. In order for effective communication to occur, the doctors need to really hear the patient's concerns and wants. "As a logical consequence, the understanding of a message is connected with the self (the person), the situation (the context), and the meaning assigned to the message. Understanding and meaning are inseparable" (p. 249). If health care professionals use a communication process model, communication breakdowns may be minimized.

Development of a relationship is a continuing task that involves opening the discussion, gathering information, understanding the patient's perspective, sharing information, reaching agreement on problems and plans, and providing closure. During the initial session, the patient should be allowed to provide opening statements and express his or her needs and wants. To gather information, the healthcare professional may use open and closed-ended questions, ask for clarification, and summarize information provided all accomplished within a context of verbal and nonverbal active listening.

To gain understanding of their patients, the healthcare provider should gather information about contextual factors (e.g., family history), probe for feelings and expectations about the condition which brought the patient to the provider, and provide feedback. While sharing information, the provider should use terminology that the

patient will understand, clarify the patient's understanding of the information presented, and encourage questions. After mutual understanding of the problems and plans has been reached, the health care provider can foster participation by the patient, determine the capability of the patient to follow the intervention plan, and provide informational resources and support.

Statement of the Problem

Communication skills are a crucial asset for audiologists who counsel patients daily about the severity of their hearing impairment, how it will alter their lives, coping strategies, and proper intervention techniques. The acquisition of counseling skills is a process that grows and develops throughout a professional's career. When conveying information that is considered life altering, such as a hearing impairment, consideration should be given to the setting in which the information is provided, the terminology used, the grieving process, coping strategies, attitudes of the professional and the client, the modalities used for information presentation, and the amount of detail initially provided. When these components are not considered, there may be a breakdown in the communication process resulting in confusion, misunderstanding, and misinterpretation.

In addition to his or her technical knowledge and skills, a successful audiologist must have the ability to interpret test results and provide intervention recommendations in ways that are understandable and acceptable to individuals with hearing impairments. Thus, audiologists need counseling skills that facilitate communication with service recipients and so direct training in the communication process is important for audiologists. The purpose of this capstone project is to develop a protocol based on a

communication process model that could be used for teaching audiologists to recognize and reduce communication breakdowns thereby enhancing their counseling effectiveness.

CHAPTER II

DEVELOPMENT OF A COMMUNICATION PROCESS TRAINING MODEL

Communication has been defined by DeVito (1999) as the transmission of information from one person to another to achieve shared meaning. Through achieving shared meaning, all parties involved in the communication process will have understood the importance of the message. Communication is not an isolated event and should be evaluated in context since verbal and nonverbal messages may be exchanged during any interaction. In addition, communication is unavoidable, irreversible, and unrepeatable. According to DeVito, the purpose of communication is

> to learn, relate, help, influence, and play. To learn to acquire knowledge of others, the world, and yourself; to relate to form relationships with others, to interact with others as individuals; to help to assist others by listening, offering solutions; to influence to strengthen or change the attitudes or behaviors of others, and; to play to enjoy the experience of the moment (p.21).

Any communicative interaction may be conveyed through verbal and nonverbal means. Beer (2003) suggested that more than half of any information conveyed in a message is communicated through nonverbal channels. According to Preston (2005), nonverbal messages may have a positive and/or negative effect on the verbal message. However, when a conflict arises between the two the nonverbal characteristics typically prevail.

Communication Process Model

The purpose of a model is to predict and explain, pose questions, clarify intricacy, and foster innovative discoveries (DeVito, 1999). Adler and Elmhorst (2002) developed one influential communication process model that has seven components: a message, channel, encoder, receiver, decoder, feedback, and noise. Each component contributes to the communicative process both positively and/or negatively to achieve shared meaning. These combinations of these seven components comprise a typical human communication interaction.

The message is a transmitted signal that results in a response from the receiver. A message may be intentional (e.g., speaking) or unintentional (e.g., batting ones' eyes, sighing). A sender encodes the message into appropriate words and/or gestures in order to transmit the message to the receiver. When encoding a message, the sender must formulate the message considering proper terminology, method of delivery, and an appropriate channel, in order for the message to be conveyed accurately. The channel/medium is the method chosen for delivery of the message. When communicating a message one may choose to deliver it in a written form, face-to-face, voice only, or mediated. The receiver is one who detects and then attaches meaning to the message. A receiver must then decode the presented message and send it to its final

destination which is the language center in the brain to attach shared meaning. Severin and Tankard (1992) stated that

> in oral speech, the source is the brain, the transmitter is the human voice mechanism or vocal system, the channel is the air, and the signal is the varying pressure passing from the vocal system of one person to the ear of another (p. 40).

Feedback can be thought of as a loop. The sender transmits the message, the receiver decodes the message, and then the receiver formulates a reply to be delivered verbally or nonverbally or perhaps both. The communicative process may be negatively impacted by noise.

DeVito (1999) described noise as any interference that will mask the signal being transmitted thus contributing to communication breakdown. DeVito identified three primary types of noise: external/physical (e.g., people talking, cell phone ringing), physiological (e.g., hearing impairments, illnesses), and psychological noise (e.g., egotism, preoccupation). The contexts in which communication may occur must also be considered in a communication process model.

Communication Contexts

Four communication contexts have been identified. The physical context, is the concrete environment in which the communicative interaction occurs (e.g., a funeral vs. a football game). The second is the social context which refers to the relationships among and between senders and receivers along with the emotional dimension and the formality of the interaction (e.g., a formal dinner vs. a cafeteria). The chronological context has to do with the ways in which time and experiences alter the interaction (e.g., winning a vacation trip vs. learning of a death). The fourth context is the cultural context, which

refers to ethnicity, nationality, beliefs, values, behaviors, and the overall lifestyle of the communicators (e.g., a Cajun French speaker vs. a Native French speaker). Another part of the communication process that has to be considered especially when conveying unexpected and perhaps potentially devastating information is the reaction to that news. The stages in reaction to a crisis are often discussed as the grieving process.

Grieving

Grief may be defined as "deep mental anguish, as that arising from bereavement; a source of sorrow or anguish; and/or an annoyance or frustration" (American Heritage Dictionary, 1994, p. 369). Grieving is a complex process with identifiable stages. Kubler-Ross (1969) identified five stages in this process: denial, anger, bargaining, depression, and acceptance. Denial is typically one's initial reaction to a loss such as a hearing impairment. At this point, there may be some realization that a problem exists but the individual may not yet be ready to accept that it is serious enough to warrant intervention. The second stage, anger occurs when the individual can no longer sustain denial. Following is bargaining, the third stage, which occurs when the individual prolongs acceptance of the loss or perhaps views the impact as minimal. When the individual has found no satisfaction in any of the other stages but is not yet ready to accept the loss, depression may occur. The final stage of the grieving process is acceptance at which time the individual will have come to terms with the loss.

Grieving is a highly individualized process that occurs when individuals experience a loss, pain, death of a loved one, and/or dying. The diagnosis of a hearing loss is idiosyncratic affecting individuals in different ways. The sequential progression through the stages and the amount of time spent in each stage will vary according to the

type of loss and the individual. Therefore, grieving should be considered a natural phenomenon that will vary from person-to-person based on the needs and extent of the loss.

Regardless of the circumstances, an individual should receive support and encouragement from healthcare professionals to facilitate his or her progression through the stages in reaction to a crisis. For example, audiologists can provide factual information about hearing losses and support groups for hearing impaired individuals and provide suggestions for communication strategies to cope with the hearing loss. The individual needs sensitive support and understanding in the progressions to the acceptance stage at which time he or she will better able to use and benefit from specialized services for the hearing loss. The audiologists' use of meaningful verbal and nonverbal communication strategies hopefully will culminate in shared meaning and a higher level of patient satisfaction.

Familiarity with, and use of, a viable communication process model can have a positive influence on the effectiveness with which an audiologist conveys messages to patients. When professionals are trained to interact with their patients using a communication process model, verbal and nonverbal communication skills are enhanced. Effective communication is absolutely essential to appropriate provision of healthcare services and knowledge of the process facilitates the kind of professional relationship essential to meeting goals for the patients.

This purpose of this capstone dissertation project was to develop a communication process training model for use in training audiologists to be effective communicators with their patients. The basic principles of the Adler and Elmhorst

(2002) communication process model were used to develop the following dialogue and scenarios for this training model. The dialogue addresses the importance of verbal and nonverbal communication skills as enhancements for the communication process.

Communication Process Model Training

Session I

Today we are going to discuss the communication process, grief cycle, and view a video clip. Communication is a natural phenomenon that occurs throughout our everyday lives. Communication encounters incorporate content along with a process. For example, think of baking a cake; what is in the pantry is the content and actually knowing how to bake the cake is the process. However, communicators often fail to acknowledge the communicative process in its entirety. According to Adler and Elmhorst (2002,) an effective communication process model has seven components; a message, channel, encoder, receiver, decoder, feedback, and noise. Here is a blank handout (see Appendix A) of a visual of what the communication process model should look like. The structure of the model appears as two eggs overlapping. If the eggs fail to overlap then shared meaning will not exist between the encoder and decoder and result in a communication breakdown. Once we have discussed each of the components you may appropriately fill in the model with each of the mentioned elements

Message. The message (see Appendix B) is the transmitted signal. The signal may be intentional (e.g., speaking) or unintentional (e.g., crossing your arms, sighing, etc.). Further, the message is communicated through any of the sense organs of the body.

Channel. The channel/medium (see Appendix C) is the means chosen to deliver the message. A message may be delivered using a written (e.g., letter, memo), face-to-face, voice only e.g., telephone), or mediated (e.g., newspaper) format. Most messages are conveyed through multiple channels in order to effectively and appropriately transmit the message to the decoder/receiver.

Encoder. The encoder/sender (see Appendix D) will formulate the message (i.e., ideas and thoughts) into meaningful words and/or gestures (e.g., facial expressions, body movements, etc.) in order to transmit the message to the decoder/receiver. The encoder must consider several things prior to relaying the message. For instance, an encoder should be mindful of the terminology used, method of delivery, along with the appropriate channel, so that the message is conveyed accurately to the decoder/receiver.

Decoder and Receiver. The receiver (see Appendix E) detects the transmitted message and attaches meaning. The decoder/receiver is viewed as the listener in the communication process. Once the message has been detected, the receiver must appropriately decode the message. After the message has been decoded it is sent along the pathway to the language center in the brain in order to achieve shared meaning. When the message has been properly decoded, the receiver/decoder will respond to the information either negatively or positively.

Feedback. Feedback (see Appendix F) can be thought of as a loop, the sender transmits the message, the receiver decodes the message, and then the receiver formulates a reply through nonverbal and/or verbal means. In addition, feedback may be expressed in two different forms. One form is referred to as self-

feedback. Self-feedback is what the encoder hears and/or sees as he/she is communicating the message to the decoder/receiver. A second form is what and/or how the decoder/receiver replies to the message. Feedback may be expressed verbally, nonverbally, and/or both. Further, feedback may be portrayed positively and/or negatively.

Noise. Noise (see Appendix G) is defined as anything that will alter the message. In addition, noise will disrupt how the receiver/ decoder receives the message and result in improper decoding of the message. There are three primary noise sources: external/physical noise (e.g., people talking, cell phone ringing, hum of the computer, etc.), physiological noise (e.g., hearing impairments, illnesses, memory loss, etc.), and psychological noise (e.g., egotism, preoccupation, extreme emotionalism, etc.). However, a fourth noise source is termed semantic (speaking in a foreign tongue, complex terminology, using colloquial speech, etc.). Noise will cause interference in the message being transmitted and create a communication barrier which will hinder the communication process and limit the amount of shared meaning that occurs.

In addition, a communicator must consider the social context and which is most appropriate for the message being conveyed. There are four different contexts that one must be knowledgeable of in order to effectively communicate a message. The four contexts are: physical context, the concrete environment in which the communicative interaction occurs (i.e., funeral versus a football game); social context refers to the relationships among senders and receivers along with the emotional dimension and the formality of the interaction (i.e., formal dinner

versus the cafeteria); chronological context has to do with the way time and experiences alter the interaction (i.e., winning a vacation versus learning of a death); and the cultural context, which refers to ethnicity/nationality, beliefs, values, behaviors, and the overall lifestyle of the communicators (i.e., southerners versus northerners; Cajun French speakers versus Native French speakers). In addition to the communication process, audiologists need to be aware of the grief process and how it may impact the communication process.

Grief

Grief is a natural, individualized process that occurs in relation to a loss. The loss can be either developmental (e.g., hearing), family (e.g., death), individual (e.g., assets), or job-related. Grief is a multifaceted process that involves five different stages. The five stages are denial, anger, bargaining, depression, and acceptance (Kubler-Ross, 1969).

Denial is an individual's initial reaction to a loss such as a hearing impairment. During this stage the individual will realize that a problem exists, but is not willing to accept that it is serious enough to warrant intervention. Anger results when the individual is no longer able to sustain denial. Bargaining occurs when the individual prolongs acceptance of the loss and/or views the impact as minimal. Whereas, depression occurs when all other strategies to cope with the loss have failed and the individual is still not ready to accept the loss. The final stage and the ultimate goal of the grieving process is acceptance. During the acceptance stage, the individual will have come to terms with the loss.

Grieving is an individualized process; therefore, the time span spent along with the order of the stages will vary according to the type of loss and the individual who is experiencing it. Audiologists must be knowledgeable of the grieving process in order to effectively communicate with the patient. The individual should receive support throughout the grieving process from friends, family, and health care providers (e.g., audiologists), etc.

Support and encouragement provided by the audiologist will foster the patient's movement through the stages. For example, during the denial stage, an audiologist could provide a patient with statistical information pertaining to the etiology and prevalence of a hearing loss. While in the anger stage, an audiologist may instruct the family members and/or caregivers about various communication strategies (e.g., reduce all background noise before communicating) to implement when communicating with someone with a hearing impairment. In the bargaining stage, an audiologist may explain how and why amplification devices are beneficial to him/her and their lifestyle. During the depression stage, an audiologist may provide the patient with information about appropriate state and/or national organizations (e.g., Hear Now) that may provide funding assistance for hearing aids based on the overall household income. Once the individual has fully accepted the loss the healthcare provider (e.g., audiologist) will be able to better communicate with him/her through both verbal and nonverbal means and provide a higher level of satisfaction.

By having an understanding of the communication process along with the grieving process, audiologists will be able to be more empathetic communicative

counselors. Further, the audiologist will possess the ability to effectively communicate to patients the test results, and intervention techniques available to them. Another important aspect of the communication process that one must consider is nonverbal communication.

Video

At this time a video clip (see Appendix H for nonverbal dialogue of video) of an audiologist and his/her patient will be played without any audio input. Class please pay close attention and take notes on what the doctor did inappropriately along with how the patient reacted to the doctor's non-verbal communication skills. Further, you should be able to report on how you knew the patient was uneasy and what the doctor could have done differently to make the patient feel more at ease in the situation. Upon completion of the video clip, a brief class discussion will be held to compare and contrast the notes taken by each of the students.

Today we discussed what a communication model is and the components included in the process, the grief cycle and how it relates to audiologists, and we viewed a video clip to begin thinking about the role of nonverbal communication when counseling a patient. At this time, are there any questions regarding any of the topics discussed today? If there are no questions then class is dismissed and will be held again the day after tomorrow. Thank you for your attentiveness and activeness in the class discussion.

Session II

In the last class we learned what a communication process model is, the components (a message, channel, encoder, receiver, decoder, feedback, and noise), the grief cycle (denial, anger, bargaining, depression, and acceptance), and we viewed a video clip to begin looking at the importance of nonverbal communication. Within this meeting we are going to discuss verbal and nonverbal communication, spiral of silence, cognitive dissonance, and demonstrate a role playing activity. When conveying a message both the verbal and nonverbal components displayed will influence the transmission of the message. At this time we will view the same video clip (see Appendix I for verbal dialogue of the video) from yesterday with the audio input. Again class, please take notes on the verbal message being conveyed. As you may know, the majority of a message is transmitted through nonverbal communication.

Verbal and Nonverbal Communication. Verbal communication is the words spoken and/or vocalized during a communication interaction. When communicating verbally, one must consider the terminology, and the sequence of the message. The encoder must closely choose the terminology used in order to effectively communicate the message. Nonverbal communication may positively or negatively support the verbal message being transmitted.

Nonverbal communication is defined as those messages that are transmitted without using linguistic means. Further, nonverbal

communication may be expressed through any of the senses (sight, hearing, smell, taste, and/or touch). Nonverbal messages can be portrayed intentionally or unintentionally. When an individual is aware of what nonverbal communication is and how to control it the message may be effectively depicted.

All of the components of your body image and language are capable if expressing some degree of meaning. Nonverbal communication is expressed though ones overall impression of others based on their appearance and gesticulations. Most nonverbal behaviors will vary across cultures; however, facial expressions representing happiness, fear, anger, surprise, sadness, and disgust are universal among cultures.

In a face-to-face encounter, a limited amount of the message is conveyed linguistically. Griffith III, et al. (2003) reported that approximately 60 to 65% of a message is transmitted nonverbally. Further, nonverbal communication typically comes in a variety if forms simultaneously. For example, appearance, paralinguistics of speech (e.g., voice, accent, speed, volume, and inflection), facial expressions, posture and body movement, along with personal space and distance all contribute to the communication process.

Appearance. Appearance plays a large role in the way one is perceived by others. In addition, appearance contributes to how an encoder's message is comprehended in both an informal or formal communicative interaction. Appearance incorporates the dynamics of both physical and nonphysical features. Physical appearance consists of size, shape, height, and overall attractiveness. In addition, the way one dresses will impact how others view him/her.

For example, professional's who work in health care want to be perceived as knowledgeable and likable by their patients; therefore, they must dress in professional attire in order to denote a sense of credibility. Another pertinent nonverbal component is the paralinguistic aspects of speech.

Paralinguistics of speech. An individual's vocal mechanism possesses the ability to communicate in ways that have no link to the spoken utterance (Adler & Elmhorst, 2003). For instance, when one overhears people communicating using a foreign dialect in which you do not understand, you are still able to determine how the speaker feels (e.g., excited, happy, bored, tired, grieving, etc.). Paralanguage encompasses an array of vocal characteristics: pitch (high versus low), range (spread versus narrow), articulation (precise versus imprecise), rhythm (smooth versus jerky), volume (loud versus soft), resonance (resonant versus thin), tempo (rapid versus slow), dysfluencies (um, er, etc.), and pauses (frequency and duration). Paralanguage has the capability of conveying ones feelings through the message. In addition, the stress patterns chosen by the speaker may affect the way that the utterance is perceived by the listener. Facial expressions also contribute to how a message is comprehended along with the emotions felt by the listener regarding the topic.

Facial expressions. Facial expressions and eye movements are used to communicate various emotions when speaking. A trained communicator possesses the ability to control facial expressions and eye movements in order to get the response warranted from the listener. Eye contact is a direct indicator of

how attentive and involved an individual is within the communicative interaction. According to Adler and Elmhorst (2003), in the majority of face-to-face communication encounters the partners will look at one another approximately 50 to 60 percent of the time. When communicating with individuals of different nationalities professionals should be aware of the cultural variations for the use and maintenance of eye contact and facial expressions. For instance, in some cultures a lack of eye contact is a sign of respect towards others. Additional nonverbal components which may greatly impact the message being conveyed across cultures are ones posture and bodily movements.

Posture and body movement. An individual's body alone can communicate a message in a variety of ways. For instance, posture may denote a level of interest in the message along with one's attitude towards the topic being discussed. Whereas, an individual's body movements may be a result of a direct word and/or phrase translation (e.g., the thumbs-up symbol for 'good job'); may heighten the verbal message (i.e., when making a gesture to the right one may illustrate this through a hand motion, head turn, and/or an entire body turn); the facial movements one makes (e.g., smiling, frowning, etc.) along with movements of the hands and body (e.g., tensing, posture changes, etc.); the actual behaviors denoted to monitor and maintain the speech of others (e.g., a head nod); and either individual gestures which appease a personal need (e.g., scratching your nose). When manipulating nonverbal communicative techniques one also needs to be aware of the proxemics.

Personal space and distance. *Proxemics refers to spatial characteristics which denote various messages along with ones feelings and attitudes. Four distances that define ones relationships when communicating are: intimate, personal, social, and public distance (Hall, 1966; as cited in DeVito, 1999). An intimate distance ranges from touching to 18 inches, personal is from 18 inches to four feet, social ranges from four to 12 feet, and public is greater than 12 to 25 feet.*

Each of the contributors (e.g., appearance, paralinguistics of speech [e.g., voice, accent, speed, volume, and inflection], facial expressions, posture and body movement, and personal space and distance) of nonverbal communication greatly impacts how a message is perceived by the listener. Each of these components should be considered throughout any communication interaction to ensure that shared meaning will occur. Again, shared meaning will occur when the eggs overlap. Meaning that the communication process has been successful and both partners fully grasp the importance of the message. Two other concepts that we should briefly discuss is the spiral of silence and cognitive dissonance.

According to Krista Jordan (2000), Elisabeth Noelle-Neumann developed the spiral of silence concept in 1971. This theory is noted as one of the most influential theories of public opinion. Spiral of silence refers to how individuals tend to remain silent when their views are in the minority. Noelle-Neumann contributes the spiral of silence to fear of isolation. Patients will withhold information they fear will be negatively perceived by the audiologist. Can you think of any audiological examples? Therefore, as an audiologist you should be

aware of this concept and encourage patients to divulge pertinent information no matter the circumstance.

Whereas, cognitive dissonance is a term that refers to an agonizing mental state where individuals find themselves doing things and/or having opinions that contradict their beliefs and values (Leon Festinger, 2006). Therefore, as professionals in the medical field one must consider that patients tend to be more open and trusting when similarities are present. Patients are going to be more accepting of the information provided to them when the information is provided in a sufficient and comforting manner. In addition, a professional's appearance may positively and/or negatively influence the perception of the patient. Furthermore, the overall exposure level of the patient along with his/her preconceived notions towards the professional will influence the amount of information retained by the patient throughout the session.

To conclude the session, I would like to have a volunteer for a role-playing activity (see Appendix J). I am going to be the audiologist in the first activity and you will be the patient. You have just come to my office to be evaluated for a possible hearing loss. Your physician referred you to my office. The facility seems to be pretty nice at first glance. All you need to do is act natural and respond to me as you normally would if this was a true doctor/patient communicative interaction. Once the role-playing activity is over we will discuss how the interaction went and then we will switch places and have one of you demonstrate ways that you would rectify the problems within the communication interaction. After completing the activity we will discuss as a class what, if any,

other strategies could have been implemented to further enhance the communication process.

This will conclude our final meeting. Are there any questions regarding nonverbal communication, the spiral of silence, cognitive dissonance, and/or the role-playing activity? Now we have learned how to bake this cake. I know that we have only scratched the surface of what the process is here. It is up to you now to implement what we discussed here within your next patient interaction. Just remember practice does make perfect. These two training sessions were designed to provide you with an entry-level understanding of the importance of communication, what a communication process model is, and effective communication skills to utilize with your patients in order to ensure that shared meaning was attained.

CHAPTER III

METHODS AND PROCEDURES

Counseling is an important entity in audiology. For purposes of this capstone project, counseling will be defined as ones' ability to accurately and precisely convey information during a communication interaction. Audiologists counsel patients daily regarding the degree and type of hearing impairments, the physiological assets, appropriate coping strategies, and proper intervention techniques. The ability to counsel patients can be enhanced with increased knowledge about the communication process. Therefore, a training course devoted to the communication process may help audiologists reduce communication breakdowns, thereby enhancing their counseling effectiveness.

The purpose of this capstone project is to develop a training protocol based on a communication process model. The hypothesis is "there is no improvement in counseling after receiving training based on a communication process model." Chapter Three is a discussion of the research design, the participants, instrumentation, and procedures.

Research Design

The proposed design is a pre-test/post-test experimental design to examine a cause-effect relationship between the dependent and independent variables. This study is designed to identify whether a cause-effect relationship exists between direct training on a communication process model (independent variable) and the number of communication breakdowns (dependent variable).

Participants

Primary Investigator

The primary investigator is a fourth-year audiology doctoral student at Louisiana Tech University who has completed all the academic coursework for the clinical doctoral program in audiology (Introduction to Research, Audiological Assessment, Anatomy and Physiology of the Auditory System, Hearing Disorders, Hearing Science, Psychoacoustics, Instrumentation and Calibration, Introduction to Amplification, Pediatric Audiology, Aural Rehabilitation, Auditory Processing Disorders, Professional Seminars in Audiology, Seminar in Amplification, Physiological Tests of Auditory Function, Vestibular System Disorders, Audiological Correlates of Language Disorders, Hearing Conservation, Rehabilitative Audiology, and nine semester hours of related coursework. The primary investigator has completed four academic quarters of supervised clinical experience in the Louisiana Tech University Speech and Hearing Center, six quarters of supervised extern experience in hospital settings (Louisiana State University- Health Sciences Center, Overton Brooks Veterans Medical Center, Alexandria Veterans Medical Center, Willis Knighton South Hospital, and Green Clinic),

and a fourth-year clinical residency. In each facility/agency, the patients ranged in age from birth to geriatric.

Secondary Investigator

The secondary investigator holds a master's degree from the University of Denver and a Ph.D. from the University of Tennessee at Knoxville, both in communication. The secondary investigator has 20 years of teaching experience in communication that consists of numerous offerings in professional communication, such as interpersonal and nonverbal communication, conflict management, physician/patient communication, and professional allied-health professionals along with experience in corporate communication consulting. Further, the secondary investigator has publications that appear in the *Organizational Developmental Journal* regarding licensed information, such as the need to achieve shared meaning with all publics, and the *Journal of Information and Behavior*, which addresses technology phobia and its influence on understanding and ways to reduce the phobia. The secondary investigator has also assisted in the development of a communication curriculum for medical students and in the design and execution of a standardized patient training program. The secondary investigator will provide the experimental treatment to the research subjects. In addition, the SI will rate the results obtained from the counseling communication interactions on the investigator-designed counseling communication checklist, pre-and post-experimental treatment.

Resource Person

An audiology faculty member at Louisiana Tech University will serve as the resource person. The resource person holds a Bachelor of Arts, Master of Arts in

Audiology, and a Doctorate of Audiology (Au.D.) from the University of Tennessee at Knoxville. The resource person has approximately two and one-half years of clinical experience with a primary focus in diagnostic audiology and aural rehabilitation. Since the secondary investigator has no direct training in audiology, the resource person will serve as a contact for the use of correct terminology and etiology of the hearing impairments. The secondary investigator will only use the expertise of the resource person if any uncertainty arises about the research subjects' verbal responses relating to the technical aspects of the hearing impairment (i.e., terminology and etiology). If uncertainty does arise, the secondary investigator will ask the resource person to review that portion of the videotaped counseling communication interaction to assist in determining the appropriateness of the interaction.

Research Subjects

Three, second-year audiology doctoral students enrolled at Louisiana Tech University will be asked to serve as the research subjects. Each will have completed approximately two years of entry-level academic coursework and similar clinical experience in audiology. Prior to their participation in the study, the research subjects will have completed coursework in Introduction to Research, Audiological Assessment, Anatomy and Physiology of the Auditory System, Hearing Disorders, Hearing Science, Psychoacoustics, Instrumentation and Calibration, Introduction to Amplification, Pediatric Audiology, Aural Rehabilitation, Auditory Processing Disorders, Professional Seminars in Audiology, and Seminar in Amplification. At the time of the study, the research subjects will be enrolled in Physiological Tests of Auditory Function. In addition, the research subjects will have earned a minimum of 100 clock hours of

supervised clinical practicum at the Louisiana Tech University Speech and Hearing Center. Verification of the academic coursework completed and the clinical practicum experiences will be provided by the Head of the Department of Speech.

Standardized Patients

For purposes of this study, 15 university students will be selected to participate as the standardized patients. Seven of the 15 will constitute a replacement pool. No attempt will be made to control for age or gender.

Each of the standardized patients will be enrolled in Speech Communication courses in the Department of Speech at the time of the study. The primary investigator will discuss the project with departmental Speech Communication faculty and ask that each provide the names of students in their classes who would be willing to participate in the study. From the faculty list, the primary investigator will randomly select 15 students to serve as the standardized patients. The selection will be made one week prior to initiation of the study.

The standardized patients will be students at Louisiana Tech University who are majoring in Speech Communication and have successfully completed a minimum of 60 semester credit hours required for the degree. In addition, the standardized patients will verify that they have earned a letter grade of **C** or better in all major (Speech Communication) courses taken prior to the time of the study. No attempt will be made to control for the number of major courses taken or the content of the courses.

The standardized patients will be given written instructions (see Appendix K) outlining what they are to do prior to the communication interaction. Four of the patients will be used in the pre-testing and four in the post-testing. The standardized patients will

be counseled by a research subject about a hearing impairment and asked to only pose applicable questions and/or statements about the information presented by the research subject. Therefore, the questions and comments will be related to the topic being discussed and presented only when further clarification is needed by the standardized patients.

Instrumentation

The investigator-developed scenarios (see Appendix L), an investigator-designed measure (see Appendix M), an aided-recall questionnaire (see Appendix N), two experimental treatment sessions (see Appendix O) based on the identified communication process model of Adler and Elmhorst (2002), and demographic data sheets for the research subjects and standardized patients (see Appendixes P and Q) will be used in this study. The Adler and Elmhorst model encompasses a message, encoder, channel, receiver, decoder, feedback, and noise. The message is the actual signal that is transmitted to the receiver. The encoder formulates the message into appropriate words and/or gestures (e.g., facial expressions, body language, and hand movements) in order to effectively deliver the message to the receiver. A channel refers to the method chosen for sending the message (e.g., letter or newspaper). The receiver detects the message and then decodes it in order to achieve shared meaning. Feedback can be either positive or negative and is referred to as the responses formulated by the receiver/decoder. Noise includes any contributing factors that mask the signal being transmitted.

Investigator-Developed Scenarios

The scenarios (see Appendix L) are designed to create a common interaction that would typify what most audiologists would encounter with most of their patients. In

addition, these interactions are designed to be transferable to any client exchange since they occur clinically. Further, the scenarios are intended to produce conclusions that may result in a similar communication interaction in order to achieve shared meaning when counseling patients. Through achieving shared meaning, the communication breakdowns (i.e., misunderstandings) can be reduced and/or eliminated and allow for a message to be more accurately conveyed and perceived.

Eight scenarios will be developed by the primary investigator. Each of the scenarios will have a bilateral audiogram (air and bone thresholds, speech reception threshold, and word recognition scores) and tympanogram results along with a case history and instructions for the research subjects. The material will guide the research subjects to identify what is important along with how to structure the counseling process. The scenarios will portray Mèniére's disease, sudden sensory-neural hearing loss, otosclerosis, trauma (i.e., longitudinal or transverse temporal bone fracture, and disarticulated ossicles), conductive (i.e., otitis media), noise-induced, and a mixed hearing loss.

Counseling Communication Checklist

This checklist (see Appendix M) was designed by the primary and secondary investigators and is intended to report the number of communication breakdowns and identify at what place in the communication process they occur. The counseling communication checklist will be rated using a 5-point Likert scale (5=always observed, 4=usually observed, 3=sometimes observed, 2=rarely observed, and 1=never observed) with 75 maximum possible points. A 5-point Likert scale was chosen for ease of computation and because it is the typical scale used in behavioral research.

The checklist contains a process and clinical content section and has a section for additional comments. The process section has 40 points and the clinical content section has 35 points. Each division has three sub-sections, the opening, the session, and the closing.

Opening. The opening refers to the initial interaction and the way the encoder attempts to be perceived. This section has the verbal and nonverbal means of communicating.

Process. The opening sub-section in the process section consists of the zone of intimacy (open body posture, eye contact, and distance) and greeting. The zone of intimacy refers to the non-verbal aspects of the initial interaction. In contrast, the greeting is the verbal welcoming of the initial interaction.

Content. The opening sub-section under the content division contains the clinical reference (the business at hand). The clinical reference is the encoder's ability to summarize what will be included throughout the clinical interaction.

Session. The session section contains the body of the interaction. This section deciphers how the message is portrayed and the components the message should include.

Process. The process section contains tone (professional confidence and professional compassion), timing (patient directed/adjusted pace, holds for patient response), and listening (active listening cues) within the session sub-section. The tone of the encoder's voice when delivering the message should reinforce content assurance and consideration for the decoder. The encoder's voice should be at a comfortable yet assertive level when representing his/her knowledge about the subject matter. Timing reflects how well the encoder pauses to allow the decoder to respond to the message. The

last sub-section, listening, refers to the encoder's active listening behaviors in response to the decoders' wants and needs. Further, the encoder should attempt to incorporate these responses into the message. For instance, if the decoder wanted a completely-in-the-canal style hearing aid but the encoder as a professional knows another style would provide more benefit, the encoder should express to the decoder why that style is less beneficial. However, in this situation, the ultimate decision is the decoders.

Content. The clinical content section has diagnosis, terminology used, etiology, functional aspects of the hearing loss, and intervention options in the session sub-section. The diagnosis section contains the type (sensory-neural, conductive, and/or mixed) and degree (mild, moderate, moderately severe, severe, and/or profound) of hearing loss. The terminology used needs to be in accordance with the decoder's level of understanding (e.g., socioeconomic status). The etiology section refers to the cause of the hearing loss. For instance, the impairment could be a result of an injury (e.g., fall, car accident), an infection (e.g., fluid in the middle ear space), hereditary factors (e.g., otosclerosis), or balance disorders (e.g., benign proximal positional vertigo, Mèniére's disease). Functional aspects of the hearing loss include an alteration in lifestyle (e.g., withdrawal from social events, isolation, and depression), and/or communication difficulties (e.g., difficulty hearing in background noise, difficulty hearing the television). These aspects should be addressed by the encoder. The encoder should provide appropriate solutions to the functional problems identified by the decoder. Last, the intervention options (e.g., hearing aids, cochlear implants, etc.) should be described in detail according to their advantages and disadvantages.

Closing. The closing section ends the interaction. Ideally, this section concludes when shared meaning is established between the encoder and decoder. If shared meaning is established then an effective communication interaction was conducted. If this is not established, the encoder should summarize and clarify the communication interaction, perhaps by using a different mode of presentation, to foster the achievement of shared meaning.

Process. The last sub-section (closing) encourages questions, directly addresses questions, and demonstrates empathy within the process division. The encoder should allow the decoder to ask any relevant/pertinent questions relating to the topic covered. Further, this needs to be conducted in a positive manner with the encoder demonstrating compassion toward the decoder when answering any of questions.

Content. The clinical content section contains professional termination within the closing sub-section. In addition, the encoder needs to summarize all the important facts that were covered. The communication session should be unambiguously ended. For example, the decoder may be asked if there is a need for clarification or if there are any further questions.

Aided-Recall Questionnaire

The aided-recall questionnaire (see Appendix N) developed by the primary investigator will be distributed to the standardized patients (pre- and post-treatment) to assess their comprehension of the material covered during the counseling session. The questionnaire contains the instructions and four questions.

Questions one and two focus on the type and degree of hearing loss with which the patient has been diagnosed. Question three addresses the functional effects the

hearing loss has on the patient (e.g., communication difficulties, psychosocial effects, etc.). Responses to question four restate the patients' understanding of available options for intervention (e.g., medical treatment, amplification devices, assistive devices, and/or alerting devices). Based on the level of training, the primary investigator determined that these items were most essential to the clinical exchange. Initially, patients should have an understanding of these items to grasp the extent of the impairment and appropriate techniques for intervention.

Experimental Treatment

Two, one-hour experimental treatment (see Appendix O) sessions will be conducted by the secondary investigator. The treatment will be conducted based on the Adler and Elmhorst (2002) communication process model and administered to all the research subjects simultaneously. According to Adler and Elmhorst, communication is a process that should be assessed based on the communication context and not as an isolated event. Ideally, a model reveals that the overall meaning of the message is in accord with what occurred before creating a process. This particular model addresses the communication process through demonstration of each step within a communication interaction (i.e., message, encoder, channel, receiver, decoder, feedback, and noise).

Further, the sessions will be structured based on the skills education developed by the Accreditation Council for Graduate Medical Education (2006, ACGME) which include instruction, demonstration, performance, feedback, and assessment. The ACGME is a non-profit organization designed to assist with successful administration of programs for individuals pursuing a medical career. As previously discussed, the secondary investigator assisted in the development and implementation of a

communication curriculum for medical students that used standardized patients. The medical students' communication curriculum was designed in accordance with the ACGME standards.

The first one hour session (see Appendix R) will focus on the communication process, components of the process, the grief cycle and how it relates to audiology, and evaluate appropriate and inappropriate nonverbal communication skills. This part of the experimental treatment will address the research subjects' ability to properly encode the message and present it to the standardized patient for decoding through video assessment of a nonverbal communication session. The first treatment session will demonstrate how concisely the message was delivered nonverbally through a video clip.

The second one hour session (see Appendix S) addresses verbal and nonverbal communication, the spiral of silence (how individuals tend to remain silent when their views are in the minority) and cognitive dissonance (agonizing mental state where individuals find themselves doing things that contradict their beliefs and values). The session will also allow for assessment of verbal communication skills through the use of a video clip and provide an opportunity for hands-on experience (a mock communication counseling session) with positive and negative feedback based on the performance.

The secondary investigator will role play a mock communication session for the research subjects to identify proper and improper communication processes. After the demonstration, the secondary investigator will provide the research subjects with positive and negative feedback on the delivery and perception of the message being conveyed. A discussion will be held for the mock counseling session. The last section, according to the ACGME, is assessment which requires the individual to be tested on the material.

The administration of the second scenario will serve as the research subjects' assessment measure.

Procedure

The research subjects and the standardized patients will be asked to sign an informed consent (see Appendix T) prior to participation in the study. In addition, the research subjects along with the standardized patients will complete a demographic data sheet (see Appendixes P and Q) prior to administration of the first and second scenarios. The demographic data sheet is designed to provide specific information about each subject.

The research subjects will be given one scenario (see Appendix L) five-minutes prior to the counseling session to familiarize them with the scenario. Each scenario will have bilateral audiometric results (air and bone thresholds, SRT, WRS, and tympanogram results), a detailed case history, and instructions for the research subjects. The audiometric results, along with the case history information, will be of equal complexity. However, the pathology and etiology will differ for each scenario. The complexity of the scenarios was determined by the primary investigator. The complexity was judged based on the academic coursework and clinical experiences of the research subjects prior to their participation in the study.

The instructions will be the same for each research subject:

Based on the case history and the test results given to you, as an audiologist, you will counsel the patient in the next room for 10-minutes on the type, severity, and physiological aspects of the hearing loss, provide a plan for intervention, and

make any appropriate recommendations. Take a few minutes to prepare by reviewing the test results provided.

The scenarios, case histories, and instructions will be placed in sealed envelopes and randomly distributed by the primary investigator to the four research subjects. The counseling communication interaction will be timed by the primary investigator for each research subject. Each research subject will complete two scenarios resulting in the use of eight scenarios. One scenario will be administered prior to the experimental treatment and one after completion of the experimental treatment.

The eight standardized patients will be given these instructions (see Appendix K):

Today you will be the patient of an audiology student trainee. The audiology trainee will communicate to you 'mock' hearing test results that demonstrate a hearing impairment. Please listen attentively and feel free to ask any clarification questions about the information you are given. In addition, you may make relevant statements that relate to your hearing impairment. If needed, you can make three statements or ask three questions that are applicable to the information presented.

The questions and/or comments were limited to three to alleviate topic shifting. Further, this number was set so that the research subjects were allowed to lead the interaction.

The primary investigator will view all of the videotaped counseling communication interactions to document any questions and/or comments made by the standardized patients prior to being rated by the secondary investigator. The questions and/or comments will be typed, appropriately coded according to which research subject administered the scenario, standardized patient, and whether they were pre- or post-

treatments. The questions and/or comments will then be attached to the counseling communication checklist.

The secondary investigator will have no prior knowledge of the coding system chosen nor which videotape is pre- or post- treatment. Further, upon completion of the counseling communication interaction, the standardized patients will complete an aided-recall questionnaire (see Appendix N) to determine what knowledge was gained from the counseling session regarding their hearing impairment. The questionnaire responses will be tallied by the primary investigator to report any significant differences, pre- and post-treatment.

All of the interactions will take place in therapy rooms, the smallest is 10 X 5 ½ feet and the largest is 14 ½ X 12 feet, on the first floor of Robinson Hall which houses the Louisiana Tech Speech and Hearing Center on the Louisiana Tech campus in Ruston, Louisiana. The standardized patients will remain in the classroom on the first floor while the research subjects will remain in the hearing aid laboratory on the first floor until the counseling communication interaction takes place. The standardized patient will be seated in the therapy rooms prior to arrival of the research subject. Each interaction will be videotaped using standard Video Home System (VHS) equipment for playback on a standard video cassette recorder (VCR).

The primary investigator will keep the tapes in a locked file cabinet in the project directors' office, Room 217 in Robinson Hall. The tapes will be viewed only by the primary investigator, secondary investigator, and the resource person. When the secondary investigator and/or the resource person have possession of the videotapes, each tape will remain in a locked file cabinet in their office unless they are being viewed for

analysis. After data from each of the videotapes has been analyzed, the secondary investigator will return all of the videotapes to the primary investigator. The primary investigator will replace the videotapes in the locked file cabinet in Room 217 in Robinson Hall. After three years, all the videotapes will be destroyed.

The secondary investigator will view each of the videotapes and rate the interactions using the counseling communication checklist (see Appendix M). The secondary investigator will not have prior knowledge of which sessions were conducted pre-treatment and which were post-treatment. The primary investigator will code each of the videotapes with a number to identify pre-treatment and post-treatment. The research subjects and standardized patients will be identified with a letter of the alphabet. In addition, the primary investigator will tally each of the checklists to determine where in the communication process any breakdowns occurred. Two to three days before administration of the second scenarios, the secondary investigator will conduct the experimental treatment (see Appendix O) for all of the research subjects.

Week I

The research subjects will present one scenario to the standardized patients in the pre-assigned therapy rooms on the first floor of Robinson Hall. Presentation of the first scenario will take place at the end of the week (Friday).

Week II

During Week II, the experimental treatment will be conducted. The first one-hour session will be administered to each of the research subjects simultaneously at the beginning of the week (Monday or Tuesday). Two days later, (Wednesday or Thursday) the second one-hour treatment session will be conducted. The allotted time-span between

the treatment sessions is pertinent for the research subjects so that they have time to assimilate what was discussed. The secondary investigator will inform each of the research subjects that in the next session they will use the communication model to complete an analysis of a communication breakdown. When the research subjects return for the second one-hour treatment session, they will be asked to participate in a role playing activity. This activity is designed to provide the research subjects with an application experience in which they begin to use the elements in the model to visualize an interaction and to determine what steps are appropriate in order to ensure shared meaning. The research subjects will then administer the second scenario following the same procedure to four different standardized patients on Friday of this same week.

Data Analysis

This research study requires parametric inferential statistical analysis techniques. According to Pace (2005), "inferential statistics is the branch that involves estimates, decisions, conclusions, generalizations, judgments, or inferences about a population based on observations in a sample" (p.16). Inferential statistical techniques are appropriate to use when examining between-subjects differences or within-subjects differences between conditions. This study examines within-subjects differences between conditions. In addition, inferential statistics offer information that allows the researcher to determine if the results obtained are due to chance alone or the experimental treatment and to generalize outside of the researchers' sample of subjects (Schiavetti & Metz, 2002).

Once the data are collected, it will be analyzed using a dependent t-test or the t-test for related (or correlated) measures to compare and contrast data when testing the

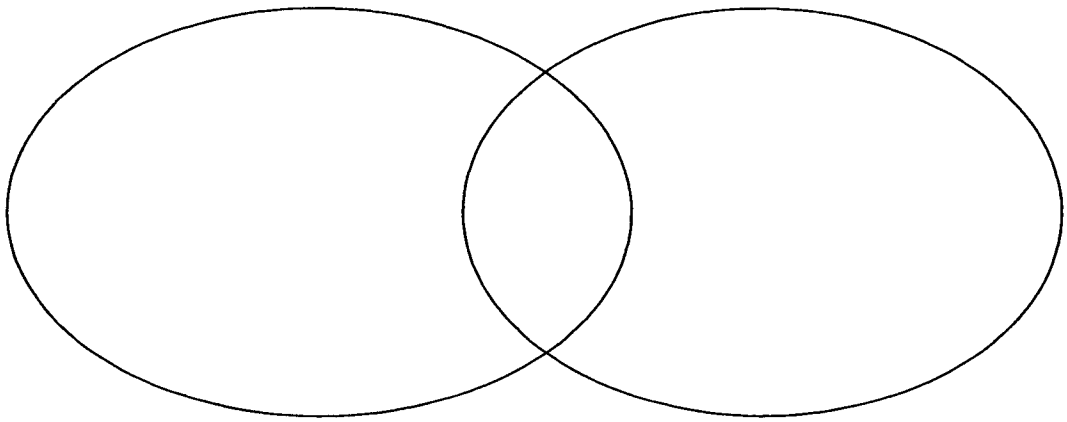
same group before and after treatment. This method is appropriate when there is a small sample size and/or when the data are normally distributed. According to Schiavetti and Metz, normal distribution implies that the majority of scores tend to fall into a symmetrical bell-shaped curve, where most of the scores fall towards the middle of the distribution. Further, this statistical design is not affected if there are inconsequential differences among the distribution. The statistical analysis will be calculated using an Analysis ToolPak for a dependent t-test in Microsoft Excel (Pace, 2005).

APPENDIXES

APPENDIX A

BLANK DRAWING OF COMMUNICATION PROCESS MODEL

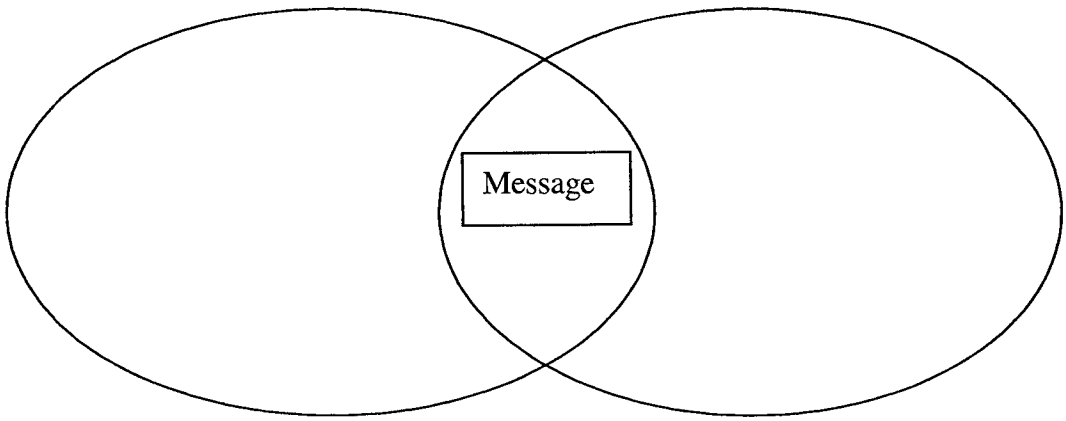
Drawing of the Communication Process



APPENDIX B

MESSAGE OF THE COMMUNICATION PROCESS MODEL

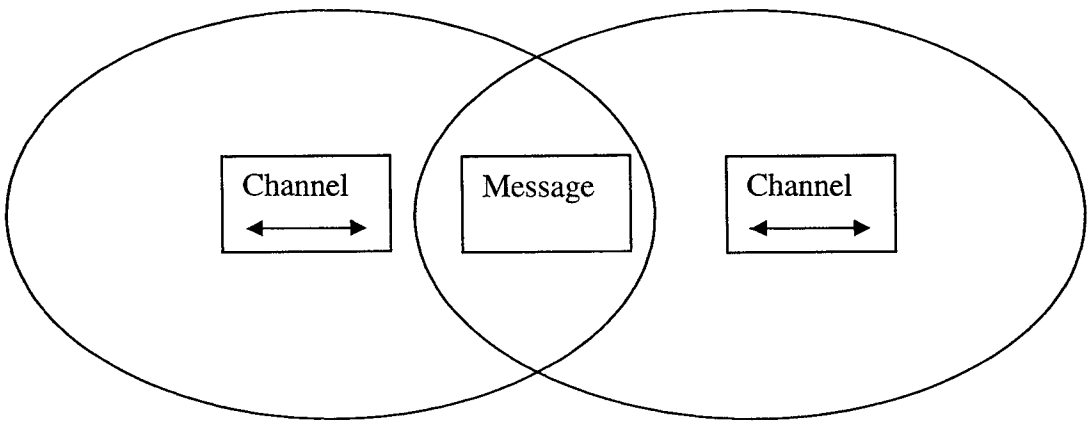
Drawing of the Communication Process



APPENDIX C

CHANNEL OF THE COMMUNICATION PROCESS MODEL

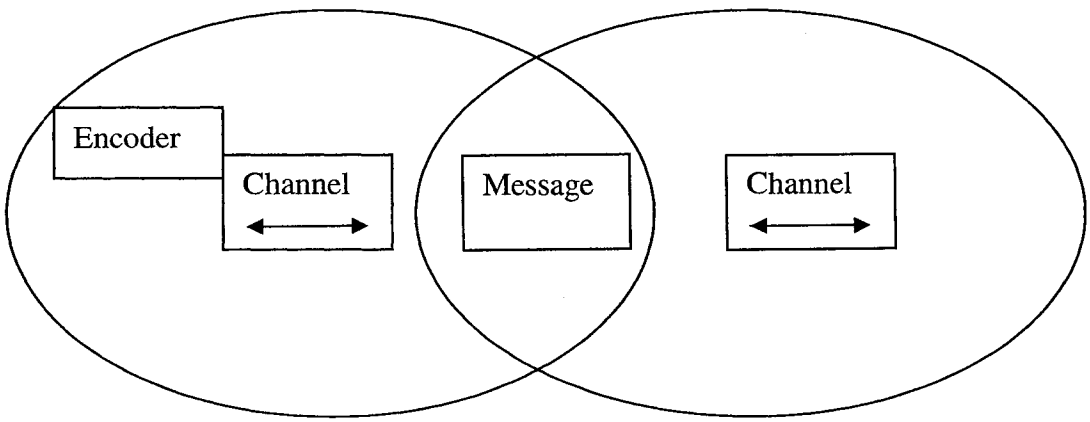
Drawing of the Communication Process



APPENDIX D

ENCODER OF THE COMMUNICATION PROCESS MODEL

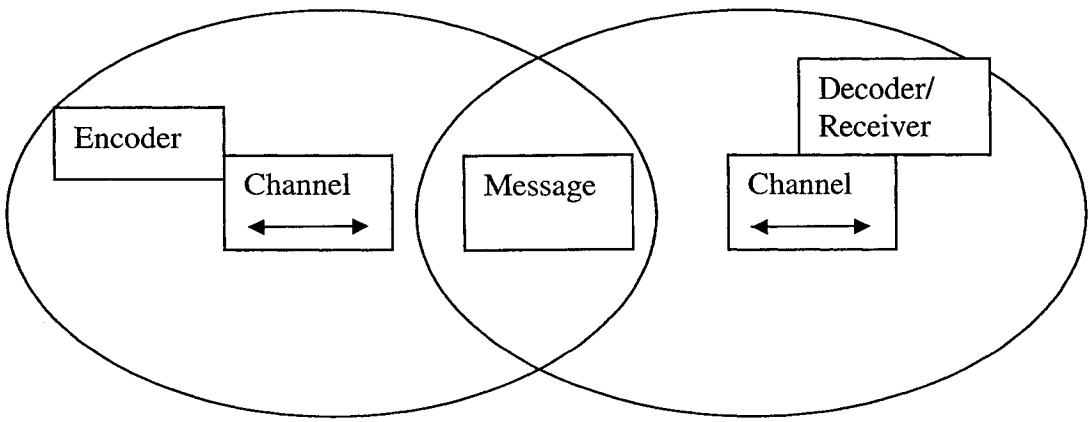
Drawing of the Communication Process



APPENDIX E

DECODER OF THE COMMUNICATION PROCESS MODEL

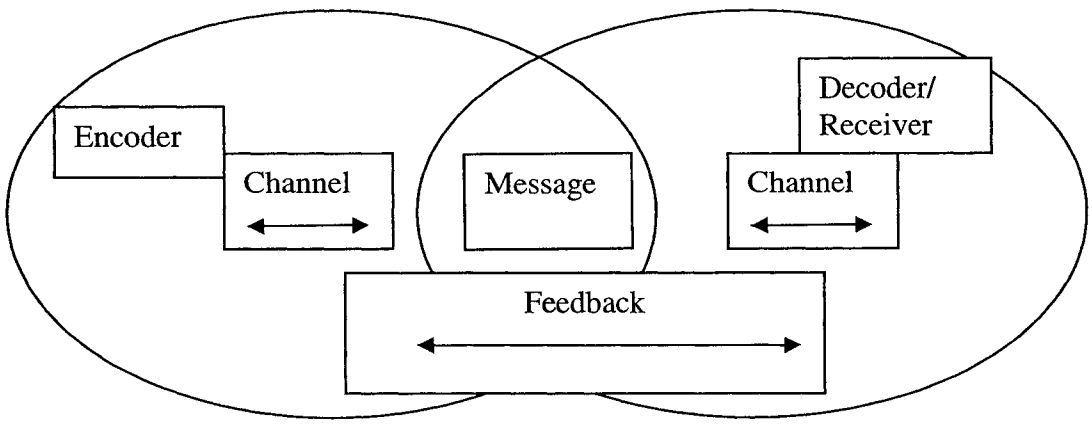
Drawing of the Communication Process



APPENDIX F

FEEDBACK OF THE COMMUNICATION PROCESS MODEL

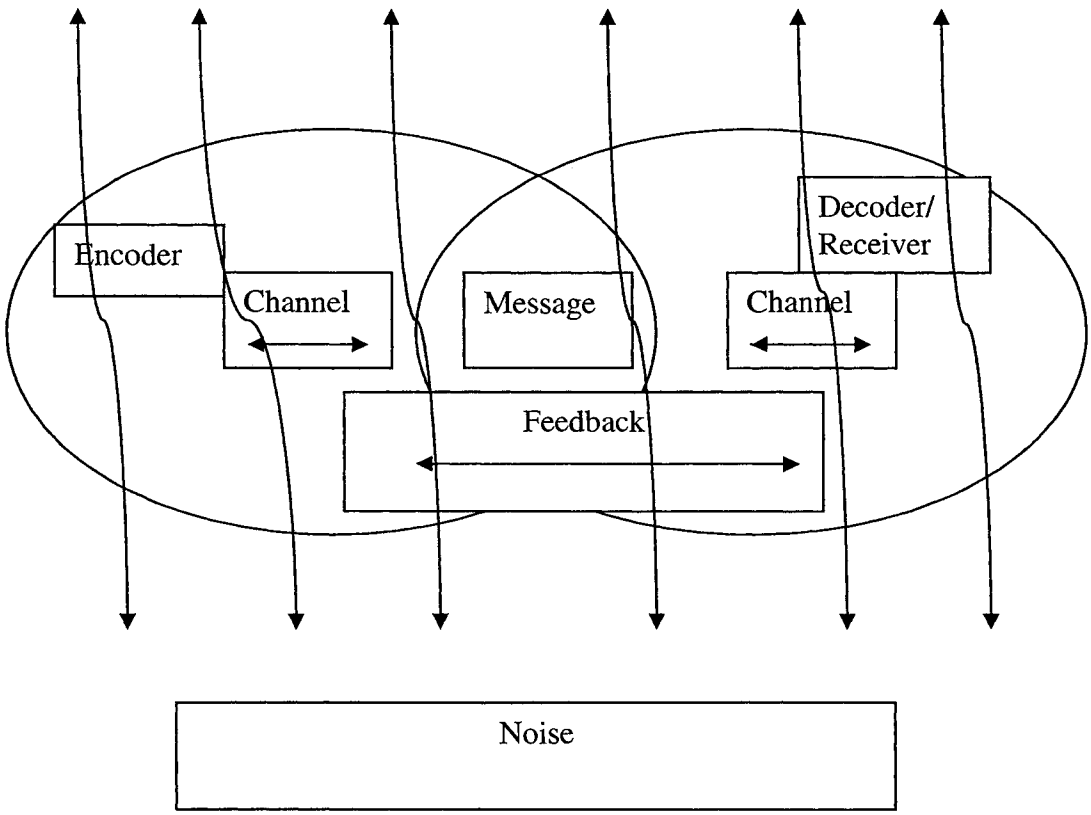
Drawing of the Communication Process



APPENDIX G

NOISE OF THE COMMUNICATION PROCESS MODEL

Drawing of the Communication Process



APPENDIX H

NONVERBAL DIALOGUE OF VIDEO CLIP

Video Clip Dialogue without Audio

- Patient is already seated in the exam room.
- Audiologist enters the room with the test results in hand and with his head down.
- After a few seconds, the audiologist looks up and addresses the patient.
- The patient just nods her head.
- Very little eye contact is made throughout the interaction.
- The audiologist keeps his arms folded for the duration of the interaction.
- While the audiologist is talking, the patient's facial expressions reveal confusion and uncertainty.
- The audiologist's facial expression denotes that he is tired and either is not having a good day or thinking of better things to do with his time.

APPENDIX I

VERBAL DIALOGUE OF VIDEO CLIP

Video Clip with Audio

Patient is already seated in the exam room.

Audiologist: (enters with results, head down, and arms folded) Hello Mrs. Smith.

Patient: Hello Doctor.

Audiologist: (lets out a sigh) So I tested your hearing and you do have quite a bit of hearing loss in your right ear.

Patient: (beginning to look confused) I do. I thought that I favored my left ear when conversing with others. Seems to me that I have the most difficulty when I am in a crowded place, such as a restaurant. I just miss so much information when there is a lot of noise and people around. Can you tell me why that is?

Audiologist: (looks annoyed and tired) Well, it is due to your hearing loss. You will always struggle more in noisy environments.

Patient: (look of confusion and a long pause) Okay. Thanks.

Audiologist: (looking bored and making no eye contact) Okay Mrs. Smith, you have essentially normal hearing in your left ear. However, your right ear revealed a severe sloping to profound sensorineural hearing loss. Therefore, no surgery can correct it, it is permanent. It could worsen, you never know.

Patient: (looks very confused and uncertain) Okay, well I guess it is good to know. Is there anything else that I should know? Do I need to follow-up with you again doctor?

Audiologist: (no eye contact) No, we are all done here. You can come see me in a year or if anything else arises. Have a good one. (doctor exits)

Patient: (just sits with a look of confusion and disappointment for a moment and then exits)

APPENDIX J

ROLE PLAYING ACTIVITY

Role Playing Activity

Audiologist: (enters with arms folded and head low) Morning.

Audiologist: (straight faced) So you are here to have a hearing evaluation?

Audiologist: (limited to no eye contact) How long have you had the problem? What do you think caused it? You want amplification?

Audiologist: Let's do the test now. (gets the patient hooked up in the sound booth)

Audiologist: Just repeat what I say and then click the button each time you hear the beep.

Audiologist: (still very little eye contact and arms folded) Well, you have quite a bit of hearing loss. What type of amplification do you think you may be interested in?

Audiologist: Okay, you think about it and just get back to me. Do you need anything else today?

Audiologist: Goodbye.

APPENDIX K

WRITTEN INSTRUCTIONS FOR STANDARDIZED PATIENTS

Standardized Patient Number _____
Date _____

Please carefully review these instructions prior to the "mock" communication counseling session.

Today you will be the patient of an audiology student trainee. The audiology trainee will communicate to you "mock" hearing test results that demonstrate a hearing impairment. Please listen closely and feel free to ask any clarification questions about the information you are given. In addition, you may make relevant statements that relate to your hearing impairment. If needed, you can make three statements or ask three questions that are applicable to the information presented.

APPENDIX L

INVESTIGATOR-DEVELOPED SCENARIOS

Scenario Number _____
Research Subject _____
Date _____

Case History

Mr. Alexander Bookman age 70 was seen at the Louisiana Tech Speech and Hearing Center for an audiological evaluation. Mr. Bookman reported that he worked in a mill most of his life, fought in World War II, and has always been a hunter. In addition, he stated that he has noticed a decrease in his hearing for about seven years or so, but just finally found the time to be tested. Mr. Bookman is very active in his community and struggles socially due to his hearing impairment. Mr. Bookman has not been seen by a physician.

Instructions

Based on the case history and the test results given to you, as an audiologist, you will counsel the patient in the next room for ten minutes on the type, severity, and physiological aspects of the hearing loss, provide a plan for intervention, and make any appropriate recommendations. Take a few minutes to prepare by reviewing the provided test results.

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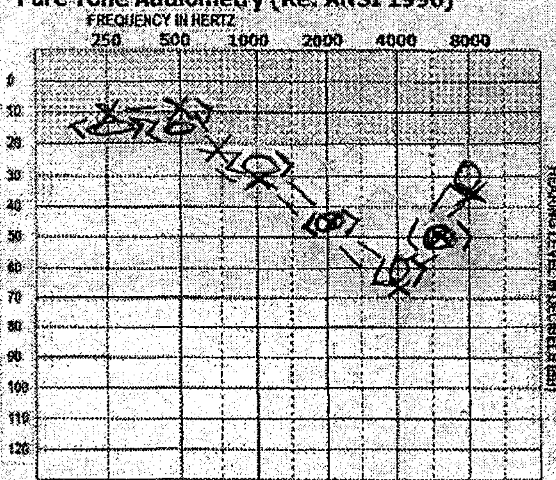
Name: Alexander Bookman DOB: 2-14-1936 Gender: M Date: 2-14-06

Center File #: OL-98760 Audiometer: GSI-60 Reliability: GOOD

Pure Tone Audiometry (Re: ANSI 1996)



MASKING

	R	L	R	L	R	L	R	L	R	L	R	L	
AC													AC
BC													BC

Acoustic Reflex Thresholds

Probe	Stim	500	1000	2000	4000
R	R				
R	L				
L	L				
L	R				
Reflex	Decay	500	1000		
R	L				
L	R				

Tympanometry

	R	L
Tymp Type	A	A
Peak Pressure	-15	-10
Gradient		
Static Compl	0.6	0.8
Base Volume	1.0	1.0

Otoacoustic Emissions (OAEs)

EMISSION TYPE USED	TEST TYPE PERFORMED
Transient	OAE Diagnostic
Distortion Product	OAE Screen
OAE RESULTS SHOWED THE	FOLLOWING:
Right Ear	
Left Ear	

Speech Audiometry

	Speech material	RIGHT	LEFT	BIN	AIDED	UNAID
SRT		25	25			
SDT						
PTA__		28	18			
MCL						
UCL						
Masking						
dB HL	Speech material	RIGHT	LEFT	BIN	AID	UNAID
70	W22	100%	100%	%	%	%
		%	%	%	%	%
		%	%	%	%	%
Masking						

KEY

L	SYMBOLS	R
X	AC	O
□	AC Mask	Δ
>	BC	<
]	BC Mask	[
⌊	No Resp	⌋
↳	Aided SF	R
	SF	S

TEST TYPE	TRANSDUCER
Standard	Insert
Play	Circumaural
COR/VRA	Sound Field
BOA	

Hearing Aid Information

Right Ear ______

Left Ear ______

Otoscopy clear, AU

Comments hx of noise exposure

Student Clinician ______

Clinical Educator ______

Scenario Number _____
Research Subject _____
Date _____

Case History

Mr. Arnold Lee was seen at the Louisiana Tech Speech and Hearing Center on February 12, 2006 for an audiological evaluation. He is 28 years old and reported decreased hearing in the right ear. In addition, Mr. Lee stated that he had a sporting accident while playing baseball four days ago. He reported that he was struck on the right side of the head with a baseball. Since this time, he has noticed a decrease in his hearing on the right side. Mr. Lee stated that he has not been seen by a physician.

Instructions

Based on the case history and the test results given to you, as an audiologist, you will counsel the patient in the next room for ten minutes on the type, severity, and physiological aspects of the hearing loss, provide a plan for intervention, and make any appropriate recommendations. Take a few minutes to prepare by reviewing the provided test results.

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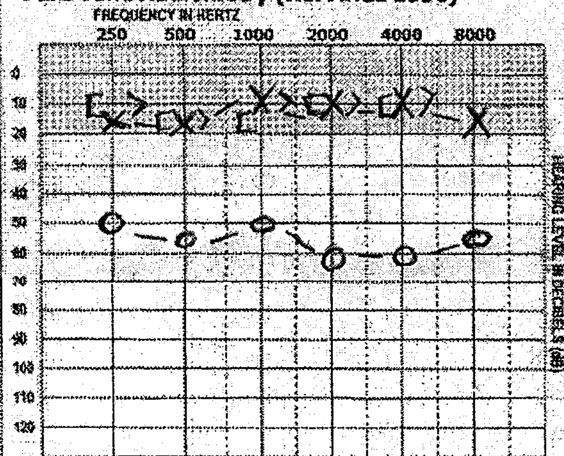
Name: Arnold Lee DOB: 2-12-1978 Gender: M Date: 2-12-06

Center File #: 06-1234 Audiometer: GSI-61 Reliability: Good

Pure Tone Audiometry (Re: ANSI 1996)



MASKING

	R	L	R	L	R	L	R	L	R	L	R	L	
AC													AC
BC		45		45		35		35		35			BC

Speech Audiometry

	Speech material	RIGHT	LEFT	BIN	AIDED	UNAID
SRT		45	10			
SDT						
PTA __		55	11			
MCL						
UCL						
Masking						

dB HL	Speech material	RIGHT	LEFT	BIN	AID	UNAID
70	W-22	96 %	%	%	%	%
50	W-22	%	100 %	%	%	%
		%	%	%	%	%
Masking						

KEY			TEST TYPE	TRANSDUCER
[illegible]	[illegible]	[illegible]	Standard	Insert
X	AC	O	Play	[illegible]
[illegible]	AC Mask	Δ	COR/VRA	Sound Field
[illegible]	BC	<	BOA	
]	BC Mask	[		
[illegible]	No Resp	[illegible]		
[illegible]	Aided SF	[illegible]		
	SF	[illegible]		

Acoustic Reflex Thresholds

Probe	Stim	500	1000	2000	4000
R	R				
R	L				
L	L				
L	R				
Reflex	**Decay**	**500**	**1000**		
R	L				
L	R				

Tympanometry

	R	L
Tymp Type	Ad	A
Peak Pressure	-45	-30
Gradient		
Static Compl.	0.7	0.9
Base Volume	1.9	1.7

Otoacoustic Emissions (OAEs)

EMISSION TYPE USED	TEST TYPE PERFORMED
Transient	OAE Diagnostic
Distortion Product	OAE Screen
OAE RESULTS SHOWED THE	FOLLOWING:
Right Ear	
Left Ear	

Hearing Aid Information

Right Ear

Left Ear

Otoscopy Clear, AU

Comments blow to right side of head with a baseball

Student Clinician

Clinical Educator

Scenario Number _____
Research Subject _____
Date _____

Case History

Mr. Tom Jones was seen at the Louisiana Tech Speech and Hearing Center on February 9, 2006 for an audiological evaluation. He is 63 years of age and reports having a history of noise exposure. Mr. Jones stated that he has worked on oil rigs most of his life. In addition, he reported that he has noticed that over the last five years his hearing has decreased; however, over the last two weeks he has been experiencing aural fullness and ear aches, bilaterally. He also reported that he has had bothersome bilateral tinnitus, for about two to three years. Mr. Jones stated that he has not been seen by a physician.

Instructions

Based on the case history and the test results given to you, as an audiologist, you will counsel the patient in the next room for ten minutes on the type, severity, and physiological aspects of the hearing loss, provide a plan for intervention, and make any appropriate recommendations. Take a few minutes to prepare by reviewing the provided test results.

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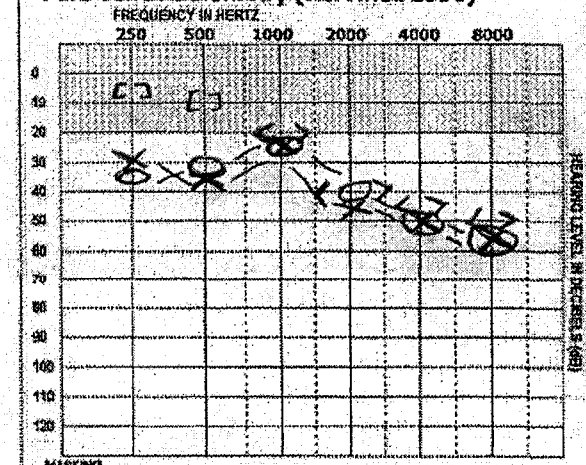
Name: Tom Jones DOB: 1-9-1943 Gender: M Date: 2-9-010

Center File #: 010-8954 Audiometer: GSI-60 Reliability: GOOD

Pure Tone Audiometry (Re: ANSI 1996)



MASKING

	R	L	R	L	R	L	R	L	R	L	R	L	
AC													AC
BC	60	60	60	60									BC

Acoustic Reflex Thresholds

Probe	Stim	500	1000	2000	4000
R	R				
R	L				
L	L				
L	R				
Reflex Decay		500	1000		
R	L				
L	R				

Tympanometry

	R	L
Tymp Type	As	As
Peak Pressure	-14	-5
Gradient		
Static Compl	.2	.2
Base Volume	1.2	1.0

Otoacoustic Emissions (OAEs)

EMISSION TYPE USED	TEST TYPE PERFORMED
Transient	OAE Diagnostic
Distortion Product	OAE Screen
OAE RESULTS SHOWED THE	FOLLOWING:
Right Ear	
Left Ear	

Speech Audiometry

	Speech material	RIGHT	LEFT	BIN	AIDED	UNAID
SRT		30	30			
SDT						
PTA ...		32	35			
MCL						
UCL						
Masking						
dB HL	Speech material	RIGHT	LEFT	BIN	AID	UNAID
75	W-22	92 %	90 %	%	%	%
		%	%	%	%	%
		%	%	%	%	%
Masking						

KEY

			TEST TYPE	TRANSDUCER
L		R		
X	AC	O	Play	Earphone
C	AC Mask	△	DPOAE	Sound Field
>	BC	<	SOA	
]	BC Mask	[		
⊥	No Resp	⊥		
L	Aided SF	R		
	SF	S		

Hearing Aid Information

Right Ear

Left Ear

Otoscopy clear, AU

Comments hx of noise exposure and filling of fullness in both ears.

Student

Clinician

Clinical Educator

Scenario Number _____
Research Subject _____
Date _____

Case History

Mr. Sawyer Miles was seen at the Louisiana Tech Speech and Hearing Center on February 9, 2006 for an audiological evaluation. He is 30 years of age and has recently noticed a change in his hearing on the right side. Mr. Miles reported that his right ear has felt "stopped up" and "muffled" for about a week now. Further, he stated that sometimes it aches. Mr. Miles stated that he has not been seen by a physician.

Instructions

Based on the case history and the test results given to you, as an audiologist, you will counsel the patient in the next room for ten minutes on the type, severity, and physiological aspects of the hearing loss, provide a plan for intervention, and make any appropriate recommendations. Take a few minutes to prepare by reviewing the provided test results.

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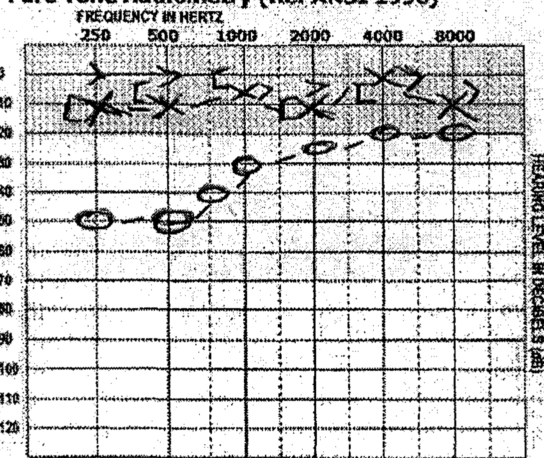
Name: Sawyer Miles DOB: 2-9-1976 Gender: M Date: 2-9-010

Center File #: 010-0412 Audiometer: GSI-100 Reliability: GOOD

Pure Tone Audiometry (Re: ANSI 1996)



MASKING

	R	L	R	L	R	L	R	L	R	L	R	L	
AC													AC
BC		40		40		30		35		25			BC

Speech Audiometry

	Speech material	RIGHT	LEFT	BIN	AIDED	UNAID
SRT		30	10			
SDT						
PTA		35	8.3			
MCL						
UCL						
Masking						

dB HL	Speech material	RIGHT	LEFT	BIN	AID	UNAID
60	W-22	%	96%	%	%	%
75	W-22	92%	%	%	%	%
		%	%	%	%	%
Masking						

KEY TEST TYPE TRANSDUCER

Acoustic Reflex Thresholds

Probe	Stim	500	1000	2000	4000
R	R				
R	L				
L	L				
L	R				
Reflex	Decay	500	1000		
R	L				
L	R				

Tympanometry

	R	L
Tymp Type	B	A
Peak Pressure		-37
Gradient		
Static Compl	0.2	1.2
Base Volume	1.40	1.6

Otoacoustic Emissions (OAEs)

EMISSION TYPE USED	TEST TYPE PERFORMED
Transient	OAE Diagnostic
Distortion Product	OAE Screen
OAE RESULTS SHOWED THE	FOLLOWING:
Right Ear	
Left Ear	

Hearing Aid Information

Right Ear

Left Ear

Otoscopy Clear, Hu

Comments hx of recurrent otitis media in the (R) ear

Student Clinician

Clinical Educator

Scenario Number _____
Research Subject _____
Date _____

Case History

Mrs. Gloria Peterson was seen at the Louisiana Tech Speech and Hearing Center on February 9, 2006 for an audiological evaluation. Mrs. Peterson is 33 years of age and recently gave birth to a healthy baby boy. The baby was delivered two and one half weeks ago by natural birth. She reported that she is breastfeeding and that everything is fine with the exception of her hearing in the right ear. In addition, Mrs. Peterson stated that every since the birth she has noticed that her hearing in the right ear has decreased. Mrs. Peterson reported that at this time she had not mentioned anything to her physician.

Instructions

Based on the case history and the test results given to you, as an audiologist, you will counsel the patient in the next room for ten minutes on the type, severity, and physiological aspects of the hearing loss, provide a plan for intervention, and make any appropriate recommendations. Take a few minutes to prepare by reviewing the provided test results.

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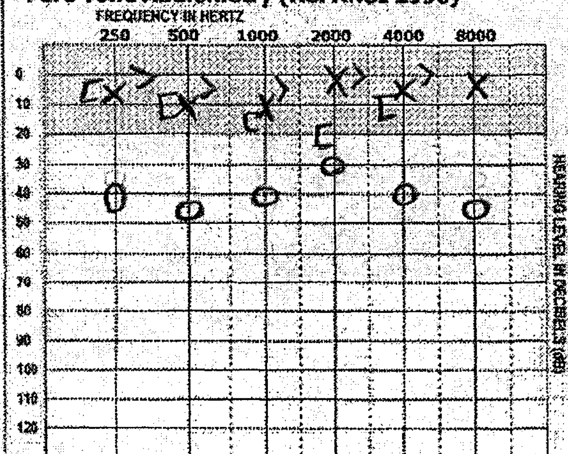
P.O. Box 3165, Ruston, LA 71272 Phone: (318) 257-4764 Fax: (318) 257-4492

Name: Gloria Peterson DOB: 2-9-1973 Gender: F Date: 2-9-010

Center File #: 010-0892 Audiometer: GSI-100 Reliability: GOOD

Pure Tone Audiometry (Re: ANSI 1996)



MASKING

	R	L	R	L	R	L	R	L	R	L	R	L	
AC													AC
BC		35		40		40		25		30			BC

Speech Audiometry

	Speech material	RIGHT	LEFT	BIN	AIDED	UNAID
SRT		35	5			
SDT						
PTA		38	7			
MCL						
UCL						
Masking						
dB HL	Speech material	RIGHT	LEFT	BIN	AID	UNAID
75	W-22	100%	%	%	%	%
45	W-22	%	100%	%	%	%
		%	%	%	%	%
Masking						

KEY TEST TYPE TRANSDUCER

L	STIMULUS	R	Standard	Insert
X	AC	O	Play	Circumaural
⊏	AC Mask	△	CONAWA	Sound Field
>	BC	<	BOA	
]	BC Mask	[		
[illegible]	No Resp	[illegible]		
L	Aided SF	R		
	SF	S		

Acoustic Reflex Thresholds

Probe	Stim	500	1000	2000	4000
R	R				
R	L				
L	L				
L	R				
Reflex	Decay	500	1000		
R	L				
L	R				

Tympanometry

	R	L
Tymp Type	As	A
Peak Pressure	-7	-25
Gradient		
Static Compl	.2	0.7
Base Volume	1.3	1.2

Otoacoustic Emissions (OAEs)

EMISSION TYPE USED	TEST TYPE PERFORMED
Transient	OAE Diagnostic
Distortion Product	OAE Screen
OAE RESULTS SHOWED THE FOLLOWING:	
Right Ear	
Left Ear	

Hearing Aid Information

Right Ear

Left Ear

Otoscopy Clear bilaterally

Comments gave birth 2½ wks ago + is breast feeding. Patient noticed a decrease in hearing in the right ear

Student Clinician

Clinical Educator

Scenario Number _____
Research Subject _____
Date _____

Case History

Mr. John Jacobs was seen at the Louisiana Tech Speech and Hearing Center on February 3, 2006. Mr. Jacobs is 43 years of age and came to the center to have an audiological evaluation due to a recent accident. He reported that he had recently sustained a bad fall off a ladder which resulted in a blow to the left temporal lobe. Mr. Jacobs stated that he did not seek any medical attention until now but he feels that his hearing acuity has decreased since the accident. Prior to the accident Mr. Jacobs reported having no hearing problems.

Instructions

Based on the case history and the test results given to you, as an audiologist, you will counsel the patient in the next room for ten minutes on the type, severity, and physiological aspects of the hearing loss, provide a plan for intervention, and make any appropriate recommendations. Take a few minutes to prepare by reviewing the provided test results.

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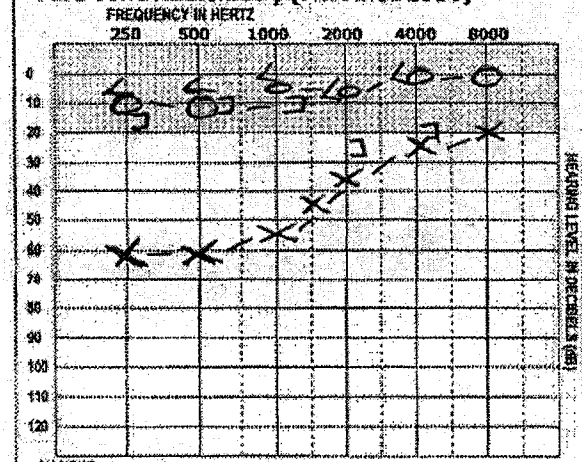
P.O. Box 3165, Ruston, LA 71272 Phone: (318) 257-4764 Fax: (318) 257-4492

Name: John Jacobs DOB: 2-3-1913 Gender: M Date: 2-3-010

Center File #: 010-0358 Audiometer: GSE100 Reliability: GOOD

Pure Tone Audiometry (Re: ANSI 1996)



	R	L	R	L	R	L	R	L	R	L	R	L	
AC													AC
BC	40		40		30		35		15				BC

Acoustic Reflex Thresholds

Probe	Stim	500	1000	2000	4000
R	R				
R	L				
L	L				
L	R				

Reflex Decay		500	1000
R	L		
L	R		

Tympanometry

	R	L
Tymp Type	A	B
Peak Pressure	-10	
Gradient		
Static Compl	0.9	1.3
Base Volume	1.2	1.35

Otoacoustic Emissions (OAEs)

EMISSION TYPE USED	TEST TYPE PERFORMED
Transient	OAE Diagnostic
Distortion Product	OAE Screen
OAE RESULTS SHOWED THE	FOLLOWING:
Right Ear	
Left Ear	

Speech Audiometry

	Speech material	RIGHT	LEFT	BIN	AIDED	UNAID
SRT		5	50			
SDT						
PTA		7	50			
MCL			90			
UCL						
Masking						

dB HL	Speech material	RIGHT	LEFT	BIN	AID	UNAID
50	W-22	100%	%	%	%	%
90	W-22	%	64%	%	%	%
		%	%	%	%	%
Masking						

KEY

			TEST TYPE	TRANSDUCER
L	Stimulus	R	Standard	Insert
X	AC	O	Play	Circumaural
U	AC Mask	Δ	CONVERS	Sound Field
>	BC	<	BOA	
)	BC Mask	[		
L	No Resp	L		
L	Aided SF	R		
	SF	B		

Hearing Aid Information

Right Ear

Left Ear

Otoscopy (R) clear ; (L) edema, blood and a TM perf.

Comments hx of longitudinal skull fracture, due to a fall

Student

Clinician

Clinical Educator

Scenario Number _____
Research Subject _____
Date _____

Case History

Mrs. Foxxy Brown was seen at the Louisiana Tech Speech and Hearing Center on February 1, 2006. Mrs. Brown stated that she is 29 years of age and has never experienced any hearing problems until now. She reported that when she woke up three days ago she could not hear anything. "It was as if I went deaf all of a sudden." Further, she stated that now she can hear some sounds; however, it is very difficult and frustrating. Mrs. Brown also reported that she has not been seen by a physician.

Instructions

Based on the case history and the test results given to you, as an audiologist, you will counsel the patient in the next room for ten minutes on the type, severity, and physiological aspects of the hearing loss, provide a plan for intervention, and make any appropriate recommendations. Take a few minutes to prepare by reviewing the provided test results.

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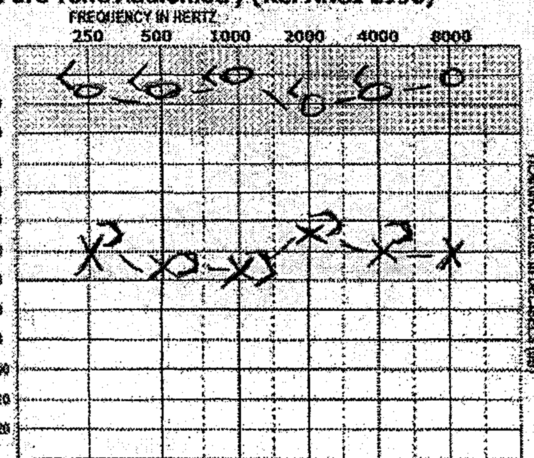
Name: Foxy Brown DOB: 2-1-1977 Gender: F Date: 2-1-010

Center File #: 06-0185 Audiometer: GSI-60 Reliability: GOOD

Pure Tone Audiometry (Re: ANSI 1996)



MASKING

	R	L	R	L	R	L	R	L	R	L	R	L	
AC													AC
BC													BC

Speech Audiometry

	Speech material	RIGHT	LEFT	BIN	AIDED	UNAID
SRT		5	60			
SDT						
PTA		5	62			
MCL						
UCL						
Masking						
dB HL	Speech material	RIGHT	LEFT	BIN	AID	UNAID
50	W-22	100%	%	%	%	%
MCL 90	W-22	%	72%	%	%	%
		%	%	%	%	%
Masking						

KEY TEST TYPE TRANSDUCER

Acoustic Reflex Thresholds

Probe	Stim	500	1000	2000	4000
R	R				
R	L				
L	L				
L	R				
Reflex	Decay	500	1000		
R	L				
L	R				

Tympanometry

	R	L
Tymp Type	A	A
Peak Pressure	-20	-17
Gradient		
Static Compl	0.7	0.9
Base Volume	1.3	1.0

Otoacoustic Emissions (OAEs)

EMISSION TYPE USED	TEST TYPE PERFORMED
Transient	OAE Diagnostic
Distortion Product	OAE Screen
OAE RESULTS SHOWED THE	FOLLOWING:
Right Ear	
Left Ear	

Hearing Aid Information

Right Ear

Left Ear

Otoscopy Clear, AU

Comments Patient reported a decrease in hearing in the left ear 3 days ago.

Student Clinician

Clinical Educator

Scenario Number _____
Research Subject _____
Date _____

Case History

Mrs. Rachael Hook was seen at the Louisiana Tech Speech and Hearing Center on January 26, 2006. Mrs. Hook reported that she is 40 years of age. She has been experiencing aural fullness, roaring tinnitus, and vertigo for the last several weeks. In addition, she stated that sometimes she has difficulty hearing but other times she hears fine. Mrs. Hook reported that when she experiences vertigo it feels as if things in the environment are spinning. Further, she stated that she has not been seen by a physician.

Instructions

Based on the case history and the test results given to you, as an audiologist, you will counsel the patient in the next room for ten minutes on the type, severity, and physiological aspects of the hearing loss, provide a plan for intervention, and make any appropriate recommendations. Take a few minutes to prepare by reviewing the provided test results.

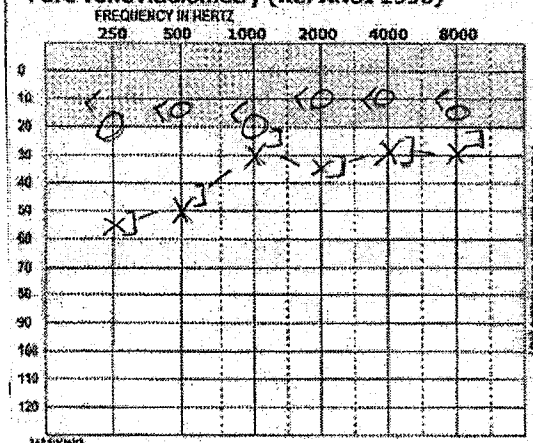
LOUISIANA TECH UNIVERSITY
SPEECH AND HEARING CENTER
RUSTON, LOUISIANA

P.O. Box 3165, Ruston, LA 71272 Phone: (318) 257-4764 Fax: (318) 257-4492

Name: Rachael Hook DOB: 1-26-1986 Gender: F Date: 1-20-06

Center File #: 06-0182 Audiometer: GSI-100 Reliability: Good

Pure Tone Audiometry (Re: ANSI 1996)



MASKING

	R	L	R	L	R	L	R	L	R	L	R	L	
AC													AC
BC	60		50		45		50		35				BC

Speech Audiometry

	Speech material	RIGHT	LEFT	BIN	AIDED	UNAID
SRT		15	35			
SDT						
PTA _		15	38			
MCL						
UCL						
Masking						

dB	Speech material	RIGHT	LEFT	BIN	AID	UNAID
55		100%	%	%	%	%
75		%	100%	%	%	%
		%	%	%	%	%
Masking						

KEY

L		R		TEST TYPE	TRANSDUCER
X	AC	O			
[	AC Mask	Δ			
>	BC	<			
]	BC Mask	[			
:	No Resp	:			
L	Aided AC	R			
	SF	S			

Acoustic Reflex Thresholds

Probe	Stim	500	1000	2000	4000
R	R				
R	L				
L	L				
L	R				

Reflex Decay		500	1000		
R	L				
L	R				

Tympanometry

	R	L
Tymp Type	A	A
Peak Pressure	-70	-50
Gradient		
Static Compl	.7	.6
Base Volume	1.1	1.1

Otoacoustic Emissions (OAEs)

EMISSION TYPE USED	TEST TYPE PERFORMED
Transient	OAE Diagnostic
Distortion Product	OAE Screen
OAE RESULTS SHOWED THE	FOLLOWING:
Right Ear	
Left Ear	

Hearing Aid Information

Right Ear

Left Ear

Otoscopy Clear, Au

Comments Aural fullness, roaring sensation, feels that things are spinning

Student Clinician

Clinical Educator

APPENDIX M

INVESTIGATOR-DEVELOPED COUNSELING COMMUNICATION CHECKLIST

Date _____/_____/_____
Videotape number_____

COUNSELING COMMUNICATION CHECKLIST

5-POINT LIKERT SCALE

5 = Always Observed 4 = Usually Observed 3 = Sometimes Observed
2 = Rarely Observed 1 = Never Observed

	Score	PROCESS	CLINICAL CONTENT	Score
OPENING		I. Zone of intimacy a. open body posture b. eye contact c. distance II. Greeting	I. Clinical reference a. the business at hand	
SESSION		I. Tone a. professional confidence b. professional compassion II. Timing a. patient-directed/ adjusted pace b. holds for patient response III. Listening a. active listening cues	I. Diagnosis a. type of hearing loss b. severity of hearing loss II. Terminology used III. Etiology IV. Functional aspects of the hearing loss a. how the loss may alter their life b. difficulties they may experience V. Intervention	
CLOSING		I. Encourages questions II. Directly addresses questions III. Demonstrates empathy	I. Professional termination a. summary of session	

Process + Clinical Content Score (75 max)	

ADDITIONAL COMMENTS:_____

APPENDIX N

AIDED-RECALL QUESTIONNAIRE

Research Subject _____
Date _____

Aided-Recall Questionnaire for Standardized Patients

Instructions

Please complete the following questions about your hearing impairment. Answer the questions to the best of your ability based on the information presented to you.

1. Circle the degree of your hearing loss.

Mild	Moderate	Severe	Profound	Do Not Know

2. Circle which part(s) of your ear is (are) affected by the hearing loss.

   Outer Middle Inner Do Not Know

3. What are two ways in which the hearing impairment will affect you in your daily life activities?

   (a)

   (b)

4. What are two types of intervention options that the audiologist student trainee said would be beneficial to you?

   (a)

   (b)

APPENDIX O

EXPERIMENTAL TREATMENT SESSIONS I AND II

Experimental Treatment Sessions I and II

Today we are going to discuss the communication process, grief cycle, and view a video clip. Communication is a natural phenomenon that occurs throughout our everyday lives. Communication encounters incorporate content along with a process. For example, think of baking a cake; what is in the pantry is the content and actually knowing how to bake the cake is the process. However, communicators often fail to acknowledge the communicative process in its entirety. According the Adler and Elmhorst (2002) an effective communication process model has seven components; a message, channel, encoder, receiver, decoder, feedback, and noise. Here is a blank handout (see Appendix A) of a visual of what the communication process model should look like. The structure of the model appears as two eggs overlapping. If the eggs fail to overlap then shared meaning will not exist between the encoder and decoder and result in a communication breakdown. Once we have discussed each of the components you may appropriately fill in the model with each of the mentioned elements

Message

The message (see Appendix B) is the transmitted signal. The signal may be intentional (e.g., speaking) or unintentional (e.g., crossing your arms, sighing, etc.). Further, the message is communicated through any of the sense organs of the body.

Channel

The channel/medium (see Appendix C) is the means chosen to deliver the message. A message may be delivered using a written (e.g., letter, memo), face-to-face, voice only (i.e., telephone), or mediated (i.e., newspaper) format. Most messages are conveyed through multiple channels in order to effectively and appropriately transmit the message to the decoder/receiver.

Encoder

The encoder/sender (see Appendix D) will formulate the message (i.e., ideas and thoughts) into meaningful words and/or gestures (e.g., facial expressions, body movements, etc.) in order to transmit the message to the decoder/receiver. The encoder must consider several things prior to relaying the message. For instance, an encoder should be mindful of the terminology used, method of delivery, along with the appropriate channel, so that the message is conveyed accurately to the decoder/receiver.

Decoder and Receiver

The receiver (see Appendix E) detects the transmitted message and attaches meaning. The decoder/receiver is viewed as the listener in the communication process. Once the message has been detected the receiver must appropriately decode the message. After the message has been decoded it is sent along the pathway to the language center in the brain in order to achieve shared meaning. When the message has been properly decoded the receiver/decoder will respond to the information either negatively or positively.

Feedback

Feedback (see Appendix F) can be thought of as a loop, the sender transmits the message, the receiver decodes the message, and then the receiver formulates a reply through nonverbal and/or verbal means. In addition, feedback may be expressed in two different forms. One from is referred to as self-feedback. Self-feedback is what the encoder hears and/or sees as he/she is communicating the message to the decoder/receiver. A second form is what and/or how the decoder/receiver replies to the message. Feedback may be expressed verbally, nonverbally, and/or both. Further, feedback may be portrayed positively and/or negatively.

Noise

Noise (see Appendix G) is defined as anything that will alter the message. In addition, noise will disrupt how the decoder/receiver receives the message and result in improper decoding of the message. There are three primary noise sources: external/physical noise (e.g., people talking, cell phone ringing, hum of the computer, etc.), physiological noise (e.g., hearing impairments, illnesses, memory loss, etc.), and psychological noise (e.g., egotism, preoccupation, extreme emotionalism, etc.). However, a fourth noise source is termed semantic (speaking in a foreign tongue, complex terminology, using colloquial speech, etc.). Noise will cause interference in the message being transmitted and create a communication barrier, which will hinder the communication process and limit the amount of shared meaning that occurs.

In addition, a communicator must consider the social context and which is most appropriate for the message being conveyed. There are four different contexts that one must be knowledgeable of in order to effectively communicate a message. The four

contexts are: physical context, the concrete environment in which the communicative interaction occurs (i.e., funeral versus a football game); social context refers to the relationships among senders and receivers along with the emotional dimension and the formality of the interaction (i.e., formal dinner versus the cafeteria); chronological context has to do with the way time and experiences alter the interaction (i.e., winning a vacation versus learning of a death); and the cultural context, which refers to ethnicity/nationality, beliefs, values, behaviors, and the overall lifestyle of the communicators (i.e., southerners versus northerners; Cajun French speakers versus Native French speakers). In addition to the communication process audiologist need to be aware of the grief process and how it may impact the communication process.

Grief

Grief is a natural, individualized process that occurs in relation to a loss. The loss can be either developmental (e.g., hearing), family (e.g., death), individual (e.g., assets), or job related. Grief is a multifaceted process that involves five different stages. The five stages are denial, anger, bargaining, depression, and acceptance (Kubler-Ross, 1969).

Denial is an individual's initial reaction to a loss such as a hearing impairment. During this stage the individual will realize that a problem exists, but is not willing to accept that it is serious enough to warrant intervention. Anger results when the individual is no longer able to sustain denial. Bargaining occurs when the individual prolongs acceptance of the loss and/or views the impact as minimal. Whereas, depression occurs when all other strategies to cope with the loss have failed and the individual is still not ready to accept the loss. The final stage and the ultimate goal of the

grieving process is acceptance. During the acceptance stage, the individual will have come to terms with the loss.

Grieving is an individualized process; therefore, the time span spent along with the order of the stages will vary according to the type of loss and the individual who is experiencing it. Audiologist must be knowledgeable of the grieving process in order to effectively communicate with the patient. The individual should receive support throughout the grieving process from friends, family, and health care providers (e.g., audiologists), etc.

Support and encouragement provided by the audiologist will foster the patient's movement through the stages. For example, during the denial stage, an audiologist could provide a patient with statistical information pertaining to the etiology and prevalence of a hearing loss. While in the anger stage, an audiologist may instruct the family members and/or caregivers about various communication strategies (e.g., reduce all background noise before communicating) to implement when communicating with someone with a hearing impairment. In the bargaining stage, an audiologist may explain how and why an amplification device(s) are beneficial to him/her and their lifestyle. During the depression stage, an audiologist may provide the patient with information on appropriate state and/or national organizations (e.g., Hear Now) that may provide funding assistance for hearing aids based on the overall household income. Once the individual has fully accepted the loss the health care provider (e.g., audiologist) will be able to better communicate with him/her through both verbal and nonverbal means and provide a higher level of satisfaction.

By having an understanding of the communication process along with the grieving process audiologist will be able to be more empathetic communicative counselors. Further, the audiologist will possess the ability to effectively communicate to patients the test results, and intervention techniques available to them. Another important aspect of the communication process that one must consider is nonverbal communication.

Video

At this time a video clip (see Appendix H for nonverbal dialogue of video) of an audiologist and his/her patient will be played without any audio input. Class please pay close attention and take notes on what the doctor did inappropriately along with how the patient reacted to the doctor's non-verbal communication skills. Further, you should be able to report on how you knew the patient was uneasy and what the doctor could have done differently to make the patient feel more at ease in the situation. Upon completion of the video clip, a brief class discussion will be held to compare and contrast the notes taken by each of the students.

Today we discussed what a communication model is and the components included in the process, the grief cycle and how it relates to audiologists, and we viewed a video clip to begin thinking about the role of nonverbal communication when counseling a patient. At this time, are there any questions regarding any of the topics discussed today? If there are no questions then class is dismissed and will be held again the day after tomorrow. Thank you for your attentiveness and activeness in the class discussion.

Session II

In the last class we learned what a communication process model is, the components (a message, channel, encoder, receiver, decoder, feedback, and noise), the grief cycle (denial, anger, bargaining, depression, and acceptance), and we viewed a video clip to begin looking at the importance of nonverbal communication. Within this meeting we are going to discuss verbal and nonverbal communication, spiral of silence, cognitive dissonance, and demonstrate a role playing activity. When conveying a message both the verbal and nonverbal components displayed will influence the transmission of the message. At this time we will view the same video clip (see Appendix I for verbal dialogue of the video) from yesterday with the audio input. Again class, please take notes on the verbal message being conveyed. As you may know, the majority of a message is transmitted through nonverbal communication.

Verbal and nonverbal communication

Verbal communication is the words spoken and/or vocalized during a communication interaction. When communicating verbally, one must consider the terminology, and the sequence of the message. The encoder must closely choose the terminology used in order to effectively communicate the message. Nonverbal communication may positively or negatively support the verbal message being transmitted.

Nonverbal communication is defined as those messages that are transmitted without using linguistic means. Further, nonverbal communication may be expressed through any of the senses (sight, hearing, smell, taste, and/or touch). Nonverbal

messages can be portrayed intentionally or unintentionally. When an individual is aware of what nonverbal communication is and how to control it the message may be effectively depicted.

All of the components of your body image and language are capable if expressing some degree of meaning. Nonverbal communication is expressed though ones overall impression of others based on their appearance and gesticulations. Most nonverbal behaviors will vary across cultures; however, facial expressions representing happiness, fear, anger, surprise, sadness, and disgust are universal among cultures.

In a face-to-face encounter, a limited amount of the message is conveyed linguistically. Griffith III, et al. (2003) reported that approximately 60 to 65% of a message is transmitted nonverbally. Further, nonverbal communication typically comes in a variety if forms simultaneously. For example, appearance, paralinguistics of speech (e.g., voice, accent, speed, volume, and inflection), facial expressions, posture and body movement, along with personal space and distance all contribute to the communication process.

Appearance. Appearance plays a large role in the way one is perceived by others. In addition, appearance contributes to how an encoder's message is comprehended in both an informal or formal communicative interaction. Appearance incorporates the dynamics of both physical and nonphysical features. Physical appearance consists of size, shape, height, and overall attractiveness. In addition, the way one dresses will impact how others view him/her. For example, professional's who work in health care want to be perceived as knowledgeable and likable by their patients;

therefore, they must dress in professional attire in order to denote a sense of credibility. Another pertinent nonverbal component is the paralinguistic aspects of speech.

Paralinguistics of Speech. An individual's vocal mechanism possesses the ability to communicate in ways that have no link to the spoken utterance (Adler & Elmhorst, 2003). For instance, when one overhears people communicating using a foreign dialect in which you do not understand, you are still able to determine how the speaker feels (e.g., excited, happy, bored, tired, grieving, etc.). Paralanguage encompasses an array of vocal characteristics: pitch (high versus low), range (spread versus narrow), articulation (precise versus imprecise), rhythm (smooth versus jerky), volume (loud versus soft), resonance (resonant versus thin), tempo (rapid versus slow), dysfluencies (um, er, etc.), and pauses (frequency and duration). Paralanguage has the capability of conveying ones feelings through the message. In addition, the stress patterns chosen by the speaker may affect the way that the utterance is perceived by the listener. Facial expressions also contribute to how a message is comprehended along with the emotions felt by the listener regarding the topic.

Facial Expressions. Facial expressions and eye movements are used to communicate various emotions when speaking. A trained communicator possesses the ability to control facial expressions and eye movements in order to get the response warranted from the listener. Eye contact is a direct indicator of how attentive and involved an individual is within the communicative interaction. According to Adler and Elmhorst (2003), in the majority of face-to-face communication encounters the partners will look at one another approximately 50 to 60 percent of the time. When communicating with individuals of different nationalities professionals should be aware

of the cultural variations for the use and maintenance of eye contact and facial expressions. For instance, in some cultures a lack of eye contact is a sign of respect towards others. Additional nonverbal components which may greatly impact the message being conveyed across cultures are ones posture and bodily movements.

Posture and Body Movements. An individual's body alone can communicate a message in a variety of ways. For instance, posture may denote a level of interest in the message along with one's attitude towards the topic being discussed. Whereas, an individual's body movements may be a result of a direct word and/or phrase translation (e.g., the thumbs-up symbol for 'good job'); may heighten the verbal message (i.e., when making a gesture to the right one may illustrate this through a hand motion, head turn, and/or an entire body turn); the facial movements one makes (e.g., smiling, frowning, etc.) along with movements of the hands and body (e.g., tensing, posture changes, etc.); the actual behaviors denoted to monitor and maintain the speech of others (e.g., a head nod); and either individual gestures which appease a personal need (e.g., scratching your nose). When manipulating nonverbal communicative techniques one also needs to be aware of the proxemics.

Personal Space and Distance. Proxemics refers to spatial characteristics which denote various messages along with ones feelings and attitudes. Four distances that define ones relationships when communicating are: intimate, personal, social, and public distance (Hall, 1966; as cited in DeVito, 1999). An intimate distance ranges from touching to 18 inches, personal is from 18 inches to four feet, social ranges from four to 12 feet, and public is greater than 12 to 25 feet.

Each of the contributors (e.g., appearance, paralinguistics of speech [e.g., voice, accent, speed, volume, and inflection], facial expressions, posture and body movement, and personal space and distance) of nonverbal communication greatly impacts how a message is perceived by the listener. Each of these components should be considered throughout any communication interaction to ensure that shared meaning will occur. Again, shared meaning will occur when the eggs overlap. Meaning that the communication process has been successful and both partners fully grasp the importance of the message. Two other concepts that we should briefly discuss is the spiral of silence and cognitive dissonance.

According to Krista Jordan (2000), Elisabeth Noelle-Neumann developed the spiral of silence concept in 1971. This theory is noted as one of the most influential theories of public opinion. Spiral of silence refers to how individuals tend to remain silent when their views are in the minority. Noelle-Neumann contributes the spiral of silence to fear of isolation. Patients will withhold information they fear will be negatively perceived by the audiologist. Can you think of any audiological examples? Therefore, as an audiologist you should be aware of this concept and encourage patients to divulge pertinent information no matter the circumstance.

Whereas, cognitive dissonance is a term that refers to an agonizing mental state where individuals find themselves doing things and/or having opinions that contradict their beliefs and values (Leon Festinger, 2006). Therefore, as professionals in the medical field one must consider that patients tend to be more open and trusting when similarities are present. Patients are going to be more accepting of the information provided to them when the information is provided in a sufficient and comforting

manner. In addition, a professional's appearance may positively and/or negatively influence the perception of the patient. Furthermore, the overall exposure level of the patient along with his/her preconceived notions towards the professional will influence the amount of information retained by the patient throughout the session.

To conclude the session, I would like to have a volunteer for a role-playing activity (see Appendix J). I am going to be the audiologist in the first activity and you will be the patient. You have just come to my office to be evaluated for a possible hearing loss. Your physician referred you to my office. The facility seems to be pretty nice at first glance. All you need to do is act natural and respond to me as you normally would if this was a true doctor/patient communicative interaction. Once the role-playing activity is over we will discuss how the interaction went and then we will switch places and have one of you demonstrate ways that you would rectify the problems within the communication interaction. After completing the activity we will discuss as a class what, if any, other strategies could have been implemented to further enhance the communication process.

This will conclude our final meeting. Are there any questions regarding nonverbal communication, the spiral of silence, cognitive dissonance, and/or the role-playing activity? Now we have learned how to bake this cake. I know that we have only scratched the surface of what the process is here. It is up to you now to implement what we discussed here within your next patient interaction. Just remember practice does make perfect. These two training sessions were designed to provide you with an entry-level understanding of the importance of communication, what a communication process

model is, and effective communication skills to utilize with your patients in order to ensure that shared meaning was attained.

APPENDIX P

DEMOGRAPHIC DATA SHEET
RESEARCH SUBJECT

Research Subject _____
Date _____

Demographic Data Sheet for the Research Subjects

Please answer the following questions to the best of your ability.

1. How old are you and what is your gender?
2. What University did you attend for your undergraduate degree?
3. What was your major as an undergraduate?
4. When did you complete your undergraduate coursework (date)?
5. What was your overall undergraduate GPA?
6. How many quarters have you been enrolled in graduate school at Louisiana Tech University?
7. At what stage are you in your program?
8. Please complete the attached form documenting the course work you have completed thus far in your program.
9. What is your current overall graduate GPA?
10. Prior to your enrollment in the doctoral audiology program at Louisiana Tech University, how much clinical experience did you have in audiology?
11. How many academic quarters have you been enrolled in a clinical practicum?
12. How many total clinical clock hours have you earned thus far (combined) at the graduate level?

Please place an X beside all courses that you have successfully completed thus far in the program, and specify if it was a 500 or 600 level course by circling the course number. In addition, indicate the number of professional seminar courses you have taken and what, if any, related coursework you have completed.

_____SPCH 500/600 Introduction to Research

_____SPCH 502/602 Audiological Assessment I

_____SPCH 518/618 Anatomy and Physiology of the Auditory System

_____SPCH 516/616 Hearing Disorders

_____SPCH 517/617 Hearing Science

_____SPCH 548/648 Psychoacoustics

_____SPCH 509/609 Instrumentation and Calibration

_____SPCH 531/631 Audiological Assessment II

_____SPCH 532/632 Introduction to Amplification

_____SPCH 543/643 Pediatric Audiology

_____SPCH 556/656 Aural Rehabilitation

_____SPCH 542/642 Auditory Processing Disorders

_____SPCH 552/652 Professional Seminar in Audiology (1 SCH)

_____SPCH 541/641 Physiological Tests of Auditory Function

_____Related Area(s)

_____SPCH 550/650 Research Proposal (1 SCH)

_____SPCH 553/653 Vestibular System Disorders

_____SPCH 512/612 Audiological Correlates of Language Disorders

_____SPCH 536/636 Hearing Conservation

_____SPCH 549/649 Audiology Clinical Practicum

APPENDIX Q

DEMOGRAPHIC DATA SHEET
STANDARDIZED PATIENTS

Research Subject _____
Date _____

Demographic Data Sheet for the Standardized Patients

Please answer the following questions to the best of your ability.

1. How old are you?

2. What is your gender?

3. What is your socioeconomic classification (low, middle, or high)?

4. How many academic quarters have you been enrolled at Louisiana Tech University?

5. What is your academic major?

6. In what year of academic study are you?

7. How many semester credit hours have you earned thus far?

8. How many semester hours in your major have you earned?

9. What Speech Communication courses have you taken?

10. What is your current undergraduate GPA?

APPENDIX R

EXPERIMENTAL TREATMENT SESSION I

Experimental Treatment Session I

Today we are going to discuss the communication process, grief cycle, and view a video clip. Communication is a natural phenomenon that occurs throughout our everyday lives. Communication encounters incorporate content along with a process. For example, think of baking a cake; what is in the pantry is the content and actually knowing how to bake the cake is the process. However, communicators often fail to acknowledge the communicative process in its entirety. According the Adler and Elmhorst (2002) an effective communication process model has seven components; a message, channel, encoder, receiver, decoder, feedback, and noise. Here is a blank handout (see Appendix A) of a visual of what the communication process model should look like. The structure of the model appears as two eggs overlapping. If the eggs fail to overlap then shared meaning will not exist between the encoder and decoder and result in a communication breakdown. Once we have discussed each of the components you may appropriately fill in the model with each of the mentioned elements

Message

The message (see Appendix B) is the transmitted signal. The signal may be intentional (e.g., speaking) or unintentional (e.g., crossing your arms, sighing, etc.). Further, the message is communicated through any of the sense organs of the body.

Channel

The channel/medium (see Appendix C) is the means chosen to deliver the message. A message may be delivered using a written (e.g., letter, memo), face-to-face, voice only (i.e., telephone), or mediated (i.e., newspaper) format. Most messages are conveyed through multiple channels in order to effectively and appropriately transmit the message to the decoder/receiver.

Encoder

The encoder/sender (see Appendix D) will formulate the message (i.e., ideas and thoughts) into meaningful words and/or gestures (e.g., facial expressions, body movements, etc.) in order to transmit the message to the decoder/receiver. The encoder must consider several things prior to relaying the message. For instance, an encoder should be mindful of the terminology used, method of delivery, along with the appropriate channel, so that the message is conveyed accurately to the decoder/receiver.

Decoder and Receiver

The receiver (see Appendix E) detects the transmitted message and attaches meaning. The decoder/receiver is viewed as the listener in the communication process. Once the message has been detected the receiver must appropriately decode the message. After the message has been decoded it is sent along the pathway to the language center in the brain in order to achieve shared meaning. When the message has been properly decoded the receiver/decoder will respond to the information either negatively or positively.

Feedback

Feedback (see Appendix F) can be thought of as a loop, the sender transmits the message, the receiver decodes the message, and then the receiver formulates a reply through nonverbal and/or verbal means. In addition, feedback may be expressed in two different forms. One from is referred to as self-feedback. Self-feedback is what the encoder hears and/or sees as he/she is communicating the message to the decoder/receiver. A second form is what and/or how the decoder/receiver replies to the message. Feedback may be expressed verbally, nonverbally, and/or both. Further, feedback may be portrayed positively and/or negatively.

Noise

Noise (see Appendix G) is defined as anything that will alter the message. In addition, noise will disrupt how the decoder/receiver receives the message and result in improper decoding of the message. There are three primary noise sources: external/physical noise (e.g., people talking, cell phone ringing, hum of the computer, etc.), physiological noise (e.g., hearing impairments, illnesses, memory loss, etc.), and psychological noise (e.g., egotism, preoccupation, extreme emotionalism, etc.). However, a fourth noise source is termed semantic (speaking in a foreign tongue, complex terminology, using colloquial speech, etc.). Noise will cause interference in the message being transmitted and create a communication barrier, which will hinder the communication process and limit the amount of shared meaning that occurs.

In addition, a communicator must consider the social context and which is most appropriate for the message being conveyed. There are four different contexts that one must be knowledgeable of in order to effectively communicate a message. The four

contexts are: physical context, the concrete environment in which the communicative interaction occurs (i.e., funeral versus a football game); social context refers to the relationships among senders and receivers along with the emotional dimension and the formality of the interaction (i.e., formal dinner versus the cafeteria); chronological context has to do with the way time and experiences alter the interaction (i.e., winning a vacation versus learning of a death); and the cultural context, which refers to ethnicity/nationality, beliefs, values, behaviors, and the overall lifestyle of the communicators (i.e., southerners versus northerners; Cajun French speakers versus Native French speakers). In addition to the communication process audiologist need to be aware of the grief process and how it may impact the communication process.

Grief

Grief is a natural, individualized process that occurs in relation to a loss. The loss can be either developmental (e.g., hearing), family (e.g., death), individual (e.g., assets), or job related. Grief is a multifaceted process that involves five different stages. The five stages are denial, anger, bargaining, depression, and acceptance (Kubler-Ross, 1969).

Denial is an individual's initial reaction to a loss such as a hearing impairment. During this stage the individual will realize that a problem exists, but is not willing to accept that it is serious enough to warrant intervention. Anger results when the individual is no longer able to sustain denial. Bargaining occurs when the individual prolongs acceptance of the loss and/or views the impact as minimal. Whereas, depression occurs when all other strategies to cope with the loss have failed and the individual is still not ready to accept the loss. The final stage and the ultimate goal of the

grieving process is acceptance. During the acceptance stage, the individual will have come to terms with the loss.

Grieving is an individualized process; therefore, the time span spent along with the order of the stages will vary according to the type of loss and the individual who is experiencing it. Audiologist must be knowledgeable of the grieving process in order to effectively communicate with the patient. The individual should receive support throughout the grieving process from friends, family, and health care providers (e.g., audiologists), etc.

Support and encouragement provided by the audiologist will foster the patient's movement through the stages. For example, during the denial stage, an audiologist could provide a patient with statistical information pertaining to the etiology and prevalence of a hearing loss. While in the anger stage, an audiologist may instruct the family members and/or caregivers about various communication strategies (e.g., reduce all background noise before communicating) to implement when communicating with someone with a hearing impairment. In the bargaining stage, an audiologist may explain how and why an amplification device(s) are beneficial to him/her and their lifestyle. During the depression stage, an audiologist may provide the patient with information on appropriate state and/or national organizations (e.g., Hear Now) that may provide funding assistance for hearing aids based on the overall household income. Once the individual has fully accepted the loss the health care provider (e.g., audiologist) will be able to better communicate with him/her through both verbal and nonverbal means and provide a higher level of satisfaction.

By having an understanding of the communication process along with the grieving process audiologist will be able to be more empathetic communicative counselors. Further, the audiologist will possess the ability to effectively communicate to patients the test results, and intervention techniques available to them. Another important aspect of the communication process that one must consider is nonverbal communication.

Video

At this time a video clip (see Appendix H for nonverbal dialogue of video) of an audiologist and his/her patient will be played without any audio input. Class please pay close attention and take notes on what the doctor did inappropriately along with how the patient reacted to the doctor's non-verbal communication skills. Further, you should be able to report on how you knew the patient was uneasy and what the doctor could have done differently to make the patient feel more at ease in the situation. Upon completion of the video clip, a brief class discussion will be held to compare and contrast the notes taken by each of the students.

Today we discussed what a communication model is and the components included in the process, the grief cycle and how it relates to audiologists, and we viewed a video clip to begin thinking about the role of nonverbal communication when counseling a patient. At this time, are there any questions regarding any of the topics discussed today? If there are no questions then class is dismissed and will be held again the day after tomorrow. Thank you for your attentiveness and activeness in the class discussion.

APPENDIX S

EXPERIMENTAL TREATMENT SESSION II

Experimental Treatment Session II

In the last class we learned what a communication process model is, the components (a message, channel, encoder, receiver, decoder, feedback, and noise), the grief cycle (denial, anger, bargaining, depression, and acceptance), and we viewed a video clip to begin looking at the importance of nonverbal communication. Within this meeting we are going to discuss verbal and nonverbal communication, spiral of silence, cognitive dissonance, and demonstrate a role playing activity. When conveying a message both the verbal and nonverbal components displayed will influence the transmission of the message. At this time we will view the same video clip (see Appendix I for verbal dialogue of the video) from yesterday with the audio input. Again class, please take notes on the verbal message being conveyed. As you may know, the majority of a message is transmitted through nonverbal communication.

Verbal and nonverbal communication

Verbal communication is the words spoken and/or vocalized during a communication interaction. When communicating verbally, one must consider the terminology, and the sequence of the message. The encoder must closely choose the terminology used in order to effectively communicate the message. Nonverbal communication may positively or negatively support the verbal message being transmitted.

Nonverbal communication is defined as those messages that are transmitted without using linguistic means. Further, nonverbal communication may be expressed through any of the senses (sight, hearing, smell, taste, and/or touch). Nonverbal

messages can be portrayed intentionally or unintentionally. When an individual is aware of what nonverbal communication is and how to control it the message may be effectively depicted.

All of the components of your body image and language are capable if expressing some degree of meaning. Nonverbal communication is expressed though ones overall impression of others based on their appearance and gesticulations. Most nonverbal behaviors will vary across cultures; however, facial expressions representing happiness, fear, anger, surprise, sadness, and disgust are universal among cultures.

In a face-to-face encounter, a limited amount of the message is conveyed linguistically. Griffith III, et al. (2003) reported that approximately 60 to 65% of a message is transmitted nonverbally. Further, nonverbal communication typically comes in a variety if forms simultaneously. For example, appearance, paralinguistics of speech (e.g., voice, accent, speed, volume, and inflection), facial expressions, posture and body movement, along with personal space and distance all contribute to the communication process.

Appearance. Appearance plays a large role in the way one is perceived by others. In addition, appearance contributes to how an encoder's message is comprehended in both an informal or formal communicative interaction. Appearance incorporates the dynamics of both physical and nonphysical features. Physical appearance consists of size, shape, height, and overall attractiveness. In addition, the way one dresses will impact how others view him/her. For example, professional's who work in health care want to be perceived as knowledgeable and

likable by their patients; therefore, they must dress in professional attire in order to denote a sense of credibility. Another pertinent nonverbal component is the paralinguistic aspects of speech.

Paralinguistics of Speech. An individual's vocal mechanism possesses the ability to communicate in ways that have no link to the spoken utterance (Adler & Elmhorst, 2003). For instance, when one overhears people communicating using a foreign dialect in which you do not understand, you are still able to determine how the speaker feels (e.g., excited, happy, bored, tired, grieving, etc.). Paralanguage encompasses an array of vocal characteristics: pitch (high versus low), range (spread versus narrow), articulation (precise versus imprecise), rhythm (smooth versus jerky), volume (loud versus soft), resonance (resonant versus thin), tempo (rapid versus slow), dysfluencies (um, er, etc.), and pauses (frequency and duration). Paralanguage has the capability of conveying ones feelings through the message. In addition, the stress patterns chosen by the speaker may affect the way that the utterance is perceived by the listener. Facial expressions also contribute to how a message is comprehended along with the emotions felt by the listener regarding the topic.

Facial Expressions. Facial expressions and eye movements are used to communicate various emotions when speaking. A trained communicator possesses the ability to control facial expressions and eye movements in order to get the response warranted from the listener. Eye contact is a direct indicator of how attentive and involved an individual is within the communicative interaction. According to Adler and Elmhorst (2003), in the majority of face-to-face communication encounters the partners will look at one another approximately 50 to 60 percent of the time. When

communicating with individuals of different nationalities professionals should be aware of the cultural variations for the use and maintenance of eye contact and facial expressions. For instance, in some cultures a lack of eye contact is a sign of respect towards others. Additional nonverbal components which may greatly impact the message being conveyed across cultures are ones posture and bodily movements.

Posture and Body Movements. An individual's body alone can communicate a message in a variety of ways. For instance, posture may denote a level of interest in the message along with one's attitude towards the topic being discussed. Whereas, an individual's body movements may be a result of a direct word and/or phrase translation (e.g., the thumbs-up symbol for 'good job'); may heighten the verbal message (i.e., when making a gesture to the right one may illustrate this through a hand motion, head turn, and/or an entire body turn); the facial movements one makes (e.g., smiling, frowning, etc.) along with movements of the hands and body (e.g., tensing, posture changes, etc.); the actual behaviors denoted to monitor and maintain the speech of others (e.g., a head nod); and either individual gestures which appease a personal need (e.g., scratching your nose). When manipulating nonverbal communicative techniques one also needs to be aware of the proxemics.

Personal Space and Distance. Proxemics refers to spatial characteristics which denote various messages along with ones feelings and attitudes. Four distances that define ones relationships when communicating are: intimate, personal, social, and public distance (Hall, 1966; as cited in DeVito, 1999). An intimate distance ranges from touching to 18 inches, personal is from 18 inches to four feet, social ranges from four to 12 feet, and public is greater than 12 to 25 feet.

Each of the contributors (e.g., appearance, paralinguistics of speech [e.g., voice, accent, speed, volume, and inflection], facial expressions, posture and body movement, and personal space and distance) of nonverbal communication greatly impacts how a message is perceived by the listener. Each of these components should be considered throughout any communication interaction to ensure that shared meaning will occur. Again, shared meaning will occur when the eggs overlap. Meaning that the communication process has been successful and both partners fully grasp the importance of the message. Two other concepts that we should briefly discuss is the spiral of silence and cognitive dissonance.

According to Krista Jordan (2000), Elisabeth Noelle-Neumann developed the spiral of silence concept in 1971. This theory is noted as one of the most influential theories of public opinion. Spiral of silence refers to how individuals tend to remain silent when their views are in the minority. Noelle-Neumann contributes the spiral of silence to fear of isolation. Patients will withhold information they fear will be negatively perceived by the audiologist. Can you think of any audiological examples? Therefore, as an audiologist you should be aware of this concept and encourage patients to divulge pertinent information no matter the circumstance.

Whereas, cognitive dissonance is a term that refers to an agonizing mental state where individuals find themselves doing things and/or having opinions that contradict their beliefs and values (Leon Festinger, 2006). Therefore, as professionals in the medical field one must consider that patients tend to be more open and trusting when similarities are present. Patients are going to be more accepting of the information provided to them when the information is provided in a sufficient and comforting

manner. In addition, a professional's appearance may positively and/or negatively influence the perception of the patient. Furthermore, the overall exposure level of the patient along with his/her preconceived notions towards the professional will influence the amount of information retained by the patient throughout the session.

To conclude the session, I would like to have a volunteer for a role-playing activity (see Appendix J). I am going to be the audiologist in the first activity and you will be the patient. You have just come to my office to be evaluated for a possible hearing loss. Your physician referred you to my office. The facility seems to be pretty nice at first glance. All you need to do is act natural and respond to me as you normally would if this was a true doctor/patient communicative interaction. Once the role-playing activity is over we will discuss how the interaction went and then we will switch places and have one of you demonstrate ways that you would rectify the problems within the communication interaction. After completing the activity we will discuss as a class what, if any, other strategies could have been implemented to further enhance the communication process.

This will conclude our final meeting. Are there any questions regarding nonverbal communication, the spiral of silence, cognitive dissonance, and/or the role-playing activity? Now we have learned how to bake this cake. I know that we have only scratched the surface of what the process is here. It is up to you now to implement what we discussed here within your next patient interaction. Just remember practice does make perfect. These two training sessions were designed to provide you with an entry-level understanding of the importance of communication, what a communication process

model is, and effective communication skills to utilize with your patients in order to ensure that shared meaning was attained.

APPENDIX T

INFORMED CONSENT

HUMAN SUBJECTS CONSENT FORM
STANDARDIZED PATIENTS

The following is a brief summary of the project in which you are asked to participate. Please read this information before signing the statement below.

TITLE OF PROJECT: A Communication Process Training Model for Use by Audiologists in Counseling

PURPOSE OF STUDY/PROJECT: To determine if formal communication training impacts audiology clinicians' ability to provide effective communication counseling techniques.

PROCEDURE: Each participant will be asked to volunteer for the study and complete a demographic data sheet. The standardized patients will receive counseling from the research subjects about a "mock" hearing impairment. The standardized patients will be given written instructions outlining their role in the study. Each standardized patient should listen attentively to the information being conveyed and only comment or pose questions that are applicable. If needed, the participant may ask questions for clarification of the information presented during the counseling communication interaction. In addition, they will be asked to complete a questionnaire at the end of each counseling session to determine if shared meaning was established. Each counseling session will be ten minutes in length and videotaped for further review by the investigators.

INSTRUMENTS: A data sheet will be given to the standardized patients to obtain demographic information. A questionnaire will be distributed to the standardized patients (pre-and post-treatment) after completion of the "mock" scenario to assess their comprehension of the counseling process. The questions will focus on the type and degree of hearing loss, the functional effects it has on the patient (e.g., communication difficulties, psychosocial effects, etc.), and any available options for intervention (e.g., medical treatment, amplification devices, assistive devices, and/or alerting devices). Every counseling session will be videotaped for review. The primary investigator will keep the tapes in a locked cabinet in Dr. Sheryl Shoemaker's office in Room 217, Robinson Hall. The tapes will be available only to the project director and the primary and secondary investigators. When the videotapes are in the possession of the secondary investigator, they will remain in a locked file cabinet until they are reviewed and then they will be returned to the project director. After three years, the videotapes will be destroyed. The collected information will be kept confidential and only viewed by the researchers.

RISKS/ALTERNATIVE TREATMENTS: None

BENEFITS/COMPENSATION: None

I, _____, attest with my signature that I have read and understood the following description of the study, "A Communication Process Training Model for Use by Audiologists in Counseling" and its purposes and methods. I understand that my participation in this research is strictly voluntary. Further, I understand that I may withdraw at any time or refuse to answer any questions without penalty. Upon completion of the study, I understand that the results will be freely available to me upon request. I fully understand that my participation in this study will not affect any relationship with Louisiana Tech University. I understand that the results will be confidential, accessible only to the principal investigators, myself, or a legally appointed representative. I have not been requested to waive nor do I waive any of my rights related to participating in this study.

_____ _____

Signature of Participant **Date**

CONTACT INFORMATION: The principal experimenters listed below may be reached to answer questions about the research, subjects' rights, or related matters.

Dr. Sheryl Shoemaker (318-257-4764) **Heather Hendrix, B.A. (803-351-0007)**

Members of the Human Use Committee of Louisiana Tech University may also be contacted if a problem cannot be discussed with the experimenters:

Dr. Terry McConathy (318-257-2924)
Dr. Mary M. Livingston (318-257-2292)
Mrs. Beth Free (318-257-5075)

HUMAN SUBJECTS CONSENT FORM
REASEARCH SUBJECTS

The following is a brief summary of the project in which you are asked to participate. Please read this information before signing the statement below.

TITLE OF PROJECT: A Communication Process Training Model for Use by Audiologists in Counseling

PURPOSE OF STUDY/PROJECT: To determine if formal communication training impacts audiology clinicians' ability to provide effective communication counseling techniques.

PROCEDURE: Each participant will be asked to volunteer for the study. Prior to administration of the "mock " scenarios the research subjects will be asked to complete a demographic data sheet. Each research subject will review a "mock" scenario for five minutes and counsel standardized patients (undergraduate Speech Communication majors) based on the findings in the investigator-developed scenarios. The research subjects will be instructed to counsel the standardized patients for ten minutes on the type, severity, and physiological aspects of the hearing loss, provide a plan for intervention, and make any appropriate recommendations. Each counseling session will be videotaped for further review. Upon completion of the first scenario, each research subject will simultaneously complete two, one-hour experimental treatment sessions. After undergoing the two experimental treatment sessions, the research subjects will provide a second "mock" scenario to another group of standardized patients.

INSTRUMENTS: Two investigator-developed scenarios will be provided for each of the research subjects. One scenario will be administered before the experimental treatment and one will be administered after the treatment. The scenarios focus on adult hearing impairments and are of equal complexity. The scenarios will address the impairments of Mèniére's disease, sudden sensory-neural hearing loss, otosclerosis, trauma (longitudinal or transverse temporal bone fracture, disarticulated ossicles), conductive, noise-induced, and a mixed hearing loss. Every counseling session will be videotaped for review. The primary investigator will keep the tapes in a locked cabinet in Dr. Sheryl Shoemaker's office in Room 217, Robinson Hall. The tapes will be available only to the project director and the primary and secondary investigators. When the videotapes are in the possession of the secondary investigator they will remain in a locked file cabinet until they are reviewed and then they will be returned to the project director. After three years, the videotapes will be destroyed. The collected information will be kept confidential and only viewed by the researchers.

RISKS/ALTERNATIVE TREATMENTS: None

BENEFITS/COMPENSATION: None

I, _____, attest with my signature that I have read and understood the following description of the study, "A Communication Process Training Model for Use by Audiologists in Counseling" and its purposes and methods. I understand that my participation in this research is strictly voluntary. Further, I understand that I may withdraw at any time or refuse to answer any questions without penalty. Upon completion of the study, I understand that the results will be freely available to me upon request. I fully understand that my participation in this study will not affect any relationship with Louisiana Tech University. I understand that the results will be confidential, accessible only to the principal investigators, myself, or a legally appointed representative. I have not been requested to waive nor do I waive any of my rights related to participating in this study.

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