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Breaking Barriers: Occupational Therapists Communicating with Adults Who are Hearing Impaired

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Breaking Barriers: Occupational Therapists Communicating With Adults who
are Hearing Impaired

by

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A Scholarly Project

Submitted to the Occupational Therapy Department

of the

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In partial fulfillment of the requirements

For the degree of

Master's of Occupational Therapy

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This Scholarly Project Paper, submitted by Valerie McClellan in partial fulfillment of the requirements for the Degree of Master's of Occupational Therapy from the University of North Dakota, has been read by the Faculty Advisor under whom the work has been done and is hereby approved.

Faculty Advisor

Date

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CHAPTER I

INTRODUCTION

Each day people all over the world communicate using different modes of interactions, both verbal and nonverbal. The one thing that most people take for granted is their ability to easily communicate with other people who cross their path, but for some this may not be the case. Through personal experience this author is aware of how difficult it is to communicate effectively with someone who speaks a different language, specifically sign language. This inability to communicate creates barriers between the hearing and non-hearing populations around the world; individuals without hearing impairments make assumptions that people with hearing impairments can understand them no matter what. Individuals with a hearing impairment use healthcare facilities everyday, but they may be unsure of how they will communicate with the healthcare professional and of how effective the visit will be in assisting them with their current healthcare needs.

Prior to addressing these types of communication barriers, it is important to define hearing impairment (HI) as it is used throughout this document. Hearing loss is typically classified from mild to profound. Individuals with a mild or moderate loss can understand face-to-face conversations, and those with a moderate loss may benefit from wearing a hearing aid. Individuals with moderate to severe loss, severe loss, and profound loss have difficulty hearing normal speech, even in a face-to-face

situation; this is the group individuals who may rely on sign language as their primary means of communication (Snow-Russel, 2001, p. 802). Hearing impairment (HI) is defined by this author, for the purpose of this document, as an inability to hear spoken language without some level of assistance; it includes the second group of individuals described above.

Statement of Problem

During the literature review process for this project, it was discovered that there is very little current literature or research in the area of treating individuals with hearing impairments in the medical setting; especially within the realm of Occupational Therapy. The available literature, reviewed in Chapter II, indicates that the lack of knowledge of how to communicate with clients with a hearing impairment can be a major problem for healthcare professionals. Many occupational therapists and other healthcare professionals interact with individuals who have a hearing impairment and who primarily use sign language to communicate. Health care professionals often do not know sign language and when an interpreter is not available communication can be a problem; especially when the individual with a hearing impairment is prelingually deaf. The inability to communicate with an individual with a hearing impairment creates a barrier to treatment. If a healthcare provider is unable to interact with their patients with a hearing impairment, it may cause treatment to be ineffective, and the individual with a hearing impairment may choose to forego any treatment.

Rationale and Theory

The Model of Human Occupation (MOHO) addresses at the choices a person makes that affect their behavior and motivation towards an occupation they are engaging in. The three subsystems of MOHO break apart the different aspects of human behavior in relation to occupations. The subsystems include: volition, habituation, and performance capacity. “Volition refers to the motivation for occupation, habituation refers to the process by which occupation is organized into patterns or routines, and performance capacity refers to the physical and mental abilities that underlie skilled occupational performance” (MOHO Clearinghouse, n.d., ¶ 4).

The questions for the occupational therapist shown in *Breaking Barriers* address the three subsystems of MOHO. This will allow the therapist to gather the most information from the individual with a hearing impairment during the initial meeting. By looking at volition, habituation, and performance capacity the occupational therapist is able to understand what motivates a person and helps to direct the upcoming therapy sessions for the individual with a hearing impairment.

Conclusion

Chapter II contains a review of literature and research related to the interactions between healthcare professionals and individuals with a hearing impairment, and addresses the current communication problems faced by this group of individuals. There is a focus on how the patients with a hearing impairment perceive healthcare professionals and includes patients’ suggestions for improving their future visits to the medical facility.

Chapter III addresses the methods used to develop the product and how the literature helped guide the creation/design of the product. Chapter IV lays out the product and how it can be used by occupational therapists, as well as suggestions that can help ease the interaction between individuals who are HI and therapists with and without an interpreter present. The final chapter describes the findings of this research and possible suggestions based on the literature findings. The limitations of this project are addressed and suggestions for future research are included in this chapter.

CHAPTER II

REVIEW OF LITERATURE

Hearing impairment and deafness can occur at anytime throughout the life span of an individual. Every year an increasing number of individuals find themselves with some type of hearing loss that may eventually lead to deafness. Approximately 15% of the American population (30.8 million people) has trouble hearing (NCHS 2002). This is a 6% increase since similar data was collected by the National Center for Health Statistics (NCHS) in 1991. Current literature indicates that individuals who are deaf or hard-of-hearing are reluctant to seek medical care because of communication barriers (Barnett 2002; Iezzoni, O'Day, Killeen, & Harker, 2004; Ubido, Huntington, & Warburton, 2002). Barnett and Franks (2002) note, "language barriers play a role in the decreased utilization of healthcare" (p. 113).

The purpose of this project is to develop a protocol for healthcare providers to facilitate communication with clients who are deaf or hard-of-hearing. In order to be accurate, the contents of the protocol must be based on current research and literature. This chapter provides that foundational information. The chapter begins with a definition of hearing impairment and deafness. The second section is an overview of the types of communication that are used by this population. The third section contains information about the communication problems faced by the deaf and hard of

hearing populations in healthcare settings. The chapter concludes with a final section that addresses suggestions for facilitating communication for the deaf and hard-of-hearing in healthcare settings.

Definitions

Throughout the literature, the specific definition of deaf and hard-of-hearing varies from author to author. According to Turkington and Sussman (2000), deafness is defined as “the ability to hear is disabled to an extent that precludes the understanding of speech through the ear alone with or without the use of a hearing aid” and hard-of-hearing is “a term used to describe mild to moderate hearing loss” (p 97). As outlined in Case-Smith (2001), the degree of hearing loss can be as follows:

- A mild hearing loss involves having some difficulty hearing speech from a distance or a faint level of speech, such as a whisper.
- Not hearing the conversations of others individuals who may not look directly at the individual in a group setting, is a sign of moderate to severe hearing loss.
- With a severe hearing loss, the individual may be able to hear voices a foot away or familiar sounds in the environment.
- If an individual can only hear some loud noises that are extremely close and is only aware of vibrations made by the noise, they are said to have profound hearing loss (p. 802).

According to Munoz-Baell and Ruiz (2000) “in the deaf community, members define deafness as a cultural rather than an audiological term” (p 40). The type of deafness is different depending on the age at which it occurred. The individuals who

lost their hearing prior to using spoken language are said to be prelingually deaf and those who lost their hearing after having the ability to speak and hear are referred to as postlingually deaf (Barnett & Franks, 2002). Schirmer (2001) writes that some of the causes for prelingual deafness are “premature birth or birth complications, heredity, maternal rubella, or cytomegalovirus (CMV)” (p. 7). Causes for postlingual hearing loss include: “meningitis, otitis media, noise (repeated exposure to loud sounds), presbycusis, ototoxic drugs, Ménière’s disease or tinnitus” (Schirmer, 2001, pp. 8-9, 13).

Prelingually deaf adults will communicate primarily with sign language, socialize mainly with other individuals who are deaf, and do not see their hearing loss as isolating them socially (Barnett & Franks, 2002). These individuals often have difficulty understanding written and spoken forms of English because they do not have a good understanding of the rules of the language. Postlingually deafened adults, who have completed their basic education, are more likely to communicate using English because of the exposure and amount of time they have spent on learning and using the language (Barnett & Franks, 2002; Barnett, 2002). Whether an individual is prelingually or postlingually deaf, all individuals with hearing impairments have some mode of communicating with other deaf individuals and with the hearing population.

Modes of Communication

There are many different ways in which the deaf and hard-of-hearing communicate with hearing and non-hearing people. The most common form of communication is sign language. In the United States, the majority of individuals using sign language utilize American Sign Language (ASL). “It is the third most

commonly used language next to English and Spanish in the United States” (Barnett 2002, p. 697). The other types of sign language that can be used include Signing Exact English (SEE-2), finger spelling, or a sign language native to a certain country besides the United States. An example of this would be British Sign Language, which is used primarily in the United Kingdom (Ubido et al., 2002). Unlike SEE-2 where everything a person says is spelled out using signs, “ALS has a different grammar and vocabulary than English” (Barnett, 2002, p 697). Supalla and McKee (2000) write that individuals who use SEE-2 take a longer amount of time to sign sentences than individuals who sign using ASL because SEE-2 requires individuals to sign every word that is said in a conversation and ASL users only sign words that convey the meaning of what the signer wants to say to their communication partner(s). Individuals who use ASL frequently use the third form of sign language, finger spelling; they interchange the two as needed throughout out conversations (Mulrooney, 2002).

Lip reading is another way individuals with hearing impairments are able to follow a conversation when an interpreter is not present. People who use sign language may use signs to respond during a conversation with a hearing person whose lips they are reading. Iezzoni et al. (2004) cite examples of how individuals with hearing problems have gone into the clinic or hospital for an x-ray or surgery and are unaware of what is happening because they are not being told, or because they are in a position where they are unable to see what is being said or done.

In order to communicate with physicians’ offices or other parts of the hospital/clinic many individuals use teletypewriters (TTY) or telecommunications

devices for the deaf (TDD) if the office they are calling has the equipment to take the call (Iezzoni et al., 2004). Stone and Hurwitz (1994) suggest that if people with hearing impairments want a device that does everything the TTY does, that person should get a computer and use it for communicating if possible. Barnett (2002) writes if no communication device is available, some individuals have resorted to using a note pad and pencil to write notes back and forth in order to communicate with the physician or other healthcare providers. “The use of note writing, although sometimes appealing during frustrating encounters, may not be helpful with all deaf patients” (Barnett, 2002, p. 697). This author notes that many individuals who primarily use sign language to communicate do not know or understand English because of the differences in grammar and vocabulary between English and ASL.

Sign language users can also use interpreters in order to communicate with hearing people who don't know sign language. Barnett (2002) notes that even though interpreters are beneficial when meeting with a patient, it sometimes makes the physician or clinician feel awkward. According to Stone and Hurwitz (1994), “the interpreter should interpret all communication from a deaf or hard-of-hearing person to a hearing person(s) and vice versa” (p. 254). It is important that the deaf or hard-of-hearing person not become depended on the interpreter but use their interpreter effectively and only as needed (Stone & Hurwitz, 1994). There are several communication modes that individuals who are deaf and hard-of-hearing use so they can converse with the hearing population and other deaf individuals, but even with all of the modes there are still problems when communicating with individuals in the healthcare setting.

Communication Issues in the Healthcare Setting

In addition to not having some of their specific medical needs met, it is indicated in the literature that healthcare utilization may be lower because of the unidentified problems that people who are deaf or hard-of-hearing may be experiencing (Barnett & Franks, 2002). When individuals with hearing impairments see healthcare providers, they don't always know what the provider is doing for them or where to get the health information about what they have received (prescriptions and services) from their provider (Ubido et al., 2002).

Results of one study indicate that there is a difference in how often a deaf or hard-of-hearing individual goes in to see the doctor based on when exactly their hearing difficulties began. Barnett and Franks (2002) note that people who are prelingually deaf are less likely to go in to see the doctor even when their health status is poor. They do not visit the doctor when they are ill because of the difficulties with communication; this results in a poorer health status. Individuals who are postlingually deaf have a tendency to go and see the doctor more due to ailments other than their hearing impairment. Individuals who are postlingually deaf are likely to have ailments associated with aging, such as cancer and a lowered level of functioning.

Ubido et al. (2002) describe how one woman went to a clinic to get what was supposed to be a routine check up and ended up having major surgery because of poor communication between the healthcare professional and the patient. For many sign language users medical terminology is unfamiliar and the patient does not understand what exactly the healthcare provider is trying to say because they do not know the

word or what it means. When individuals who are deaf or hard-of-hearing interact with healthcare professionals, there is a language barrier that exists because medical terms are being used and an individual who is prelingually deaf and only knows sign language does not understand the medical jargon or terms that are being discussed.

Adults who are deaf or hard-of-hearing may have difficulty communicating with healthcare professionals and their staff when scheduling or during the actual appointment. When some individuals who are deaf or hard-of-hearing visit with a doctor or clinician, and the doctor or clinician does not speak directly to the patient, or because the patient can not see the clinician's face they are unaware of what is actually being said (Iezzoni et al., 2004). In other instances, the individuals with a hearing disability are forced to write down what they want to say because the clinician does not know sign language and there is no interpreter present. Even with an interpreter present there are occasions when things are not translated to the client correctly and then problems arise. Ubido et al. (2002) note, "the first language of many people who are prelingually Deaf is not English, but Sign Language" (p. 248). They did not have an opportunity to learn language skills so they are not familiar with English; specifically the grammar, syntax, and the vocabulary associated with it. Those who become deaf after learning language skills find it easier to communicate using English because of their experience with the language (Barnett, 2002). Individuals who are deaf or hard-of-hearing complain about how the communication with the physician's office over the phone is less than adequate, especially, when trying to get results of tests that have been run. Frequently, the person with hearing loss would prefer to go

into the doctor's office to get the information rather than calling and having to use a teletypewriter or telecommunications devices for the deaf (Iezzoni et al., 2004).

The literature shows how many individuals who are deaf find it difficult to follow what the physician is saying because of a high rate of speech or because they turned so the deaf individual was unable to see what was being said (Ubido et al., 2002). Individuals who are deaf or hard-of-hearing frequently do not let the physician know when they do not understand what was said because they are embarrassed (Ubido et al., 2002). Difficulties with communication, not only with the physician, but with other healthcare professionals and support staff cause deaf and hard-of-hearing individuals to refrain from speaking up and saying that they don't understand, or requesting that the person needs to slow down his rate of speech to facilitate lip reading (Iezzoni et al., 2004; Ubido et al., 2002; Barnett, 2002).

The perceived attitudes deaf and hard-of-hearing individuals get from their physician or healthcare professional is one of not understanding what the client is trying to say regarding barriers (Iezzoni et al., 2004). In their study, Cooper, Rose, and Mason (2004) researched what the attitudes of healthcare professionals were towards the deaf and hard-of-hearing patients they encountered. Ninety psychologists completed a 60-item questionnaire; the data was then analyzed to determine which items to include in the scale. Based on the data, a 22-item scale was designed to be used by human service professionals; the responses to the scale give facility personnel and healthcare professionals an idea of any attitudes they may have towards individuals who are deaf; either positive or negative. Even though there are many issues related to communication between the hearing population and individuals with

hearing impairments, the available literature includes suggestions of ways to improve communication between hearing and non-hearing individuals.

Suggestions for Facilitation of Communication

There are several suggestions within the literature to help facilitate communication between healthcare providers and the hearing impaired population. Even when the patient may be able to hear some of what is being said or read lips, Barnett (2002) notes that encouraging the individual to use some type of assistive listening device may be beneficial. The best way to help the patient understand more about what is going on is to bring in an interpreter to facilitate communication between the physician and the patient. Iezzoni et al. (2004) noted that many physicians do not seek out interpreters who are trained in medical sign language because they are more worried about the overall cost of that type of service. Interpreters help the deaf and hard-of-hearing patient understand what the physician is saying or what exactly is going to occur during a procedure. They help open up the communication lines between the patient and doctor so there is a decrease in the possibility of miscommunications occurring (Stone & Hurwitz, 1994). Based on the recommendations mentioned in the literature, a major area that needs to be addressed first is making sure professionals are informed about the communication needs of individuals who are deaf or hard-of-hearing. The best way to communicate with this population of individuals is to create an overall positive atmosphere for everyone involved. This can be accomplished through introducing an on call sign language interpreter and clearer health information that can be easily obtained and understood by patients (Ubido et al., 2002). Barnett (2002) suggests that the long-

term adjustment to be made is to implement education on deafness and the ways that all healthcare professionals can handle it.

CHAPTER III

METHODOLOGY

Breaking Barriers uses suggestions from the literature to improve the interactions between occupational therapists and other healthcare providers and patients with hearing impairment. The booklet gives a therapist a starting point and additional ideas of ways to interact with individuals with hearing impairment. It includes basic methods, such as using an interpreter, to the more high tech software that can be used if an interpreter is unavailable. The guide also shows therapists some basic signs that can be used in conjunction with an interpreter throughout the initial interaction with the patient.

Information from research and literature was the foundation for the development of the booklet *Breaking Barriers*. The literature reviewed covered topics including: background information on hearing impairment, modes of communication used by the hearing impaired population, communication issues in healthcare settings, and suggestions for facilitation of communication. Throughout the literature the patients with hearing impairment made suggestions about the best solutions to promote the decrease of communication barriers that currently exist between healthcare providers and people with hearing impairment.

This author's personal experiences with individuals with hearing impairment also aided the process of determining the signs that would help the therapist gather the

most useful information about the patient; American Sign Language was used in the booklet. Applying an occupational therapy frame of reference helped guide the development of specific questions to be used by the therapist to facilitate rapport during the first contact with the patient.

Because the new trend in the communicating with individuals with hearing impairment is to use high tech devices a section describing these devices was included in the booklet. The use of high tech tools not only facilitates the communication between therapist and patient, but it also helps the patient to increase the amount of English they understand, and the therapists to learn additional signs. High tech software makes it possible for multiple therapists and healthcare providers to become familiar with sign language, an alternative to the less effective techniques used when interpreters are unavailable.

CHAPTER IV

PRODUCT

Based on the literature, it is obvious that there is a need to address the difficulties that individuals with hearing impairment have while interacting with healthcare professionals and their support staff. Having a basic reference guide with basics questions that are asked of every client/patient can make the initial meeting between an occupational therapist and a client go smoother and help build rapport. An individual with hearing impairment is more likely to respond to a person who is willing to use sign language, if it is the clients' primary means of communication, rather than using paper and pencil. If the client knows that the therapist or other health care professional is willing to try and understand them and the language they are using they are more apt to participate and come to therapy.

Breaking Barriers was created to help an occupational therapist gather the information he/she needs to know when meeting with a client for the first time, and to help facilitate communication during treatment. It is designed to help occupational therapists be more client-centered when they need to communicate with someone with a hearing impairment who uses sign language as a primary means of communication.

The first section of the booklet includes questions that will give the therapist and idea of what the client wants and how that can be achieved. It can also help the

therapist determine the client's interests, responsibilities, and goals prior to developing an intervention plan. The manual alphabet is also included in this section. The signs included in this booklet should be practiced so that the therapist is familiar with the sign and the movements associated with that particular sign. When it comes time to use the sign(s), the therapist should feel comfortable while signing.

The second section of the booklet includes suggestions for other modes of communication that can be used by occupational therapist and other healthcare providers to facilitate interactions between healthcare providers, their staff and the client. The final section is a description of other resources that can be helpful in facilitating communication with clients with hearing impairment.

Breaking Barriers



Valerie McClellan, MOTS

Gail Bass PhD, OTR/L, Advisor

PREFACE

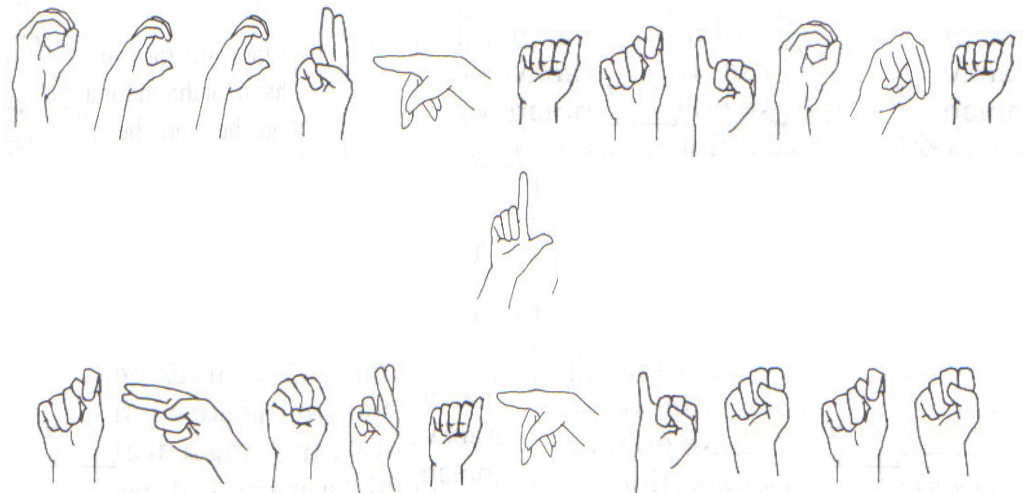
Breaking Barriers was created to help an occupational therapist gather the information he/she needs to know when meeting with a client for the first time, and to help facilitate communication during treatment. It was designed to help occupational therapists be more client-centered when they need to communicate with someone with hearing impairment who uses sign language as a primary means of communication.

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SECTION I

A Quick Reference Guide of Sign Language For
Occupational Therapists



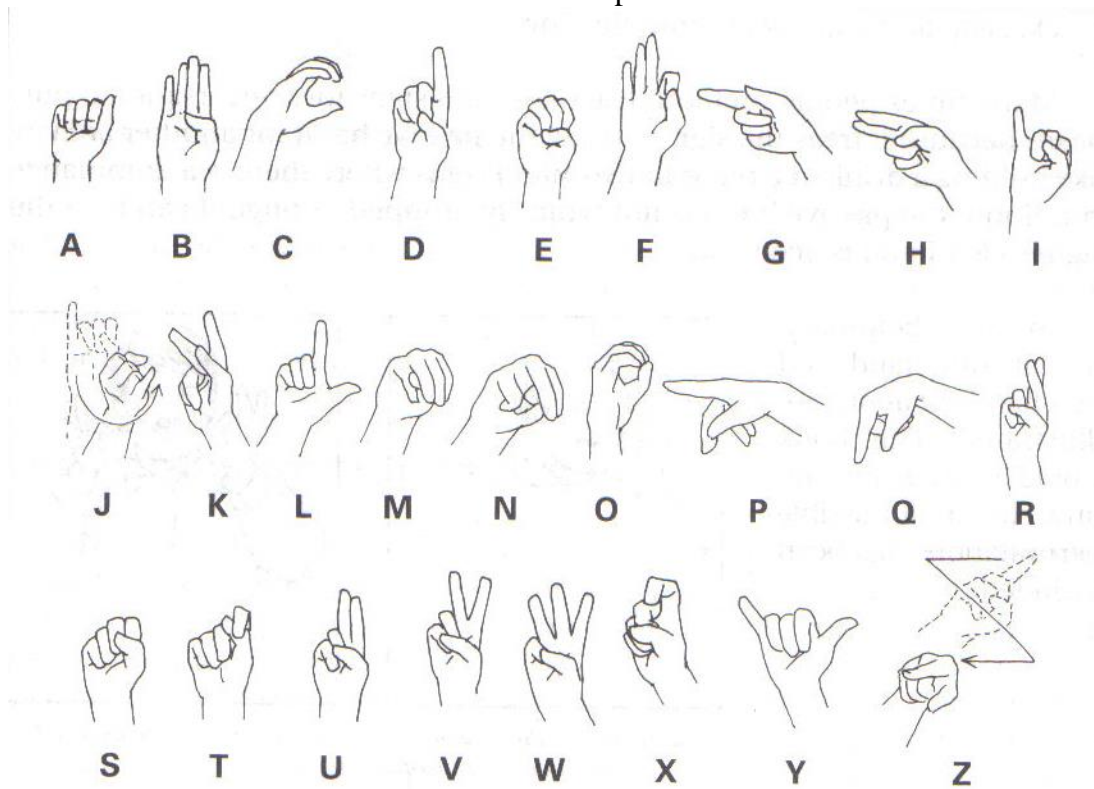
(Tennant & Brown, 1998)

Illustrations drawn by Valerie McClellan using *The American Sign Language Handshape Dictionary* as a guide.

How to use this section of the booklet:

- This guide is to be used in conjunction with sign language interpreters who should be present during evaluations and treatment.
- The therapist should explain to the client that they only have a basic knowledge of signs and the interpreter is present to translate the clients' responses and communicate any messages that are beyond the realm of the guide and the therapist's skill level.
- Only use the signs, which are related to the topic of conversation when communicating with the client.

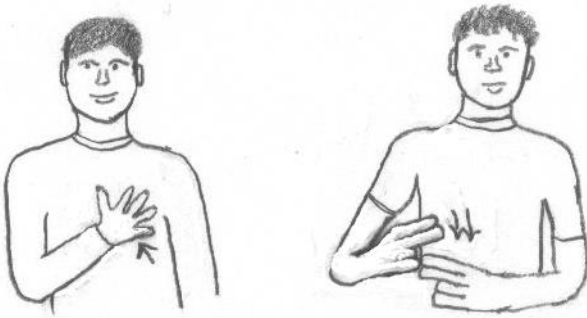
The Manual Alphabet



(Tennant & Brown, 1998)

The manual alphabet is used to spell out words such as names or words that do not have specific signs. For words that have no specific signs a sign language technique called fingerspelling, with this technique the manual alphabet is utilized to create words. Fingerspelling is commonly used for spelling out names.

Introducing yourself
My name is...

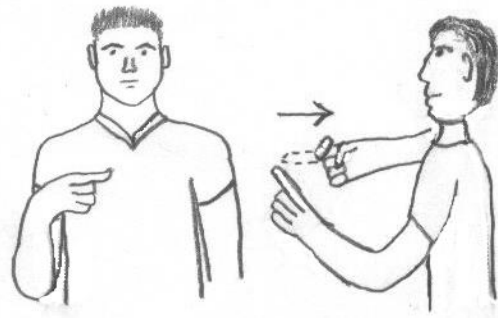


Example: Valerie



(Tennant & Brown, 1998)

I am from Occupational Therapy

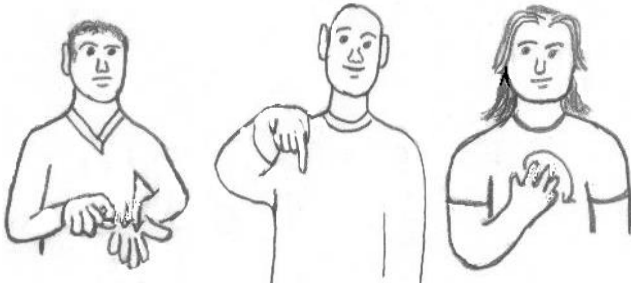


(Tennant & Brown, 1998)

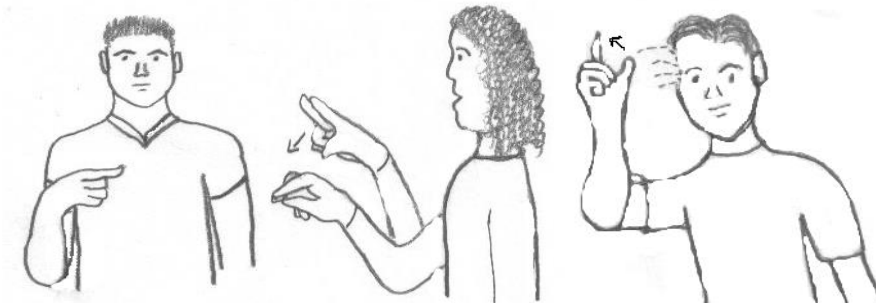


Basic Response/Request

Please write it down

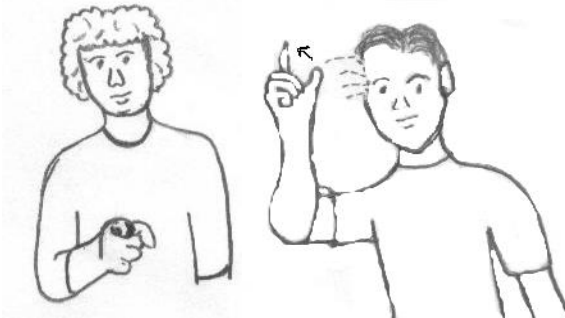


I don't understand

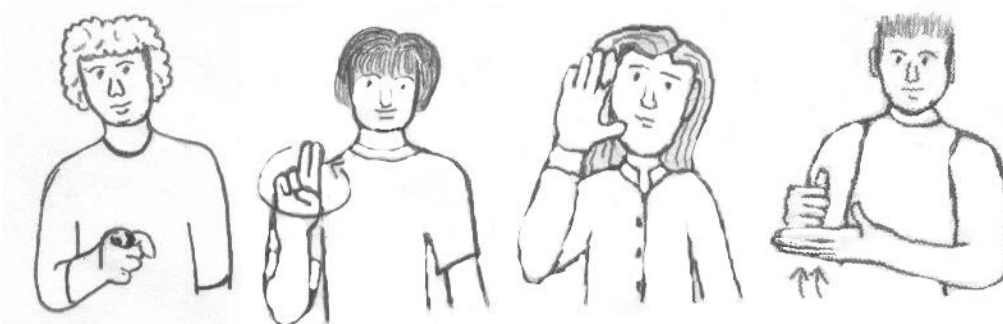


Questions

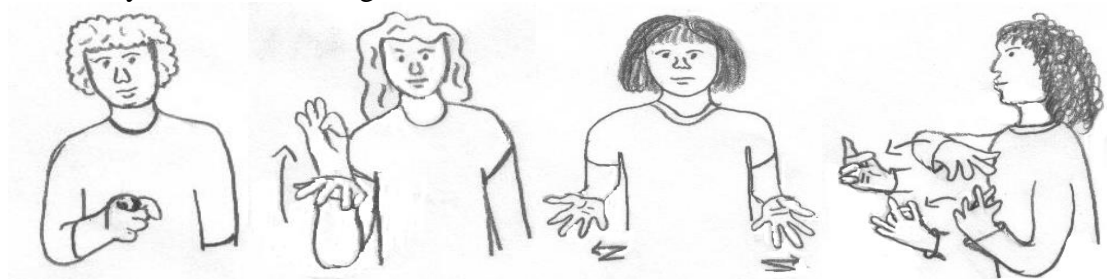
Do you understand?



Do you use a listening aid?



What do you find interesting?



Crafts



(Tennant & Brown, 1998)

Exercise



Books (fingerspell s)



Sports



Art, drawing



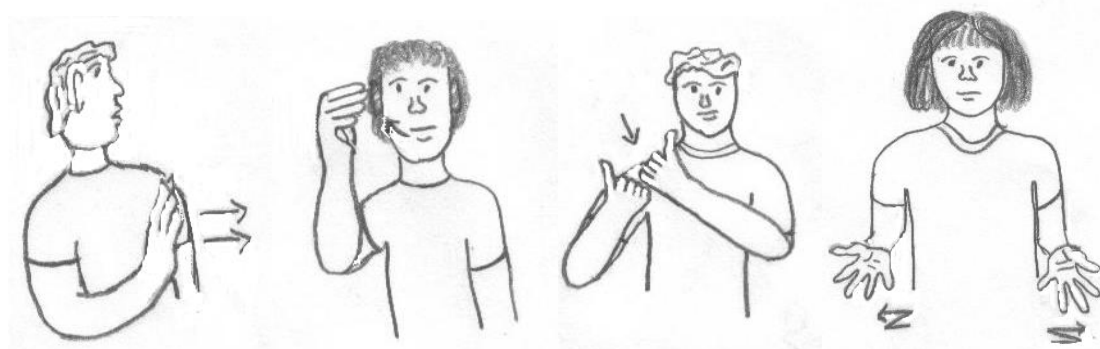
Cooking (fingerspell the -ing)



What is important to you? What do you value?



What are your responsibilities at home?



Wash dishes



Clean



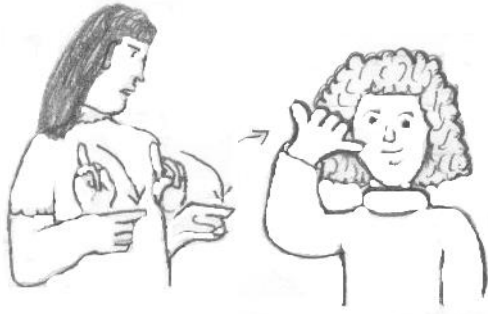
Fix, repair



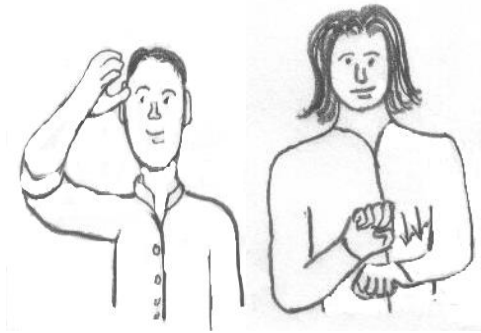
What are your responsibilities at work?



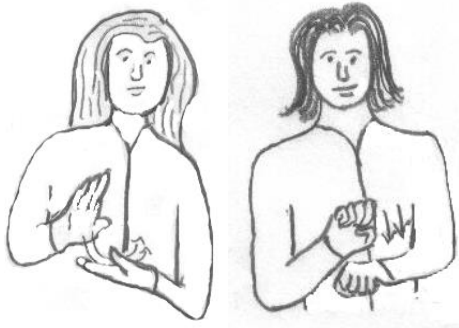
Answer phones



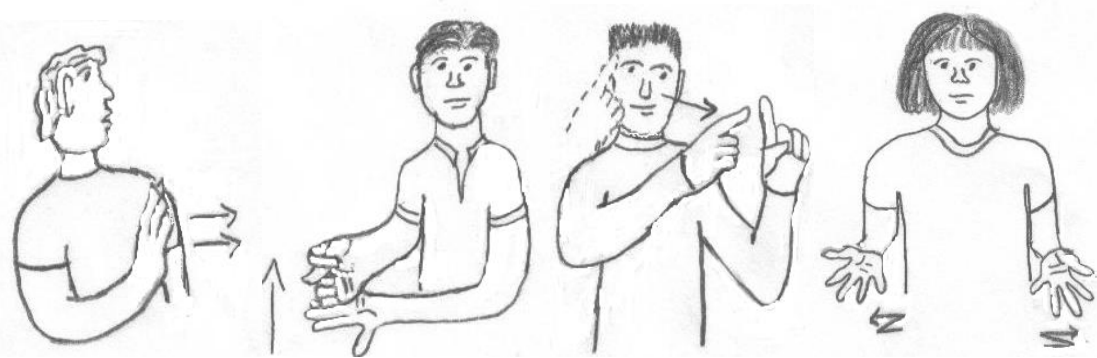
Computer Work



Paper Work



What is your goal for therapy?



SECTION II

MODES OF COMMUNICATION

There are many different ways a hearing person can communicate with an individual with a hearing impairment. As previously described, sign language is one of the best ways to communicate. The literature also describes other means that can be used to aid the communication between a hearing person and an individual who is hearing impaired. These different communication modes can be utilized by any healthcare provider who may be treating a the individual.

For clients who use sign language and are being seen by a healthcare provider, who does not know any sign language, the best option is to have a sign language interpreter present to aid the communication process (Barnett, 2002; Ubido, Huntington, & Warburton, 2002). The interpreter can tell the client exactly what the provider said by using the language they are familiar with. This is a better option than the use of written messages that the client may not fully understand (Barnett, 2002). It is important to make sure the interpreter understands what is being said and knows medical terms along with the standard terms used in sign language. If the client asks for an explanation or clarification on something it can be easily done through the interpreter. Even though this is the best options, it may be prohibitive because of the availability of an interpreter.

Healthcare providers, who do not have a sign language interpreter available, can use other modes to communicate with their clients. One way to assist an individual with hearing impaired in getting the knowledge they need about the services they are receiving is to have an internet site set up. The individual is then

able to go to the site and view what is involved with their treatment and explore other treatment options that may be available. Many individuals with hearing impairment use computers and may find it easy to use the Internet to get the information they need rather than calling the healthcare provider's office and trying to ask questions. Healthcare providers can also use e-mail to clearly communicate with clients who are deaf or hard-of-hearing. In addition to encouraging Internet use, a healthcare provider should also provide each client with an informational sheet that explains the procedure, places to go for additional resources, and phone numbers that can be used if a client should have any questions.

Some clients have questions after leaving the clinic and need to talk to a person rather than looking or searching for the answer on the Internet. In these cases, healthcare providers should have a telephone system such as a text telephones (TT), previously named telecommunication devices for the deaf (TDD), in place to decrease any communication barriers that may exist between the provider, their support staff, and the client (Barnett, 2002; Iezzoni, O'Day, Killeen, & Harker, 2004; Ubido et al., 2002). If the client is able to contact the provider's office and get the needed answers they are more likely to follow the instructions they are given.

When an interpreter is not available the client may use lip reading in order to follow what the healthcare provider is saying. If lip reading is being used, the provider needs to remember to face the client at all times when they are talking; otherwise the client is unable to see what is being said and may miss something. The rate of speech should be slowed in order for the client to understand what is being said (Ubido et al., 2002; Iezzoni et al., 2004). One way to know the rate at which

speech should occur is by asking the client. It is important to make sure the client is able to understand what is being said because sometimes they may say they understand when, in fact, they do not. This can cause the client to not follow the instructions accurately or to do something that can be harmful. One way to assure that the client understands is to follow the verbalizations with a set of written directions, or to have the client repeat what was said when possible.

No matter what communication mode is used, it is important to take into consideration how much the client is able to understand and when some additional explanation may need to occur. A client is more likely to respond to a healthcare provider who makes an attempt to use an effective mode of communication, rather than someone who will make the client write and read everything on a sheet of paper (Iezzoni et al., 2002). It is important to listen to the client about what is in their best interest when it comes to implementing different communication techniques. Though flaws and setbacks may occur, if there is a working system that can be implemented at any time it will be mutually beneficial to the client and healthcare provider.

SECTION III

ADDITIONAL RESOURCES

Many healthcare providers do not know about the different resources that are available to assist in communicating with clients with hearing impaired. These additional resources include: a sign language dictionary, computer software programs of sign language signs, online sign language dictionaries, and sign language interpreters who are trained in medical terms. Individuals with hearing impairment will be more likely to take an active role in their overall healthcare if they see the healthcare provider attempting to learn and use sign language or alternative modes of communication with them.

The sign language dictionaries can be used in combination with each other. The reason for doing this is because a word can have several signs that can be used to express it. The online dictionary allows the user to check and see which is the most commonly used sign for a word. The online dictionaries have animation to show the user how to make the signs by giving a visual example; the sign language dictionary only pictures it with the word.

In conjunction with the dictionaries an interpreter can be called upon to assist the therapist in learning medical signs correctly. If the interpreter is not available, the healthcare provider is then able to sign to the client what will occur. The interpreter can also help teach the provider different signs that may be key to interacting with clients

The newest resource available is a computer software program, iCommunicator™, that not only gives the word and how the sign would be formed,

but it also demonstrates the sign being used. It is a virtual teacher to those who wish to learn more about sign language and need to find out what a specific sign means, or learn how to sign a word they want to use.

These additional resources not only facilitate communication with clients with hearing impaired, but they also add to the overall knowledge that there are ways to communicate other than pencil and paper (Barnett, 2002; Iezzoni et al., 2004; Ubido et al., 2002).

Resources include:

- *The American Sign Language Handshape Dictionary* by R.A. Tennant & M. Gluszak Brown (1998)
- Michigan State University's ASL Browser
<http://comtechlab.msu.edu/sites/aslweb/browser.htm>
- iCommunicator™ by Interactive Solutions, Inc./Teltronics, Inc.
<http://www.mycommunicator.com>

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CHAPTER V

SUMMARY

Based on the findings in the literature, it is important for therapists to be aware of all possible communication issues that can become barriers to treatment with patients who have hearing impairments and use sign language as their primary means of communication. Therapists and other healthcare providers need to be aware of the options that are available in order to maintain an open line of communication with their patients. There is a need to incorporate the suggestions of patients with hearing impairment into the planning/improvement process for all healthcare facilities in order to improve the follow through of treatment by this population of patients. It is also important for healthcare professional to be aware of their own attitudes towards patients with hearing impairments. Having an interpreter present is the best solution to facilitate communication. When this is not possible, professionals in healthcare facilities need to reevaluate the options available for individuals with hearing impairments in order to ensure the best possible experience for the patients and the decrease the communication barriers that currently exist because many healthcare professionals do not know or understand sign language. The breakdown in communication with individuals with hearing impairment is not only a problem in the United States, it is a problem found in healthcare facilities around the world.

Breaking Barriers is a reference guide for occupational therapists who want to communicate with their patients with a hearing impairment by using their primary language. It is also designed to help a therapist build rapport with the patient and increases the likelihood that the patient will follow through with their therapy. The booklet gives occupational therapists an outline of questions along with the signs to ask each question during the initial meeting with the patient. The Model of Human Occupation was used to help develop a question outline that gives the therapist an overall picture of the patient and the best route to pursue for their therapy. MOHO looks at the choices a person makes that affect their behavior and motivation towards an occupation they are engaging in, by looking at the volition, habituation, and performance capacity involved in the occupations that the person engages in (MOHO 2005).

The literature reviewed for this study focused mainly on the interaction between healthcare professionals and individuals with hearing impairments in a clinical setting. The amount of current literature and research on this topic was found to be limited which can be considered as a limitation to this project. Literature that focuses on communication issues across environments for individuals who have hearing impairments should also be reviewed if this project is expanded.

Research data should be collected by therapists who use the *Breaking Barriers* manual to determine if its use makes a difference in patient outcomes. Additional research needs to be completed to help develop a better method of communicating with individuals with hearing impairments across all environments. Healthcare professionals are not the only individuals who have difficulty communicating with

the hearing impaired population. At some period in time, almost everyone has contact with an individual who has a hearing impairment and they are often unable to communicate with each other effectively. With improving technology more research should be focused on the effectiveness of using alternative communications options when interpreters are unavailable. There is also a need for more education on hearing impairment so that individuals who hear are aware of the best way to communicate with this population, in order to decreasing the communication barrier between the two groups.

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