ABSTRACT

CLIENTS’ PERSPECTIVES OF THE HOME MODIFICATION PROCESS AND PRODUCTS

by Lauren Pauline Thieman

The purpose of this qualitative study is to explore clients’ perspectives of the home modification process and product. As there is a growing desire and need to move from institutional care to home and community-based care it is important to explore one aspect of this ever changing trend of older adults desiring to age in place. This study is beneficial to healthcare professionals who are involved in the home modification process as it will help inform and offer insight into the views of home modification clients. Research questions involve life before, during, and after the formal home assessment performed by the therapist. Eight one-time, semi-structured interviews were conducted with clients and family members who had made home modifications five weeks to three years ago. Findings show that informants view both the home modification process and products favorably.
CLIENTS’ PERSPECTIVES OF THE HOME MODIFICATION PROCESS AND PRODUCTS

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by
Lauren Pauline Thieman
Miami University
Oxford, Ohio
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Advisor_________________________
Dr. Christopher Wellin

Reader__________________________
Dr. Lisa Groger

Reader__________________________
Dr. Jennifer Kinney
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Dedication

First and foremost, I would like to dedicate this piece to my Lord and Savior Jesus Christ who guided me into this field and has given me a passion and gift for helping older individuals. I am also dedicating this to my wonderful loving husband Nic who has been such a blessing from the Lord and such an encouragement throughout this entire process. Finally, I would like to dedicate this to my sweet and loving parents who have always encouraged and supported my dreams and set a wonderful example for me.
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CHAPTER 1: INTRODUCTION

America is on the rise... in age that is. Americans are expected to live longer and there are expected to be more of them. By 2030, the population of older individuals is expected to double. Interestingly, this growing population of older individuals has different views on aging than any generation in the past. A major aspect of their unique views focuses on where they prefer to spend their years as they age. Simply put, most want to remain in their present homes. In an AARP study (2003) over half the people interviewed preferred to live in their own homes rather than moving to any other housing option as they age. As this projection becomes a reality, America will face a rising number of older people who want to stay in their homes. Staying at home for a healthy aging individual is feasible with a few precautionary adjustments: but when health issues arise, staying in one’s home becomes more difficult. Unfortunately, the national 1995 American Housing Survey found that “almost 8.9 million housing units in the United States had at least one occupant who had a physical activity limitation” (U.S. Department of Housing and Urban Development, 2005). An activity limitation can range from the inability to reach into an overhead cupboard to the inability to bathe oneself. Interestingly, the majority of older individuals move into their last home before the age of 60 and three fourths of these homes are conventionally built with no consideration for activity limitations or age-related changes. This helps to explain why “approximately 5.1 million of the households in which a member had an activity limitation had no home modifications present” (U.S. Department of Housing and Urban Development, 2005). This research does not show whether the activity limitation was from a slow progressing chronic condition or from an acute medical event. Therefore, it is important to realize the need for home modifications can come about from a gradual deterioration of one’s physical condition (age-related changes) or from an acute medical episode or condition. This is in contrast to individuals with lifelong disabilities who confront this challenge throughout life. Aging individuals are known to have more acute and chronic health problems than younger individuals. According to the National American Housing Survey done in 1995, “More than one-fifth of elderly households (22.8 percent) had at least one member with physical activity limitations. This is in contrast with only 5.3 percent of non-elderly households and only 9.1 percent of all households” (U.S. Department of Housing and Urban Development, 2005). Although older individuals are disproportionately in need of services, services are needed by
many younger people as well. It is important to understand that it is not the age of the individual that determines the need for home modifications (although it may be a factor) but the physical condition and/or diagnosis that ultimately leads to the need for home modifications.

The ‘medical model’ is one approach that is often utilized when providing healthcare and rehabilitation in the United States, yet falls short of addressing a complete diagnosis. According to Morgan and Kunkel (2001), the medical model of healthcare “focuses heavily on the diagnosis and treatment of disease within specific systems of the human body” (Morgan & Kunkel, 2001 p.346). Morgan and Kunkel note that there are three main tenets to the medical model. The first is that those who operate by the medical model understand that health is the absence of disease (Morgan and Kunkel, 2001). The second is the medical model is built on rigid beliefs that can limit its helpfulness (Morgan and Kunkel, 2001). One of these beliefs is that the recognition and diagnosis of a problem involves one solution. For example, if a person has a fall, a professional ascribing to the medical model would say the fall was caused by an inner ear problem affecting the patient’s balance that could be remedied by surgery. A person following the medical model would miss the fact that the person is aging and unable to lift his/her feet producing a shuffling motion instead of walking. Because the patient shuffled, he/she got a foot caught under the rug which was the real reason for the fall. By a medical worker’s training in the tenets of the medical model, the healthcare provider would have ‘fixed’ the balance problem but would not have addressed the shuffling or the environmental hazards in the person’s home. Thus, by limiting the diagnosis and solution, the medical model falls short of examining the entire problem and all possible solutions. The final tenet is that the medical model approach is utilized to focus on the cause of the problem and not the surrounding environmental factors involved (Morgan and Kunkel, 2001). Morgan and Kunkle recognize that the medical model has a narrow lens through which to look at old age and disability. They recognize that not only does a person have a medical diagnosis, but the diagnosis is also impacted by social roles, psychological issues, emotional issues, and physical environment, and community variables which should contribute to the diagnosis. By understanding the limitations of the medical model that so many healthcare professionals implement, it becomes clear that attempting to address a person’s needs by making changes to the home works in opposition to this model.

In recent years because of the growing preferences of elders to remain in their homes, there has been a shift in the long-term care system from institutional care to home and
community-based care and aging in place. As the saying goes, for most Americans, “There’s no place like home.” Because of recent studies that explore the preferences of older individuals, professionals such as healthcare providers, policy makers, and others are beginning to learn that aging individuals want to live and be cared for at home and not in an institution. As Prellwitz and Skar (2006) found, “The home, at its best, offers protection from the outside world and gives basic security” (p. 193). Who could imagine wanting to leave a place of protection and security for an unfamiliar living arrangement?

Not only is the home the place where people want to be cared for and rehabilitate, home care is being looked at as a more cost effective alternative to institutional care. Research has shown that it is much less expensive to receive care at home than it is to receive care in an institution. A study done in Canada found that home care in one location was $31,000 less per year than care in an institution and home care in another location was $32,000 less per year (Chappell, Havens, Hollander, Miller, & McWilliam, 2004). The researchers also examined other studies with the goal of learning whether home or institutional care was less expensive in Georgia and Arizona and learned that costs were very much less at home than in an institution in both states (Chappell et al., 2004). Research like this makes a strong case for keeping people in their homes. Consequently, in order to age in place safely and successfully, home modifications are often beneficial and sometimes necessary.

The concept of aging in place most often applies to healthy older individuals who are aging normally. The study of home modifications, on the other hand, does not examine people who are aging normally but those who have gone through an accelerated aging of sorts. An understanding of not only a person’s diagnosis but also a person’s medical, social and emotional trajectory is important when contemplating home modification (Strauss, Fagerhaugh, Suczek, & Wiener, 1977). For example, aging in place will happen differently for a person who has a degenerative disease than for a person who had a stroke. The person with a degenerative disease will eventually lose independence and will have a declining medical trajectory; whereas, the person who experienced a stroke may well eventually gain independence and will then experience an escalating medical trajectory. The need for home modifications often involves physically deteriorating or rehabilitating older individuals. Gilson and Netting (1997) would say these types of people experience accelerated aging. Thus, the term ‘aging in place’ has a new dimension added to it. Under the umbrella of home modifications, aging in place happens for
individuals with declining health issues or for those who need rehabilitation with the help of therapists and/or other rehabilitation specialists. This creates a new angle for an old term and is the basis for this research project.

With the movement of care to the home, healthcare providers must make sure that clients have a safe home in which to age and/or rehabilitate. Some clients are more realistically able to do this than others and it is the role of the therapist to help shed light on this. Consequently, sometimes a therapist has the role of telling the client that it might be better not to remain at home and instead to make the move to an institution. This can happen because the home can be hazardous to older adults. According to Nikolaus and Bach (2003), “the home environment has been implicated in one-third to one-half of all falls or injurious fall events in older persons” (Nikolaus & Bach, 2003). Determining whether or not a home is appropriate for a person with a disability is a difficult task that requires consideration of the dwelling, the physical and mental capacity of the client, and the client’s ability to receive help from others. These types of situations offer more challenging aspects than those experienced by healthy individuals wanting to age in place.

Today, when a person experiences a medical episode, hospitalization and rehabilitation often occur. In order for a person to safely leave the institution, a solution enabling the person to remain independent in his/her home must be reached. Occupational therapists are often responsible for assessing homes prior to a client being released from a hospital, nursing home, or rehabilitation facility, and for suggesting home modifications that will enable the client to live successfully upon returning to his/her home. It is the job of an occupational therapist to help the client regain continuity in his/her occupation. The American Occupational Therapy Association (AOTA) declared that, “An occupational therapists’ expertise lies in their knowledge of occupation and how engaging in occupations can be used to affect human performance and the effects of disease and disability” (Siebert, 2005). Therefore, it is the job of the occupational therapist to evaluate, consult, and train clients who are in need of home modifications (Siebert, 2005). About a week before a client returns home, many occupational therapists find it helpful to conduct a home assessment. Home assessments usually result in the completion of a checklist or document that considers a person’s ability to complete daily tasks: independently, with minimal assistance or with much assistance, and offers a number of safety suggestions. Because occupational therapists work with multiple clients and offer many suggestions, it is important
that they adapt their suggestions to best fit the needs of the individual being served. After suggestions are made, it is up to the individual and the family to implement these suggestions. This is what is known by occupational therapists as the home modification process. In technical terms, the home modification process is defined by the American Occupational Therapy Association (AOTA) as “the confluence of activities and delivery services, including assessing needs, identifying solutions, implementing solutions, training in use of solutions, and evaluating outcomes, that contribute to…” the home modification product (Siebert, p. 4). The home modification product is:

Any alteration, adjustment, or addition to the home environment through the use of specialized, customized, off-the-shelf, or universally designed technologies, equipment, products, hardware, controls and cues, finishes, furnishings, and other features that affect the layout and structure to improve functional capability of or minimize environmental demands on individuals and their caregivers to meet the situational needs for promoting performance of daily activities as independently and safely as possible (Siebert, p. 3-4).

Home modification products can be simple or very complex. Adding an anti-slip mat in a bathtub is a very simple modification that can reduce the likelihood of falling in the tub. A more complex home modification would involve the installation of a stair lift in a home. This modification would enable a person to get from one floor to the next without having to navigate the steps.

The purpose of this project is to examine, from the perspective of a therapy client, the home modification process and the various products. A client’s emotional and aesthetic sense of home, his/her informal support network, the trajectory of his/her illness and disability and even his/her prior social roles and activities impact the home modification process and are here examined through the lens of a gerontologist. Answers to questions asked from this perspective might inform therapists about not only the home modification products, but also about the broader perspective involving the lifestyle of the client. Therefore, occupational therapists and others could benefit by knowing how clients felt during the home assessment process and to learn if clients implemented the suggestions made and if not, why the home modifications weren’t implemented. Occupational therapists also need to know how clients perceive the effectiveness of the modifications that are implemented. Currently, this information is not widely available and could either reinforce or change the practice of conducting home
assessments and implementing home modifications. In order to begin, it is important to take a look at a few of the existing research projects done about home assessments.

**Existing Research on Home Assessments**

Literature on pre-discharge home assessments has informed this research project. Patterson, Viner, Saville, and Mulley (2001) mailed a survey to occupational therapists to learn about the procedures (number of visits done, who went, etc.) of the current practice of pre-discharge home assessment visits for older patients. The findings showed that all but one facility conducted pre-discharge home visits. In approximately one third of all the facilities, pre-discharge home assessments were performed for over half of the patients going home. In 70% of the facilities, the occupational therapists claimed that the number of home visits they participated in was increasing (Patterson et al., 2001). Taking these facts into account, it is important to understand the home assessment process as it is being done in more facilities, for more individuals, is beginning to involve more of an occupational therapist’s time. The research done by Patterson and others is important and informative, but it does not examine how the client views the assessment process. It also does not explore the outcomes of the assessment, including the implemented modifications and/or the impact those modifications have made. This research project examined both of these areas.

Although Patterson and others did not examine the views of the participants in the home assessment practice or the “after-effects” of the process, in their 2004 study, Nygard, Grahn, Rudenhamar, and Hydling (2004) did. The researchers wanted to answer the occupational therapists’ questions of whether the pre-discharge home visits they conducted increased the home environment safety of the clients with whom they worked. Their research findings concluded that many of the clients were satisfied with the interventions recommended by the occupational therapist. Those who were dissatisfied had not received the prescribed assistive devices or home modifications in a timely manner. The occupational therapists were largely in agreement with the clients’ evaluations except when the client did not implement a “necessary” home modification or when the client chose an alternative modification (Nygard et al., 2004). Research by Nygard et al. was very informative and enlightened clients, researchers, and readers about the process of home assessments and implementation of home modifications. The research for this project differs from that by Nygard and colleagues in that it explores different questions.
which highlight the views of clients and not the occupational therapists about the home modification process and products in a Midwestern medium-sized city in the USA.

The lack of information about the views of clients concerning home modifications helped to motivate this research project. Another aspect that helped to motivate this research was the understanding that the home modification process offers a direct opposition for and critique of the medical model through which so many professionals have been trained, and to which they continue to limit themselves. Through this research project I was able to explore the views of clients concerning the home modification process and product. It became clear during the research that after a medical episode or declining physical condition there was not just one way to address gaining information about home modifications; it was also important to learn that many different kinds of modifications were implemented. Often it was not the clients but friends and family who implemented home modifications. When traditional modifications were not available, clients and their families used their own home modification ‘inventions.’ Finally, clients were all satisfied with the results of home modifications as they offered an increased sense of empowerment, an increased sense of safety, and an increased ease of living.
CHAPTER TWO: METHODS

Methodological Approach

I employed a qualitative approach for this research in order to conduct a thorough exploration of the client perspective concerning the home modification process and products. I conducted eight semi-structured, in-depth interviews with occupational therapy clients and their family members who had recently made home modifications.

Procedures

I began by obtaining IRB approval from Miami University and The Ohio State University. Subsequently, I made occupational therapist contacts with the help of a professor in the Allied Medical Department at the Ohio State University. Ultimately, three sources of recruitment were utilized: occupational therapists from Ohio State Dodd Rehabilitation Hospital, occupational therapists from the Oxford and Cincinnati area, and snowball sampling. A total of three occupational therapists from the Columbus area were each given a letter describing the study (See Appendix A) and between 10-20 packets of information for distribution to clients who might be interested in participating. Two occupational therapists from the greater Cincinnati area were also given copies of the letter describing the study and 10 of packets for potential participants.

In addition to these recruiting sources, one participant recommended other individuals who might be interested in participating in the research. According to Maykut and Morehouse (1994), “Qualitative researchers may use a technique called snowball sampling, where one research participant or setting leads to another or snowballs” (p. 57). Consistent with Maykut and Morehouse, during an interview, the informant suggested that I talk to two of her friends who had also made home modifications and subsequently provided the names and phone numbers of the women. I contacted the potential participants by phone, told each about the study and both agreed to become participants.

The packets distributed to potential participants by the therapists contained a letter describing the study (See Appendix B) and a post card (See Appendix C) that the potential participant could return by mail if he/she was interested in participating. Upon receipt of the post card, I contacted the potential participant by phone in order to answer any questions that
she/he had and set up a time for the interview. At least 23 of the packets were mailed to potential participants in the Columbus and Cincinnati areas, resulting in a response rate of approximately 52% for those participants who were recruited by therapists.

The interviews took place in each participant’s home that had been modified. Each interview began by obtaining written informed consent for participation and for photographs to be taken of the modifications (See Appendix D & Appendix E). After obtaining consent the interview began. I recorded each interview for transcription purposes and each lasted approximately one hour. The interviews consisted of a number of questions regarding the home modification process and products (See Appendix F). Specific questions in the interview addressed issues related to pre-home assessment, the actual home assessment process, the home modification products and implementation, and the impact modifications had made.

Participants

Originally, my requirements for participation in the study were that individuals a) had been hospitalized and had undergone rehabilitation, b) were 50 years and older, and c) had made recent home modifications-- from three weeks to one year prior to the interview. However, some of the potential participants had made home modifications as long as three years prior to receipt of the information packet, and I included them in the study. I conducted a total of eight qualitative interviews with a total of 13 individuals (ranging in age from 51 to 84 years of age) who live in central Ohio. There were six females and seven males. Of the participants, 12 were Caucasian and one was African American. I conducted interviews with four configurations of people: interviews with just the therapy client (2), interviews with just the spouse of a client (2), interviews with the client and a spouse or significant other (3), and one interview with the client, spouse, and an informal, unpaid, caregiver who happened to be the daughter-in-law (1).

Both occupational therapy clients who were interviewed by themselves were Caucasian men in their fifties (Mr. N and Mr. K). One made home modifications because of an accident and the other because of a stroke. Of the two interviews I conducted with spouses of an occupational therapy client, one spouse (Mrs. C) was an African American woman in her late seventies who made home modifications because of her husband’s Alzheimer’s disease. The other spouse (Mrs. H) was a woman in her early fifties who made modifications after her husband had a stroke. With respect to the three interviews that I conducted with couples, one couple in their fifties made modifications after the husband was in a car accident. Another
couple with the wife in her sixties and the husband in his seventies made modifications after the husband had an accident. The third couple in their late fifties made modifications after the man had an unnamed type of accident. The last interview I conducted was with an occupational therapy client (EB), her spouse (NB), and their caregiver (Mrs. B, daughter-in-law). The client and spouse were both in their eighties and the caregiver was in her fifties. The caregiver did most of the talking. See Appendix G for a summary of informant profiles.

Analytic Approach

Data analysis can be done using three different approaches ranging from very superficial and basic to very in-depth interpretation. The first approach is utilized by the researcher who wants “to present the data without any analysis” (Maykut and Moorehouse, 1994 p. 122). Some liken this type of researcher to a news reporter or journalist who wants to present facts. The second and more involved approach is where the researcher “is primarily concerned with accurately describing what she or he has understood, reconstructing the data into a ‘recognizable reality’” (Maykut and Moorehouse, p. 122). This construction process involves coding words and phrases in order to better organize the codes into themes and then into concepts. In this approach, the researcher intertwines quotes from the interviews and some personal interpretation to create a story for the reader. The third and very in-depth approach involves “the highest level of interpretation and abstraction of the data in order to arrive at the organizing concepts and tenets of a theory to explain the phenomenon of interest” (Maykut and Moorehouse, p. 122). The third approach is what Glasser and Straus call the grounded theory approach which involves the inductive process of theory formulation.

During the data analysis I transcribed the interviews verbatim from the audio recordings and typed out field notes immediately following each interview. As described by Maykut and Moorehouse (1994), I coded data pages to the interviews by using the pseudonyms given to each participant. Next, I analyzed the data using the constant comparison method whereas categories were determined by the questions being asked and data from all interviews were placed in the categories and coded. I then refined the categories and compared the data. Later, I used a computer program (Atlas_TI) to help in systematic and thorough organization and analysis in order to link common themes throughout all 8 interviews. According to Maykut and Morehouse, “The process of qualitative data analysis takes many forms, but it is fundamentally a
nonmathematical analytical procedure that involves examining the meaning of people’s words and actions. Qualitative research findings are inductively derived from this data” (p. 121). It was my attempt not to act only as a news reporter who presents facts, but to intertwine the quotes from informants with personal interpretation and at times to verge on “organizing concepts and tenets of a theory” in order to explain the home modification process and product. Thus, all three types of analytic approaches were utilized.
CHAPTER THREE: FINDINGS

Introduction

Meaning of Home

It has become clear in recent years that people have very strong feelings about home. Prellwitz and Skar (2006) note that “It [the home] is also a symbol for identity, how an individual sees him/herself and wishes to be perceived by others” (p. 194). Thus, if the home is related to a person’s identity, strong feelings about one’s home are likely. Within this premise, it is imperative to understand in order to fully grasp the magnitude of importance placed on the decision to modify the home. Modifying a person’s home can be compared to modifying his/her identity – something not easily or hurriedly done.

Graham Rowles found the concept of home as one having meaning to the inhabitants. He developed a model explaining the four levels of interaction a person has with the environment (Wiseman, 1978). Rowles noted that a person can interact with the environment through action, orientation, feeling, and fantasy (Wiseman, 1978). For the purposes of this study, the third level (feeling) is the most important. From the model created by Rowles, a person has feelings about the home. These feelings about the home may affect a person’s ability to thrive in the home environment. Therefore, it is important to consider that strong feelings (either positive or negative) are often present in the decision to modify the home.

Another scholar who understood the meaning of home to an individual was Sandra Howell. Howell (1983) claimed that meanings of home and place are part of a continuous process and that they are also part of self-identity (Howell, 1983). Thus, if a person has new memories of experiences in a home that happen each week, over the course of 50 years, the meanings attributed to the home would gradually evolve. Also, interwoven within the numerous memories that would happen over a long period of time, a person may develop a self-identity intertwined with his or her home.

Reasons for Making Home Modifications

After trying to understand how people feel about the home, it is also important to examine why people go about making the decision to make changes to the home. It is not the majority of people who would modify their homes by adding ramps, grab bars, and other assistive devices in order to simply prepare for the future possibility of becoming disabled,
although some do. None of the participants in this project chose to make major or even minor home modifications without a current or imminent need for self or others. This was probably a result of the method of participant recruitment through health services.

Someone once said, “We are all temporarily able” in reference to the looming possibility of becoming disabled. This quote references the sobering reality that a life-changing accident could happen to anyone at any moment. A number of the study participants had such accidents, forcing them to consider making home modifications. One participant had been in a car accident (Mr. O), two had unnamed accidents (Mr. D and Mr. N), and yet another had fallen down the stairs (Mr. H). His wife recalled:

He fell down the basement stairs. He hit his head so hard in the back that it slammed his brain forward, creating a subdural hematoma and swelling. To relieve that, they removed his skull flap to let his brain expand, and eventually ended up removing the right frontal lobe of his brain because it was bruised and damaged.

Falling down a familiar set of steps...such accidents create the necessity to modify a person’s home.

A stroke is often a life-changing event that can leave a person without the ability to speak, read or write, move, and/or think and process things intellectually. Two of the participants I interviewed had experienced sudden strokes (Mr. K and Mr. S), leaving them profoundly and forever changed. Mr. K said, “My need for modifications came about by a sudden and unexpected stroke.” Mrs. S recalled life before her husband’s stroke. “It was always easy for him to get anywhere before he was disabled because he was a very, very active person.” After having a sudden medical event such as a stroke, people are often left wondering how they can return home to a “normal” life. This is where home modification experts can help.

Finally, two participants, (Mrs. C and Mrs. B) modified their homes because of slowly declining health and the compromised functioning of a loved one. Mrs. C made changes to her home because her husband was diagnosed with Alzheimer’s disease. She realized after he had left the house and wandered down the road without her knowledge a few times, she needed to do something to ensure his safety and to keep her apprised of his whereabouts. Mr. and Mrs. B moved into a home they thought could eventually accommodate their aging parents. Mrs. B said:
So when we moved here four and a half years ago we were looking for a house that was big enough to accommodate them if we needed to, and a year later we needed to. When we got the call that said he needed help, we went about and got a contractor to come in and give us an estimate.

I conducted eight interviews with people having a wide range of medical conditions prompting the decision for home modifications. Some had acute episodes while others had more gradual declining conditions.

The need for home modifications could best be explained by Powell Lawton (1986) who said, “The basic assertion underlying the study of the environment and behavior is that a person’s behavioral and psychological state can be better understood with knowledge of the context in which the person behaves” (Lawton, 1986 p. 2). He later clarified this statement by saying that a person has certain competencies at a given time and the environment has certain demands which it places on a person’s competencies (Lawton, 1986). Depending on the person’s competencies and level of demand (also known as environmental press), a person’s behavior is able to be better understood. There is a certain type of environment that offers just enough challenge (yet not an overwhelming amount) that is ideal for an individual (Lawton, 1987). This environment and amount of challenge is different for each individual. Thus, after an injury or a deteriorating physical condition, the degree of environmental press tolerated by the person would decrease for a time, either temporarily or permanently. Because the lowered tolerance would become a reality for the person, either the individual would need to overcome the medical condition, or something in the environment would need to change. Thus, it is important for the client to gain information about the home environment potential and the changes that might need to be made in order for an optimal living situation to be achieved.

**Impetus for Modifications- Sources of Information**

Ideally, before a modification is ever made, information is gathered or a home assessment is conducted in order to help educate the client and the family. It is somewhat surprising, if not disappointing, through the words of the participants, that there is no reliable route for gathering information or getting a home assessment. Often, participants found themselves at the mercy of the assigned people assessing the home for information and education. Surprisingly, participants received information about home modifications including home assessments from many sources. Some received information from therapists, some from contractors, some from government
programs and agencies, some from friends and family, some from examples set by others, and
some gained information through self-education.

*Information from Therapists*

The traditional approach to making home modifications involves a therapist going to the
home of a client for a home assessment to make accessibility and safety suggestions. One of the
major findings from this study is that this “traditional” process was described in only three out of
eight interviews that were conducted. One of these participants had to purchase a new home to
accommodate her husband’s new medical condition. Before Mrs. D purchased a new one-story
home to accommodate her husband’s diagnosis as a quadriplegic, she recalled, “We had
[therapist]…come in before we even bought it. She and a social worker from DH [rehab facility]
came in and they measured the doors and we even had a quad come in and drive his wheelchair.”
Without this information from the therapist Mrs. D would not have been sure if the home she
was about to buy would be accessible enough for her husband’s new condition.

Although some clients received suggestions and information from a therapist, in a
number of cases, the therapist did not actually visit to the home to assess it. Mr. O said, “We
don’t know what we were getting into... up at [rehab facility] they’re good about educating you
…education is important for patients. It would have been nice to know what to expect in coming
home. Education is key!” According to Mr. O, the “traditional” approach to gathering
information about home modifications would have been helpful. Although he was provided with
information from therapists at a rehab facility, a therapist never came to his home to provide
suggestions which would have made things easier for him.

*Information from Contractors/Builders*

Unfortunately, the “traditional” way of gathering information and assessing a home for
necessary modifications isn’t always possible without a medical event necessitating time spent
with a therapist for rehabilitation. Mrs. B contacted a contractor to educate her about making
safety and accessibility modifications to her home in preparation for her in-laws who would soon
be living with her. She reflected on the process by saying:

We went about and got a contractor to come in and give us an estimate... Having a
contractor come in who did not have the specific knowledge may have hindered us a little
bit, but he did a good job. His crew did a good job but there were a couple of things that we should have thought about ahead of time and that was concerning the shower. Unfortunately, Mrs. B felt she missed out by not going through the “traditional process” of working with a therapist. Another participant, Mrs. S, gained information through the use of a builder. She “Planned it with a builder… The builder that I used is a family friend-- someone I thought I could trust to be in the house when I wasn’t here…” Mrs. S was able to find someone trustworthy whom she felt gave her credible information about the process. She later told me that this builder friend had made many modifications for people with disabilities so he knew the appropriate products to recommend. It is important to note that even though a builder or contractor may have technical knowledge of building procedures, it does not mean he has knowledge or expertise of home modifications as in the case of Mrs. B’s contractor. One can learn from these participants that it is important to find a builder or contractor like the person Mrs. S found who has knowledge and experience making home modifications and making adaptations for a person with a disability.

Information from Government Programs and Agencies

Because Mr. O had a car accident on the job, he had to go about getting modifications through the Workman’s Compensation program. He did not take the traditional approach by working with a therapist but instead gained information through a government program. This way of accessing information proved to be a difficult one from the very beginning. His partner had to go about contacting the person from the program who was supposed to perform the home assessment instead of the government program initiating the process. “She [his partner] called MM [the workman’s compensation contact], I know, 3 or 4 times and MM would just never call back…” The process of gathering information continued to be difficult especially when the worker made suggestions for things Mr. O knew would not work in the space the home and land provided. Thus, information provided by the government program was difficult to obtain and had to be carefully evaluated for its feasibility.

Another participant, Mrs. C, went through a local agency for senior citizens. Mrs. C also had to go about contacting an employee of the agency to request information instead of waiting to be contacted. Mrs. C said, “Well, the [agency] person came. They had their people-- I don’t know what the position was and the point I think mostly was to see if we could qualify for certain things.” Therefore, even though Mrs. C sought information from the agency about home
modifications, what was provided was not information pertinent to her needs, but a financial assessment to make sure that she could qualify for future services. Overall, information from government programs and agencies proved at times to be difficult to obtain and was considered by clients to be only moderately helpful.

*Information from Friends and Family*

Friends and family were an essential piece of the puzzle during the information-gathering step of making home modifications. One participant mentioned how many people offered suggestions and information about making home modifications.

> We had everybody’s brother weigh in about how to do this ramp. I mean, we had everybody…all my family, her family, strangers. Well, I think you ought to do it this way, well I think you ought to do it that way. There was a lot of suggestions like that…”

Without so many suggestions, certain aspects of the process may not have been thought about. Mrs. B said, “Yeah and some things [modifications] I didn’t think about until somebody mentioned it.” Without the help of her social network, Mrs. B may not have made some of the more essential modifications for her husband. Another participant, Mrs. C, learned about organizations she might contact for home modification help. She relayed, “My brother-in-law told me we should get connected with the VA so we did that.” Overall, the information gathered from friends and family was very helpful in the home modification process.

*Information from Examples Set By Others*

Participants gained information (good and bad) about home modifications from examples set by others. Clients had home modification examples set by others which they viewed to be helpful examples to follow. Mrs. C remembered a time in her childhood when she volunteered to help older adults. She recalled, “I’ve seen a couple of the ladies even change their living room and put a bed for the, a hospital bed for their husband to keep him out of the nursing home and all of that.” Mrs. C viewed this as a good option for her future in order to keep her husband at home for as long as possible. Another informant who learned from the examples set by others was Mr. D. He went to the home of another person to get ideas for future home modifications. He recapped:

> They showed us they have a sidewalk that comes in at zero level entry… He had a track in his ceiling in his bedroom that would lift him up in a Hoyer lift and it would roll on his
track into the bathroom and would suspend him over him over the tub and that is how he got his bath.

Later in the interview, Mr. D indicated that he may want to make some of these modifications to his home in the future.

Some participants learned about home modifications from examples set by others that were viewed as negative. For example, Mr. N counted himself lucky as he did no have to make many modifications after his accident. He recalled, “Other people I have known have had to change houses or make major modifications.” These options were not viewed by him in a positive light and so he was glad not to have had to make any profound changes to his home.

Another informant had a negative example of home modifications set by her own parents. Mrs. S’s mother was confined to a hospital bed for five years before she passed away. Her father did not believe that his wife would live long and so he didn’t feel that changing the home was necessary. Mrs. S recalled, “She spent the last five years of her life living in her living room with no privacy, in a hospital bed with a chair and a bedside commode and a screen, and I’m not going to do that.” Because Mrs. S was impacted from the example set by her parents, she resolved not to do anything similar with her husband. Instead, Mrs. S went in quite the opposite direction and made modifications totaling $78,000 so that her husband could be comfortable in their home.

Overall, whether positive or negative, informants gained views and ideas of home modifications from examples set by others. These examples were either ideas to follow or were illustrations of what not to do.

*Information from Self-Education*

Study participants also gained information about home modifications through self-education. In preparation for her husband’s return home, Mrs. H educated herself about some of the things she might face upon his return. She recounted:

I watched what they would go through at D H [rehab facility], and wherever he was at because of his brain injury, R [her husband] was very impulsive…and he would always have to have a sitter with him someone just to keep an eye on him because he would always want to pop out of bed and go… so I saw what they went through.
By watching his tendencies, she was able to learn which home modifications would be most necessary and helpful for her husband’s success at home. Mr. D and his wife also gained information through self-education. They looked at the examples set by others, they talked with other people, and they spent extensive time thinking about the best way to implement a ramp before making the decision. Others were able to gain education through reading books, magazines, newspaper articles, exploring the internet, talking with professionals, discussing with friends, and mulling it over in their own heads. Overall, through self-education, informants in this study were able to gain a better understanding about home modifications.

Implementation

The Products Implemented

Products can be small or large, simple or complex, inexpensive or expensive. In the homes of the participants, modifications ranged from basic grab bars to a complex air pressured door system. They included: roll-in-showers, hand-held showers, stationary showerheads, shower benches, baby monitors, table risers, railings, ramps, door alarms, bed alarms, walking paths, clapper lighting systems, and wheelchair lifts along with a number of structural modifications such as widened doorways. The most common of the home modifications implemented were grab bars, which were implemented by seven of the eight informant groups. This finding remains consistent with a national research study. According to the 1995 American Housing Survey, “Handrails and grab bars were the most common home modifications and were present in more than 2 million households (22.6 percent) reporting activity limitations” (US Department of Housing and Urban Development, 2005). Mr. K reflects on a few of the modifications that he made:

So there is a grab bar that helps me with a toilet. That is really an important thing. One thing that really became important was that you could have a safe floor [in the roll-in-shower] that wasn’t slippery and that stuff [rubber boat decking] is really great stuff. That is very important. I tell people I can go anywhere as long as there is a railing. But without a railing it would be very difficult.

Most of the home modifications were made to three areas: entry/exit, the bathroom, and the bedroom/living space. This is consistent with what Barras (2005) says are the areas of the home that are assessed (mobility, access, safety, kitchen, transfer, and toileting). Because it is so important to be able to enter and exit one’s home, many modifications are made in entry areas.
Mr. D showed the pleasure he found with his air pressured door system by saying, “Now this is our crown jewel of renovations…The door opens up…” Modifications to the bathroom were also very common. Mrs. B said, “We added a hand rail to the wall next to the toilet and we got the shower bench chair…” Finally, changes made to the bedroom and living space were also common. Mr. N couldn’t fit his wheelchair under the kitchen table. He said, “We did have to raise the table, we had to put 3 inch blocks under the table so I could get underneath.” He also explained a bit about the grab bars he added by saying, “They are permanent fittings and are very useful.” Overall, a number of modifications were made to the homes of the participants and home modification products were viewed favorably.

**What Resources do People Use to Pay for Modifications?**

There are three ways in which the participants paid for the modifications. The majority paid out of pocket, some had assistance from a government program, and others accepted charitable donations. People who paid for home modification products out of pocket would all be classified as being in an upper socioeconomic level. Mrs. S who probably made the most extensive modifications paid out of pocket. She recalled:

> It was out of pocket. We had a down payment, a first draw a second draw, and I am still holding back $2,000 until they can correct the problem with the siding. The total package was $120,000.00; but the part that was necessary for handicapped accessibility: converting the office and sunroom; the shower and running heat to that room; the ramps, wide doors and handicapped accessible door handles, faucets and toilet came to about $78,000. Well, we are very fortunate that we can afford it.

Mr. N and Mr. K also paid for the modifications out of pocket. Mr. N said, “It was out of pocket. It wasn’t really very much overall…not in the big scheme of things.” Unfortunately, not everyone is able to pay for their home modification products out of pocket and must turn to government programs for help.

A few of the informants had assistance from a government program to pay for the products they installed. Mr. O had modifications paid for by the Ohio Workman’s Compensation program. When asked how much the program had paid, Mr. O recalled, “Well those aluminum ramps were probably about $2,000 total. The big ones were about $600 a piece. The lift was about $6,000…I want to say that was about $10,000 or $11,000 too.” Mrs. H had
some of the modifications paid for by insurance. When asked what types of things insurance covered she said, “Medical necessity. I believe so because of his injuries.” Mrs. B paid for home modifications through obtaining a home equity loan. Mrs. B said, “The modifications that we made prior to their [her in-laws] moving in here were paid by a home equity loan and then when their house sold we paid off the home equity loan.” Although these participants did not seem to have any trouble, it is sometimes difficult to qualify for programs like these and therefore some people find and accept charitable donations for home modification products.

Two of the participants in this project were able to obtain home modification products through charitable donations. Mrs. C received a door alarm from an acquaintance in a support group. Mrs. C said, “A man in the support group gave me the [door alarm], gave me what his wife had because she had to go to a nursing home.” When later discussing other modifications that she might have to make she said, “I don’t know how to explain it but it with our age he’ll be 82 and I’ll be 79…I definitely don’t want to go into a lot of debt or anything like that so it just kind of puts you at a funny place.” Obviously, finances are a consideration for Mrs. C and she would have to determine which modifications would be “worth it.” In seeking out bids from contractors, Mr. D came upon a group who offered to supply the products free of charge. Mr. D was grateful to receive the home modifications products. He said:

Of course, if we woulda had to pay for that, well I don’t know. They are very expensive, very expensive. So if we woulda had to pay for that whether we would have chosen a less expensive alternative or not I don’t know. I’m glad we didn’t have to make that decision because it worked out really well and it’s gonna work out really well and it looks like it’s part of the house.

It is clear to see that people pay for home modification products through different means. Depending on a person’s situation and income, some options are available, and others are not. People making changes to a home must understand their financial situation and find the means to purchase the necessary products. So how do clients view the payment of home modifications? Those who can afford it view it as just another expense; whereas, those who could not afford it are grateful for the financial assistance they receive. Once the products are purchased, it is up to the client and the family to implement them.
Who did What?

When making changes to the home, often times therapy clients must rely on friends or family members to make the home modifications because they are recovering and/or living away from home in a rehabilitation facility. One of my most prominent findings was that not a single person made arrangements for or made modifications without the help of a friend or family member. Clearly, it was necessary for my informants to have an advocate during the home modification process. Many times, family members and friends become vital assistances in order to help implement the home modifications. Mr. D said, “See my daughter’s boyfriend who is in construction sort of rigged up that whole setup.” Mrs. S had a sister who helped by looking over paperwork for her. “My sister even came over and reviewed the contract,” she said. Mrs. H benefited from the help of her family during the home modification product implementation. “My brother happened to be visiting so I put him to work. There is always the honey-do list on the fridge when family comes to visit.” Mr. P had family who traveled quite a way to install the modification products for his home. Mr. P remembered:

My father-in-law came and got some help and built the ramp. I basically designed it for him because I’m an engineer so it ended up being pretty much as we had envisaged it. So they stayed and they built it in a day. He together with his brother-in-law came over from Indianapolis and in a day they put it together.

Mr. K said:

It’s funny, I was in rehab and they told me that all these modifications were being done…My wife was here [at their home]. She came home on the weekends so she was involved [in the home modification process]. So somebody from my family was involved. You have to have a person whose home it is who is going to use the space involved in it.

Each informant had his or her own story about how help had come from friends or family when it came to implementing the home modification products. Friends and family members not only helped implement modifications but may have also aided the well-being of the client by being there for support during the difficult time (Plews, Bryar, & Closs, 2005). Mr. O said:

I feel really bad for older people who don’t have people to work on their behalf because they are just going to be nowhere in this process…I can pretty much open up my mouth
and make a lot of noise but some of these old people don’t have anybody to do that and that’s the people you really have to feel sad for.

Mr. O realized the amount of work his partner went through to make the necessary changes to their home and felt sorry for people who weren’t able to have someone to do the same. It is important to think about what Mr. O said when he mentioned feeling bad for people who don’t have family or friends to help in this complicated process and realize that having help outside of the medical field is necessary for a successful home modification project. Thus, the home modification process is one that couldn’t take place without the help of family and friends.

*Personal Inventiveness*

When implementing home modifications, the majority of my informants not only implemented traditional modifications that were suggested, but also used personal inventions. The use of personal inventions was implemented in order to keep clients from danger and for reasons of convenience.

For example, Mrs. H’s husband had fallen down the basement stairs causing a condition that necessitated home modifications to be implemented. Mrs. H used personal invention by rigging a lock on the outside of the basement door so that her husband was not able to open it. She then attached a gate to the top of the steps so that if her husband opened the door, he would be stopped by the gate and prevented from falling again. Another example of a personal invention created to keep a client from danger was Mrs. C’s window covering. Because her husband was prone to wandering out of the house, Mrs. C created a paper covering over the window leading to the garage so that her husband would not be visually motivated to exit the house. A final example of personal invention used to keep an informant out of danger was in the purchase of a pair of rubber shoes. Instead of Mrs. S worrying about her husband slipping in the new walk-in shower, she bought him a pair of rubber shoes called ‘Crocs’ that he could wear and stay safe when showering. Overall, home modifications created through personal invention were used to keep clients from danger.

Home modifications created through personal innovation were also used for convenience. Mr. N relayed the difficulty of closing a door while moving in his powered wheelchair. Because of the difficulty, Mr. N tied a rope onto the door so that he could grab onto it and pull the door closed behind him. He said, “When I rode out with the wheelchair I couldn’t reach back and
grab the door handle so I grabbed the rope.” By adding the rope, it made leaving his home much more convenient. Mr. N no longer had to try to readjust the wheelchair in order to close the door. Instead he simply pulled on the rope and out the door he went. In order to get into the van, Mrs. B wanted to get a step stool for her mother-in-law to use. Because the steps offered by the medical company came with only one step (which did not allow her to reach the van), she took matters into her own hands. Mrs. B went to a local store and purchased a step stool with two steps from the children’s department for her mother-in-law to use. When she noticed that the steps were a bit slick, she found non-slip strips and attached those to the children’s step. This solved the problem. Her mother-in-law was now able to get in and out of the van and reach things in high places without help. A final example of personal invention relating to home modifications was when Mr. O’s partner put a rug down so that he would be able to transfer from the wheelchair to the bed more easily. She said, “I put that mat there, that little rug, because the floors were so slippery that the wheelchair was moving on him when he would transfer.” It became clear after talking to the informants that personal invention was utilized to keep clients from danger and for convenience.

**Satisfaction with Results**

All of the participants in this study were extremely satisfied with the results of their home modifications. Although some may have wished they could have done something a bit differently or wished they could add to the modifications that were made, no one regretted the decision to make home modifications. Mr. O put it best when he said, “Oh, with the modifications I’m elated…without them I would be, oh a grouchy old guy.” Obviously, Mr. O saw what life was like before modifications and the difference that modifications made in his day to day activities. According to Makigami, Kuniko and Pynoos (2002), home modifications are an effective way to improve the quality of life for older individuals. Although Makigami et al., do not distinguish between home modifications to improve the quality of life for those with normal age-related changes and for people who are in the process of rehabilitating from a medical incident, it appears that they are effective in either situation. My findings revealed that participant and family satisfaction with the results of the home modifications could be attributed to three distinct life changes. Participants felt a new sense of empowerment; they were given a sense of safety; and they experienced a new ease of living after making home modifications.
Empowerment

Empowerment can have a huge impact on the life of an individual. The definition of empowerment implies that a person was lacking, and then was enabled or given some sort of power. Informants in this study felt a new sense of empowerment after making home modifications. This sense of empowerment was the result of a new found independence which was manifested through increased confidence.

The new sense of empowerment felt by the clients was the result of increased independence. According to Pynoos and Nishita (2003), home modifications can reduce the need for expensive personal care services, decrease accidents, and help delay the process of institutionalization. No longer does a person need to rely on others for every aspect of life, but now can do things independently. Informants echoed the idea of having increased independence as a result of making home modifications. Mr. O said, “I can be outside in a matter of minutes now, where before I needed somebody.” This new found independence was of great importance for him because there wasn’t always someone present who was able to help him. Now Mr. O has the freedom to leave his home if he chooses to do so. Mr. K also described the result of his home modifications as making him, “…able to be more independent…that’s a huge help for me.” Mr. D commented on his new-found independence. “[The new permanent ramp] has been totally different. She doesn’t have to do anything I just go right down the ramp myself so it is a very good modification.” Each of these three men were significantly empowered by their increased independence.

Not only were the three men empowered by their increased level of independence, but they also attained a new level of confidence. Regaining confidence after a medical episode is a very important part of the recovery process. Mr. K said, “Yes, I can get around with much more confidence…To have that confidence that you have in that space where you can get by without that fear of falling… It is a really nice situation.” Because Mr. K experienced a fear of falling before the modifications were installed, he now experienced an increase in confidence in his ability to avoid falling as a result of the home modifications. Mr. O displayed his increased confidence in this statement:

It has left you to believe that without the modifications you need 24 hour help. With the modifications…I’m gonna be fine puttering around here doing whatever I’m doing. I can
get in the bathroom by myself, I can go in the computer room by myself, I can get in the kitchen by myself, get in the refrigerator, get me a coke or whatever. Clearly, home modification clients view the completed outcome as giving them a sense of empowerment. This sense of empowerment can more clearly be explained in the context of continuity theory.

**Continuity Theory and Empowerment**

Many theories have been prominent in the field of gerontology. Although aspects of home modification have not been explicitly theorized, there are assumptions embedded within continuity theory that are relevant and practical to the idea of home modification. Continuity theory is built on the idea that when making adaptive choices, older adults attempt to maintain internal and external structures and prefer to accomplish this objective by applying recognizable strategies in familiar arenas of life (Atchley, 1989). To better understand the parts to this theory, an exploration of one person’s attempt to maintain internal continuity after disability, and one individual’s attempt to maintain external continuity after disability will be informative.

Continuity theory claims that people strive to remain who they are both internally and externally. What are the implications of remaining the same internally? EB was always a homemaker and has always taken care of the cooking, cleaning, and laundry in her home. Because she is no longer able to walk and has been unable to perform her normal routine, she faced internal discontinuity. The profound reason for her discontinuity is because her previous role of being a housewife was suddenly taken away from her and now she can no longer operate in the ways she is used to. Another reason is because, in part, her identity was likely tied to her roles (Shenk, Kuwahara, Zablotsky, 2004). EB probably felt the need to return to her former way of life as a housewife to reclaim continuity—basically, her familiar roles and identity. One way of accomplishing this is by finding someone to make home modifications. With the modifications, she would be able to move freely in her wheelchair. She could feasibly once again perform all of the cooking, cleaning and laundry, thus regaining her internal continuity. Her empowerment would be derived from the recovery of her previous roles.

This theory also claims that continuity of environments or external continuity, is important to adaptation. The theory states that “environments condition us, and learning to cope with environments is an essential aspect of daily routines” (Atchley, 1989 p. 189). As people age, many experience a changing level of physical ability. As health declines and mobility
becomes difficult, some people find themselves confined to a wheelchair. With the onset of this restriction, a person can be faced with the decision to stay at home or to move to a facility that can better accommodate his/her needs. In order to keep external continuity in one’s life, the optimal choice would be to continue to live in one’s home. Mr. and Mrs. S faced that decision after Mr. S had a brain injury. Mrs. S was determined to keep external continuity in her husband’s life by keeping him at home. To continue to live independently and to maintain external continuity, they made home modifications in order to enable Mr. S to function at home. After making these modifications, external continuity was achieved and Mr. S was able to feel empowered by the new sense of independence and confidence brought on by changes made to the home. Thus, both internal and external continuity are important to the lives of many older individuals. With the help of home modifications, it is possible to maintain continuity and gain a sense of empowerment while at the same time having a disability or inhibiting medical condition.

Safety

An important aspect of home modifications is that, clients and family members are often provided with a new sense of safety. The sense of safety generally falls into two categories: the security in knowing there is a means of escape in case of an emergency, and new monitoring capabilities. The first, a means of escape, is something that clients mentioned as a reason for satisfaction with home modifications. The second, having monitoring capabilities, is something the family members of the clients mentioned as a reason for satisfaction with home modifications.

In case of a fire or other type of emergency in the home, a person with para or quadriplegia might not be able to leave without the help of another person. However, after making home modifications, clients were provided with an emergency exit that could be accessed without the help of friends or family members. Mr. O explained, “…couldn’t get out of the house... I mean, I was a slave to the old house. D would leave to go to work and I know I’m in here and if there was a fire, tough…” Another informant, Mr. D, also mentioned escaping in a fire:

“…because that is my emergency exit [his new door modification]. If she leaves and goes somewhere and I’m here by myself and let’s say the house caught on fire that’s the only way I’ve got to get out because I can’t open any [other] doors.”
Before this modification was made, Mr. D would also have been a prisoner in his home in the event of a fire. Fortunately, the home modifications allowed both Mr. O and Mr. D a means of escape. Clients view the means of escape as a reason for satisfaction with home modifications.

Family members of clients viewed home modifications as a success in large part because of the monitoring capabilities provided by home modifications that helped to increase safety around the home. Both Mrs. C and Mrs. H had husbands who needed to have constant supervision. By installing alarm systems and by using monitors designed for parents of young children, the women were able to have peace of mind and give their husbands and themselves some needed space during the day and night. Mrs. H reflected:

The other thing is I have baby monitors around here. Our youngest just turned 19 and I’m back to baby monitors (laughs), but I have one down next to his bed, so from upstairs I can hear if he’s getting out of bed. Or if I’m in the family room and he’s gone to bed I can hear him if I’m in there if I’m doing something.

Even though not many people use home modifications to monitor clients, the people who find it necessary view it as a ‘godsend’ because of the knowledge that a loved one is safe.

Ease of Living

The final reason home modifications are viewed as being a success is because the modifications offer participants and family members a new ease of living. Ease of living allows for simpler functioning in and around the home. Before modifying their bathrooms, two informants went through an enormous amount of trouble to have a bath. Mr. D describes the before and after processes:

I would put my chair…tilt back, I would put my head back and what she would have to do is to get these big troughs…these big basins full…and she would have to get a dipping cup. She would dip in there and pour it over my hair and so that was kind of cumbersome on her. But this new setup is pretty slick because you just turn that water on, spray the hair down, wash the hair down, spray the hair down, and we’re done. No lifting, no basins, no nothing so that is a significant improvement.

Mr. O also had an exhaustive experience before making modifications to his bathroom. His significant other recalled the process they went through, “I had to take a trashcan wash his head over the trashcan and take the hose from over the kitchen sink and rinse it to get his hair washed.” Because of the implemented home modifications, bathing became easier for both of
these men and for their caretakers. As a result of their lives becoming easier, their view of home modifications was a positive one. Therefore, satisfaction was felt by clients and family members because of facilitated living made possible by home modifications.

Overall, home modifications make a great difference in the lives of people who have them. Clients and family members view the home modification process and products as being a success because of a new sense of empowerment, because of an increased sense of safety, and because of the helpfulness of facilitated living.

Summary and Conclusions

Clients have strong feelings of home that can sometimes be tied to their personal identity. This can make the process of modifying it a very delicate and sometimes difficult one. Making home modifications is not generally something that is done in preparation for the future, but changes that are made because of medical necessity. Modifications are implemented because the level of environmental press on a person’s compromised competencies is too great to handle (Lawton, 1986). Before making home modifications, some clients take the traditional route of contacting a therapist for information, but many other sources of information are also used including contractors and builders, government programs and agencies, friends and family, examples set by others, and self-education. Many different kinds of products are implemented, from modifications as simple as grab bars to modifications as complex as an air-pressured door system. No client implemented modifications without the help of friends or family members. When traditional modifications were not available or did not suffice, personal invention was used to create new modifications. Finally, clients were satisfied with the results. Satisfaction came about because of a new sense of empowerment, an increased sense of safety, and because of the helpfulness of facilitated living. Overall, home modification products greatly benefit the lives of the individuals who implement them and the process is one that could not take place without the help of others.
CHAPTER FOUR: DISCUSSION

Advice to Professionals

Because a successful home modification process is one that involves many elements other than just making the modifications themselves, I decided it was important to share some suggestions with professionals who perform home assessments and who make suggestions for changes to the home. From the clients I learned that the delicate process of making a successful home modification involves feelings, routines, family life, and home value. These are the four primary aspects to consider when suggesting and making changes to a home. These aspects of the home modification and rehabilitation process oppose the medical model practiced by so many professionals. The medical model attempts to recognize the textbook medical cause and solution of the problem, instead of recognizing the many intricacies of a person and his/her life as a valid part of the cause and/or the solution. First, learning about a person’s feelings related to his/her home is important before undertaking a home modification project. Second, it is important to learn about a person’s routines before making suggestions for modification. Third, it is important to realize that often times, modifying a home affects not only the client but the entire family. Finally, making adaptations to a home can bring about changes that may or may not increase the value of the home. All are important considerations before making suggestions during the home assessment process.

Feelings

Before a therapist, contractor, builder, or other professional begins making suggestions for modifying a home, it is imperative that he/she understands that people have feelings about the home in which they reside. Therefore, it is imperative that a professional take the time to learn about the client’s feelings as they relate to the home. Feelings about the home are often linked to memories, and on a deeper level, feelings of home can even be linked to self-identity.

Talking with the informants, it became clear that feelings of home can be linked to memories. A question I posed to many of the informants was, “How long have you lived in your home?” One might expect a brief answer where the length of time was stated. Interestingly, a few people related their answer to memories. Mrs. C said it best when she said, “We moved here in August of 1962…uh huh (with a chuckle) my youngest child was about 3 or 4 months old
when we moved out here.” Clearly, the move into her home was not just a physical move; it was full of memories of her life and her family. Mr. D answered the question by relating the length of time his family had lived in their home to his life-changing accident.

We moved in, in October of 2006. I got hurt May 16, 2006… I got out of the hospital for the first time November 2006. They moved out [of the old house] and into this house before I ever got out of the hospital. Once I went into the hospital I never went back to our old house. So we moved in here and sold that place and never went back to the old place.

Of course it makes sense that he would relate the length of time spent in his new house to his accident because it was the only reason his family had to move from his previous home to his current home. Therefore, memories can evoke powerful feelings of home whether of happy times with family or less happy times after a tragic accident.

Feelings of home are also linked to self-identity. Robert Rubenstein examined the significance of personal objects to older people. He found that a personal object (like a home) can help to maintain personal identity and can aid older adults in expressing this identity and meaning in later life (Rubenstein, 1989). In this study, the personal object being described is a person’s home. I asked informants, “What do you like most about your living space,” again, Mrs. C, who had lived in her home the longest (46 years) said, “Well it’s just part of me I’ve been here so long.” Her statement shows just how her identity and her home are now intertwined. Another longtime homeowner Mrs. S said, “Well I think part of it is we raised our family here.” These quotes exemplify the idea that a home is often linked to a person’s identity.

It is necessary to learn about a person’s feelings toward home whether based on memories or as part of self-identity before haphazardly making suggestions to remove and change portions of the home. Therefore, even though a house is a structural dwelling place, it is important to recognize that a home may have many memories associated with it, and can be part of a person’s identity; and even small changes may be unwelcome. In order to discover the feelings a person may hold dear about his/her home, more time should be spent uncovering and understanding these feelings before modification suggestions are made.

Daily Routines

A second aspect to consider before making suggestions for modifications to a home is the typical life routine of the home dwellers. By learning about daily routines that may include
favorite activities and hobbies, professionals are able to make suggestions for modifications that include each area of the home where an individual spends time on a daily basis. Some people may enjoy waking up, getting ready, making breakfast, getting the mail, working out, and spending some time outside. For these people, modifications may need to be made to multiple areas of the home. In conversations with the informants, many different daily routines, activities, and hobbies were mentioned. Mr. O loved to spend time in his computer room ‘fiddling’ on his computer, “And that room back there, that’s my room basically. That’s where I go to get away…on the computer it keeps me busy and it keeps me active and doin things ya know?” Without a professional taking the time to learn this about him, the door would not have been widened and the computer table would not have been modified, and Mr. O would not have his place to “get away” from the rigors of daily life.

Not every time a home assessment is done does a professional learn about a person’s hobbies and routines. Mrs. H told me that her husband loved to garden.

He had just finished planting the garden when this happened. Twenty-one tomato plants, green pepper plants, cucumbers, lettuce… You know, Mr. H, avid gardener, so I’m trying to figure out how to get him back out there…I wanna get him back outside and doing things.

Because the healthcare professional suggesting home modifications to Mrs. H did not learn that Mr. H liked to spend time in his garden, no suggestions were made about modifications that could be made to enable him to continue his hobby after his medical episode. By having conversations about a person’s daily routines and free-time spent in and around the home, suggestions and modifications can be made to better allow the individual to happily and safely age in place.

Family

Learning about a person’s family is an important aspect to consider when suggesting and making changes for a home because home modifications often impact every person living in the house. If a person lives alone, suggestions and coordination of home modification implementation must be made only with that person. If a person has a family, coordination should be made with not only the client, but also with at least one other decision maker in the family.
Whether it is the change itself or the process of implementing the change, family members are also affected by the process. Although off to work during the day, Mr. O gave a picture of what life was like during the daily process of implementing the home modifications.

They put more stress on you when you have to…I had workers in here…drywall dust… it was just miserable and I’m sitting right here [in his hospital bed in the midst of the work] and I’m going, well I can’t go anyplace.

Imagine what it was like for Mr. O’s partner every night when she came home from work. The living area of the house was torn up, dusty, messy, with lots of equipment around, and her partner continually told her how horrible it was to have to sit there, unable to move all day, while the men did their work. This went on for weeks while workers transformed the home. It would have been helpful for someone to work with Mr. O and his partner in order to coordinate a quicker renovation process, a move to a temporary location, or a service that could come and take Mr. O to a different location during the day so that after a long day’s work, Mr. O’s partner did not have to come home to a mess as well as a complaining partner.

Because a professional was able to involve Mr. D’s family in the process, a decision was made to move the family from one home to another because a one-story home was more conducive to Mr. D’s success in living with his new condition. The family had to be very diligent in searching for a new home while Mr. D was still in the hospital. The family also had to move from the old to the new home without Mr. D. Overall, it was imperative that Mr. D’s family was involved in the home modification process. Because of their involvement, the process was not only “seamless” for Mr. D, but the entire family had ownership in the changes. It is necessary for professionals to remember that not only the client, but the entire family are affected by the home modification process. Therefore, suggestion and implementation aspects of the home modification process should be directed to both the client and the family.

Home Value

The last aspect to consider for a professional suggesting or implementing modifications is the importance of remembering that changes made to the home may or may not increase the value of what is often a person’s largest financial asset. A number of the informants had opinions on the matter of home value. Mr. N said that, “In terms of resale, people look at these things [grab bars] kind of negatively.” A realtor attempting to price the home for a sale may not see the added value of having home modifications such as ramps and grab bars. When Mrs. S
was asked if her home still felt home-like after the changes she replied, “I’m not sure about how it would affect resale eventually, but I like it.” Again, she raises the concern of how others might view the changes. Finally, Mr. D added, “You have gotta think about those things when it comes to resale... That might be actually a deterrent to selling the house I would think... It might possibly diminish the resale...” When making suggestions for home modifications, it is important to present different brands and options to the client and his/her family. By presenting options, a person can decide which product might fit best with the need and with the décor of the home. There are even home modification products like grab bars that are made to look as if they were part of the original plan of the home. By suggesting options like this, the professional puts the decision of how to change the home into the hands of the individual who will eventually be financially affected when the time comes to sell the home. Therefore, careful thought and meticulous planning are necessary when making suggestions concerning a person’s biggest financial asset.

It is important that professionals have open communication with the client before beginning the assessment process. A therapist will be better equipped to decide what to recommend by remembering that clients have feelings about the home and perceive it as having meaning; that each client has a different routine that must be considered when choosing and planning ways in which to modify the home; that not only the client but the family also is and will be affected by the modifications; and finally, that a home is often a person’s biggest financial asset and modifications should be made with thought to the value of the home.

**Policy Constraints**

Knowing the scope of this research project, it is important to understand that policy implications or suggestions are not appropriate, yet, it *is* important to shed light on some policy constraints that were exposed during the research project. There are three major policy constraints that relate to home modification that were brought to light during this research project. The first constraint is the lack of time professionals making home modification recommendations are able to spend with the client. The second is that there are no financial assistance programs available to help people who fall in the middle income bracket. The third is the lack of a cohesive system for obtaining home modifications in central Ohio.

The first policy constraint is the lack of time a professional is able to spend with the client during a home assessment. This is not a surprising constraint in light of the medical model
which does not provide the opportunity to utilize a holistic approach to healing. Although one might not think there is not a connection between policy and the time a professional spends with a client, insurance company coverage and Medicare/Medicaid often dictate the amount of time a professional can spend with a client. This ultimately can be the deciding factor for whether a home assessment is done and whether follow-up visits are conducted. As suggested previously, in order to accomplish a successful home modification process, a professional needs to get to know a person and his or her routines within the home before being able to accurately recommend home modifications. This can only be done by spending a reasonable amount of time in the person’s home, which cannot be done if there are major time constraints. Not only does time need to be spent before modifications are made, but at least one follow-up visit is often necessary in order to educate the individual about the best ways in which to use the home modification products that have been implemented. “One of the reasons why older adults do not use assistive devices after they are discharged is that occupational therapists have been unable to provide follow-up services” (Chiu & Man, p. 114). These follow-up services include education and training for the proper techniques and uses of the home modifications. “Without follow-up services, older adults may find it difficult to translate skills learned from an institutional setting to a home setting” (Chiu & Man, p. 115). With follow-up services that include education, older adults will likely be able to transfer skills learned in rehab to the home when using their new home modifications. With the current system, therapists are not always able to make follow-up home assessment visits, and the visits are not as effective as they could be with more time available.

Modifying a home can be an expensive project and not all Americans can pay for modifications out of pocket. The second policy constraint is found in the lack of assistance programs provided for individuals in the middle income bracket. Modifications such as creating a lower level handicap accessible bathroom, installing doors that open through an air pressurized system, and/or installing a wheelchair lift cost a considerable amount of money. People who can pay out of pocket are in the minority. Those who are not able to afford to pay must seek assistance from other sources. Although there are options for people in the lowest income bracket including programs from Medicaid and SSI, there aren’t programs available for people who fall into the middle income bracket like some of the participants in this study. Fortunately for people like Mr. D, a construction company made a charitable donation of products and labor
in order to make modifications to his home that he would not have otherwise been able to afford. Most people in the middle income bracket aren’t so fortunate. They find themselves going without their much needed modifications, trying to find someone or a program that will provide resources, or spending their available assets until they financially qualify for an assistance program. None of these are good options. Thus, the policy constraint of the lack of financial assistance for persons in the middle income bracket is problematic for a large percentage of the population.

A third policy constraint is the fragmented service in central Ohio whereby home modifications can be accessed. Because there is not one place to access home modification information or assistance, the clients I interviewed found help from whomever they could. Some of the people sought assistance from untrained individuals who implemented modifications that were inappropriate for their situations. A cohesive system would ensure clients having their homes assessed by qualified therapists and professionals instead of builders and contractors who lack training in assessing for home modifications. Because of the complexity of this policy issue, it is uncertain as to whether there will ever be a cohesive system in central Ohio where people can access home modification assistance.

A Role for Gerontologists in the Home Modification Process

Because gerontologists study the aging process as well as the aging person, training in viewing the bigger picture provides an advantage and a place in helping out with the home modification process. An understanding of not only a person’s diagnosis but also a person’s medical trajectory is important when thinking about modifying a home (Strauss, Fagerhaugh, Suczek, & Wiener, 1977). Without having a holistic perspective one might not notice some of the nuances of the home modification process such as: the importance of the whole-person perspective, the importance of client education, the importance of a social network, the importance of time spent with a client, the importance of social programs for financial disparities, and the importance of having a one-stop-shop for easy access to home modification help. With more people trained in gerontological perspectives entering the professional field, home modification clients could benefit from the expertise of these holistically trained individuals who could aid during the process or who could become advocates for clients without family.
If I were to summarize the most important things I have learned through the interviews that I conducted and offer a few suggestions for the future, I would suggest three things. First, I would advocate an increase in the utilization of home modifications; second, an increase in the amount of money available for trained professionals and for people who must make home modifications; and third, an increase in time spent getting to know an individual before recommending home modifications. With an increase in the utilization of home modifications, costs of aging would be decreased because more individuals would be able to stay in their homes as opposed to living in expensive care facilities. Another reason an increase in home modifications would be a benefit to humanity is that more people would have the opportunity to age in place. By providing more money for training professionals in making home modifications, more time could be spent during the process and more people could be helped. By providing more help for people making modifications, independence could be gained. Finally, by spending more time with an individual, the modifications made would address the significant aspects of a person’s life. After the interviews I conducted, it became clear to me the importance of home modifications not only for the individual, but for the family, and for our culture as well.

**Suggestions for Further Research**

One of the interesting questions raised by this research study is what the range of client perspectives of the home modification process and product would be if maximum variation sampling was employed. This study utilized convenience sampling and had a number of informants in their 50s who had made home modifications because of an accident or health crisis. What would the responses be like if more people in their 70s or 80s were interviewed? Would the answers be similar or would they be very different? Also, how would the answers change if more people were interviewed who had made home modifications because of a slow progressing condition? Would the modifications be more or less welcome? Would the modifications be as significant? Finally, how would the informants’ answers change if the people interviewed were those who had made modifications for preventative reasons? What are the demographic characteristics of people who make modifications without a direct need? Would more males or females make these changes? Would people living alone be more apt to make modifications for the future? Interesting questions like these have been raised and could be better answered using maximum variation sampling in future research projects.
Other questions are raised concerning whether saturation was reached regarding clients’ perspectives of the home modification process and products. Does performing eight interviews allow saturation to be reached? That is, would new insights have been learned had subsequent interviews been conducted? Because I do not believe that the eight interviews I conducted were inclusive and were able to represent the entirety of views on the home modification process and products, I think it is important that more research be done in order to reach the point of saturation. Once no new information is brought forth in the interviews, one might be convinced that saturation was accomplished. Therefore, although more research is necessary in order to learn all of the intricacies of the home modification process and products, this project provides a good foundation from which to learn more about a little studied topic.
AARP. (2003). *These four walls...Americans 45+ talk about home and community*. In M. Greenwald (Ed.).


APPENDICES

Appendix A

Letter to Occupational Therapist

Dear Occupational Therapist,

Hello! My name is Lauren Thieman and I am a graduate student at Miami University getting my masters in Gerontology (the study of aging). I am writing to let you know that I am conducting a qualitative interview research project for my critical inquiry (thesis project).

In this project, I am planning to interview 8-12 clients who have implemented home modifications. My plan is to interview these clients to learn about the home modification process and products and to learn about the impact that the modifications have made in the life of the client. After the research is complete, I hope it will be clearer how the client decided to pursue the option of making home modifications, how the client felt during the home assessment process, how the client went about getting the necessary home modifications, how the client paid for the home modifications, how the client initially adjusted to the implemented modifications, and how the client currently views the home modifications that were installed.

To complete this project, I need your help! I would ask if you would be willing to help me in two ways. The first way is to gather a list of clients who are 50 years or older, who have made home modifications three weeks to one year ago. The second way is to mail these clients the packet of information provided. Each packet will have prepaid postage and will contain a letter describing my study and a postcard which the client can return to me if they are willing to participate. After mailing the packets, your involvement in this research is finished. Your willingness to help in this research project will not only be such a help for me, but it could also have benefits for you, for future clients, and for the Occupational Therapy profession as a whole. I would really appreciate your assistance in this matter.

I will be contacting you within the next week in order to see if you would be willing to help.

Thank you for your time!

Sincerely,

Lauren Thieman
614-561-0048
ferenclp@muohio.edu
Appendix B

Client Recruitment Letter

Dear Potential Research Participant,

Hello! My name is Lauren Thieman and I am a graduate student at Miami University getting my masters in Gerontology (the study of aging). I am writing to let you know that I am conducting a qualitative interview research project for my critical inquiry (thesis project).

In this project, I am planning to interview 8-12 people who have implemented home modifications. I hope to learn how people like you view the process getting home modifications, the products, and the changes these modifications have made in your life and ability to complete daily tasks.

To complete this project, I need your help! I would ask if you would be willing to participate in one interview concerning these topics as they relate to your daily routine. The interview would take place at your home or another place of your choice and would take about one hour. The interview could be scheduled at your convenience. Your willingness to help in this research project will not have any impact on the care that you receive by your occupational therapist.

Your help in this project will not only be such a help for me, but it could also have benefits for you as you reflect on the impact of the changes you have made to your home, for future clients making home modifications, and for the occupational therapy profession as a whole as they can learn from the things that you have to say. I would really appreciate your assistance in this matter.

If you are willing to participate, or want to hear more about the study, please indicate your interest on the post card and mail it back to me. If I receive your post card indicating that you are willing to participate, I will follow up with a phone call to give you more information and to set up a time to meet. Thank you for your time!

Sincerely,

Lauren Thieman
614-561-0048
ferenclp@muohio.edu
Appendix C

Post Card

Front

Lauren Thieman  
3696 Bainbridge Mills Dr.  
Powell, OH 43065

Lauren Thieman  
3596 Bainbridge Mills Dr.  
Powell, OH 43065

Back

Please complete and return. Thank You

Name ______________________________________________

Address _____________________________________________

Phone ______________________________________________

_________ Interested in participation

_________ Not interested in participation

_________ Would like more information
Appendix D

Consent Form

I understand that I am participating in an interview to discuss my opinion of the home assessment process and the difference home modifications have made in my ability to complete daily tasks along with other related questions. I understand that all or portions of this interview will be audio recorded. I understand that answering these questions will take about one hour of my time. I understand that the risks involved in participating are minimal or low and are no more than the risks faced on a normal day. By participating in this study, I understand that I might benefit from the topics discussed and that I might learn something about the differences that my home modifications have made.

I understand that my participation is voluntary. I understand that refusal to participate will involve no penalty or loss of benefits to which I am otherwise entitled. I understand that my personal information and my answers to the questions being asked will be confidential; no one but the interviewer will know that I was involved or will know which answers were mine. After the final paper is written my tape and my contact information will be destroyed. I understand that I may stop the interview anytime I wish and I am not required to answer any questions I do not wish to answer.

I understand that if I have questions about this project, I can ask Lauren Thieman by sending an email to ferenclp@muohio.edu or by calling 614-561-0048 or her advisor Chris Wellin by sending an email to wellincr@muohio.edu or by calling 513-529-1592. If I have questions about my rights as a research participant I may contact Miami University’s research office by calling 513-529-3734 or by sending an email to humansubjects@muohio.edu.

________________________________________________________________________
(Signature & Date)                                (Printed name & Date)

I understand and agree to be tape recorded. __________ ________________

(Initials Here)                      (Date)
Appendix E

*Photograph Consent Release Form*

☐ I give my permission for photographs to be taken of my home modifications (that will not be identifiable to anyone who has not been there before) to be used for educational and research purposes.

Signature of Participant

______________________________

Date________________________
Appendix F

Home Modification Interview Guide

- **Biography**
  - What is your date of birth?
  - Do you use a walker, cane, or wheelchair to get around?

- **Pre-Home Assessment**
  - How long have you lived in your home?
  - What do you like most about the living space?
  - What was the biggest physical challenge that you faced before modifying your home?
  - Does your home have a full bathroom on the first floor or a sleeping area on the first floor?
  - Tell me how you came in contact with your occupational therapist.
  - When was your home assessed?

- **Home Assessment**
  - Tell me what happened on the home assessment
    - Who was there
    - What did they actually do
    - Did they talk with you before starting the assessment
    - What did you expect.
    - How long did the assessment take
  - Tell me about your feelings during the assessment
    - Goals, Fears, etc.
  - What were the home modifications that your occupational therapist recommended to you?
  - Why do you think these particular suggestions were made?

- **Implementation/Product**
  - Which home modifications did you make to your living space?
    - Are the modifications durable
    - Are the modifications simple to use
    - Are you comfortable with your ability to use the modifications/devices
  - Who installed the modifications?
  - Why did you choose to implement these modifications?
    - Why didn’t you implement _________ modifications?
      - Preference, money, lifestyle, etc
  - How long ago did you make home modifications?
  - Do you plan to use the modifications forever or to remove them at some point?
  - How did you pay for the modifications?
    - Out of pocket, government, loans, block grants, etc.
  - Were you shown how to use the devices or modifications?
• **Impact for Person/Product**

  o Describe for me in what way/s getting around your house has changed.
    ▪ Burden reduction or needing less assistance?
  o How has your confidence changed since the home modification was made?
    ▪ Is that connected to the changes you made in your home?
  o Do you feel like you are able to do more by yourself with the modifications?
  o How often do you use the modifications?
  o On a scale from 1-10 with 1 being least happy and 10 being happiest, how happy are you with your home modifications and why?
  o Would you implement other modifications if it were necessary to stay independent in your home?
    ▪ If money was limitless
  o Does your home still feel home-like since you made the changes?

  o Are there any aspects of the home modification process that I didn’t ask about that you think are important or that you would like to discuss?
Appendix G

Table of Participants

<table>
<thead>
<tr>
<th>Informant</th>
<th>Pseudonym</th>
<th>Age</th>
<th>Medical Condition</th>
<th>When Modifications Made</th>
<th>Modifications Made</th>
<th>Payment for Modifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>OT Client</td>
<td>Mr. K</td>
<td>51</td>
<td>Sudden Stroke</td>
<td>3 years ago</td>
<td>Ramps, walking path, converted den into bedroom, handicap accessible bathroom downstairs including: grab bars, roll-in-shower, etc.</td>
<td>Out of Pocket</td>
</tr>
<tr>
<td>OT Client</td>
<td>Mr. N</td>
<td>53</td>
<td>Unknown type of Accident</td>
<td>2.5 years ago</td>
<td>Ramps, temporary room conversion, grab bars, raising table height three inches, handheld shower, ropes on doors, etc.</td>
<td>Out of Pocket</td>
</tr>
<tr>
<td>Spouse of OT Client</td>
<td>Mrs. C</td>
<td>79</td>
<td>Alzheimer's, Lou Gehrig's Disease</td>
<td>4-6 months ago</td>
<td>Notes around the home, alarm system leading out to the garage, clapper lighting system, showerhead, etc.</td>
<td>Gifts from Friends</td>
</tr>
<tr>
<td>Spouse of OT Client</td>
<td>Mrs. H</td>
<td>52</td>
<td>Spouse fell down basement stairs causing brain injury</td>
<td>2 years ago</td>
<td>Alarm near bed, baby monitors, converted downstairs room into bedroom, grab bars, potty chair, handheld shower, shower bench</td>
<td>Out of Pocket</td>
</tr>
<tr>
<td>OT Client and Spouse</td>
<td>Mr. and Mrs. S</td>
<td>70 &amp; 67</td>
<td>Unknown type of Accident causing subdural hematoma</td>
<td>11 months ago</td>
<td>Remodeled Florida room into bedroom with handicap accessible bath, widened doorways, outdoor ramps and paths, etc.</td>
<td>Out of Pocket</td>
</tr>
<tr>
<td>OT Client and Spouse</td>
<td>Mr. and Mrs. D</td>
<td>59 &amp; Unknown</td>
<td>Unknown type of Accident causing quadriplegia</td>
<td>7 months ago</td>
<td>Moved homes, widened doorways, ramps, handheld shower, air pressured door system, etc.</td>
<td>Charitable Donation</td>
</tr>
<tr>
<td>OT Client and Spouse</td>
<td>Mr. and Mrs. O</td>
<td>53 &amp; Unknown</td>
<td>Car Accident causing paraplegia</td>
<td>5 months ago</td>
<td>Widened doorways, handicap accessible bathroom, converted family room into bedroom, wheelchair lift, etc.</td>
<td>Workman's Compensation</td>
</tr>
<tr>
<td>OT Client, Spouse, and Daughter-in-law Caregiver</td>
<td>EB, NB, &amp; Mrs. B</td>
<td>82, 84, &amp; 55</td>
<td>Aging, iliostomy, weak hip</td>
<td>3.5 years ago</td>
<td>Moved to new home, converted rooms into living space, handicap accessible bathroom, widened doorways, door conversion, etc.</td>
<td>Home Equity Loan, Medicare, Medicaid</td>
</tr>
</tbody>
</table>


Appendix H

Mrs. H

Mrs. H is a 52 year old Caucasian woman who lives with her husband Mr. H. A few years ago, her husband fell down the basement stairs and landed on the back of his head. Because of the force, his brain hit the front of his head and there was a lot of swelling and bruising. They later had to remove his frontal lobe. Now Mr. H must be watched each day because of his lack of balance, his lack of judgment, his confusion, and his inability to perform tasks on his own. Mrs. H is his caregiver. She does everything from cooking for him to bathing him and changing his depends. Because it was an unexpected accident, the home had to be modified while Mr. H was still in rehab.

Mr. and Mrs. H live in a nice two story home in an upper-middle class neighborhood. Because of his balance issues, Mr. H now has a room (which was a converted den) on the first floor so that he doesn’t have to go up and down the stairs except when it is time for a shower. Mrs. H put an alarm under the sheets of Mr. H’s hospital bed so that she would know when he was getting out of bed but when the alarm kept going off every time he rolled over, she moved it under a rug at the foot of his bed. Because Mr. H is getting better, he has the sense to know to step over the rug if he doesn’t want her to know he is getting out of bed. Mrs. H also placed monitors around the house and in his room so that she could be in the family room and still listen to him if he is in his bedroom. Mrs. H mentioned that it was like having a child again to have to care for her husband. Other modifications included a raised commode seat, a shower chair, a handheld shower, the hospital bed, some grab bars, and other minor modifications.

Mrs. H talked to a therapist who had never seen her house about home modifications and made changes before a home assessment ever took place. She said that it only took about 15 minutes because she had talked to the therapist before Mr. H came home and tried to make the modifications ahead of time. She said that she also added some modifications of her own like the baby monitors because she watched what they went through in rehab and she learned and figured out how she would be able to take care of him when he came home. The H’s paid for the modifications both with the use of insurance and out of pocket. Insurance paid for the things deemed medically necessary like the hospital bed and the wheelchair. Other modifications like the hand held shower, monitors, rigging on the basement door, padding to protect the furniture, and railings, were purchased by the family. Mrs. H mentioned when I was leaving that if her
husband had only been 60 years old instead of in his 50’s, many more programs would have been available to help pay for the modifications.

Overall, Mrs. H seems to be happy with the modifications that she made to their home. She didn’t have to change many things because they had a functional area where he could sleep downstairs and he was well enough to make it upstairs for baths. The one thing she mentioned was that she would really like to find more modifications to help him garden. She said Mr. H was an avid gardener and she wants to get him back out there again. It sounded to me like she was so overworked that she didn’t have time to do the research that she wanted to do when it came to finding new modifications for her husband.
Appendix I

Mr. O

Mr. O is a 53 year old Caucasian male who lives with his long-time female partner DH. Sometime last July/August, Mr. O got in a car accident that broke many of his bones and left him paralyzed. He spent a long time in the hospital doing rehabilitation activities and was finally moved home in September. He thought it was so important for people to know that professionals need to be qualified to do their jobs when it relates to modifying people’s homes.

Their home is located on a neighborhood street near a park. The home is a single level home with a front and a back entrance. The front entrance has 3 steps which lead up and into the family room. The back had a newly widened exit door with a wheelchair lift on the side. In the family room Mr. O laid in a hospital bed. Mr. O said they had to move the couch out to accommodate the bed. The bathroom had been modified to include a walk-in shower and a higher toilet seat. Many of the doorways had been widened, the carpet had been removed, and there were a number of other modifications that still needed to be completed.

Because Mr. O was injured on the job, workman’s compensation covered his modifications. The bureau of workman’s compensation had sent out a woman to assess the home. She was very difficult for Mr. O’s partner to get in touch with and finally came out a week before Mr. O got home (which was WAY too late to do any good). Mr. O wasn’t there for the home assessment which would have helped as he has some knowledge about construction. It took another week and a half for the home assessor to write up the suggestions thus Mr. O had no modifications started or finished by the time he got home. He said that it was important that every modification be recognized by the person performing the assessment or else they weren’t able to get it funded through the workman’s compensation program. Because of the slow process of getting modifications he wasn’t able to shower for a month which put him in a very disagreeable mood. DH had to put his head over the trashcan and rinse it with the kitchen sink hose so that at least his hair could be washed. Workman’s compensation company finally got them connected with the group who did the construction.

They were very happy with the modifications but not as happy with the quality of some of the work. The person who did the work on the bathroom was very new (it was his first project) so there were gaps in the floor and things weren’t done very well. He also showed me where the person who put up the wallpaper folded it over to wrap the partial walls like a present.
instead of cutting the wallpaper as it should have been done. On the other hand, the porch and lift were constructed very nicely. The person performing the home assessment noted that Mr. O needed a ramp for his wheelchair. The problem is that for every inch of rise, a foot of ramp is needed and because there were 40 inches or rise, there would have had to be 40 feet of ramp in the back of the house. This would have taken up the whole back yard and gone into the gravel which wouldn’t have been possible for a wheelchair to navigate through to get to the ramp. Mr. O fought hard and finally they installed a wheelchair lift instead of a 40 foot ramp which was probably of comparable cost. Another issue they faced was that the portable aluminum ramps that were supposed to stay at the front of the house alerted everyone in the neighborhood that Mr. O was now handicapped. He also said that the ramps would have been stolen because of the aluminum. Therefore, they used the portable ramps for a time, until the wheelchair lift was installed and then they put the ramps away.

Even with some of the poor construction work, Mr. O was very happy with the overall outcome of the home modifications he had made. Mr. O said that with the modifications, he was able to be independent and to move around and function in his home.
Appendix J

Mr. D.

Mr. D is a 59 year old Caucasian man who lives with his wife Mrs. D. Mr. D had an accident some time ago and is now quadriplegic. He is in a wheelchair that he controls by using a toggle switch. Because he can’t use his hands, he wears hand splint where he can insert a pen in order to write. Normally there is a wand which he uses to push buttons and do other things that require precise movement. Mr. D has to have someone with him most times throughout the day to help him with activities that required using his hands, legs, and other body parts.

Mr. and Mrs. D lived in a one-story home that was located across from a local park. The home had a few steps leading up to the front door. Everything in the home was on one level except for the “Florida room.” There was a makeshift ramp built by Mr. D’s daughter’s boyfriend from the Florida room to the kitchen area. The most intricate modification in the home was an air pressured system. From the kitchen, Mr. D could push a button on a garage door opener and a door would slide open, exposing a small room that would lead to the garage. Mr. D would then wheel in and press the second button on the garage door opener and the door leading to the garage would open. These doors were rigged on an air pressure system. Mr. D could then go out into the garage, down the wooden ramp and get into his handicap accessible van. The other modification that Mr. D had made was he had sawtered a connecter onto the tub so that they could have a handheld shower. He said that this really helped Mrs. D bathe him until the roll-in shower was built.

Mr. D was working with an organization that offered grant money for home modifications to people with disabilities. In order determine which contractor would be given the work, the grant organization required that the family get estimates from three contractors for the job. The third builder that they interviewed said that he would make the modifications for no charge and would classify it as their charity project for the year. Mr. D said that they had agreed to come back in 2008 to install a roll-in shower for them. From how they made it sound, I don’t think Mr. and Mrs. D could have afforded the modifications that were done for them because they told me that the air pressured door openers were very expensive.

Overall, Mr. D seemed happy with the modifications that were made. However, he was not happy with the speed of the work. He said that even if he was getting a free roll-in shower that he would set up a time frame during which the work had to be completed. He also needed to
have the builder come and perfect the garage opening technique because it didn’t work 100% of the time and that was Mr. D’s only way out of the house if he was left home alone during an emergency. Overall, I think Mr. D loved the modifications because it gave him the peace of mind that he could exit in an emergency situation and they gave him the ability to become somewhat independent. Mr. D was very informative and said that education was extremely important before making any home modification decision. He said that everyone would offer suggestions about how to do things but he found that doing research and spending time in the place to be modified were the best ways to learn about the optimal home modification solutions. Unlike others, Mr. D thought that modifications should be made after a person had moved home and spent time in the space for a few weeks. He said this would be the best way for the person to know exactly what was needed and where it was needed.
Appendix K

Mrs. B and In-Laws

Mrs. B is a 55 year old Caucasian woman. She and her husband (unnamed) take care of his parents (her in-laws). Mrs. EB and Mr. NB are both in their 80’s and moved into the B’s home about 3.5 years ago. Her in-laws moved in after her mother in-law became frail from a number of conditions including an illiostomy. Because of an accident as a child, EB has a fused hip and has always needed help with anything that involved bending like dressing, bathing, etc. EB is now almost completely confined to a wheelchair although she sometimes uses a walker. NB her husband is hard of hearing and is showing signs of aging and not being able to care for his wife’s needs on his own. NB had a number of heart attacks before moving in with his son and Mrs. B.

Mrs. B, her husband, and her in-laws live in a two story home on a quite street. Mrs. B and her husband moved into the home 4.5 years ago. They chose to move into the home because they knew that they needed a place that could someday have enough space to house the in-laws if it was necessary to do so. Little did they know that 1 year later EB and NB would be moving in with them. Before they moved in, Mrs. B began the process of making necessary changes to the home. They added 3 doors to close off the living room and dining room and to turn the half bathroom into a full bathroom. They also put in French doors out to the back deck because they thought the sliding glass door would be too heavy for EB and NB to manage and they thought a wheelchair would fit better through French doors. They also took up the carpeting and placed linoleum in the bathroom so that the wheelchair would be able to move better. Finally, they built a ramp in the garage. Mrs. B said that it was very difficult for the contractor to finish the bottom of the ramp. At first, he left it with a gap and she said that just wouldn’t do, so they figured out a way to make it flush to the ground.

Before EB and NB moved in there was no formal home assessment done. Mrs. B contacted a contractor who made a few suggestions and did the bathroom and first floor renovations. She later said that she wished she had had a formal assessment because the contractor wasn’t familiar with all of the modifications that would be necessary for her in-laws. He even built the permanent seat in the shower too high and her mother-in-law cannot use it. These modifications were paid for by obtaining a home equity loan. After the in-laws sold their home, the home equity loan was paid off. Years after the in-laws had been living there (about a
year ago) EB had a stress fracture. A home assessment was done where more tips and suggestions for modifications were made. Some suggestions included grab bars in the bathroom, a hand rail on the side of the bed, a shower chair for bathing, a hand held shower and a couple of other things. Every suggestion that was made both from the contractor and the therapist was implemented by Mrs. B.

Mrs. B seems to be generally happy with the changes that she has made to the home in order to accommodate her in-laws. She definitely wished that the built-in shower seat wasn’t too high because the current shower chair takes up most of the shower room. She also wished that she could have designed things a bit differently to make the shower smaller. Another thing Mrs. B shared with me was a modification of a step stool they used so that EB could get into the van. Because the one step option suggested by the therapist didn’t work because the step was too high for EB to make, the therapist suggested getting a two step apparatus. She found it at Target in the kids department. It consists of two steps and a storage space in the top. It is very sturdy and it works well for them. SB said that she would absolutely make other modifications if it was necessary to keep her in-laws independent.
Mrs. C
Mrs. C is a 79 year old African American woman who lives with her approximately 83 year old husband Mr. C. She has been diagnosed with COPD and glaucoma and has had a few hospitalizations because of her health and her husband Mr. C has been diagnosed with Alzheimer’s disease and Lou Gehrig’s disease. She was a very positive woman and seemed happy to meet with me. She was even positive when talking about the difficulty of having a husband with Alzheimer’s disease. She shared her fear of showing symptoms of the disease herself but seemed relieved when her sister (in the healthcare profession) told her it was nothing to worry about. She mentioned that her husband was very stubborn and wouldn’t tell anyone if he was in pain and wouldn’t accept her assistance in showering. He was also the one who didn’t want to install hand railings on both sides of the steps, saying that having a railing on one side would be sufficient.

The two-story home is located on a busy road across from businesses and a quaint little church. The home looks like a duplex but the family owns both sides. She and her husband have lived in the home since 1962 (46 years). I went in through the garage, and then through a room into the kitchen. From the kitchen you can go down about 8 steps into a family room area with a bathroom, den, and place to sit and watch television (this is the place her husband spends a lot of time). Through the kitchen you could also enter into the living room which didn’t look like it was used very often. Up about 6 steps one would enter into the bedroom (there was no wall so from the living room, one could see into the bedroom). There is also a bathroom in the bedroom which I did not see but which she mentioned earlier. As I looked around I saw notes taped up all over the house instructing her husband to do or not do certain things. The house was clean and seemed comfortable.

During the interview, she mentioned that someone from SO (a program) had come in and done a home assessment. After the assessment she told me about the clapper system that had been installed by a friend, and how the wiring in her house did not allow for a motion-censored lighting system. She also showed me the alarm that she had installed on the door to the garage that alerts her if her husband were to try to leave the house at night. The alarm was also installed by the friend and was given to her by a man in her support group whose wife had been moved to a nursing facility and so he no longer needed the devices. Finally, she showed me the shower
that her husband used and told me there used to be a handheld shower there but that since he had trouble moving his arms they replaced it with a standard showerhead. She said that when spring came she would like to have shower-fitters redo the entire bathroom, which would make it useable for her husband. When I asked what she would have done, she wasn’t sure but thought maybe a seat or something. The one modification that she had made that she didn’t mention that I noticed was her use of notes around the home. She said she had learned that it was important for her husband to continue to read and since he didn’t read the paper anymore, she thought it would help for him to read notes. Some of the notes said things like close blinds at 6:30pm, please do not turn off the lights that I have left on around the house, please do not hang clothes on the treadmill, and things like that. She said they helped sometimes but sometimes he had a mind of his own.

She was very happy with the modifications she had made to her home, especially the alarm to the garage. This seemed to give her peace of mind that her husband would be safe at night and if she ever had to go to the hospital. She said that she had even told her neighbors about the alarm so that if she wasn’t there or couldn’t get to her husband in time maybe one of them could catch him before he ran into the busy street.
Appendix M

Mrs. S

Mrs. S is a 67 year old Caucasian woman and her husband Mr. S is a 70 year old Caucasian man. Mr. and Mrs. S were both very active individuals until Mr. S had an accident. Because of his accident Mr. S was diagnosed with a Subdural Hematoma and he needed to have brain surgery. After the surgery, Mr. S could not even sit up on his own. He has come a long way and can now brush his teeth, speak, dress, and perform a number of other tasks. Mr. S still suffers from the incident because he can no longer read or write, he doesn’t have short and some long-term memory, and he doesn’t communicate very much. He is somewhat independent but still needs someone to follow behind him and make sure he is safe when getting ready and sometimes remind him of the next steps. Because of this, Mrs. S did most of the talking. Mrs. S is a very sweet woman who loves to help out.

The home I visited was a large two-story home with a zero step entrance and a mailbox next to the front door. We walked through the living room and into the family room where Mr. S was sitting in a recliner. Mrs. S told me that they had lived in the home since 1968 and before they moved in there was no house beyond the fireplace. They built an addition where there used to be a very large “Florida room” and a large back yard. Because they had no bedroom or full bathroom on the first floor, Mrs. S contacted a builder whom she knew and had him create a bedroom and handicap accessible bathroom on the first floor. The bathroom was like a showplace. They had a roll in shower, a higher toilet, a shower and commode chair, and grab bars that helped Mr. S function in the bathroom. The bedroom was beautiful as well and in it there was an adjusting bed because Mrs. S didn’t want Mr. S to sleep in a hospital bed any more than he had to. They also had widened the doorways in the family room and in the bedroom so that were exits to the outside so that Mr. S could get out if he was in a wheelchair. Finally, they installed wooden walkways on each side of the house. On the left side, the walkway went from the front of the house to the back so that guests could access the back patio without having to go through the bedroom. The wooden walkway/ramp on the right side (where the driveway was) allowed them to get into the back portion of the house where the bedroom was now located. Finally, Mr. S had access to the back patio from the bedroom.

Mr. and Mrs. S had no formal home assessment. Mrs. S said that the lady who was supposed to assess the home was very pregnant and decided not to come out. She did however
thoroughly discuss all of the changes they would need to make to the home so that Mr. S could live comfortably and independently. As previously mentioned, Mrs. S contacted a builder friend who she could trust and had him draw up the plans and begin the many month process of renovating their home. Mrs. S paid for the renovations out of pocket. “The total package was $120,000.00; but the part that was necessary for handicapped accessibility: converting the office and sunroom; the shower and running heat to that room; the ramps, wide doors and handicapped accessible door handles, faucets and toilet came to about $78,000. The rest was the new porch, driveway, siding, furnace and AC; none of which were "essential" to accessibility; but needed done in a house that had last been done over in 1982.”

Overall, the modifications seem to be a great addition to the lives of Mr. and Mrs. S. They certainly don’t detract from the beauty of their house. In fact, I thought they actually enhanced the home. Mrs. S seems to be very pleased that she is able to sleep in the same bed as her husband again. The one thing that she seemed dissatisfied with was the amount of time that it took to complete the modifications. She was also dissatisfied with the fact that they convinced her to put a cupboard in the bathroom and she thought the space could have been better used for something else. Finally, I found it interesting that there was a grab bar behind the toilet. When I asked her if she was pleased with the placement of the grab bars she told me that she didn’t understand the point of the placement of that one. Overall, they were thrilled with the modifications.
Appendix N

Mr. N

Mr. N, a 53 year old Caucasian man, lives with his wife. About 2.5 years ago he had an accident (unnamed) which caused him to leave the hospital and rehab facilities in a powered wheelchair. Since the accident he has been recovering and now sometimes relies on a cane and uses an electric scooter when going out in public or for long distances. He is now able to care for himself although I think that he has not returned to work since the accident.

Because of the home they lived in, Mr. N and his family didn’t have to make many changes. Their doorways were wide enough, they had a large enough first floor bathroom for the wheelchair to fit into, and they had a room they could convert into a bedroom for the time being. Mr. N had a background in engineering so he was able to design the ramp that they installed and think through whether it would be necessary to install other modifications. The changes they did make were: installing a ramp in the garage and a ramp from the sun room to the back patio, adding grab bars to the downstairs and upstairs bathrooms, converting the living room into a bedroom until Mr. N could go upstairs, raising the kitchen table with 3 inch blocks so that he could get his wheelchair to fit under it, installing a shower chair and a handheld shower, and a few other things. While in the garage I noticed a blue rope tied to the door and attached to something else in the garage. I asked what that was for and Mr. N told me that when he was in his wheelchair it was difficult to close the door behind him so they rigged the rope system so that he would be independent and able to close the door behind him. He said that he used the COTA transport system to go places and so he needed to get in and out by himself (this is a website that explains the program he was able to use (http://www.cota.com/project_mainstream.asp).

Mr. N had a formal home assessment but he wasn’t there for it. He was still recuperating in DH [rehabilitation facility]. Essentially, the home assessor said that they needed to put a ramp in the garage so that he could get in and out of his house. Mr. N and his family paid for all of the modifications out of pocket. He said that the cost didn’t amount to much when you looked at expenses relatively.

Overall, Mr. N seemed to be happy with the modifications he had made. He said that he would keep the grab bars intact unless they were going to move. He said that having them could be a turn-off to potential buyers and could lower the resale value of the home. He mentioned that he felt like a two year old when he had to be watched and he had to learn how to stand up.
and walk again. He said that he is the type of person that knows his limits and he only did things he felt he could do safely while he was home alone. The modifications helped him to do some of these things. He mentioned that he had orthotics suggested to him by a therapist. He said that the standing joke was that every time he ordered a new pair (because he was improving) it would take so long to make and deliver them that they would no longer be appropriate for his needs when he got them. This seemed to be a mildly frustrating occurrence.
Appendix O

Mr. K

Mr. K is a 51 year old Caucasian man who lives with his family in a nice two story home. Mr. K had a sudden stroke about three years ago. He said that he had a weakness in the lining of the carotid artery and clots began to form. These clots were the reason for the stroke. He was fortunate in that the clotting did not affect his thinking, speaking, reading, or personality. His physical ability was the only thing that was really affected. Because his physical ability was affected, he was in a wheelchair upon his return home from the hospital. As time went on, Mr. K was able to progress out of the wheelchair and is now able to walk very slowly and with a severe limp. His left side is greatly affected and he must rely on his right side.

The home was a very large two story home with hardwood floors throughout the downstairs. They had a large kitchen where he would have plenty of space to move around in if he was able to make his meals. Because Mr. K was not able to make it upstairs for some time, they converted the dining room into a makeshift bedroom. They also had a handicap accessible bathroom built and made it accessible to the dining room by adding double pull doors. In the bathroom was a roll in shower with boat decking rubber floor so that it wouldn’t be slippery. There was also a pedestal sink so that he could roll up to it and a number of grab bars around the room for help in transferring. Outside, there were path-like wooden walkways that were put in so that he could practice his walking. Because Mr. K is able to go upstairs now, they have removed the bedroom setup from the living room but they have kept the bathroom. On the way upstairs, Mr. K had added another railing to the steps and a railing at the top of the steps to aid in his ability to get up and walk around upstairs. In the master bathroom, there is a grab bar on the wall of the shower and a wooden bench. Mr. K told me that the wooden bench was better than a plastic one because the latter would be cold in the wintertime. He also showed me that the metal grab bars sometimes have plastic backing on the back for gripping purposes. Overall, there were many modifications in this home and they seemed to be working for the family quite well.

Mr. K said there was a home assessment while he was still in the hospital. The person who came out went around with his wife and made suggestions. He said that he was kept informed while he was still in the hospital about the changes they were making to the home. He thought it was very important for his wife (at least) to be involved in the assessment and modification process because he said it was important for a person who uses the space to be there.
making the decisions about how the space will be changed. Mr. K and his family paid for the modifications all out of pocket. Mr. K thought it was very important to talk to a therapist or consultant before making modifications because he relied on their expert opinion.

Mr. K and his family (he and his wife had 5 kids) seemed to be happy with the modifications that they had made. He said that it was important to be able to walk in and out of your home safely and without anxiety and he thought the modifications enabled him to do this. One other thing he mentioned that I found to be interesting was that before going to a restaurant that he hadn’t been before, he would call and ask if they had stairs at all. If the answer was yes, he would ask if they had a railing on both sides. He said that if you just asked if the place had railings they would answer yes, and if you weren’t more specific you wouldn’t know till you got there that you weren’t able to go up AND down the stairs (because of having one side heavily impaired).