



2013

The Experiences of Occupational Therapists in Natural Disasters: A Qualitative Study

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THE EXPERIENCES OF OCCUPATIONAL THERAPISTS IN NATURAL
DISASTERS: A QUALITATIVE STUDY

by

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An Independent Study Paper

Submitted to the Occupational Therapy Department

of the

University of North Dakota

In partial fulfillment of the requirements

for the degree of

Master's of Occupational Therapy

Grand Forks, North Dakota

May 2013

This Independent Study Paper, submitted by Samantha L. Becker and Emily Reiter in partial fulfillment of the requirement for the Degree of Master's of Occupational Therapy from the University of North Dakota, has been read by the Faculty Advisor under whom the work has been done and is hereby approved.

Faculty Advisor

Date

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Department Occupational Therapy

Degree Master's of Occupational Therapy

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ACKNOWLEDGEMENTS

The researchers would like to thank Dr. Jedlicka for her guidance throughout this study, her knowledge and experience were invaluable for the successful completion of this research project. The researchers wish to express their appreciation for the participants in this study. The researchers would also like to thank their friends and family for their continued support.

ABSTRACT

OBJECTIVE. This study explored the experiences of occupational therapists who have lived through a natural disaster within the last five years.

METHOD. Researchers conducted a literature review and developed a semi-structured interview using the Person Environment Occupation Performance (PEOP) model as a guide. Six occupational therapists (1 male and 5 females) were selected using convenience and purposive snowball sampling. Each participant was interviewed one time. Interviews were recorded, transcribed verbatim, and data was analyzed using an open coding system.

FINDINGS. Following the data analysis process, four categories were identified. These categories included personal experience, environmental influence, social experience, and professional experience. Two final assertions emerged from the data. The first assertion is that the floods affected the occupational aspects of the participants' lives personally, environmentally, socially, and professionally. The second assertion is that the participants' identities as occupational therapists influenced the way in which they responded to the disruptions in their lives. Natural disasters impact all aspects of individuals' lives. Occupational therapists have the skills and knowledge base to assist individuals in recovering from natural disasters. Additional research is needed to further develop and support the role of occupational therapy in natural disaster relief.

CHAPTER I

INTRODUCTION

Millions of people are affected by natural disaster each year. Within the last twelve years, approximately 2.7 billion individuals were affected by a major natural disaster worldwide (The United Nation's Office for Disaster Risk Reduction, 2012). A natural disaster is defined by Fritz (1961) as

actual or threatened accidental or uncontrollable events that are concentrated in time and space, in which a society...undergoes severe danger, and incurs such losses to its membership and physical appurtenances that social structure is disrupted and the fulfillment of all or some of the essential functions of the society...is prevented. (p. 655)

One of the most common natural disasters in the United States is a flood (Federal Emergency Management Agency [FEMA], 2012). In recent years, communities in the Western and Midwestern United States have experienced significant flooding disasters (U.S. Geological Survey [USGS], 2011). Natural disasters, including floods, are traumatic events that can significantly impact individuals in every aspect of their lives. Occupational therapists have the skill set and perspectives to assist individuals by helping them regain control over their life situations through engagement in meaningful occupations (Scaffa, Reitz, & Smith, 2011). However, occupational therapists may often be personally involved with the natural disaster.

Little research has been conducted regarding roles and experiences of occupational therapists in natural disasters. The purpose of this study was to explore the experiences of occupational therapists living in natural disaster situations, using a phenomenological design. It was expected that occupational therapists living in an area affected by a disaster would be impacted personally and experience difficulty maintaining their therapist role. It was also expected that client outcomes would decline as a result of the disaster in the community.

The Person-Environment-Occupation-Performance model (PEOP) was used as a guide throughout the study. The PEOP model is useful in explaining the interaction between the person and environment and how this interaction can either hinder or help the individual and community in regards to occupational performance (Baum & Christiansen, 2005). Baum and Christiansen (2005) suggested that individuals gain a sense of identity and satisfaction through participation in daily occupations. The PEOP model views individuals and experiences holistically, taking into account the aspects that influence the individuals' identity and occupational performance.

A thorough review of literature including the experiences of various populations and healthcare professionals can be found in Chapter II. The methodology, outlining the process of the study, is in Chapter III. The results and discussion of the data are presented in Chapter IV. Chapter V consists of the summary of the research study along with recommendations for future studies and implications for occupational therapy practice. The Appendices include the Institutional Review Board approval, interview format, the informed consent, and the table of findings.

CHAPTER II

LITERATURE REVIEW

Floods are the most common form of natural disaster. Over 2,066 major floods occurred worldwide within the last twelve years (The United Nation's Office for Disaster Risk Reduction, 2012), and floods affected over 100 million people worldwide in 2011(The International Disaster Database, 2012). A comprehensive review of literature encompassing a range of qualitative, expert opinion and concept papers was completed as part of this study. The findings of the literature are organized into four broad areas defined by Baum and Christensen (2005): person, environment, occupation and performance.

Person

An individual's occupational identity, as defined by Kielhofner (2008) is "a composite sense of who one is and wishes to become as an occupational being generated from one's history of occupational participation" (p. 106). Christiansen (1999) proposed that the factors that compose identity, self-esteem and self-concept, are influenced by situations and contexts. This sense of identity or how individuals define themselves is often derived from their work, leisure activities, and roles undertaken throughout their lives (Unruh, 2004).

The psychological impacts of a natural disaster can be devastating to the individuals within a community. Research suggested that some of the effects may include increased anxiety and stress in regards to personal loss, damage, displacement, and

disruption of daily life (Carroll, Morbey, Balogh, & Araoz, 2009). Disasters such as a flood have also been shown to lead members of the community to experience feelings and symptoms of depression (Mason, Andrews, & Upton, 2010; Stimpson, 2006).

Depressive symptoms have been attributed to a loss of control of one's life, which in turn could make the individual more susceptible to additional stressors (Stimpson, 2006).

These symptoms and feelings may often influence an individual's ability to resume daily life, as the personal identity, sense of self, and assurance of safety in the environment, have been altered.

After a disaster, researchers found that many individuals have reported an increased amount of stress (Broussard, Meyers, & Meaux, 2008; Carroll et al., 2009; Tapsell & Tunstall, 2009). In one community, the populations who reported experiencing the most significant amount of stress were older adults and single women (Tapsell & Tunstall, 2009). The experience of significant stress associated with disasters can also lead to a mental health condition called post-traumatic stress disorder (PTSD) (Kristensen, Weisaeth, & Heir, 2012). The suggested connections between PTSD and disaster related losses are the threat of life, witnessing death, or other traumatic events (Kristensen et al., 2012). Individuals experiencing PTSD often experience flashbacks of the event, and demonstrate avoidance behaviors with an increased state of arousal (American Psychiatric Association, 2000).

Stress may also lead to reduced positive coping mechanisms. During a stressful time, individuals often have difficulty with expression of emotions, which may in turn lead to decreased coping responses (Rosnefeld, 1982). Research suggested that in certain natural disaster situations, the most common coping method used was the rational

approach (Mason et al., 2010). In this adaptive method, the survivors become practical and problem focused, avoiding the emotional aspect of the disaster. However, this approach may increase stress, because the individual has little control over the natural disaster or the degree damage of the aftermath.

The rational coping mechanism, along with emotional and avoidance, has been associated with a higher risk of psychiatric disorders, such as PTSD and depression (Mason et al., 2010). Mason et al. (2010) found that the detached coping method seemed to have the least risk of psychological stress. When using the detached method, individuals are able to distance themselves from the situation during times of extreme stress (Mason et al., 2010). However, Deeny and McFetridge (2005) suggested that if the trauma and associated reactions are not recognized and addressed, the result will often be a decreased mental health status and the individual will have difficulty functioning within the community. Personal loss needs to be recognized and a grieving process needs to take place before it is possible to move forward with necessary changes and modifications (Unruh, 2004).

Using the appropriate coping method for the individual and situation may contribute to the grieving process in regards to time and ease of recovery, which often takes place over a period of time (Mason et al., 2010; Rosenfeld, 1982). During the acute stages of a natural disaster, the healthcare professional may be advised to not interrupt the coping strategy, but to use methods to enhance it (Deeny & McFetridge, 2005). These methods should take into account the identity of the individual as well as the individual's culture.

The themes of resilience and vulnerability have been identified in regards to a person's response to a traumatic event (Deeny & McFetridge, 2005). This spectrum, ranging from resilience to vulnerability is a broad continuum of an individual's reaction to the event and the manner in which the individual responds. This can be influenced by the culture in which the event occurs and previous experiences the individual may have had (Deeny & McFetridge, 2005). The coping mechanism the individual uses is often based on the location on this spectrum. This spectrum can also be influenced by the culture of the community.

A common theme identified in literature in regards to post disaster activity is the sense of community spirit and community bonding (Broussard & Myers, 2010; Carroll et al., 2009). This community bonding was described as means of strengthening friendships and decreasing the negative experiences of the disaster (Carroll et al., 2009). The social support offered by the community is essential to the individual's ability to cope with the situation (Henderson, Roberto, & Kamo, 2010). As the environment begins to recover, a sense of community spirit emerges, and the hope of recreating the sense of place becomes a reality (Cox & Holmes, 2000). This sense of hope will assist individuals with renewing their occupational identities as members of the community culture (Deeny & McFetridge, 2005).

Environment

Cohn and Lew (2010) define environment as "the external physical and social aspects that surround clients while engaging in the occupation" (Cohn & Lew, 2010, p. S57). The environment is a key aspect of an individual's identity, as the environment is where an individual performs valued occupations. The environment directly impacts the

individual's success in participation in occupations (Cohn & Lew, 2010). A primary role of occupational therapy is to work collaboratively with the client in determining environmental supports and barriers (Cohn & Lew, 2010). When an event such as a natural disaster occurs, individuals involved become limited in their ability to perform their daily occupations due to environmental barriers (Deeny & McFeteridge, 2005; Scaffa, Reitz, & Smith, 2011).

When a natural disaster occurs, there will be significant damage to the environment. Victims of the disaster experience damage to their property. Research suggested that the house is the strongest social attachment because it serves as a private place where individuals feel safe and have a sense of security (Hidalgo & Hernandez, 2001; Tapsell & Tunstall, 2008). Damage to, or loss of, the home leaves individuals without that safe and familiar place they need for recovery (Cox & Holmes, 2000). Some individuals view natural disasters as an invasion to their homes. It intrudes and violates personal space, leaving behind a house that no longer feels like home (Carroll et al., 2009; Tapsell & Tunstall, 2008).

The emotional attachment toward a home affected by a natural disaster has an influence on identity as well. A key term that has been identified to explain this phenomenon is place attachment. This involves "affection and bonding, which values routine and familiarity, the personal stamp of identity, the privacy and sanctuary of home and the social relationships built there" (Carroll et al., 2009, p. 545). Therefore, in a disaster, individuals not only lose their homes, but their sense of connection, comfort and consistency are also impacted (Carroll et al., 2009).

Mirsha, Mazumday and Suar (2009) found that place attachment had a direct impact on the amount of preparation individuals do for disasters. When individuals develop an affective bond or link for their home or community, they become attached to that environment (Hidalgo & Hernandez, 2001; Mishra, et al., 2009). Research suggested that the more attached to the environment someone is, the more likely he or she is to take steps to prepare for natural disasters. Preparation is done in order to avoid as much destruction as possible to their environment (Mishra et al., 2009). For instance, when individuals own their homes, they have more freedom, choice and opportunity to take action, and are therefore more likely to do so (Harvatt, Petts, & Chilvers, 2011).

During interviews with the survivors of disasters, researchers found that common environmental concerns included loss of pets and personal possessions that held deep meaning (Cox & Homes, 2000; Tapsell & Tunstall, 2008). This personal loss of mementos and possessions contributed to the individuals' experiences of the event. Not only are daily occupations interrupted, but the sense of meaning is influenced as well. Routines and meaning are said to be essential to an individual's sense of place and self-identity (Tapsell & Tunstall, 2008).

Natural disasters often impact public facilities in a community, including schools and health care facilities (Broussard, Myers, & Meaux, 2008; Broussard & Myers, 2010; Du, FitzGerald, Clark, & Hou, 2010). This results in many individuals, including health care workers, being displaced and without jobs (Du et al., 2010).

There are specific physical and temporal factors of a disaster that have been noted to have an impact on reactions and responses to natural disaster events (Harvatt, Petts, & Chilvers, 2011; Tapsell & Tunstall, 2009). One of these is the time of day and the speed

at which the disaster occurs, and another temporal factor is the time of year. For instance, in a situation where a flood took place during the winter season, the individuals were much more uncomfortable and had to deal with the cold weather along with the flooding condition (Tapsell & Tunstall, 2009). Understanding the various degrees of damage and loss can assist occupational therapists in realizing the effects the disaster has on their personal lives and the lives of their clients.

After the damage is done, communities are often left to deal with the aftermath of a disaster. Damage to homes and possessions lead individuals to deal with insurance issues, construction, and contractors (Carroll et al., 2009). A majority of individuals who have experienced this reported that the process was difficult and they experienced consistent setbacks throughout the process (Carroll et al., 2009). This frustration was often the result of the attitudes and interactions with outsiders and companies, who did not understand the sense of identity and bonding one has to the home.

Occupation and Performance

A major concept of occupational therapy is that health and adaptation come from participation and engagement in occupations (American Occupational Therapy Association [AOTA], 2008). Natural disasters often disrupt meaningful occupations such as employment, volunteering, and taking care of family, pets, and home (Henderson et al., 2009).

Due to the disruptive nature of disasters, it is important for survivors of disasters to reclaim some sense of stability and consistency. Lafuente, Eichaker, Chee and Chapital (2007) studied healthcare providers following Hurricane Katrina and found that healthcare providers believed continuation and continuity of care was significant when

treating veterans after the hurricane. Occupational therapists can provide a means for individuals to reclaim a sense of control through engagement in structured activities. After the initial shock and chaos of a disaster, occupational therapists may help survivors cope with the stress of the situation through the use of therapeutic activities (Scaffa, Reitz & Smith, 2011). Healthcare providers working in an area after a natural disaster should be cognizant of the specific needs within their communities and become involved with the networks already in place (Deeny & McFetridge, 2005).

Healthcare providers must also be aware of the way the natural disaster affects their clients' abilities to participate in everyday occupations (Deeny & McFetridge, 2005; Oakley, Caswell, & Parks, 2008). Tapsell and Tunstall (2008) found that individuals struggled with their occupations of employment and household house hold management, while at the same time attempting to recover psychologically and begin rebuilding and repairing their homes. Many of these individuals believed having more support from an authority figure, such as the government, would have decreased the amount of stress throughout the flooding recovery process. Occupational therapists could be a part of a team providing mental health and occupational services that would reduce the long-term effects of a natural disaster.

Occupational therapists in a disaster situation must be able to focus on short term basic needs, while having the foresight to assist their clients with psychosocial needs as well. In a disaster instance, there may need to be a shift in occupational therapy focus in order to address the mental health needs of the population (Deeny & McFetridge, 2005; Scaffa, Reitz & Smith, 2011). The acute and ongoing mental health needs of individuals impacted by a disaster are heavily influenced by the type of experience the individuals

had. Indirect experiences and previous disaster experience are a few of the factors that influence how an event is interpreted and coped with.

Indirect experience often creates an attitude that is based on denial of susceptibility or vulnerability to a disaster occurring (Harvatt, Petts, & Chilvers, 2011). Interviews have revealed that many individuals do not consider themselves to be at risk for a flood, even if they are in a high-risk flood area (Harvatt, Petts, & Chilvers, 2011). The lack of experience of a previous flood leads to a sense of disbelief and unawareness as to the actions one should take or who should be contacted (Tapsell & Tunstall, 2009).

If individuals have previously experienced a natural disaster directly, they may demonstrate an increased understanding of the steps needed to prepare for a disaster (Broussard & Myers, 2010). The previous experience was also reported as leading to increased anxiety when even the smallest event that could lead to a natural disaster, such as heavy rain, occurred (Tapsell & Tunstall, 2008). This fear and vigilance led to various responses including restructuring of the home and decrease in community participation if any signs of a flood appeared (Tapsell & Tunstall, 2008).

A natural disaster has the ability to completely disrupt the daily lives of individuals within a community (Carroll et al., 2009). This results in increased difficulty for individuals who wish to return to their previous routines or create new routines around their current disaster circumstances. Research strongly suggested that this period resulted with an increased bond formation in the neighborhood due to the familiarity it provided (Carroll et al., 2009). The bond forged through negative experiences strengthened relationships and led to an overall increased community spirit (Carroll et al., 2009). Occupational therapists who are living within the community impacted by a flood

have the unique opportunity to use their professional understanding and experience to help their communities.

Henderson et al. (2009) found that the daily hassles following Hurricane Katrina had a significant impact on the daily performance of older adults. These individuals had difficulties obtaining basic resources such as food, water, clothing and shelter. They also experienced difficulties with communication when the mail system was down and the phones were out of service. The occupational therapist's understanding of environmental and contextual stressors would allow the therapist to provide specific assistance to individuals in these situations (Scaffa, Reitz, & Smith, 2011).

A primary occupation impacted by a disaster is transportation (Henderson et al. 2009). Based on the severity of the disaster, key routes and transportation systems are affected (Tapsell & Tunstall, 2008). This leaves the individuals without a way to commute throughout the community and may in turn hinder their ability to perform daily tasks. If the disaster is severe enough, it will create shortages in public transportation methods, leaving individuals feeling stranded in their own community (Carroll et al., 2009; Tapsell & Tunstall, 2008). Research has shown that public and private transportation issues were especially stressful, because without a means of transportation, employment and daily routines were greatly impaired.

As survivors of a natural disaster, occupational therapists may have many of the same basic needs as their clients. Often the healthcare providers living in a disaster area are also displaced and must cope with the same lack of resources and daily hassles as the general public (Du et al., 2010; Rebmann, Carrico, & English, 2008), but they also have a duty to care for the wellbeing of others (Scaffa, Reitz, & Smith, 2011). However, it may

be difficult for occupational therapists to provide services post disaster due to the damaging affects disasters may have on healthcare facilities (Du et al., 2010).

While the literature is limited regarding the experiences of occupational therapists living in natural disasters, there is literature about other healthcare professionals' experiences. In many of these cases, the healthcare professionals' occupations and occupational performance were disrupted by the events during and after a natural disaster (Broussard et al., 2008; Broussard & Meyers, 2010; Lafuente et al., 2007) Some of the disrupters included daily hassles, personal losses, excessive client needs, and a sense of isolation (Lafuente et al., 2007). Daily hassles included not being able to access computers to obtain medical records of clients (Broussard et al., 2008; Lufuente et al., 2007). Laufuente et al. (2007) found that limited supplies, reduced privacy, insects and the weather made working in a natural disaster area more difficult.

Broussard et al. (2008) studied school nurses who lived in Louisiana and were affected by Hurrricanes Katrina and Rita. These nurses found their occupations challenged by ongoing stress created by the physical and psychological needs of their students, while at the same time being personally affected by the hurrricanes. For these nurses, the disaster experience was a time of "uncertainty, helplessness and thankfulness" (p. 80). The nurses reported that the uncertainty came from being unsure as to what would happen next, and they felt helpless in the midst of the chaos and stress of the disaster. However, they were also thankful that they could help others during the situation. The nurses also reported a significant increase in stress due to the large number of displaced students and the difficulty experienced when attempting to access needed information about their students' health and medical needs.

Occupational therapists have contributed to communities in times of disaster (Oakley, Caswell & Parks, 2008; Scaffa, Reitz, & Smith, 2011). However, there are barriers for occupational therapists who want to assist during natural disaster situations. For instance, in the field of mental health during disasters, occupational therapists are not always recognized as a qualified mental health provider (Oakley et al., 2008). Oakley et al. (2008) were a group of occupational therapists who had to advocate for the psychosocial role of occupational therapy in order to serve as a part of the Public Health Services disaster mental health response team. Once a part of the team, they were required to follow the framework of the team response, but they did so with a strong focus on occupation, which is a unique quality of occupational therapy. Through the use of occupational therapy concepts and tools, Oakley et al. (2008) felt that they were able to fill a niche in service to individuals requiring mental health services after disastrous situations.

Implications

Christiansen (1999) suggested the way individuals perceive events that take place in their lives is influenced by their identities. When someone's occupational identity is disrupted by a crisis, such as a natural disaster, steps must be taken to understand the event in light of his or her life story. The purpose of this qualitative research is to explore the experiences of occupational therapists who have lived through a natural disaster within the last five years. The researchers are interested in how the environmental stressors of a natural disaster impact the occupational identity of the therapists in all aspects of their lives.

Occupational therapy is a profession that aims to provide a holistic approach to patient care. This method takes all aspects of the individual into perspective, which in essence, is the occupational identity. Christiansen (1999) made the assertion that the act of therapy involves identity building. By providing opportunities for success in daily activities, occupational therapy strives to reinstate the sense of self-esteem and self-concept that may have been lost due to impairment.

Occupational therapy has the opportunity to utilize its specialized services to provide care to assist individuals in establishing, maintaining, or reclaiming their identities (Christensen, 1999). In this sense, it is clear that if an individual's sense of identity is lost or altered due to a natural disaster, occupational therapy could have a role in assisting the community or individual in recovering from the event. Occupational therapists have the training and skills to assist in the preparation for, response to, and recovery from natural disasters (Scaffa, Reitz & Smith, 2011). Because of their specialized training and skills, they can help their communities prepare by helping to create a disaster plan and consulting with relief organizations on behalf of vulnerable and special needs populations.

In response to a disaster, mental health services are an important element of care for survivors (Deeny & McFetridge, 2005; Scaffa, Reitz & Smith, 2011). Occupational therapists have the mental health background to provide emergency mental health services to survivors (Scaffa, Reitz & Smith, 2011). Occupational therapists may become involved in organizations already set up in the area or they might join teams that travel to areas affected by disaster situations (Scaffa, Reitz & Smith, 2011).

While there is literature available regarding occupational therapists role related to disaster management, little research has been conducted regarding occupational therapists' direct experience of disasters and the impact this has on their personal and professional identities. Within this review of literature, the researchers limited their search to water-related disasters within various populations, including various healthcare providers.

CHAPTER III

RESEARCH METHODOLOGY

The purpose of this study was to explore the experiences of occupational therapists in natural disasters, focusing primarily on floods. The Person-Environment-Occupation-Performance model (PEOP) was used as a theoretical guideline. This chapter provides a description of the methodological process used in conducting the study.

Research Design

A phenomenological approach was used to capture the meaningful experiences of occupational therapists in natural disasters. This was accomplished through the use of phenomenological interviewing of participants about their experiences and reflections regarding a flooding event in their community. The phenomenological design emphasizes the experience of the individual and the meanings derived from that experience (Merriam, 2009).

A thorough review of available literature was conducted to determine the way in which a natural disaster impacts the person, the environment, and the individual's ability to perform meaningful occupations. The researchers then developed a semi-structured phenomenological interview using the PEOP model and current literature. The interview design consisted of open-ended questions in order to facilitate conversation and gain thorough details of occupational therapists' experiences. The researchers obtained Institutional Review Board approval through the University of North Dakota prior to initiating the data collection process.

Six occupational therapists were recruited through the use of non-randomized, purposive and snowball sampling techniques. The criteria for inclusion in the study included the following: the participant must be an occupational therapist who has been practicing for at least three years, was living in the community when the disaster happened, experienced the natural disaster within the last five years, is at least six months post-disaster, and is able to describe and process the experiences regarding the disaster.

The six participants included five females and one male. The sample included: two school-based occupational therapists, one outpatient therapist, one inpatient, and two who worked a combination of inpatient and outpatient rehabilitation. The occupational therapists were living and working in communities in Wyoming and North Dakota.

Informed consent was obtained prior to initiating the interview. Interviews were audio recorded and lasted between thirty and ninety minutes. The interviews were conducted at a location of the participants' choosing and measures were taken to ensure privacy and confidentiality. These measures included finding a private location where the interview would not be overheard or disturbed.

Interviews were transcribed verbatim and analyzed using an open coding system as described by Berg (2009). This included breaking down the data into common codes. Themes emerged from the codes and were then categorized. From the categories, two final assertions were developed. The findings were then related to current literature findings to ensure accuracy and applicability.

Trustworthiness

Multiple methods were used to ensure trustworthiness of the study. The researchers used a semi-structured format to conduct the interviews in order to ensure

that the interviews were similarly conducted. Interviews were transcribed verbatim and both researchers collaborated to process the data. To ensure internal validity, the researchers used a process called member checking in which the participants were asked to verify and confirm the codes (Merriam, 2009).

Direct quotations in the results were used in order to illustrate accuracy in interpretation of the information. The use of theory throughout the study led to increased validity of findings. Bias was limited through the use of reflexive journaling and by having two researchers active throughout the research process. An experienced qualitative researcher guided the researchers throughout the study; ensuring proper research techniques were utilized.

Interview data was gathered using an audio recording device and then transcribed verbatim. After the transcription, the interviews were deleted from the recording device. Open coding was used to break down the data and identify themes. From the themes categories were developed, leading to two final assertions. The following chapter presents the results of the study.

CHAPTER IV

RESULTS

Six occupational therapists were interviewed regarding their experiences living in an area that had recently flooded. Pseudonyms were assigned to the participants in order to protect confidentiality while portraying their stories. A summary of demographic information can be found in Table 1. The PEO model was used as a framework for data analysis. Data from the interviews were coded and then categorized. The categories included personal experience, environmental influence, social experience, and professional experience. Each category included the experiences of the participants, presented in their own words through the use of direct quotations. See the Appendices for a flow chart of the study's codes, themes, categories and assertions.

The participants' experiences were varied; some described daily hassles, while others' lives were completely disrupted. Christiansen (1999) discussed that an individual's identity is created through occupational experiences. The occupational identity influences how an individual interprets and reacts to the events in that individual's life. It is important to know the person in order to understand how that person interprets the flood events.

George is married and has a young son. He works in an outpatient setting, primarily with orthopedic injuries. He also occasionally practices within the inpatient setting. His family was displaced from their home during a flood, and the home required complete renovations due to the extensive damage caused by the floodwaters. During part

of their displacement, his family lived in a Federal Emergency Management Agency's (FEMA) trailer for several months.

Melissa had been working as an occupational therapist at an inpatient hospital setting when her community was flooded. She, her husband, and their two daughters were displaced from their home for several weeks due to flooding in the area. However, no damage was done to their home and they were able to return in a timely manner.

Julie is a school-based occupational therapist who worked and lived in the midst of a flood zone. Despite their best efforts, her family lost their home in the flood and had to completely renovate after the disaster. Her family of five spent several months in a FEMA trailer while her home was being remodeled.

Ruby is a pediatric outpatient occupational therapist as well as a school-based occupational therapist. She was fortunate to live in an area that was not affected by the flood, but she still felt its effects in her daily life and in the lives of her clients.

Maggie is an occupational therapist working in an outpatient clinic as a certified hand therapist. She had recently moved to the community when the flood occurred. Maggie was in the process of switching homes before the flood, and the one she moved into was not affected.

Betty is an occupational therapist who travels throughout her community and works part time at a hospital. She had a baby just prior to the time of the flood, and therefore felt she was not as involved in the aftermath as she would have liked.

Table 1
Demographics

Participant	Sex	Age	Occupational Therapy Degree	Years of Experience in Occupational Therapy Prior to Flood
George	Male	37	Bachelor's	8
Melissa	Female	41	Bachelor's	17
Julie	Female	42	Bachelor's, working on Master's	18
Ruby	Female	42	Bachelor's	7
Maggie	Female	42	Bachelor's	15
Betty	Female	37	Bachelor's	8

Personal Experience

While the personal experiences of the participants were unique to each individual, there were commonalities among the experiences. One of the common themes identified by all six participants was chaos. The participants frequently referred to their experiences as being chaotic, both during and after the flood. Melissa described the daily disruptions that encompassed her family and work roles.

...just trying to organize where our stuff was and umm just getting ourselves to work, figuring out how, like, the girls were still going to do their activities....some of the things we normally do at our house we were not able to do...just the structure of our day was so different...

Another participant, Julie reported personal stress from the lack of organization during evacuation,

when people evacuated us they just took stuff and just shoved it in boxes and bags and its not like you packed your china and labeled it, you know, we found like a toothbrush in a bag and a shoe and a sock and a bowl and a, you know, so we couldn't find half of our stuff.

None of the participants had received any type of experiential or educational preparation related to flooding prior to their experiences. The hectic conditions of their personal lives were significant and impacted their personal occupational roles. Three of the participants had to evacuate their homes because they were living in flood zones. They described this process as being stressful and chaotic. George described the emotional toll of the evacuation process;

Worked hard long hours, but ya I think my emotions were just, ya, all over the place, I mean your mind's is just kind of spinning. You don't know which way to go, or what to do. You walk into your house to start moving stuff out; just kind of walk in circles, you're like, what do I take and what don't I take?

Melissa had a similar experience when she was evacuating.

So it was really just a lot of chaos, a lot of packing stuff up last minute, having family and friends come help us, trying to figure out where we were going to get sandbags and organize all that. So it was really stressful for a few weeks or longer.

Julie experienced a different series of emotions after the immediate evacuation and destruction of her home

I was just really numb; because I think it was hard for me to believe it, and especially we couldn't come in here [the home]...you couldn't gain access to anything so basically what you saw was what was on the news.

Although all six participants lived in a flood disaster area, two of the participants felt that the flood did not have a direct impact on their personal lives. Maggie and Betty minimized the event in light of previous disaster experiences. Maggie, who has assisted

indirectly with disaster relief efforts in the past, had a unique view of the flood. She stated, "I mean it's interesting when we talk about the flood being a disaster... I think well this was really isolated and it's terrible but I don't feel like it made an impact on who I am." Betty, who was involved in the aftermath of September 11th, also minimized the flood as a disaster in lieu of her life experiences.

The four participants, who felt that the flood directly impacted them personally reported different methods that they used to cope with the stress of the situation. George reported that his primary coping method was to focus on what he could control, which was to work. However, he also reported that talking with others was beneficial, stating, "It was probably good stress relief for me, talking with people about how it affected them or if I could help them." Julie experienced some health issues that were exacerbated by the stress related to the flood and being displaced from her home. She stated

I'm pretty ok usually, I do tend to hold a lot in and just hold it together for everybody so I did have some health issues come up and I've had trouble with a heart arrhythmia, but during the flood it got really quite to the point where I actually had to go to the hospital, I was in the hospital two days and got put on a beta blocker because the stress from everything was making the heart arrhythmia issue worse, so umm, obviously, umm, I must not have been handling it really well

Julie did realize the importance of taking measures to reduce her stress and relax.

I let myself get a massage, so that was an expense that I allowed because it was very relaxing so every eight weeks I got a massage and just took some time for

myself or spent some time by myself, so that I wasn't constantly trying to help other people, which is kind of my nature

Two of the participants reported that physical activity was beneficial as a means to relieve and cope with the stress of the floods. Ruby reported that she had an injury, so she focused on stretching exercises, while Melissa found that the combination of social support and physical activity was of great importance, stating, "During that time, like I run, so I was still able to run with my morning running group friends so that was probably the most important thing to help me get through that."

Another factor identified by participants as a stress reliever was returning to work and trying to maintain a normal daily routine. Julie recognized that "work is a constant" and most of the participants reported their work as occupational therapists did not change during the disaster.

Environmental Influence

The floods experienced by the participants had varying degrees of destruction. Generally speaking, roads were damaged, bridges were washed out, and many buildings were destroyed. This altered the environment of the participants; many had to take lengthy detours and wait in traffic lines to get to their intended destinations. The most challenging circumstances reported by the participants came from having to evacuate their homes and live with extended family.

The participants who had to evacuate their homes identified several stressors as a result of being displaced. All three lived with family immediately after being evacuated and, while all of the evacuees were thankful for their families, the living conditions were a major source of stress. George and Melissa both described their experiences. George,

who lived with his wife's extended family, as well as other family members who were displaced, stated that it was "tough adapting to not having your own routine, like your home, at your house, you get up and get ready for work and do whatever for the day without other people to worry about." Melissa discussed her difficulties living in the role of being a guest and trying not to burden her host:

Just to invade someone else's space when you go from not having a bunch of people in your home to us moving in and trying not to be a problem, so that was probably the most frustrating or just stressful.

Transportation issues were also prevalent among all of the participants. They reported experiencing increased travel time, having to take detours and alternate routes, increased traffic, and dangerous driving conditions such as washed-out bridges. Betty described her experience, "There were some waits and there were some detours because of bridges down...you just had to be re-routed." Ruby described in detail her first experiences with transportation after the flood event:

Well for instance, getting to work the first few times after the flood happened there was national guards, you know, monitoring intersections, and all the streets were closed off and so you had to allow extra time, find alternative routes to get where you needed to go.

Melissa felt that the flooded areas had a significant impact on family events and explained, "the family memory making things, like, were really affected because everything we did was really in the flooded area."

Several participants discussed the impact the flood had on their clients. Maggie discussed the difficulty some experienced with getting to therapy sessions, "I was having

no shows and cancellations during that time...” She also explained, “I did have patients who couldn’t get in because they were stuck on their property.” Melissa’s clients were also affected. She discussed the impact on a client who was preparing for discharge and discovered her home was affected:

I did have a gal...that I worked with...she had scheduled back surgery...I just remember her just being overwhelmed with having nowhere to go from the hospital because her home was flooded and she did get the call while she was here in the hospital.

Social Experience

A common social support identified by the participants displaced by a flood was their coworkers. Coworker support ranged through both the professional and personal realms. George described the professional support he received, stating:

Luckily I have a very good, umm, coworkers, I should say, and boss, that got me out of there so I could spend some time getting everything out of the house that we could and basically moving stuff out...my coworkers and stuff were very nice about helping out and giving me time off to do my thing so it was really awesome.

Julie experienced support on even a more personal level as she described the willingness of her coworkers to assist in any way they could:

One of my coworkers had a trailer hookup on her property and she and her husband offered us to live there instead of going to the trailer park and so we did...you can’t repay that...obviously I had a lot of people willing to be giving

and I had a lot of people in our office be real helpful...I think everyone tried really hard to make things less stressful as much as they could.

Ruby did not have to evacuate from her home, however, she identified a strong desire to provide support for her displaced coworkers:

Other people that we worked with lost their homes in the flood, their homes flooded, so umm, you know, trying to be on the lookout for opportunities to be helpful and keep in mind, you know, what they were going through.

The common theme of coworker support demonstrates the willingness of occupational therapists and other health professionals to help those in need during disaster situations. The assistance provided by the coworkers demonstrated not only using the skills acquired within the profession, but on a personal level as well. The extent of involvement and willingness to help others also supports the concept of becoming involved as a method of coping with stressful events. Helping out and becoming involved were discussed by a majority of participants throughout their interview.

At different points, all of the participants discussed looking for opportunities to help out within their communities. Betty discussed a desire to have helped out, but was unable to do so because she had just had a baby. Maggie assisted neighbors with evacuating their homes, and other participants also became involved within their communities. Several helped with sandbagging, packing, and moving items to safer locations. George explained the experience as being a positive community-building event:

Talking to our neighbors seeing, 'what are you guys doing?' and then you know, we were also asking our neighbors, 'do you need help lifting this?' and they were

helping us and we were helping them and the whole community really came together and helped everybody evacuate who didn't have the resources. I mean, people who weren't even affected by the flood were coming in...to help with trailers and trucks to move stuff out.

Ruby discussed the importance of a community coming together, "I think the most help that people receive comes just from their immediate community, there's less strings attached, its just people helping people because they want to." Betty's interpretation of the experience was similar, "There was a lot of volunteers. A lot of my friends volunteered and just everybody, I just think that the whole community everybody helped everybody." The community cohesiveness influenced the overall perception of the flood and was identified by all of the participants as being a positive outcome of the event.

Professional Experience

Therapeutic use of self, as defined by Punwar and Peloquin (2000), is the therapist's "planned use of his or her personality, insights, perceptions, and judgments as part of the therapeutic process"(p.285). Several participants discussed aspects of therapeutic use of self after the flood through their descriptions of interactions with others. Melissa described this in regards to being more understanding with her patients, stating, "I think it's just like being a little more understanding for what hardships patients go through when going through their histories and just being able to be a little more empathetic toward them." Ruby replied similarly, discussing the approach she felt was necessary when working with others after the flood:

You know, a lot of people deal with things all of the time that we don't necessarily know about and so something like the flood when you are bing

mindful of the fact that people are dealing with stress... we have to give people grace...so just approaching people, you know, with that attitude of you know, being willing to be gracious and being wiling to help

The therapeutic relationship involves collaboration between the therapist and client.

George discussed the opportunity for collaboration and rapport building through bonding over the experience,

I felt I developed a really good rapport with them (the patients) because they were talking about how the flood affected them and then I could say I was flooded too and they could talk to me a little bit and I would just kind of listen... it was almost like a counseling session...but I listed to them and what happened to them and stuff.

Literature suggests that occupational therapy could have a potential role in disaster relief (Scaffa, Reitz, & Smith, 2011; Oakley, Caswell & Parks, 2008). Julie supported this, further discussing the skill set of occupational therapy applicable to this type of event:

I think there is a whole piece of occupational therapy that people overlook and that is the, you know, the social emotional piece...using activity...we could divert some of that stress or, kind of from a psychosocial point...we did some groups with our kids...to keep kids engaged and doing things and busy and that kind of thing takes their minds off of some of what was going on and still working with them on the things they need to.

Maggie also discussed the profession having the skills and characteristics necessary to assist in the recovery process:

I think in times of crisis when things aren't going as predicted...OTs should be able to accommodate that and help calm things and look at things differently and say, 'ok this isn't working how about we try this?' That's one thing about OTs, I see them being much more flexible and you need that and you need to be able to have this holistic approach to it because it's not just water coming into your basement or something, it could be something much more.

The commonality of the participants indicating the skills that occupational therapists possess and the cohesiveness of those skills in a disaster situation further suggest that occupational therapists have the potential to play a role in natural disasters. This involves not only the clinical skills, but the ethical, personal and therapeutic skills as well.

A natural disaster significantly influenced the lives of the occupational therapists. Two assertions emerged from the data as it was analyzed. The first assertion is that the flood affected the occupational aspects of the participants' lives, be it personally, environmentally, socially, or professionally. The second assertion is that the participants' identities as occupational therapists influenced the way in which they responded to the disruptions in their lives. The final chapter is the summary of the research study.

CHAPTER V

SUMMARY

Flood disasters have the potential to impact all aspects of an individual's life. While some literature has suggested a possible role for occupational therapists in natural disasters (Scaffa, Reitz, & Smith, 2011), little research has been done regarding the occupational therapist's experience of a natural disaster. With an increased understanding of the way in which occupational therapists interpret and react to a natural disaster event, further research, support and programming can be created to further enhance the role of occupational therapy within communities experiencing natural disasters.

The experiences of six occupational therapists living in a flooded community were explored and analyzed using a phenomenological approach. The Person Environment Occupation Performance (PEOP) model was utilized as a guide in the review of literature, formulation of interview questions and the data analysis process. The data was organized into codes, themes, categories and assertions.

Four categories emerged from the data analysis. The first category was personal experience, with themes including chaos as a result of the event and coping methods used. Another category within the data was environmental influence with the themes of altered life roles and routines for the both participants and the clients they were working with at the time. The third category that emerged was social experience with the themes including the community coming together and the amount of coworker support the participants received. The final category from the data was professional experience

including the increased use of therapeutic use of self and the skills set occupational therapists possess that increases their ability to have a role in disaster situations. From these themes, two assertions emerged. The first assertion was that the flood affected the occupational aspects of the participants' lives personally, environmentally, socially, and professionally. The second assertion was that the participants' identities as occupational therapists influenced the way in which they responded to the disruptions in their lives.

This study was limited by the small sample size in which the saturation level was not fulfilled. The extensive similarities among the backgrounds of the participants interviewed limited the insight provided by the participants. The study also only took into consideration the individuals experiences at a specific point, not accounting for changes experienced over time.

The results of this study indicate that occupational therapists have the ability to cope with the personal losses of a flood while remaining active in their professional role of occupational therapist. This allows the practitioners to utilize the skills they have as occupational therapists as they cope with and interpret stresses and events in both their personal and professional lives. Further research is needed to explore occupational therapists experiences in a variety of natural disasters. Research is also needed to explore the experiences of individuals receiving occupational therapy services during a natural disaster. This research could further develop and support the role of occupational therapy during natural disaster relief.

APPENDIX

Appendix A
IRB Expedited Approval

REPORT OF ACTION: EXEMPT/EXPEDITED REVIEW
University of North Dakota Institutional Review Board

Date: 5/10/2012 Project Number: IRB-201205-413
Principal Investigator: Becker, Samantha; Reiter, Emily
Department: Occupational Therapy
Project Title: The Experiences of Occupational Therapists in Natural Disasters: A Qualitative Study


The above referenced project was reviewed by a designated member for the University's Institutional Review Board on May 23, 2012 and the following action was taken:

- Project approved. **Expedited Review** Category No. 6/7
Next scheduled review must be before: May 22, 2013
 - Copies of the attached consent form with the IRB approval stamp dated May 23, 2012 must be used in obtaining consent for this study.**
- Project approved. **Exempt Review** Category No. _____
 - This approval is valid until _____ as long as approved procedures are followed. No periodic review scheduled unless so stated in the Remarks Section.
 - Copies of the attached consent form with the IRB approval stamp dated _____ must be used in obtaining consent for this study.**
 - Minor modifications required. The required corrections/additions must be submitted to RDC for review and approval. **This study may NOT be started UNTIL final IRB approval has been received.**
 - Project approval **deferred**. **This study may not be started until final IRB approval has been received.** (See Remarks Section for further information.)
 - Disapproved claim of exemption. This project requires Expedited or Full Board review. The Human Subjects Review Form must be filled out and submitted to the IRB for review.
 - Proposed project is not human subject research and does not require IRB review.
 - Not Research
 - Not Human Subject

PLEASE NOTE: Requested revisions for student proposals MUST include adviser's signature. All revisions MUST be highlighted.

Education Requirements Completed. (Project cannot be started until IRB education requirements are met.)

cc: Janet S. Jedlicka, Ph.D., OTR/L



Signature of Designated IRB Member
UND's Institutional Review Board

5/23/12
Date

If the proposed project (clinical medical) is to be part of a research activity funded by a Federal Agency, a special assurance statement or a completed 310 Form may be required. Contact RDC to obtain the required documents.

(Revised 10/2006)

Appendix B Informed Consent Form

Informed Consent

Title: The Experiences of Occupational Therapists in Natural Disasters: A Qualitative Study

Project Directors: Samantha L. Becker and Emily Reiter

Contact information: Samantha L. Becker
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Emily Reiter
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Department: University of North Dakota Occupational Therapy

The student researchers from the University of North Dakota's Occupational Therapy satellite program at Casper College are conducting a qualitative research study concerning the experiences of occupational therapists who have been impacted by a natural disaster within the last five years.

The purpose of this study is to gain a better understanding of how the disaster impacted the occupational identity, clients and personal lives of occupational therapists. The questions in this study are designed to learn about your views, opinions, and experiences concerning your involvement with the natural disaster.

During the next few months, we will be interviewing occupational therapists who choose to participate in this study. The interview questions will be based on your experiences as an occupational therapist in relation to a natural disaster. The interview will be digitally recorded and typed to ensure accuracy. If at any time you do not wish to answer a question or wish to end the interview we will respect that decision. The interviews will last between 60 to 90 minutes.

We hope that the information gathered in the study will contribute to the knowledge base of occupational therapy and the possible roles of occupational therapists during a natural disaster situation.

The risks for participation in this study are minimal. The interview questions are not intended to cause any stress. However, if any questions make you feel uncomfortable, you may stop the interview or skip the question. There is no cost to participate in this study and you will not be paid for your time. It is hoped that you will enjoy sharing your story and helping others who may experience a natural disaster.

This study is part of our independent research project required for the completion of a master's degree in occupational therapy. The information gathered will be analyzed and presented as required by the University of North Dakota Occupational Therapy Program. We then hope to submit our study for publication.

IRB APPROVED

MAY 23 2012

University of North Dakota
Research Development & Compliance

1

Date: _____
Participant Initials: _____

The records of the study will be kept private. In any reports about this study that will be shared, you will not be identified, and your name will be changed to ensure confidentiality. Your participation is voluntary. You may choose not to participate or you may end your participation at any time.

The researchers conducting this study are Emily Reiter and Samantha Becker. You may ask any questions you have now. If you have later questions, concerns or complaints about the research please contact one of us or our advisor, Dr. Janet Jedlicka at (701)-777-2017. If you have questions regarding your rights as a research subject, or if you have any concerns or complaints about the research, you may contact the University of North Dakota Institutional Review Board at (701) 777-4279. Please call this number if you cannot reach research staff, or you wish to talk with someone else.

Your signature indicates that this research study has been explained to you, that your questions have been answered, and that you agree to take part in this study.

Participant Name: _____

Participant Signature: _____ Date _____

Researcher Name: _____

Researcher Signature: _____ Date _____

IRB APPROVED

MAY 23 2012

2

Date: _____

Participant Initials: _____

University of North Dakota
Research Development & Compliance

Appendix C Interview Questions

The purpose of this interview is to gain an understanding of your experience with a natural disaster. This will include some of your demographic information, your experiences as an occupational therapist, and your experiences surrounding the natural disaster. The interviews will be audio recorded and transcribed for accuracy. After the interviews are conducted an analysis of the statements will take place. After which, we will be contacting you to review statements for accuracy.

1. Demographics:
 - a. Age
 - b. Gender
 - c. School location, degree, years of practice,
 - d. Practice area
 - e. Time of disaster and what point in your career
 - f. What specific disaster
2. As I understand, you were an OT who was practicing in _____ during the disaster of _____? Tell me about what that experience was like for you?
3. I want you to think back to the first day you found out that there was a possibility of a natural disaster.
 - a. What was your reaction?
 - b. What did you do in planning?
4. What stands out the most for you when you think back on the natural disaster?
5. The literature defines occupational identity as “a composite sense of who one is and wishes to become as an occupational being generated from one’s history of occupational participation”.
 - a. What is your reaction/ thought about this?
 - b. How do you see this as being part of your experiences
6. As you think back to your experiences during the disaster, how do feel your daily occupations were affected?
 - a. How did it impact your daily routines?
 - b. Are there any valued occupations you were/are no longer able to do?
7. What impact do you think the natural disaster had on your occupational identity?

8. Disasters can be damaging. Can you describe the impact on family, friends, and coworkers that occurred as a result of the disaster?
9. Think back to the natural disaster in regards to transportation. How did it impact you and your ability to get around in your community?
10. As occupational therapists, we focus on clients' ADLs and IADLs, as you reflect on this, how did the disaster affect your ADLs and IADLs?
 - a. Budget and finance
 - b. Shopping
 - c. Laundry and home care
 - d. Basic self-care activities
 - e. Daily habits and routines
11. Looking back, please tell me about any preparation you had with regards to training, education, or anything else before the disaster occurred?
12. How do you feel the event impacted your performance as an occupational therapist?
13. Natural disasters can impact several areas of your life. Please rank these cards in order of the most to least impacted due to the natural disaster. (Home, work, interpersonal relationships)
14. Everyone has different mechanisms they use to cope with stressful events. Describe what you did to cope with the stresses the disaster had on your life.
15. Looking back, how do you think your clients reacted to this disaster?
 - a. What impact did this have on therapy?
 - b. Did it influence patient outcomes? In what way?
16. In an ideal situation, what do think the role of occupational therapy could/should be during a disaster?
17. Imagine another occupational therapist comes to you after their community has experienced a natural disaster. What advice would you give them?
 - a. What would you recommend to OT programs to teach their students concerning disaster relief?
18. How has the disaster experience changed your life?
19. "In reflecting back on the disaster and your experiences, is there anything positive that came out of the experience?
 - a. developing a sense of community, working with neighbors, satisfaction of rebuilding , more aware of personal strengths, etc.

Appendix D
Table of Findings

Assertions			
The flood affected the occupational aspects of the participants' lives personally, environmentally, socially, and professionally.		The participants' identities as occupational therapists influenced the way in which they responded to the disruptions in their lives.	
Categories			
Personal Experience	Environmental Influence	Social Experience	Professional Experience
Themes			
The chaotic conditions became the normal expectation.	The damage created by the flood disrupted daily routines.	There was significant support from coworkers during and after the flood.	There was an increase in the awareness of therapeutic use of self.
Personal coping became a way of reestablishing occupational identity.	Changes were experienced when providing care and occupational therapy services.	The community came together: family, friends and strangers.	Occupational therapy could play a significant role in the relief efforts of floods.
Codes			
Home stressors Hassles Preparation Community disruption Working Minimizing Exercising Helping others Child concerns Family concerns	Food Volunteering Sandbagging Strangers Renewed "humanity" Looking to help Taking shifts Transportation	Repairs Sandbagging Costs IADL roles Living with others Transportation Loss of daily structure Leisure	Discharge planning Injuries Missed appointments Building rapport Therapeutic modes Flexibility Sharing stories Psychosocial focus Holistic perspectives

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