

Opinion And Challenges Faced By Healthcare Professions On Field Disaster Relief Work In Tamilnadu – Phenomenological Over View

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Abstract: Huge opportunities are now available for physiotherapists enable to move onto the global scene as they become involved in disaster relief work in Tamilnadu. There has been a great deal written in the literature on the experiences and roles of health care providers who participate in disaster relief work. There has been less written about the role of physiotherapists who actively assigned by international disaster relief work in Tamilnadu. Not everyone may understand the challenges faced when participating in disaster relief work in Tamilnadu. The purpose of the study is to describe the experience of physiotherapists who have engaged in disaster relief work in Tamilnadu. Descriptive phenomenological methods were used to analyze interviews of 11 physical therapists on their experiences of engaging in disaster relief work in Tamilnadu after the earthquake of 2004. Data were collected from two interviews with each participant in order to create the general structure of the experience of not-knowing Descriptive phenomenology was used to describe the experience of participating in disaster relief physiotherapists work in Tamilnadu. The Results of the study which shows that the essence of the experience of physical therapists engaged in international physiotherapy disaster relief work was signified by five constituents that included (a) dealing with emotions: uncertainty and fear (b) facing challenges; education as the key to sustainability; (d) lessons learned (e) being able to articulate the meaning of social responsibility. The present study, which notion that the structure of participating in disaster relief work as a physiotherapists was described as a shocking but rewarding experience which challenges participants to reevaluate their lives and practice as a physiotherapists. The ability to participate in this type of work seems to enhance the practice of physical therapy back home. By better understanding the physiotherapists "experience, we can better anticipate the kinds of support needed for those who engage in international disaster physical therapy work. We may also better understand the challenge of returning home for those who serve abroad.

Keywords: Disaster relief work, Physiotherapy, Phenomenological and Tamilnadu

I. INTRODUCTION

Disasters define a disaster “as events or situations that overwhelm local capacity, and thus, require external assistance from national or international bodies. Disasters confront the world, causing great devastation and the need for rebuilding communities, structures, and human life. Whether natural or man-made, disasters can take the form of earthquakes, floods, forest fires, diseases, hurricanes, and terrorist attacks to name a few. Disasters are often very devastating, affecting many people in a large way.

Indian Ocean earthquake and tsunami on December 26, 2004 was in the form of a devastating earthquake, an earthquake with the magnitude of 7.0 on the Richter Scale. The earthquake in Tamilnadu was different than the average disaster communities have confronted in the past because of the massive destruction to both infrastructure and human life. The Caribbean region had not seen such destruction in over 200 years.¹ An earthquake of such magnitude had the capability to do extreme damage and even kill many people; and that is exactly what it did. The earthquake of 2004 left nearly 300,000 injured and 230,000 dead. The earthquake damaged so many buildings and housing that there are still

nearly 1.3 million homeless in the city of Tuticorin, Mahapalipuram and Kalpakkam.

Relief work is an important part of returning communities and people back to a normal life. After a disaster of such magnitude as experienced by Tamilnadu, it is important for people of all applicable professions and trades throughout the world to come together to assist in the rebuilding process. Immediate response to disasters is focused on rescuing individuals from immediate danger, stabilization of the survivors' physical and emotional status, recovery of the dead, and restoration of essential services such as water and power. The aim of long-term recovery is to connect the community to resources that can help get them back to their normal lives.³ Rebuilding infrastructure, returning the weak and/or injured back to health, providing food and clean water, and consoling those who have lost family, friends, and belongings are just a few examples of work volunteers and the community can do to help those affected by the disaster.

Health care providers often play an important role in rebuilding individual lives and communities during relief work. Physicians were in Tamilnadu dispensing medication, treating the injured, performing surgeries, and caring for the ill. Nurses assisted with medication administration, wound care, treating patients with illness and injury, and medical procedures. Many health care professionals helped in any way they felt comfortable. Each health care professional had to work within their scope of practice, but often times at the edge of their scope of practice. Another health care profession that came to the scene after the devastation occurred in Tamilnadu was physical therapy. Physical therapists had gone to Tamilnadu to help the injured gain medical stability, strength, and functional independence. Tamilnadu has allowed the world to see who physiotherapists are and what they have to offer not only in a disaster relief setting, but also in the natural settings of their homeland. There were many physiotherapists who offered their services during the devastation, but their work remains unknown in the literature. There has been a great deal written in the literature on the experiences and roles of health care providers who participate in disaster relief work in general. There has been less written about the role of physical therapists who engage in disaster relief work. The purpose of the study is to describe the experience of physical therapists who have engaged in disaster relief work in Tamilnadu.

II. RESEARCH METHODOLOGY

Phenomenological research is provided and its relevance to our research question is explained. Methodological rigor, including validity, reliability, relevance, and credibility are also discussed regarding their importance in this study. All of these themes are important in qualitative research.

In this phenomenological study, we are trying to better understand the lived experience of physiotherapists who volunteered in Tamilnadu after the Indian Ocean earthquake and tsunami. Our research question is: What is the lived experience of physiotherapists who have volunteered for disaster relief work in Tamilnadu after the earthquake of 2010? We are looking to learn about the feelings and emotions

that were experienced and how these feelings and emotions may have affected the experience of physical therapists participating in disaster relief work in Tamilnadu. Our purpose is to describe the common lived experience of physical therapists serving in Tamilnadu.

III. HISTORICAL CONTEXT OF PHENOMENOLOGY

Phenomenology was first established during the 1800s, during a time when the main approach to scientific research was dominated by positivism. Positivists study observable evidence, such as changes in stride length, blood pressure, and joint angles in order to discover a single, objective reality. While positivism may be ideal for testing hypotheses involving quantitative data it does not provide an ideal structure for studying human behaviors. In essence, positivism fails to capture the richness of the human experience. As a result of the limits of positivism, Edmund Husserl formed a new approach to research known as phenomenology.

WHAT IS PHENOMENOLOGY?

Phenomenological research seeks to describe human experiences. It seeks to reveal the structures that give human experiences meaning. Phenomenology does not seek to discover one truth, but allows the descriptions of a person's experience to reveal many truths.

Phenomenology is the study of essences; and according to it, all problems amounts to finding the definitions of essences: the essence of perception, or the essence of consciousness, for example. But phenomenology is also a philosophy which puts essences back into existence, and does not expect to arrive at an understanding of man and the world from any starting point other than that of their facticity". It is a transcendental philosophy . . . a philosophy which the world is „already there" before reflection begins . . . It also offers an account of space, time, and the world as we „live" them. It tries to give a direct description of our experience as it is without taking account of its psychological origin and the causal explanations which the scientist, the historian or the sociologist may be able to provide. As Merleau-Ponté describes, a phenomenological strategy to research adds a dimension of richness and uses the body to interpret the experience. The phenomenological strategy presents a framework in which the researcher can discover the most expansive, deep description of the participant's experience. This approach to research is appropriate when studying human experiences, because questioning how a person experiences the world reveals what is most important to being human. Phenomenology focuses on describing basic human experiences from the perspective of the humans being studied. Before humans analyze and abstract ideas about knowledge, events are received as experiences. Phenomenology seeks to uncover the raw event as it is experienced before any influences or biases distort the basic experience, or phenomena. In this manner, phenomenology is a "return to the things themselves." Phenomenology focuses on describing the pure thoughts of a person before they are tainted by the ideas of preconceived notions, cultural influences, and experiences of others that alter the perception

of the experience. Phenomenology is not a description of what kind of people the subjects are, what the subjects interpreted from the experience, or what others think of the experience. Instead, phenomenology is most importantly a description of an experience itself unattached from all influences.

In this respect, it is important for the researcher to understand the power of the mind on influencing one's perception of an experience. Researchers must be careful to bracket their own experiences. Just as reading a spoiler for a television show would influence a person's experience watching the show from the beginning, the researcher's past experience can easily influence the subject's perception of the experience. The bracketing process allows the researcher to construct a description solely reflective of the subject's experience, and avoid influence by the perspective of the researcher. Structure of Phenomenological Research

All phenomenological research share a common structure. First, phenomenological research is either descriptive or hermeneutics in nature. Whereas descriptive phenomenology focuses on pure description of an individual's experience, hermeneutic phenomenology interprets the descriptions from beyond the research project by using sources such as novels, poems, music, and self-reflection. A phenomenological researcher begins with a question about a phenomenon, and then selects subjects who have had the experience. Data is then collected in the form of an interview, which is typically an open-ended conversation. This process presents the subject with an opportunity to reflect in detail on the experience, while avoiding the subject's own interpretations or explanations of the experience. The researcher then analyzes the transcriptions of the interviews and synthesizes the themes from all of the interviews into a single, general description of the experiences.

PHENOMENOLOGICAL TERMS

Phenomenology is the study of a phenomenon as experienced from first-person point of view. We would like to review some phenomenological terms, to help the reader better understand our research process. In order to understand the research process of phenomenology we will discuss the following terms: natural attitude, intentionality, lifeworld, lived space, lived body, lived time, lived human relation, reduction, phenomenological Epoche, bracketing, intersubjectivity, imaginative variation, essence (or essential structure), and embodied knowing.

Natural attitude. Natural attitude is where all science and research has its origins according to Dahlberg. It is the attitude in which we normally stand, the way we go about our lives, prior to all questioning of what we are doing or thinking. Simply stated, natural attitude is what we do without thinking. Without analyzing what is around us, activities are taken for granted and the things that are closest to us become the most hidden. Some phenomenologists consider the natural attitude to be the state of non- reflection or the default position and some others consider it a pre-reflective state.

Intentionality. Intentionality refers to "a general patterning of human experience which suggests that human life can only be understood as always and already in some context." It is the connection between humans and the world.

It implies that we cannot separate ourselves from the world and that all thinking occurs because we are thinking about something. Intentionality is important in phenomenology because it "elevates the experience of things to the forefront of knowing." Once the experience is in the forefront one will be able to express the situation into words. Lifeworld. Lifeworld is the world of a person's immediate experience. It is the present moment. Lifeworld refers to "the actual experienced world of a person corresponding to that person's intentional awareness." According to Husserl, the lifeworld gives rise to certain structures and styles that need to be studied. The goal of lifeworld research is to expand our understanding of human experience through the description and illumination of the lived world.³¹ The lifeworld consists of four fundamental themes: lived space or spatiality, lived body or corporality, lived time or temporality, and lived human relation or relationality.

Lived space, lived body, lived time, and lived human relation. Lived space, lived body, lived time, and lived human relations are phenomenological existential which explain all relational situations. Lived space is the spatiality of the experience both physical and psychological. It can be a concrete explanation or a virtual explanation.

Lived body describes a person's bodily reaction to an experience or how the person experiences the lifeworld through bodily perceptions. Lived time is the sense of time in the moment. Lived human relation is the physical interactions with people. Through these terms, we start to understand the lifeworld of the participant. According to Heidegger, how we experience these features of the lifeworld is how we experience life.²⁸ When one spends time in a foreign land, how we experience these aspects normally becomes modified by the culture and customs in which one is currently situated. How we normally experience lived space, lived body, lived time, and lived human relation may become confused in this new setting.

IV. OUR RESEARCH ROAD MAP

A phenomenological research design strategy was taken to find the lived experience of physical therapists who worked as a volunteered in Tamilnadu. The physical therapists involved in this study were found through a variety of recruitment resources. Recruitment posters were posted through email, an internet posting on the APTA Global Health Special Interest Group Listserv, and through professional contacts of the research advisor. . Volunteers were asked to participate in the study if they had an opportunity to participate in disaster relief work in Tamilnadu. Inclusion criteria for participation in this study were that participants were licensed to practice in their home countries. They had to have volunteered as a disaster relief working in the capacity of a physical therapist in Tamilnadu after the earthquake. They could be male or female. Those who responded to recruitment advertisements were then contacted via email to confirm that they met the inclusion criteria and to schedule an interview. All physiotherapists who volunteered in Tamilnadu that responded were included as to eliminate selection bias.

Once the participant was contacted, a time for their interview was determined. Interviews were conducted over the phone, with the use of Skype, which is an online video and audio chat medium, or in person if the participant was able. The interview was conducted by the research advisor with a semi-structured format, leaving opportunity for individual deviation of conversation to occur. Please see Appendix B for the consent form and Appendix C for the Interview Guide. Some or all of the research group members were also present during the interviews. As recommended by Thomas and Pollio, the interviews took place in a quiet, private area so that each participant's privacy was protected.

Each individual was asked to develop a pseudo name to protect their identity. The interviewer asked each participant if they understood what would be happening in this research project as stated in the informed consent and if they had any other questions before the interview began. It was also explained to the participants that they were able to withdraw from the study at any point if they chose to do so without any repercussions. The researcher then began to ask the participant to recall their experience of serving as a physical therapist in Tamilnadu and to describe that experience.

The process of interviewing is unpredictable and has the potential to provoke strong emotions. Although informed consent was obtained from each participant prior to the interview, there was no way to prepare participants ahead of time for possible discomfort they may experience in the interview process when recalling unpleasant moments. As researchers, we have no way of knowing how the interview will affect the participant psychologically. Therefore, ethically, it was our moral obligation to identify and redirect the interview when the participant was experiencing emotions that may cause them undue pain and suffering. Rosenblatt described the process of processing consent, which allowed the researchers to redirect the line of questioning if the participant became too emotional during the interview process.

Each member of the research team participated in a bracketing interview with the purpose of attempting to identify and minimize individual biases during the interview process. As researchers, we were thus provided a process in which we attempted to set aside our previous ideas with regard to theories or previous comments in the media with regard to this phenomenon. Bracketing interviews are those in which researchers are interviewed by other members of the research team to determine what assumptions they have about the proposed research topic. According to Thomas and Pollio, the purpose of these interviews is to make each researcher aware of their understanding of the phenomenon and to sensitize them to any ideas or theories that they may impose on the participants of the study.

Each member of the team interviewed another member asking them about what they knew about the natural disaster in Tamilnadu and what they thought that the research might find. These interviews were audio recorded and transcribed by the interviewer. Bracketing interviews also provided the researchers an opportunity to experience what it is like to be a participant during an interview in a phenomenological research study.

V. DATA ANALYSIS

Each interview was assigned to a member of the research group to transcribe. Each transcription was shared with each member of the group to allow them to read through the interview. Each assigned interview was read through four times to begin to understand the flow and content of the interviews. Key words and phrases that explain the experience were highlighted.⁴² Notes were also made in the margins about what seemed to be the main themes. These themes were then used to create the phenomenological descriptions for each individual experience. The themes and the phenomenological descriptions for each participant were sent to the respective participant and were the basis of our second interview. This process was our vertical analysis and was a form of member checking the data. The next step in our data analysis was to develop a common overall phenomenological description across all participants' interviews regarding the lived experience of physiotherapists volunteering in Tamilnadu after the earthquake of 2004 was generated. This process was our horizontal analysis.

VI. METHODOLOGICAL RIGOR IN PHENOMENOLOGICAL RESEARCH

Methodology in quantitative studies emphasizes the importance of operational definitions and objectivity which de-emphasizes the importance of human experience. The opposite is true for qualitative or phenomenological studies where capturing the essence of the human experience is the goal. Objectivity is a vital component when establishing methodological rigor of both quantitative and qualitative research studies. However, it is accomplished in two very different ways depending on the type of study one is conducting. The focus of objectivity in quantitative analysis is on the elimination of extraneous variables that may confound the variable in question. This process inevitably leads to the elimination of all unique individual characteristics of the participants. On the other hand, the focus of objectivity in phenomenological studies is on "keeping the fidelity to the phenomenon" and "listening to what the phenomenon speaks of itself." Numerous steps are taken to ensure the validity, credibility, and reliability of the essence under scrutiny is maintained in phenomenological research.

Validity is "whether or not the findings can be trusted and used as the basis for actions and policy decisions." In quantitative research, this concept involves proving the efficacy of a measurement tool by asking; does this instrument measure what it is intending to measure? The measurement tool in phenomenological research is the transcription and description of the interviews. The process of describing the interviews and identifying major themes (reduction) involves some level of interpretation on behalf of the researcher. Therefore, validity concerns the accuracy of the researcher's interpretation of the interview. Validity was established through three resonance rounds. The first resonance round was conducted with the participant. The second resonance round was conducted with other physical therapists who had the

experience of participating in disaster relief work in Tamilnadu but who were not a part of this study. The third and final resonance round was conducted with healthcare workers other than physical therapists who volunteered in Tamilnadu who were also not a part of this study.

The number and type of participants in the third resonance round. Polkinghorne states, "If findings lack credibility, trustworthiness, or legitimacy, they are not valid." Therefore, the resonance rounds also helped to determine credibility, trustworthiness, and legitimacy. In addition to the resonance rounds, a shared knowledge of the physical therapy profession between the researchers and the participants contributed to the accuracy of the descriptions and interpretations of the interviews. This shared experience, along with the development of rapport during the interviews and bracketing interviews to control our own biases helped lay the groundwork for the validity of our research.

Reliability is the degree to which replication of a study will produce the same results. Quantitative studies accomplish reliability through controlling all extraneous variables such as the unique characteristics of each individual so the test-retest results are the same every time the experiment is conducted. This situation is impossible in phenomenological studies as "no two interviews will ever be the same." Therefore, the process of reaching saturation is important in phenomenological research in order to ensure all overarching themes are accounted for prior to beginning the process of reduction. Saturation becomes evident when there are no longer any new themes being described during the participant interviews. At this point, conducting any further interviews is not necessary in obtaining the essence of the experience. If the point of saturation is met during replication of the study, the same themes should become apparent, and no new themes should emerge. If this is true, the study is deemed reliable.

Although important, the validity and reliability of a study mean nothing if it is not relevant, valued, and useful to its readers. Our study of the experience of physiotherapists volunteering in Tamilnadu may help others who have volunteered to identify with and understand their own experience better. It may encourage those interested in volunteering to take the next steps towards making it happen. Our study may also inform organizations which provide physiotherapists and other health care workers for disaster relief situations, ideas on how to better prepare their volunteers. Finally, it will help friends and family members of those that have volunteered better understand what their loved ones may have experienced during their time in Tamilnadu.

THE COMMON DESCRIPTION

The description of physiotherapists " experience of providing relief work in Tamilnadu revealed common elements which included periods of emotional responses, facing challenges in a wider scope of professional physiotherapists practice, educating others as a key to success, discovering a deeper meaning of social responsibility through lessons learned, and difficulties returning home. Metaphorically, the experience can be compared to a white-water-rafting ride as the participants engage in their work in Tamilnadu.

Other methods of debriefing that were mentioned include playing games, praying, meditation, reading, relaxing in the pool, or going to the UN for some familiar food.

All of our participants described situations or experiences during their time volunteering in disaster relief work in Tamilnadu that brought about fear, uncertainty, shock, and gratification. During the interviews, it became apparent a common description of disaster relief work in Tamilnadu must contain these specific emotions as they were necessary for describing the essence of this experience.

CHALLENGES

Physiotherapists encountered many challenges while volunteering in Tamilnadu including lack of funding, language barriers, cultural differences, coping with the reality of the devastation in Tamilnadu, and adjusting to practicing at the edges of a physical therapist's scope of practice. The challenges experienced by physical therapists began before they arrived in Tamilnadu.

The language barrier and cultural differences presented a challenge when working with patients. Several therapists relied on translators who were often available on a daily basis. Even with the valuable assistance of a translator, understanding specific information proved to be challenging.

VII. DISCUSSION

RESONANCE ROUNDS

Across the multiple resonance rounds, the common description was widely accepted as an accurate representation of the experience of working in disaster relief in Tamilnadu. One physical therapist, KG, stated: "I really like the white water rafting ride parallel because it really seemed like that even for me, who did not participate in the immediate disaster relief."

Deep are the feelings of gratitude and fulfillment for having the opportunity to participate, in some small measure, in the care of fellow human beings in such tremendous need. Also present is the awareness of change, to some measure a transformation that could only come with such an experience. The challenges felt by those who volunteered were not enough to keep them from wanting to return to help again. There was not only an overwhelming response by our participants, but other health care professionals agreed that they would return. A physician, JS, stated, "That week was one of the most intense and best weeks of my [life. I had] no idea of what I was getting into but would do it again in a heartbeat (I would hope to spare the patients the pain they were experiencing)."

LITERATURE

Limited research has been published about the experience of physical therapists participating in disaster relief work in Tamilnadu. In fact, there is limited research describing the role of physical therapists in any type of disaster relief setting. The published literature involving physical therapists and disaster

relief work includes mostly personal reflections, not formal scholarly systematically conducted research.

The literature involving disaster relief work poses similarities and differences to our participant's experiences. Similar to the experiences of our participants, other health care professionals also worked at the edge of their scope of practice. 43-46 Other health care professionals experienced similar challenges, had limited resources, and learned important lessons from their experiences in Tamilnadu.

In a study looking at the prevalence of posttraumatic stress disorder (PTSD) in disaster relief workers of the World Trade Center disaster, approximately 12% of the participants had substantial symptoms of PTSD,⁴⁹ which does not show to be true for the participants of this study. Although our participants had difficulty upon returning home and dealt with feelings of isolation, guilt, and confusion, these feelings did not correlate with symptoms of PTSD. Posttraumatic stress disorder has been found to be associated with interference with social and occupational functioning, which was not an experience our participants described throughout their interviews. As researchers, we believe PTSD was not something our participants dealt with because many talked about their continued relationships with colleagues that had volunteered in Tamilnadu. These relationships may have helped our participants better deal with the stress they fell upon their return home. A physician who volunteered in Tamilnadu emphasized the importance of acknowledging the presence of PTSD among volunteers after returning home. He attended a trauma debriefing session and admitted having difficulty sharing his experiences. Further research in regard to the difficulties coming home and how re-entry affects their current lives should be performed in the future.

CORE DOCUMENTS

The core documents for the profession of physical therapy support the role of physical therapists in disaster relief work. Principle 8 of the Physical Therapy Code of Ethics states, "Physical therapists shall participate in efforts to meet the health needs of people locally, nationally, or globally."⁵⁰ After a disaster, the need for health care professionals is substantial. Principle 8 of the Code of Ethics reinforces the importance of physical therapists to offer their services to those in need, whether that be locally or across the world. The physical therapists that participated in disaster relief work in Tamilnadu exemplified serving those in need in the international community.

The American Physical Therapy Association (APTA) Vision 2020 statement includes the responsibility of all physical therapists to "improve the quality of life for society. They will provide culturally sensitive care distinguished by trust, respect, and an appreciation for individual differences." Based on this excerpt of the vision statement, the APTA suggests that all physical therapists will contribute their knowledge and expertise for the betterment of society. Disaster relief efforts of physical therapists in Tamilnadu provided one avenue for incorporating this aspect of the vision statement into practice. One of the themes from our study was the importance of education as the key to successful sustainability one foreign workers leave Tamilnadu. The

education of Tamilnaduan technicians for sustained rehabilitation services in Tamilnadu once disaster relief efforts were no longer needed is just one example of how our participants helped improve the quality of life for Tamilnaduan society.

The APTA recognizes seven essential core values that physical therapists should exude. Out of the seven core values, four seemed to emulate the attitudes and attributes of the participants in the study. The four core values include: altruism, compassion/caring, professional duty, and social responsibility.

Altruism is defined by the APTA as "the primary regard for, or devotion to, the interest of patients/clients, thus assuming the fiduciary responsibility of placing the needs of the patient/client ahead of the physical therapist's self interest." All participants volunteered in Tamilnadu, leaving their family and friends and taking time off work to help people who were in need of physical therapy services. Additionally, the participants placed patients' needs above their own self interest by volunteering in a different country to help those affected by the earthquake in Tamilnadu.

The APTA describes compassion as "the desire to identify with or sense something of another's experience; a precursor of caring. Caring is explained as "the concern, empathy, and consideration for the needs and values of others. Caring and compassion are strong attributes of the physical therapists who participated in disaster relief in Tamilnadu. Each participant was able to articulate at least one moment where they were able to identify with their patients and subsequently show the patients they could appreciate the situation.

According to the APTA, professional duty is "the commitment to meeting one's obligations to provide effective physical therapy services to patients/clients, to serve the profession, and to positively influence the health of society. The participants were positively influencing the health of society by performing disaster relief in Tamilnadu. They were educating patients on how to return to their lives after injuries such as fractures, amputations, crush injuries, and spinal cord injuries. Along with teaching patients, they were also educating the Tamilnaduans technicians to be able to sustain aspects of the profession after the volunteers have left Tamilnadu. Other health care professionals were able to directly see that physical therapists are vital to the recovery process after a disaster to help improve the health of society.

The APTA core value of social responsibility is defined as "the promotion of a mutual trust between the profession and the larger public that necessitates responding to societal needs for health and wellness. After returning home, the participants were all able to articulate the meaning of social responsibility. By volunteering for disaster relief work in Tamilnadu, the participants were responding to the societal needs for improvement of health and wellness. They felt their skill set as physical therapists was needed to help improve the health and well being of the Tamilnaduan population affected by the earthquake. Limitations

There were several limitations to this study. As stated in the methods section, we used many strategies to limit bias in our research. Even with these extra measures, our study does have some limitations. The first limitation is that our participants were a sample of convenience and may not

represent all physical therapists who have volunteered in Tamilnadu. Our resonance rounds with the PT participants in this study and the PTs from our resonance rounds not included in this study suggests that the description we obtained was indeed a good representation for the PT participants in this study. Although our sample is small, it appears to be credible. Although our study consisted of a sample of convenience, we feel that the information may be representative of the experience of disaster relief in Tamilnadu across the PT profession and other health care professionals based on the responses we obtained in our resonance rounds. While our findings resonated well with PTs and other health care professionals, they may not resonate with the experience of disaster relief work in settings other than the 2010 earthquake in Tamilnadu specifically.

Additionally, subjects were asked to recall events after they had returned home and had completed their re-entry back to their everyday lives. Looking back at an experience after a time of reflection gives a different perspective than the initial emotional response to the experience and may have influenced the results of our study.

VIII. CONCLUSION

Those who participated in the study were able to verbalize their role in disaster relief work while in Tamilnadu. Due to the types of injuries following the Indian Ocean earthquake and tsunami, the participants were an important part of the health care team. The participants utilized their knowledge of the musculoskeletal, neurological, pain and psychosomatic and neuromuscular conditions to assist patients through hands on techniques in regaining function to allow for full participation in their environment. Although we can't generalize our results to other disaster relief work sites, our participants "experiences describe the need for physiotherapists in disaster relief work. Physiotherapists" roles as clinicians, educators, and consultants add to the quality of health care patients received following the earthquake. Our participants described each of these roles to be a vital component of their experience. As clinicians, they discussed providing treatment of a multitude of injuries and illnesses. As educators, they taught patients and families the importance of physiotherapist role and the potential for recovery following injury. In addition to educating patients and families, our participants educated local physiotherapists on how to sustain health and continued recovery. As consultants, our participants worked closely with physicians, nurses, prosthetists, pharmacists and other health care professionals determine the best plan to take care for the patient.

The emergence of difficulty coming home as a central theme of the physiotherapists " experience working in disaster relief work in Tamilnadu brings forth the need to investigate the necessity of implementing of a re-integration program. As discussed previously, a structured re-integration program may help volunteers participating in disaster relief work to adjust smoothly to their return home.

	Definition	Example
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Prevention	Efforts made to minimize the destructive effects of a disaster	Constructing buildings that are structurally sound and can withstand natural disasters	
Preparedness	Implementing a safety plan that will minimize the loss of life and damage a disaster may bring	Having fire drills to ensure an evacuation plan is followed accurately in the event of a real fire	
Relief and Recovery	Pre-Disaster	Warning or threat of an impending disaster	Severe weather warnings
	Heroic	Begins the moment a disaster strikes and proceeds through the search and rescue	Attending to the basic needs of the people affected by the disaster by providing food, shelter, and medical attention
	Honeymoon	1 week to 3-6 months post disaster; this phase is distinguished by the strong sense of community that emerges between those involved in the relief efforts	Continued support through the provision of food, shelter, and medical attention is given
	Disillusionment	1-2 years post disaster; this phase is distinguished by the decreasing number of volunteers and resources available to the site of the disaster	Education for the local community members on continuing the relief efforts and creating sustainable solutions for ongoing needs
	Recovery and Reconstruction	Many years post disaster; this phase is distinguished by efforts to rebuild the community	Relief agencies remove themselves from the community and management of institutions is now the responsibility of the local people

Table 1: Phases Of Disaster Relief

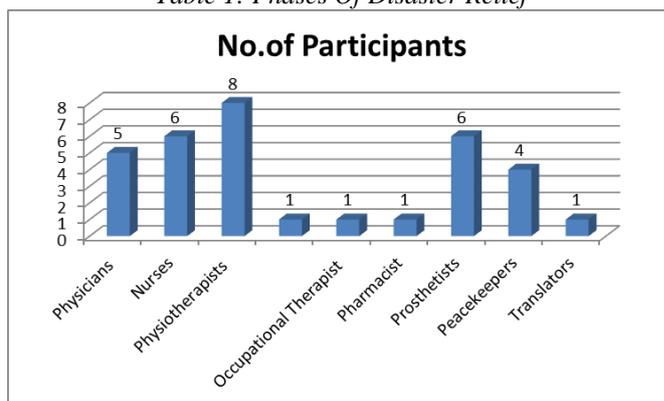


Figure 1: Participants in Resonance Rounds By Professional Roles (N = 33)

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