Being Both Helpers and Victims: Health Professionals' Experiences of Working During a Natural Disaster

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Abbreviations:
COR: Conservation of Resources
FMT: Foreign Medical Teams
PTSD: posttraumatic stress disorder

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Abstract

Background: In November 2013, the Haiyan typhoon hit parts of the Philippines. The typhoon caused severe damage to the medical facilities and many injuries and deaths. Health professionals have a crucial role in the immediate disaster response system, but knowledge of their experiences of working during and in the immediate aftermath of a natural disaster is limited.

Aim: The aim of this study was to explore health professionals' experiences of working during and in the immediate aftermath of a natural disaster.

Method: Eight health professionals were interviewed five months after the disaster. The interviews were analyzed using phenomenological hermeneutic methods.

Results: The main theme, being professional and survivor, described both positive and negative emotions and experiences from being both a helper, as part of the responding organization, and a victim, as part of the surviving but severely affected community. Sub-themes described feelings of strength and confidence, feelings of adjustment and acceptance, feelings of satisfaction, feelings of powerless and fear, feelings of guilt and shame, and feelings of loneliness.

Conclusion: Being a health professional during a natural disaster was a multi-faceted, powerful, and ambiguous experience of being part of the response system at the same time as being a survivor of the disaster. Personal values and altruistic motives as well as social aspects and stress-coping strategies to reach a balance between acceptance and control were important elements of the experience. Based on these findings, implications for disaster training and response strategies are suggested.

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Introduction

The Philippines, an archipelago country comprising over 7,000 islands with approximately 98 million inhabitants,[1] is one of the most disaster-prone countries in the world. Early in the morning of November 8, 2013, the super typhoon Hayian (locally called Yolanda) made landfall into the central parts of the Philippines. Approximately 14 million people lost their homes, 28,000 people were injured, and approximately 7,000 died in the disaster.[2,3] In Tacloban, the regional capital of the Leyte province, the typhoon caused an almost complete loss of electricity and a severely damaged infrastructure.[2,4] All medical facilities in the Tacloban area were severely affected or were non-functional after the typhoon had passed.[5]

Health in post-disaster settings is dependent on many factors, including pre-existing factors, the event itself, and the response.[6,7] Most often, health effects include both physical injures as well as psychosocial harm and should therefore be seen in a biopsychosocial health perspective.[8,9] Disaster responses aim to reverse adverse health effects caused by the event, decrease vulnerability, and increase the resilience of the population.[10] The first, and therefore vital, response to any disaster is the response from the local community, including rescue and health professionals.[11,12] During the early stages of the Haiyan disaster, the

Philippine health authorities requested international support.[5] Approximately 100 Foreign Medical Teams (FMTs) responded to the disaster during the first month after the typhoon.[13] Their roles were mainly to compensate for damaged medical facilities and infrastructures.[13] A few studies have commented on the interaction between local medical resources and FMTs, addressing issues of cultural awareness, civil and military coordination, competence, and personal preparations among the international staff.[14-16]

Rescue workers in general have shown an increased prevalence in psychological problems, including posttraumatic stress disorder (PTSD), compared with the general population.[17] However, little has been written about the experiences of the primary health professionals during disasters.[18-20] Studies on first responders working during the Katrina hurricane (2005; Gulf Coast, USA) described their experiences as surreal,[21] with feelings of uncertainly and frustration but also exhilaration.[22] Role conflicts between personal and professional obligations also were reported.[23] Both organizational and personal factors have shown to be of importance for preventing mental health problems among operational staff deployed in emergencies.[24] Organizational factors of importance are leadership, stress-management training, social climate, level of training, and expressions of appreciation and acknowledgement.[24] Previous traumatic experiences, personal losses, and role conflicts have been identified as risk factors in an individual perspective.[24] Today, there is no consensus on how to support operational personnel after potentially traumatic events. Evidence-based strategies for crisis support in general also are recommended for professionals.[25,26] In particular, social support from colleagues and supervisors seems to be of importance for helping to balance negative experiences.[27] Several studies also have addressed the question on disaster competences, but no general consensus has been reached.[28]

There are many theories of stress and coping, including the transactional model of stress and coping described by Lazarus and Folkman,[29,30] later developed by Bonanno as the regulatory flexibility model.[31] These models focus on stress appraisal as a cognitive process with emotional regulation related to this process. In the regulatory flexibility model, a feedback system is central for the individual in order to modify the emotional regulation and coping strategy used.[31] Another approach is the Conservation of Resources (COR) theory.[32] The COR theory is a motivational theory describing how the individual strives to protect personal values and to compensate for losses of such values caused by traumatic events.[3] In this report, elements from both these perspectives will be used in addition to the concept of resilience. Resilience is a dynamic process, traditionally described as "to bounce back" after a stressful displacement.[33] Most people, including individuals who are seen as resilient, experience some levels of distress related to a stressful event,[34,35] but they generally do not get hampered by their stress reactions in their ability to function. Therefore, resilience can be seen as a "healthy" adaption to a traumatic event.[36]

The health care system is an important resource for promoting health after a disaster and it is highly dependent on the people deployed within it. In order to prepare and respond adequately, knowledge of primary professional responders' experiences and needs during and immediately after a disaster is essential. Therefore, this study aimed to explore health professionals' experiences of working during and in the immediate aftermath of a natural disaster.

Methods

An explorative, qualitative study using phenomenological hermeneutical method[37] was used. The data collection was performed in the Tacloban area of the Philippines, five months after the typhoon. Inclusion criteria were that the participants should have been 18 years or over and been working as a health professional (medical doctor, nurse, or paramedic) during and in the immediate aftermath of the Haiyan typhoon. The ability to communicate in English (an official language in the Philippines) also was a requirement. A modified snowball sample[38] was used, in which a participant or a supervisor in a hospital department proposed, based on personal knowledge, potential candidates to the researcher. When a potential participant was identified, written study information was given by the researcher, and if the person volunteered to participate in the study, a letter of consent was approved before the interview. No personal data such as name, exact age, or exact professional position were recorded.

Eight individual interviews were conducted. The characteristics of the participants can be seen in Table 1. The participants were employed by either governmental, city-owned, or private hospitals, or by the regional office of Department of Health (Manila, Philippines). All interviews were conducted by the head investigator (KH) in or nearby the participant's workplace, as requested by the participant. The interviews were held in a colleague-to-colleague way, and an interview guide (Table 2) was used to support the interviewer with asking questions that stimulated a more exploring, deep interview.[37] The first and the last questions from the interview guide were used in all interviews as starting and ending questions, but apart from that, the use of the questions in the guide varied widely depending on the progress of the interview.

The interviews lasted for 20 to 90 minutes and were audio recorded. One of the interviews was interrupted because of an emergency situation and completed a few hours later. After the interviews, the interviewer (KH) wrote field notes[37] on personal reflections and impressions which occurred during the interview. The field notes were used later when formulating the naïve understanding and to validate and contribute to the comprehensive understanding[37] (Figure 1).

All interviews were transcribed verbatim and analyzed by a phenomenological hermeneutic approach, as described by Lindseth and Norberg.[37] Phenomenological hermeneutic studies aim to capture the essence of the lived world experience[37] and are based on the philosophy and epistemology of Paul Ricour.[39] One core value for Ricour was that interpretation of texts means moving beyond understanding what the text says, to understand what it talks about.[40] The meaning of the texts, as well as metaphors and manifest information, must be understood and the pre-understanding and context of the study are implicit and are therefore an important tool for reaching a deeper understanding of the text.[40,41] It is not the experience itself, but the meaning of it, that can be transferred from private experiences to public knowledge.[41] Ricour also held that the interpretations and understanding of something is a constantly developing process, while the "truth" might change over time.[40]

Data analysis was conducted by the head researcher (KH), supervised by the co-authors, all who had access to the verbatim written texts. The analysis started with a naïve reading,[37] where the whole text and field notes were read through several times to gain a general understanding of the phenomena studied. When a naïve understanding had been formulated, a structural analysis[37]

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Profession	Gender	Age[a]
Medical Doctor	Two Male, Two Female	30-50 years
Nurse	Two Male, One Female	20-50 years
Paramedic	One Male	20 years

Table 1. Characteristics of Participants

[a] If exact age was not spontaneously mentioned during the interview, age was estimated by the interviewer.

1. Where were you when Yolanda came? a. What was the main concern for you at that time? b. What were the challenges for you? c. What did you do at that time? d. What was important to you? Why?
2. If you would give any advice to anyone who should be in the same situation as you, in any other disaster, what would that be? a. Can you give any example? b. Why is that important?
3. Do you have any more comments or thought that you want to share?

Table 2. Interview Guide

was performed. First, meaningful units were identified and marked. The meanings units were thereafter condensed by re-writing their essential meaning in "everyday words," formulated as concisely as possible. The condensed units were sorted into sub-themes and themes which were reflected upon in relation to the naïve understanding. The truthfulness in phenomenological hermeneutic methods depends on a coherence between the parts and the wholeness,[37] and therefore, the process of comparing the structural and naïve analysis was repeated until the naïve understanding and the structural analysis validated each other and did not exclude any data.[37] In the last step, a comprehensive understanding[37] was formulated by reading the whole text and the themes from the structural analysis and reflecting on them in relation to the text, field notes, literature, theories, and the context of the study[37] (Figure 1). Pre-understanding and the context of the research was seen as a useful tool for reaching a deeper understanding of the lived experience studied and its meaning.[37,41] The head researcher (KH) had experiences from working in several disaster situations, including the disaster studied, although in the Haiyan typhoon this was not as part of the health response. This experience was used to deepen the analysis of the texts and for formulating naïve and comprehensive understanding. By monitoring the analysis process and results in relation to the original texts, literature, experiences, and theories, the co-authors (MG, AA, and PO) contributed to an objective structural analysis and the formulation of a comprehensive understanding.[37] The study was approved by the National Ethical Committee of the Philippines (Taguig, Philippines), approval NEC code 2014-005-Hugelius-DRB. Guidelines for research involving disaster-affected populations[42] were followed and arrangements for psychosocial support were available if such a need would have been desired by any participant.

Results

The analysis of the interviews is presented as a naïve understanding followed by a structural analysis showing one main theme, two themes, and six sub-themes. After that, the comprehensive understanding of the results is presented.

Naïve Understanding

The experience of being and working as a health professional during and after a natural disaster was described in the context of contrasts, sometimes involving emotional conflicts. The health professionals had high expectations for themselves to be strong and to be able to help others at the same time as they themselves felt lonely, scared, and out of control. Moral conflicts occurred then they were torn between worries about their own safety and their families' wellbeing, at the same time as they felt a strong will and pride to serve the community and people in need of their services. Feelings of not being able to do enough or not having enough information distressed the staff. All health professionals said that they worked very hard and for a long time. Being flexible and being able to improvise was important in managing the situation. Support from authorities and foreign relief teams was described as both a relief and a disappointment.

Structural Analysis

The structural analysis of 166 quotations resulted in one main theme *(being professional and survivor)*, two themes *(being a helper and being a victim)*, and six sub-themes (Table 3).

The main theme, *being professional and survivor*, described both positive and negative emotions and experiences from being both a helper, as part of the responding organization, and a victim, as part of the surviving but severely affected community, at the same time. The experiences were ongoing and integrated, meaning that experiences from the themes and sub-themes were sometimes simultaneously experienced.

Being a Helper

In the theme being a helper, which consisted from positively associated emotions to the meaning of being a health professional, three sub-themes emerged.

Feeling Strength and Confidence—Feelings of being strengthened by professional pride emerged from fulfilling one's own and others' expectations. The importance of not only relying on theoretical knowledge, but also on one's own capacity to cope and manage the situation, was emphasized. To convince or remind oneself of being confident was mentioned as an important coping strategy. To convey safety and trust by staying strong and stable was important:

> "You must encourage people around, even if you don't have any courage yourself. You must think clear and calm. And when you do, you will find strength inside yourself."

The health professionals also expressed pride in helping others and pride in being a medical professional contributing the community in a severe situation:

> "I was telling myself, 'those things are important,' but then you realize what really matters. That makes it easier."

The situation itself made the professionals see life values more clearly, and that insight strengthened them when they were guided by their inner values. The participants also described

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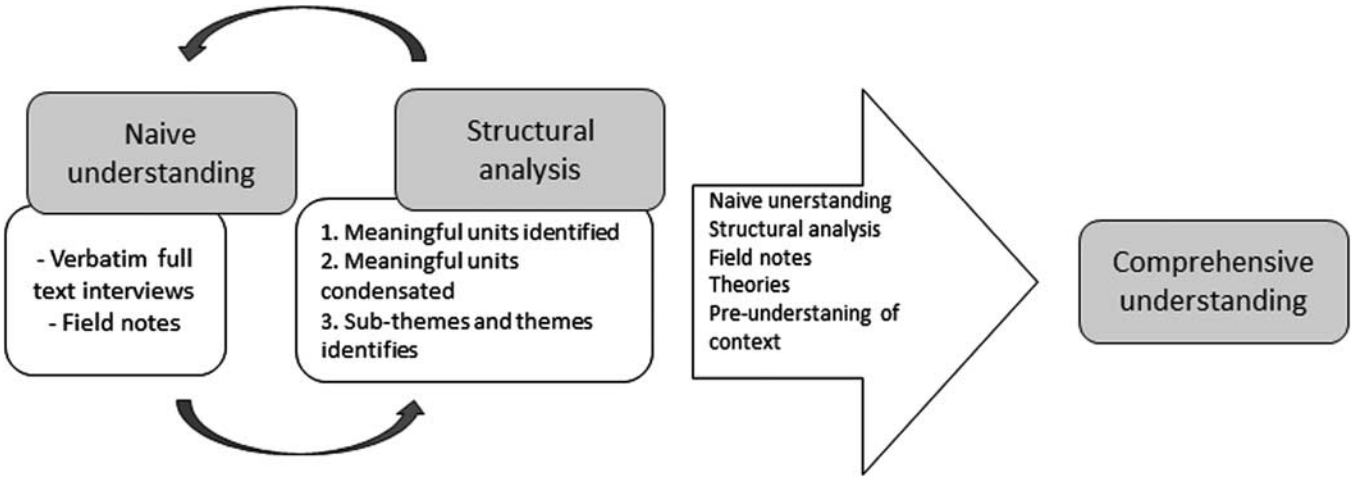

Figure 1. Overview of Analysis Process of Phenomenological Hermeneutic Methodology According to Lindseth and Norberg 2004.[37]

Being Professional and Survivor	
Being a Helper	**Being a Victim**
Feeling strength and confidence.	Feeling powerless and fear.
Feeling adjustment and acceptance.	Feeling guilt and shame.
Feeling satisfaction.	Feeling lonely.

Table 3. Results of the Structural Analysis

that being inside the "hospital-bubble" isolated them from external events and made it easier to repress negative feelings and thoughts.

Feeling Adjustment and Acceptance—By reaching a state in which the person stopped trying to control the uncontrollable situation, a feeling of acceptance emerged. That feeling made the person start to adapt their way of working, for example adjusting their way of working. This new adjusted way of working was based on flexibility and the acceptance that normal rules were not so relevant in this situation. For example, nurses had to perform traditional medical doctors' procedures, like suturing, and surgical procedures such as Caesarian sections, which were performed by the light of a mobile telephone:

> "You must realize that you cannot control…you must follow."
>
> "So, at the time, you could not tell who the nurses were and who were the doctors, because everyone was helping. Even nurses, even cleaning staff, they were helping us. She [a nurse- author's note] won't normally suture patients, like lacerated wounds…."

When the person no longer tried to control or to work according to books or normal routines, a clear insight, which created a sense of control and calmness inside the person, occurred.

Feeling Satisfaction—The feeling of being satisfied was empowered by a sense of altruism, a positive sense of helping another person in need and not expecting anything back. That feeling confirmed or reinforced a professional positive identity of being a helper:

> "They could see it. When they were doing PSP [psychological support- author's note], they could see the change in… in the personality of the… the person, and it made them feel good. It made them feel better that, instead of being just a victim, we are a helper."

Being a Victim

In the theme being a victim, three sub-themes emerged describing negative emotions related to being a health professional during the disaster.

Feeling Powerless and Fear—Feelings of not being able to control the situation and being scared were strong feelings which affected the health professionals. Some had experienced moments when they themselves had feared dying. Some also described feelings of being cheated by the situation itself, meaning that even if they had prepared their very best, the force of the typhoon and the feelings of being a victim themselves surprised them and cheated them:

> "We were helpless, also."
>
> "I was scared for my life, actually, even if I was inside…."
>
> "You must realize…these are powers…strong powers… [silence]. You can be prepared but you have no idea what to be prepared for. Therefore, I say, you should trust yourself. Be prepared is illusion. Yes. Illusion."

Additionally, the reconsideration of life values could contribute to the feeling of being disappointed with life and losing control and confidence.

Being inside the hospital, the medical personnel felt that they had no control of what was happening around them outside the hospital. They were unable to inform their patients or give them support when they themselves did not know what was happening and felt in need of help themselves.

Feeling Guilt and Shame—Feelings of guilt were commonly expressed. The guilt had different courses, sometimes in conflict

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with each other. All participants described guilt for leaving their families, while at the same time, feeling a moral obligation to serve patients or the community in need of their help. Being torn between these interests created emotions of guilt and shame. Also, feelings of not being able to do enough and to have to prioritize or refuse people also created feelings of shame. Guilt towards one's own needs also was expressed, meaning that the professionals knew their responsibility to take care of themselves in order to enhance their own endurance and resistance to distress. When they realized that they felt bad after the disaster, they felt guilt:

> "I told my wife that I cannot go [to evacuate- author's note], because I…I'm the trained one for disaster management and it would have been, you know, bad for me as…as the chairman of disaster management, as if I'm running away from my obligation. I made a pledge, and I had my word. People would not believe me next time. So, even if she was crying, I had to stay."

> "When the wind subsided, there were a lot of patients coming here. But first we refused to accept them. We refused...(emotional)."

Feeling Lonely—The health professionals lost colleagues, friends, and family members in the disaster. Some participants stated that at the same time as they were taking care of others and providing psychosocial support to patients, they themselves were mourning. Feelings of being lonely, both as a human and as a health professionals, were described. The feeling of being lonely was reinforced by a feeling of being isolated from society outside the hospital. Sometimes, the health professionals felt that they could not trust themselves and their coping ability, and that created a feeling of sadness and loneliness:

> "It was the saddest part of my life, because that's the turning point of everything. When you realize that money is nothing. Really this is you, yourself, and your family. Your God…But you are alone."

> "How… how effective are they in the… the cost/benefit ratio? Because I noticed that several organizations are competing to give relief. Why? Because they want the attention of the donor."

Experiences of external help, especially from international relief teams, were ambiguous. The health professionals expressed doubts about FMTs' motives for coming, at the same time as they were thankful and admired them for their will and efforts to come and help. Although, the health professionals were disappointed when promised or expected support did not arrive, or when they felt ignored as individuals or as professional colleagues. This increased the feelings of being left alone and that no one could actually help or even share their situation.

Comprehensive Understanding

The meaning of being a health professional deployed during a natural disaster was a complex, powerful, and ambiguous experience of being part of the response system at the same time as being a survivor of the disaster.

The positive outcome of feeling confident and strong can be understood as a state that appears if a person feels confident to master the demands rather than to appraise them as a threat,[29] or as an investment of personal resources to cope a challenging stuation.[32] Among the health professionals, personal convictions and altruist motives influenced these processes both positively and negatively. Feelings of being part of a community or a system are essential for maintaining resilience,[32,36] and social interactions also are important for the individual appraisal and feedback process of regulatory strategies.[31] When feeling isolated both as professionals, not getting enough acknowledgment for their efforts, or their personal needs from authorities, the community or FMTs, neither being part of the survivors' community, a strong and potent feeling of abandonment and loneliness occurred. Moral conflicts of being torn between professional and private obligations and responsibilities occurred.

The health professionals also expressed feelings of lack of control, being helpless, and how they endeavored to establish a sense of control. Acceptance is an important component in fostering resilience in stressful and life-changing situations,[36] and the adjustment required to reach a state of acceptance when not being in control, as described by the health professionals, can be understood as a way of adjusting regulatory strategies to a more realistic appraisal,[31,36] a process dependent on personality, social relations, and personal experiences.[30,43,44]

The individual perception of the situation,[29,30,32,43,44] as well as individual core values and resource losses,[32] were central to create the meaning of being a health profession during a disaster.

Discussion

To work as a health professional during a natural disaster is highly challenging. This study has shown the complexity of the meaning of being both a victim, a survivor, and a part of a response system at the same time.

A disaster always compromises the functional status of a societal system and actions are needed in order for the society to become fully functional again. The health care system and its adaptive capacity is essential for promoting health, and the ability to adapt is closely related to the adaptive capacity of its staff.[45] In order to plan for good functioning of a health care system in a post-disaster setting, understanding of the complexity and meaning of the role of being a health professional is of importance.

It can be concluded that personal values contributed to moral conflicts and feelings of guilt and shame found in this study. The altruistic elements present in the theme *being a helper* contributed to a positive existential meaning for the health professionals. This could be seen as an investment to strengthen central values of a positive sense of self as a helping person.[32] Previous studies have described that helping others after disasters has been positively associated with wellbeing.[46] Focusing on personal values, such as an altruistic motive, has been found to buffer stress and contribute to resilience.[36] At the same time, the altruistic desire to help also generated guilt and shame when it was not possible to fulfil moral or idealistic expectations. The altruistic mechanisms in the sense of being a health professional during a disaster can therefore be both seen as a protective and a burdening element.

This study supports the idea that disaster training and planning should not only focus on medical performances, such as triage or organizational aspects as command systems, but also should cover personal and psychological aspects of being a health professional in disasters,[47] such as strategies to support adequate adjusting regulatory strategies. In order to avoid resignation, the re-appraisal process must include finding a positive or neutral meaning in the situation.[36] With reference to the transactional model, the perception of control and clarity is essential,[43] and to discuss the

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extent to which a severe crisis situation can actually be controlled and the personal meaning of being in such a situation can possibly contribute to an increased personal preparedness.

Loneliness, a feeling strongly expressed in this study, can be a result of physical losses, but also a psychological or existential dimension which appears despite actual circumstances. The buffering effects of social relations and social support is essential for promoting recovery and resilience after traumatic events.[26,36,48] In order to reduce feelings of loneliness among health professionals, awareness of the problem, as well as practical strategies, must be identified. Disaster radio, a temporary radio station which broadcasts specific disaster information and music in disaster affected areas, has been shown to reduce feelings of loneliness and isolation among disaster survivors.[49] To use disaster radio in and nearby medical facilitates might be a useful tool to decrease such feelings, also among health professionals.

Despite good intentions, meeting with FMTs raised ambiguous feelings among the participants in this study. Feelings of being abandoned by agencies who were expected to provide support indicate either false expectations from the health professionals or a potential for increased acknowledgement and response from the agencies. In order to organize aid with maximum benefit for the recipients, the context in which aid is delivered must be understood.[47] A disaster normally occurs before the arrival of FMTs and the burden normally lasts long after they have left. This study can contribute to an increased awareness of primary health professionals' situations and needs when planning for and using international medical response in disasters. Further research on the interaction between primary, local professionals and responding disaster organizations is needed to understand these processes and to increase the effectiveness of the overall response.

This study has shown that the meaning of being a health professional during a disaster involves both positive and negative experiences. There are still gaps in the knowledge about experiences and needs of operational personnel during disasters, as well as strategies to reduce negative elements such as guilt, shame, and helplessness found in this study. The relationship between the lived experience, training, and contingency planning also is worthy of further research.

Methodological Limitations

The validity of a qualitative study depends upon a detailed description of the research process and analysis of the data.[50] In this study, the sample included both male and female participants with different employers and different professions in order to acquire a wide-range of experiences.[50] The study is not intended to give a general description of all disaster-affected populations or disasters, but rather to contribute to the knowledge which may be applicable to similar situations.[12,51]

The time perspective is essential when conducting disaster studies.[10] Because of practical circumstances and to reduce the risk of interrupting the acute response and recovery phase,[52] the interviews were conducted approximately five months after the disaster. Previous studies have shown that the time elapsed after a disaster event has a limited impact on survivors' memories and experiences expressed in research.[53] The impression received during the interviews and analysis was that the participants did remember and were able to express their experiences of the acute phase very well. It is possible that the time passed since the event had allowed time for reflection, which led to more insightful interviews.

The use of an interview guide when conducting narrative interviews can be questioned. In this study, the guide served as inspiration and support for the interviewer rather than a traditional interview guide, and only the first and the last questions were used in all interviews. To validate the interpretations of the texts, the naïve understanding and the structural analysis challenged each other until a coherent result emerged.[37] Also, the authors' pre-understanding of the context and literature and theories contributed to a deeper understanding of the meaning of the texts.[37,41]

Conclusions and Clinical Implications

Being a health professional during a natural disaster was described as a complex, powerful, and ambiguous experience of being part of the response system at the same time as being a survivor of the disaster. Personal values and altruistic motives as well as the individual perception, social aspects, and regulatory strategies to reach a balance between acceptance and control were important elements of the meaning.

In order to maintain an optimally functioning health care system during and after a disaster, health professionals have a central role. To prepare health professionals for the demanding situation of being in a natural disaster, disaster medicine training needs to include aspects of the meaning of being in such a situation. Also, health professionals' specific needs, both as professionals and as survivors, must be taken into consideration when preparing for and responding to disasters, for example as FMTs.

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