



Nurses' Needs and Expectations after Natural Disasters Trauma Based on Values and Culture

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Abstract. Background: Disasters can happen anywhere and causes trauma for human, including nurses. This study aimed to identify the needs and expectations of nurses who experience trauma after natural disasters based on values and culture.

Materials and methods: A qualitative research design with phenomenological approach. The study included 37 practicing nurses who had experienced and survived a natural disaster. The data collection instrument was an interview guide to identify themes concerning the experience, needs, and hopes of survivor nurses via in-depth interviews. Data analysis involved the commonly used Colaizzi analysis to determine the themes.

Results: Most participants experienced post-traumatic stress syndrome after a disaster, characterized by fear, anxiety, and helplessness. Between the occurrence of the disaster and the time of the study, participants' relationships with God and those who experienced the same suffering deepened, and the need to help each other was based on self-awareness, motivation, and interdependence.

Conclusions: Natural disasters cause trauma to everyone who experiences them, especially those who suffer great loss. Cultural and spiritual factors become an important intervention of post-traumatic stress syndrome.

Keywords: cultural, disaster, nursing, post-traumatic stress syndrome, spiritual.

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INTRODUCTION

A disaster is a calamitous event, often occurring suddenly, causing great loss of life, damage, or hardship which severely disrupts the functioning of a community or society (Ha, 2016; Kelman, 2019) and caused damage, loss, and death (Brown et al., 2018). Indonesia is a developing country with an archipelago and mountains and has a large population, 237 million as of 2010. The country is spread over 17,504 islands, of which 7,870 are populated and 9,634 are unpopulated (Sriyono et al., 2020). Two-thirds of Indonesian territory consists of sea, and the country is located between the Eurasian/South East Asian, Philippines, Pacific, and Indo-Australian lithospheric plates, which leaves it vulnerable to volcanic eruptions, earthquakes, and tsunamis (Zakki et al., 2018).

According to surveillance conducted by the Ministry of Health Centre for Crisis Response, there was a three to four fold increase in the number of disasters that occurred between 2006 and 2008 (Brown et al., 2018). The increase in the number of disasters led to unpleasant experiences, including loss through environmental damage and infrastructure, resulting in loss of life and individuals', families', and communities' inability to use resources (Brooks et al., 2019; Harris et al., 2018; Sriyono et al., 2020). Loss involves deviation from what was present prior to the disaster (Becker et al., 2017); it occurs either abruptly or continuously, is difficult to predict, and could create unpleasant and unforgettable experiences that give rise to trauma (Hamiel et al., 2013; Ritchie et al., 2014). A preliminary study conducted in Yogyakarta and Padang in 2009 showed that early psychological responses to loss and grief included helplessness, shock, and disbelief, which manifested as guilt and sleep problems (Mustikasari et al., 2018). The completion of grief resulting from loss takes between 1 and 3 months (Chong & Chang, 2018). The experience of prolonged grief could cause chronic stress that renders the individual incapable of decision-making and self-control with respect to the event that was experienced (Gupta, 2013; Schechter & Cevdet Tosyali, 2013) and causes trauma (Bulut, 2018). Trauma is a serious problem and lead to post-traumatic stress syndrome (PTSS), which is an ongoing response to an extremely traumatic event (Kinzie, 2015).

In a mental health nursing study, which was conducted by one of the authors during 2011 and 2012, a psychological adaptation model for nurses experiencing PTSS following natural disasters was examined.

The study found guilt was the main dominant emotion four years subsequent to the disaster. The guilt was rooted in a conflict of ethics and negligence concerning moral principles when nurses were faced with a choice as to whether to save themselves or others, and role conflict between helping others and saving themselves and their own families resulted in interdependence and a reduced ability to fulfil their roles. One of the treatments offered to address this problem involved self-help groups (Harris et al., 2018).

This study, however, had yet to explore the ability of nurses shaped by years as individuals with their behaviour and life infused by the cultural and spiritual aspects they believed and conducted. A study previously stated that nurses' experience with PTSS following the Aceh earthquake and tsunami revealed that faith in God's might increase their power and ability to help (Brown et al., 2018). This study aimed to reduce the occurrence of PTSS in nurses using a disaster nursing model based on cultural and spiritual factors.

MATERIALS AND METHODS

A qualitative study with phenomenological approach was utilized to elaborate on the meaning and significance of the experience, needs, and hopes of nurses who had survived a natural disaster, according to their values, culture, and beliefs (Alizadeh & Sharifi, 2020; Mosavi et al., 2014). The research was conducted in Yogyakarta, North Sulawesi, East Java and West Sumatra for three months. The study had ethical approval from Faculty of Nursing, Universitas Indonesia. The participants were 37 practicing nurses who had experienced and survived a natural disaster with criteria were as follows: a) membership of a nursing professional organization; b) presence at the disaster site during a disaster; c) disaster survival; d) experience of loss (e.g., a damaged house or loss of wealth); e) experience of grief (the time required to reach acceptance normally ranges from 2 to 3 years depending on the factors leading to the loss of a loved one); f) experience of the main symptoms of PTSS, including anxiety, terror, excessive fear, and helplessness.

The data collection instrument was an interview guide developed in a previous study conducted by one of the authors, which involved the development of a mental health nursing psychosocial model for nurses experiencing post-disaster PTSS. Open and closed interviews, interview recording, and interview transcripts were used to ensure the accuracy of the data. In addition, field notes were made to elaborate on the phenomenon accurately and comprehensively. Demographic information was analyzed with simple statistical analysis. Data analysis involved the Colaizzi analysis. This research had received ethical approval from Ethical commission from Faculty of Nursing, Universitas Indonesia.

RESULTS

This study was conducted to test a disaster nursing model of psychological adaptation to reduce the occurrence of post-traumatic stress syndrome (PTSS) in nurse survivors post-earthquake disaster. Through the course of the study, the authors were able to identify themes as well as confirm the usability of the model to reduce PTSS. The results of the analysis of data from 37 participants from four provinces showed that most held nursing diplomas and some worked in healthcare facilities (hospitals and primary healthcare facilities). Participants experienced physical, psychological, and spiritual reactions, such as panic attacks, anxiety, fear, feeling faint, and praying, when remembering an event that had occurred more than two years previously. Participants also felt sad and helpless when remembering the event.

Physical Responses

Natural disasters that had occurred in Indonesia were identified in three locations, there were the flood disaster in Situbondo, East Java and volcano eruptions in northern Sulawesi and the Kelud mountain in Kediri, East Java. In several interviews it was found several physical responses that were shown by every nurse who experienced a disaster directly at the location or the physical response that was felt after being given the task as a volunteer. The physical response felt by individuals directly affected was a form of body response when panic occurred, which was running around, trying to save family and valuables, trembling, heart palpitations and many screams for mutual assistance.

"I was cooking at that time, then suddenly there was information from outside, screaming that a mountain had erupted, I immediately turned off the stove and immediately went out ..."

"... must be trembling and scared, I ran out of the house. In front of the house, there were already many people, the ash and rocks from the eruption of the mountain made the air very dark ..."

"I was trembling so much, it felt like my heart was going to break. Even though there was a warning from BNPB, still my legs felt shaking and my breathing was fast. "

The volunteer nurses who did not experience the disaster directly also felt the impact that occurred at the disaster site due to getting stories from the community.

"Floods there often occur, but yesterday was very large. Residents there say it's normal, no one is surprised because it will happen every heavy rainy season "

"There are some people who say there are still some people who fainted, especially those whose children were drowned by the water ..."

"... some are even very sad because the collected objects are damaged by the flood"

Psychological Responses

All people who were in the phase of a disaster impact were certainly very scared and it caused deep trauma. In disasters that did not cause major damage and death, the fear response level was felt to be lower than natural disasters such as volcanoes or earthquakes.

"Even though I didn't feel it right away, some parents told me that the Mount Kelud eruption had a level of vigilance of more than one week. Many are anxious and displaced. "

"I was very scared, I ran out of the house in a panic while carrying my child ..."

"If there was no prolonged trauma, there was only a mother who fainted because her child was dragged by the water during a big flood."

Spiritual Reactions

Spiritual reaction to the community showed that there were those who accept with ordinary feelings and feel that this was a rebuke from God.

"The name of the disaster can be a warning from God, Miss, we cannot refuse ..."

"This could be a warning for us to improve our lives so far."

"Remain grateful, even though many things are broken and lost, God still provides salvation."

"I am just grateful and accepting, because Indonesia does have very many natural disasters."

Post-traumatic Stress Syndrome and Intervention

There were a number of people in locations affected by natural disasters who had experienced trauma due to extensive damage and loss of goods that they had gathered over the years. There were some women who were drawn into sadness because their children died during disasters and there were some who panicked because of being their first time in a disaster situation.

"From yesterday's grandfather's story when I gave a statement saying that his family lost his house, his house collapsed due to strong wind when it rained ..."

"I tried to invite a mother whose child was dragged by water, she just shut up and cried, then I talked to her family."

"Natural disasters have often occurred, the impacts are also many, but, yes, I am still prepared to get a call as a trauma post disaster volunteer."

The response to disasters felt by the community requires intervention from nurses during the resilience and reconstruction phase of the disaster, many victims need immediate action so that PTSS does not develop into mental health disorders.

"I was there to provide counseling and teach the community to be independent and alert in any disaster that occurred."

"There is a miss, my colleague, who is an expert in mental health therapy that intervenes in individuals who begin to show symptoms of withdrawal, prolonged sadness and excessive panic."

DISCUSSION

Post-traumatic Stress syndrome (PTSS)

The grieving and loss observed in participants, seeing their response, had passed the limit of loss and 'normal' grieving. The length of grieving following loss varies due to numerous factors. It may take months to years to reach complete closure following loss and grief (Malloy et al., 2011; Veenema et al., 2017). It is, however, viewed as a sign of resilience if the grieving individual shows positive feelings six months after a loss (Imamura et al., 2019). Prolonged grief could lead to chronic stress, which renders the individual incapable of making decisions and controlling themselves with respect to the event experienced (Brooks et al., 2019), leading to trauma fatigue (Liaw et al., 2011). Trauma involves extreme shock, which is characterized by defensiveness and loss of bodily function. Prolonged trauma has been shown to cause PTSS, which is an ongoing response to an extremely traumatic event (Alizadeh & Sharifi, 2020). This finding was supported by previous research which found that PTSS resulting from chronic stress could develop because of trauma. The main symptoms of PTSS include anxiety, terror, excessive fear, and helplessness (Lokker et al., 2015), and PTSS was found to occur when two of the main symptoms were observed within

6–24 months of the natural disaster (Alidoost & Safari, 2020). PTSS occurs because of the individual's inability to use coping mechanisms to overcome the unpleasant experience resulting from a disaster; problem solving (optimism) and coping are highly influential factors in post-trauma development, while supervision of the use of various coping approaches is influential in the post-trauma recovery phase. The factors influencing PTSS occurrence were age, sex, and education, while the presence of different categories of PTSS depended on the extent of the survivor's depression, trauma related to the loss of life, and psychosocial disorder resulting from extreme stress (Gupta, 2013; Sriyono et al., 2020).

In disaster settings, nurses could be victims in addition to helping others. This is because they have a strong drive to help others, and the nursing workforce is in direct contact with patients and the community. Nurses are bound to adhere to a professional code of ethics, including the altruism principle, which states that they should always serve the community, and the beneficence principle, which involves making the best decision in favor of the community, while other survivors focus only on saving themselves and their loved ones (Handayani & Mustikasari, 2018). If seen from one of the disaster events not all disasters are large-scale, but, because it happens repeatedly, it may result in psychological problems in nurses, such as anxiety, fear and eventually trauma (Shen, 2015). The trauma is exacerbated by clear and detailed descriptions of disasters in the electronic media, such as the Aceh earthquake and tsunami and the earthquake in Yogyakarta, Tasikmalaya, and Padang, which demolished buildings and killed numerous people,

Nurses also need help from others to enable them to help the community. This refers to the basic principle of "nurses caring for nurses caring for clients."

Disaster Nursing Model based on Cultural and Spiritual Factors

Factors between the occurrence of the disaster and the time of the study showed that participants' relationships with God and those who had experienced the same suffering had deepened, and the need to help each other was based on self-awareness, motivation, and interdependence (Harris et al., 2018; Mustikasari et al., 2018). Interdependence involves an individual's relationships with other people in a group because of their involvement in the group and emphasizes empathy, respect, affection, caring in social relationships. Success in treating nurses experiencing PTSS involved changing cognitive function through individual therapy based on cultural and spiritual factors, via which they improved their own capability (Handayani & Mustikasari, 2018). The use of a self-help group proved useful. Self-help groups aim to provide social support and allow members to share their experiences, discuss their psychosocial needs and possible solutions, and improve their coping abilities. The togetherness experienced in self-help groups exerts a therapeutic effect on nurses. Interventions that involve psychosocial support constitute a primary preventive strategy that can be implemented by family, friends, and the community to facilitate support for nurses (Becker et al., 2017; Brooks et al., 2019). The feelings of togetherness and closeness experienced in the self-help group exerted a therapeutic effect on nurses, because they shared cultural factors and spiritual beliefs that had been established and developed for years. The study recommends the development of a disaster nursing model based on cultural and spiritual factors, which are the foundation of nurses' thought processes, and to increase their ability to improve their own self-awareness analysis, communication, intrinsic motivation, and interaction.

CONCLUSIONS

Natural disasters produce trauma to everyone who experiences them, especially those who suffer great loss, including nurses. Cultural and spiritual factors become an important element for intervention of post-traumatic stress syndrome.

CONFLICT OF INTEREST

The authors declare that there is no conflict of interest in this article

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