LIVED EXPERIENCE OF NURSES IN CARING FOR PERSONS WITH OUT-OF-HOSPITAL CARDIAC ARREST IN RURAL AREAS OF EAST JAVA INDONESIA: A PHENOMENOLOGICAL STUDY

Janes Jainurakhma¹, Mochamad Soleh², Ni Luh Diah Ayu Sita Dewi¹, Ika Yuli Astuti³

¹Emergency Nursing Department, Sekolah Tinggi Ilmu Kesehatan Kepanjen, Indonesia
²Community Health Nursing of PUSKESMAS Kepohbaru Bojonegoro, Indonesia
³Medical Surgery Nursing Department, Sekolah Tinggi Ilmu Kesehatan Kepanjen, Indonesia

Correspondence: Janes Jainurakhma, M.Kep
Emergency Nursing Department, Sekolah Tinggi Ilmu Kesehatan Kepanjen Jl. Trunojoyo No.16, Kepanjen, Malang, East Java Indonesia
Email: janesjainurakhma.nuryadi@gmail.com
Telephone: +6281216836573
Fax: (0341)396625

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BACKGROUND

Pondok Kesehatan Desa (PONKESDES) is a health facility located in the village that aims to improve the health welfare of rural communities, especially in East Java Province, Indonesia. PONKESDES held in East Java is to improve the health status of the community by being a primary service provider to increase the awareness of the community about healthy environment, improve clean and healthy behavior, and improve easy access to people in rural areas (Department of Health Service, 2011; East Java Governor Regulation, 2010). The role of nurses in PONKESDES is very important, including the authority in emergency condition to save lives (East Java Governor Regulation, 2010).

The rural areas located in East Java Province of Indonesia have only one nurse in each village, which is quite challenging because the distance to from the rural area to the hospital takes about one hour with poor road conditions. In addition, each village has no ambulance available to provide services. However, nurses are still demanded to provide the best care in every condition. Nurses are required to be sensitive to the environment, culture, and legal ethics, as well as being sensitive to emergency conditions that threaten the lives such as Out-of-Hospital cardiac arrest (OHCA) (Jainurakhma et al., 2017; Mumpuni et al., 2017; A. A.-I. Siregar, 2017; Winarni, 2017).

In critical or emergency conditions, nurses hold the principle of caring as the core of professionalism, which nurses treat clients and families as a whole as a human being, respecting the trust of clients and families and all the differences exist while still upholding the similarities in nursing care (Izzah et al., 2018; Jainurakhma et al., 2017; Mailani & Fitrı, 2017), thus creating a harmonious relationship between client-family and nurse, and creating satisfaction with the high quality of emergency services (Mailani & Fitrı, 2017).

However, as there is lack of information regarding the caring experience of nurses in PONKESDES, the aim of this study was to explore the caring experience of PONKESDES nurses when dealing with clients with OHCA in rural areas of East Java, Indonesia.

Abstract

Background: Out-of-hospital cardiac arrest can occur anywhere, including in rural areas. Nurses are demanded to have skills for critical care to save lives.

Objective: This study aimed to explore lived experience of nurses in caring for persons with out-of-hospital cardiac arrest in the rural areas of East Java, Indonesia.

Methods: This study employed a phenomenological research design. Five nurses were selected from five village health posts using a purposive sampling. A semi-structure interview was used to collect data. Colaizzi’s method was used for data analysis.

Results: Four themes emerged, including (1) being fast and responsive, (2) needing a family trust, (3) feeling worried, and (4) lacking personnel and infrastructure.

Conclusion: The role of nurses in saving lives of persons with out-of-hospital cardiac arrest is very important. It is suggested for the nurses to always improve the quality of knowledge management of persons with critical conditions, provide understanding of basic life support in community, increase the trust of family in nurses, and improve the collaboration between nurses and community. The government also need to provide better emergency equipment and add health personnel in community.

KEYWORDS
out-of-hospital cardiac arrest; Indonesia; ethics; nursing; health services
METHODS

Study Design
A phenomenological study was used in this study.

Participants
Five nurses were selected from five PONKESDES using a purposive sampling. The inclusion criteria of the sample were nurses who worked at the PONKESDES for at least three years, and had experience in caring for clients with out-of-hospital cardiac arrest conditions.

Data Collection
Data collection in this study was carried out for six months from August 2018 to January 2019 in five areas, including: Ngranggon Anyar, Cengkir, Brangkal, Mojojari, and Krangkong. A semi-structure interview was conducted to explore lived experience of nurses when dealing with clients with OHCA. The interviews were done by the researchers for 30-60 minutes and all processes were recorded using a voice recorder. The interview was conducted in the workplace of each participant.

Data Analysis
Data were analyzed using the Colaizzi’s methods (Polit & Beck, 2010), with the following stages: 1) listening to the participant's verbal interview results from the recording, 2) making transcripts and collecting all transcripts, 3) reading the entire transcripts of all participants repeatedly to determine and underline the essence of significant statements, 4) clustering theme, 5) validating the description with participants, 6) putting together new data in the final description, 7) integrating the theme in the narrative description.

Trustworthiness
The credibility of the study was examined by extending the observations in the work environment of nurses, and triangulation (source and time). The entire research process was audited by senior nurses in the village environment as a dependability testing stage.

Ethical consideration
The study was approved by the Institutional Research Institute of Kepanjen STIKes, Number: 2017.4 / ST / LPPM / STIKes-KPJ / XII / 2017. The study permission was also obtained from the Head of Research Institute and Community Service at Kepanjen College of Health Sciences. Informed consent was obtained from the participants as a manifestation of their voluntary involvement in the research. Full disclosure of the study was given and the participants were assured of their confidentiality and anonymity.

RESULTS
Participants involved in this study were five nurses, three men and two women. They are all Muslim and having Javanese ethnic background. Majority has 5 years of experience and hold bachelor degree in nursing. All of them have emergency trainings.

| Participants | Education | Experience as a nurse in PONKESDES | Emergency Training |
|--------------|-----------|-----------------------------------|-------------------|
| 1 (P1)       | Bachelor of Nursing and Ners | 5 years | Basic life support (2005), First aid training in the emergency department (2015) |
| 2 (P2)       | Diploma III in Nursing | 5 years | Basic trauma life support (2012) |
| 3 (P3)       | Bachelor of Nursing and Ners | 5 years | First aid training in the emergency department (2017) |
| 4 (P4)       | Diploma III in Nursing | 7 years | First aid training in the emergency department (2007) |
| 5 (P5)       | Bachelor of Nursing and Ners | 8.5 years | First aid training in the emergency department, Basic cardiac life support (2005) |

The results of the study showed that five themes emerged from data, including: 1) being fast and responsive; 2) needing a family trust; 3) feeling worried; 4) lacking personnel and infrastructure.

Theme 1: Being fast and responsive
This theme was raised by the nurses when dealing with clients’ critical conditions when conducting initial assessments, providing first aid with airway-breathing-circulation (ABC) stability, and referring clients to more complete facilities. This requires fast and responsive behavior to save lives. This is explained in the following statements:

“The main determinant of success is our speed in dealing with emergency condition and referring the clients to the nearest hospital. So, the problem will be resolved” (P4 & P1)

“Airway-breathing-circulation should be prioritized, so the client’s life can go on” (P2)

“The factor of success is timing. Our speed in providing help, or referring to a better place. A client with a cardiac arrest can immediately have his/her heart stop” (P2)

“If there is a person with cardiac arrest, we immediately resuscitate the heart. This is our alertness in critical care” (P2)

Theme 2: Needing a family trust
Nurses need family trust in caring for the client. One of which is by making good communication with families who are experiencing anxiety, especially when facing clients with critical conditions. If trust does not exist from the family, nurses do not get the authority to conduct first aid to save the clients. It is explained in the following:

“The family should trust the nurse to provide first-aid to clients. That’s the key” (P1)

“We understand that family is anxious in the critical condition, they just need to trust us” (P3)

“If the family refuses, cardiac massage will not be done” (P1)
To maintain the trust, calming the family is also needed in order to reduce the tense in critical condition. The participants explain this in the following:

"We explain to family what happened and what must be done. This is to calm the family" (P4 & P2)

"I immediately gave help to the client, and explained the condition to the family” (P1)

**Theme 3: Feeling worried**

The theme shows that the nurses often feel worried when caring for clients with cardiac arrest in the community. This is due to the cardiac arrest events rarely occurred in their work environment. This is explained in the following:

"I feel worried when facing an emergency condition” (P4)

"Worried in facing emergencies. How to immediately help and send clients to the hospital?” (P3)

"I dealt with emergency condition, I was still nervous and worried” (P2)

"I feel worried if the lives of our patients would not be helped. The distance to hospital was far enough, the rescue staff was only one person, and no transportation to immediately help” (P1)

**Theme 4: Lacking personnel and infrastructure**

This theme explains that there was lack of facilities in providing emergency services, including lack of health personnel, special emergency transportation, emergency equipment, and emergency response system. This is expressed by the following participants:

"When there was a person with cardiac arrest at his home, I was alone, with the interval of 3 minutes of the incident” (P1)

"There was no pre-hospital assistance, no infrastructure facilities, no call center facility to assist, no transportation available, facilities, and no village assistance” (P1)

"We use manual tools in helping a person with cardiac arrest. The existing equipment did not meet the standards for emergency”(P3)

"There was only oxygen and nasal cannula, no bag valve mask, long spinal board, or cervical collar, and no automatic defibrillator (AED). If there is a cardiac arrest patient, yes, we do cardiopulmonary resuscitation, and if there was a vehicle, immediately we took the client to the closest hospital in 30 minutes, the fastest trip”(P1)

**DISCUSSION**

Nurses in carrying out their duties are required to always prioritize the holistic needs of the clients. Although the emergency conditions in their working area are very rare, but this does not close the possibility of the critical events in the community. Therefore, nurses need to gain authority in conducting health services outside of the authority as stipulated by professional organizations to save lives. This is in line with the policy of East Java Governor Regulation (2010) states that, the formation of a prosperous, moral, fair, independent, and competitive community should be formed by providing easy access to affordable, quality and quality rural communities.

Four themes emerged in this study. The theme “being fast and responsive” is one of the caring values raised by nurses in dealing with clients with critical conditions in the community, fast and responsive in identifying client's emergencies by reviewing the client's airway-breathing and circulation (ABC), helping or providing action to meet ABC’s needs client, responsive in solving emergency problems that occur to the client, inform the client's condition to the family, and immediately take a referral action to the nearest health facility (hospital) that can be taken the most quickly is 30 minutes by using a vehicle. The ability of nurses in conducting primary surveys must be fast and precise, so as to be able to determine the gravity that occurs, and immediately take a decision on the situation, and how to stabilize the airway-breathing and circulation conditions that occur (Hidayah & Amin, 2017; Kaban & Rani, 2018; Prawesti et al., 2018). The speed and responsiveness of nurses in dealing with emergency conditions often have problems, which the level of community or family knowledge and responsiveness in reporting emergency conditions is still felt to be very lacking, so this also influences the success of emergency cases that occur in rural communities. However, the time of help in patients with emergency conditions greatly determines the survival (golden hour) and the phase of victim care (De Gryuer et al., 2019; Winarni, 2017), and increases client-family client satisfaction when critical conditions (Mailani & Fitri, 2017; Nastiti, 2017). The speed in which AEDs are given by people who find cardiac arrest victims are also very influential in increasing OHCA life expectancy and neurological conditions (Auricchio et al., 2019; Karlsson et al., 2019; Leung et al., 2000), but unfortunately in the PONKESDES work area there are no AED facilities available, as well as the ability of officers when providing quality CPR will determine the success of rescuing clients with cardiac arrest at home, whether done on the floor or above the place sleep against chest recoil accuracy (Ahn et al., 2019). The provision of cardiac pulmonary resuscitation (CPR) with two rescuers is more effective, where the first helper performs CPR and provides oxygenation through BVM (bag-valve-mask) and the second helper opens the airway with both hands (Shim et al., 2015), but the phenomenon in our study that nurses often work alone when doing their jobs, including CPR.

The second theme “needing a family trust” indicates that a nurse's caring relationship will form properly if interpersonal relationships are created with a bond of trust (Jainurakhma et al., 2017). An important key in providing emergency nursing care when in rural areas is family trust. If this trust is not obtained, emergency response licensing is not granted by family members as well, so that the nurses are not able to assist quickly and precisely. Families trust will have an impact on demands on nurses, and this is what is not desired by the nurses. Emergency conditions are often constrained when requiring patient and / or family trust to be immediately referred to the hospital, this is not only detrimental to the client physically but also financially, the longer the waiting time referring to the hospital will further aggravate the condition and treatment while at home sick (De Gryuer et al., 2019; Sulistio et al., 2015). Therefore, nurses’ communication about client emergency information is urgently needed to increase family trust. Good and directed communication (focus) on conditions experienced by clients when emergencies have a major impact on patients and families (Firstiana et al., 2017; Jainurakhma et al., 2017; Oeak & Avsarogullari, 2019).

That communication is also meant to calm the family who experience confusion when they find family members lying unconscious, and fears that occur in the family's mind about the death of the client (Nugroho, 2017), and the family's ignorance in providing first aid during emergency events such as cardiac pulmonary resuscitation (Nugroho, 2017; Rosyid et al., 2018; Winarni, 2017). They need to be given information about the emergency conditions experienced by clients (Herawati & Faradilla, 2017; Paputungan et al., 2018), and what efforts can be done to help clients, both personally, conditions physical, and requires emotional reinforcement when dealing with the condition of
The theme “feeling worried” indicated that the nurses have mental discomfort due to emergency equipment is very rare in rural areas. This is a dilemma for nurses who really want to help the clients, but the condition does not support them. We understand that the presence of equipment such as AEDs (automatic external defibrillators) greatly contributes to the rescue of victims with cardiac arrest before getting further help in hospital, this is evident victims with cardiac arrest who received AED facilities life expectancy increased threefold compared with the help of victims of OHCA without AED (Karlsson et al., 2019). However, defibrillation was only available at the nearest hospital which was 30 minutes away from the village. Thus, this needs high attention.

The last theme “lacking personnel and infrastructure” indicates that the environment that nurses work has no stand-by village transportation facility, no emergency response system, BVM (bag-valve-mask), long spinal boards, AEDs (automatic external defibrillator), and cervical collar. This is a nightmare for nurses who want to help or refer clients to emergency conditions, which should ideally have referral facilities such as an adequate supply of oxygen, portable monitors, suction devices, emergency medicine, and other devices (needles) (Dawes et al., 2014), AED (Karlsson et al., 2019).

Finding of this study highlight the phenomena of caring practice of nurses in emergency conditions, which require a solution that can improve welfare in the health sector for rural communities, including the need to increase the empowerment of resources available in rural communities, such as the need for basic life support training for the community (Hidayah & Amin, 2017; Nugroho, 2017; Rosvidi et al., 2018; Winarni, 2017), so they will be more sensitive to any emergency conditions and be able to synergize with the nurses in providing client-first aid with emergency airway-breathing-circulation. The existence of an integrated emergency response system service is also needed in the village area (Mumpuni et al., 2017; Winarni, 2017) to provide services for 24 hours emergency medical service (Dawes et al., 2014), as well as the completeness of emergency equipment to reduce the death rate due to cardiac arrest (Mumpuni et al., 2017; Prawesti et al., 2018; Winarni, 2017). And integrated emergency training every year for community and health workers in the PONKESDES work area is necessary to do to facilitate community skills and responsiveness in dealing with emergency cases in the community area (Kaban & Rani, 2018; Mumpuni et al., 2017; Prawesti et al., 2018; Rosvidi et al., 2018; Winarni, 2017).

CONCLUSION

Nurses are very meaningful to improve the quality of life of people in community, specifically in rural areas in the Province of East Java. With their caring nursing practice, nurses are quickly and responsively saved lives of people with cardiac arrest. However, their works require the family and community trusts, as well as supported by complete infrastructures. Findings of this study revealed the nursing practice and its limitation, and therefore, it is suggested for the nurses to always improve the quality of knowledge management of persons with critical conditions, provide understanding of basic life support in community, increase the trust of family in nurses, and improve the collaboration between nurses and community. The government also need to provide complete emergency equipment and to add health personnel in community.

DECLARATION OF CONFLICTING INTEREST

None.

AUTHORS CONTRIBUTION

All authors have contributed from conception to the finalization of this study. Most of the significant intellectual content of this publishable copy of the article was done by the corresponding author.

ORCID

Janes Jairurakhma https://orcid.org/0000-0002-6902-3724
Mochamad Soleh https://orcid.org/0000-0001-5884-1931
Ni Luh Diah Ayu Sita Dewi https://orcid.org/0000-0001-5103-3345
Ika Yuli Astuti https://orcid.org/0000-0002-9943-7653

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