**ABSTRACT**

**Introduction:** Acute Myocardial Infarction (AMI) and the care environment affect the patient's physical, psychological, and social condition. Caring applications in the nursing process can increase positive change and build trust and satisfaction in patients and families. This study aims to get an overview of the application of caring in AMI patients in the Intensive Care Unit (ICU) from perceptive nurses.

**Methods:** The descriptive qualitative design was selected to obtain in-depth information with face-to-face interviews with twelve nurses. Participatory involvement in the research was selected using purposive. Data analysis is manually done with Colaizzi's Content Analysis. Triangulation, member checking, and peer debriefing have increased data crawling. Before and during the data retrieval process, the ethics of the researchers are applied.

**Results:** Data analysis produces three themes that can answer research objectives. The themes formed can describe the caring behavior of nurses in critical units caring for AMI patients.

**Conclusion:** Nurse care is an interpersonal process with professional knowledge and skills that can result in protection, emotional support, and fulfillment of the bio-psycho-social needs of patients. This study's perception and application of nursing care for AMI patients are with the spirit of caring and implementing instrumental caring. Unfortunately, there are still obstacles in applying nurse care to AMI patients.

**Keywords:** acute myocardial infarction, caring behavior, nursing care.


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**INTRODUCTION**

Acute myocardial infarction (AMI) affects the patient's physical, psychological, social, and living conditions as a whole. Physical disorders include fatigue that impacts decreased self-care abilities, physical activity, sexual activity, and other activities that can be done before being diagnosed with AMI. AMI also affects the patient's psychological condition. Patients diagnosed with AMI experience mental fatigue, high anxiety, depression, and the acute phase of the patient experiences fear of death. Anxiety is associated with the onset and progression of cardiac disease. The condition causes sleep disturbances, lowers health quality, and increases patient mortality. Patient considers the AMI disease he suffers life-threatening and becomes a traumatic experience.

Psychological disorders experienced by critical patients and families are also stimulated by the condition of the treatment room in the intensive care unit (ICU). The patient can experience post-traumatic psychological problems, anxiety, fear, hallucinations, unable to concentrate, experiencing depression due to being in a treatment room that feels foreign and unfriendly. Patients in the ICU also experience physical weakness caused by muscle weakness and loss of muscle mass due to immobilization. Patients can potentially experience stress and stress because they feel unprepared for their condition.

Nurse care is an essential component of inpatient care. Nurse caring is an interpersonal process with professional knowledge, skills, personal maturity, and responsiveness. The process results in protection, emotional support, and meeting the patient's bio-psycho-social needs. A nurse needs to understand the condition of the patient receiving nursing care to provide nursing care sincerely and passionately. For the patient, the feeling of being treated is more important than the meaning of the care itself. The caring behavior of nurses can help overcome patients bad feelings and make them feel comfortable to improve the quality of care in critical patients.
The perception of nurses and patients’ families about the importance of caring behavior of nurses in the ICU obtained the result that caring behavior is assessed based on professional technical competence, altruistic and emotional aspects. Human care is demonstrated through empathy, sensitivity, compassion, creativity, dynamic, and understanding humans. There are ICU nurses, and Caring is responsible, empathetic, competency development and holistic service.

Applying caring behavior in providing nursing care can positively impact patients, families, and nurses. Caring behavior can increase patient satisfaction with nursing care. Family-centered caring and care behaviors can alter patients’ families’ stress response and maladaptive behavior in the ICU. The competence that professional nurses have, and the caring behavior of nurses can build patient trust in nursing services. The meaning and the expression of caring among nurses in clinical work units obtained the results that caring behavior increases concern for the work environment and increases nurses’ satisfaction and retention. Although the application of caring behavior positively affects patients, families, and nurses, not all nurses apply caring behavior in providing nursing care. This study aims to explore nurses’ perceptions of caring for acute myocardial infarct patients.

METHODS

Study design and setting
The researcher conducted a descriptive qualitative study to overview participants’ subjective experiences. This approach is appropriately used to obtain a research goal: exploring nurses’ perception of caring for Acute Myocardial Infarction patients. The study was carried out in the intensive care unit, Semarang district general hospital, Central Java Province, Indonesia.

Participants
Participants are selected using purposive techniques involving the head of the intensive care unit as a key informant. Eligibility criteria in this study are nurses who have experience working in intensive care units for at least three years and have treated Acute Myocardial Infarction patients. Twelve participants were willing to become informants in the study. The basic characteristics of participants in the study are presented in Table 1.

Data Collection
Data is collected through in-depth interviews using open-ended questions and face-to-face by BK conducted inside and outside the hospital following participants’ wishes. The interview guide has been tested by researchers (BK) on three nurses, non-participants and the results of the trial are discussed with other researchers; improvements are possible. Interview topics submitted:
1. What is the picture of AMI patients being treated in intensive care units?
2. What does caring mean for intensive care unit nurses?
3. In performing nursing care in AMI patients, how is caring behavior applied?

Detailed data is obtained by clarifying essential information to explore using probes and recording non-verbal responses during interviews in field notes. The reviewer does not conduct Re-interviews to keep the data submitted by the participant consistent. Researchers used a digital voice recorder to record verbal information, and it was turned off when participants wanted certain information not recorded. The average interview duration is 30–45 minutes. Saturation of data in the study was achieved after participants disclosed no new information. Researchers meet the participant again to check the suitability of the interview contents with verbatim transcripts that have been written.

Data Analysis
All recordings of interviews are written in verbatim transcripts. Content analysis is done to evaluate data using the seven stages of Colaizzi analysis. Each transcript is read repeatedly to understand the information conveyed by participants. Bracketing begins at this stage in order to obtain biological data. A specific statement is identified to be formulated into a more general statement or meaning. These specific statements are coded in different colors. Specific statements that have been identified will be formulated as keywords, then grouped into specific categories. The categories that have been formed are grouped based on meaningful relationships. The following stage groups the same categories into form sub-themes and themes. The final stage in the analysis process is to return to the participants to check the suitability of the theme arranged with information from participants. Data analysis is done manually to trace meaning units, codes, and categories from verbatim transcripts. Coding is done independently by BK and Y. The agreement is reached after the results are discussed with EN. Examples of the Coding process are presented in Table 2.

Trustworthiness
Triangulation of information is done to compare and confirm researchers’ interpretation of the study results from informants’ perspectives. In addition, discussions with the second author are

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<th>Table 1. Basic characteristics of participants.</th>
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BN = bachelor of nursing; RN = registered nurse
conducted during data collection and data analysis to determine the preliminary interpretation. Peer debriefing is carried out between the first author, another author, and colleagues at the University of Indonesia who know the research issues that are being conducted.

**Ethics**

The authors provide information about objectives and topics that will be discussed before the interview is conducted and continue with the signing of Informed consent. Confidentiality of information and information rights are protected on time-anonymous informants during the analysis and publication of the results. Recording using a digital voice recorder is realized by participants and reserves the right to refuse recorded interviews. Ethical approval was given by the Ethics Committee of the University of Indonesia, Jakarta, with number 0326/UN2. F12.D/HKP02.04/2019

**RESULTS**

The resulting themes result from the analysis of several categories formed from coding to the unit of analysis. An example of the coding process is shown in Table 2.

**Theme 1: Spirit of Caring**

The theme of spirit caring is formed from the interrelationship between three sub-themes: caring as an altruistic value, therapeutic communication being part of caring behavior, and spiritual care as part of caring behavior in AMI patients. The theme is interpreting the expression of participants related to the meaning of caring in nursing care in AMI patients and the experience of caring behavior of participants when conducting nursing care in AMI patients. An example of one of the underlying quotes formed by the theme:

“The nurse understands the patient’s pain, so the nurse will provide appropriate interventions to reduce the patient’s pain” (P12)

**Table 2. Examples of coding processes, from meaning units to themes.**

<table>
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<tr>
<th>Meanings unit</th>
<th>Coding</th>
<th>Category</th>
<th>Sub-theme</th>
<th>Theme</th>
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<td>“... Limit activity, provide nasal airway cannula three to five liters, monitor saturation. If the saturation is sufficient, 99% does not need to be replaced with a simple mask.” (P3)</td>
<td>Oxygenation repair</td>
<td>Life-saving measures</td>
<td>Life-saving measures become a focus of nurses in expressing caring behavior in IMA patients</td>
<td>Application of Caring in AMI Patients in Intensive Care Unit</td>
</tr>
<tr>
<td>“If we accept AMI patients, the condition is already unconscious... The main thing is waterway management, if it needs to be installed ventilator then we install it.” (P9)</td>
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**Theme 2: Application of Caring in AMI Patients in Intensive Care Units**

The theme of caring in AMI patients in the Intensive Care Unit becomes patterned of three sub-themes. The sub-themes, namely the life-saving action, become nurses’ focus in expressing caring behavior in AMI patients. Instrumental caring behavior is applied to overcome pain in AMI patients. Nurses use clinical medical knowledge to apply caring behavior in AMI patients. These themes result from interpreting the expression of participants related to the meaning of AMI in nursing care in patients in the Intensive Care Unit and nurse perceptions of the patient’s view of the AMI. Examples of quotes submitted by participants are:

“Severe pain felt by patients cannot be managed alone. Nurses give the therapeutic collaboration analgesic injection, such as titration of morphine or nitroglycerin. If the pain is getting more intense, we should suspect there is an expansion of the infarction area, so it requires re-ECG monitoring, and compared to the EKG picture when entering”. (P8).

**DISCUSSION**

The three themes formed from eight sub-themes are the result of interpreting participants’ expressions related to nurses’ perceptions of caring behavior in the nursing care of AMI patients in the ICU. The theme of life-saving is interpreted as an instancing action to save the patient. Critical patients need assessment, continuous observation, and action as needed quickly. Patients are at risk of respiratory failure, so definitive intubation and mechanical ventilation installation must be done. Invasive mechanical ventilation (IMV) is performed on critical patients in the ICU who experience acute respiratory distress syndrome (ARDS). Nurses act in response to physiological changes in patient respiration.
Instrumental caring behavior is a behavior that indicates the skills and abilities of nurses who are assessed from cognitive and psychomotor aspects. Instrumental emphasis on caring in the ICU is task-oriented and focuses on pre-planned actions.22,23

Nurses use basic clinical medical knowledge to apply caring behavior in nursing care based on knowledge, evidence-based data, and continuously maintained skills to improve the quality of service.24 Caring behavior is influenced by nurses’ level of knowledge, which can be gained from education and training. Low education and skills of nurses affect the quality of service.25

Caring behavior means altruism carried out by nurses arises not because of pressure or obligation but the action is voluntary, benevolent, and humanitarian.26,27 Altruism, honesty, religiosity, and empathy are essential values and are associated with professionalism in nursing.17,28

Therapeutic communication becomes part of the caring behavior of nurses content of the message in such communication can provide therapeutic influence for patients and is related to the quality of nursing services.29,30

Spirituality is associated with each individual’s physical and mental health.31 Pain felt by AMI patients and fear of death are susceptible to spiritual distress. The nurse needs to provide spiritual support following her beliefs in this condition.11,32 In certain countries, spirituality is connected with culture, so it is necessary to involve families and realms to fulfill spiritual needs.33,34

The act of nursing that became a habit of difficulties was changed and understood differently between senior nurses and juniors. Caring is a dynamic phenomenon and will develop with increasing educational status.35 The development of nurse professionalism can be achieved by improving academic degrees, applying evidence-based practices, and collaborating with colleagues, although work experience also influences skills.36

Hospital management becomes a problem in nursing oriented towards instrumental caring. Hospital policies related to the cost of care are a challenge for nurses in providing pharmacological ignition. Low income and health systems become obstacles in caring.37,38

There is an inherent limitation of the qualitative study. This study results can not conclude about the caring behavior of nurses in treating AMI patients in general. However, the narration provided by the participants of this study provides an overview of each personal experience regarding their point of view and perception in caring for AMI patients. The experiences expressed by the participants were also limited since this study was only conducted in one hospital; thus, a larger scale study is needed to find out how the perception of other nurses in different hospitals.

CONCLUSION

The patient's view of AMI is a life-threatening disease and a traumatic experience for them. This condition certainly affects the patient's physical, psychological, and overall life, so nursing care is an important component of inpatient care for AMI patients. Nurse care is an interpersonal process with professional knowledge and skills that can result in protection, emotional support, and fulfillment of the bio-psycho-social needs of patients. Perception and application of nursing care for AMI patients in this study are with the spirit of caring, which defines the patient's needs. The implementation of nurse care with patients is done by implementing instrumental caring. Unfortunately, there are still obstacles in applying nurse care to AMI patients, such as differences in understanding from junior and senior nurses and several hospital management conditions that can limit the nursing care carried out. The application of caring behavior in providing nursing care is very important so that a good application can have a positive impact on patients, families, and nurses to increase patient satisfaction.

AUTHOR CONTRIBUTION

All authors contributed equally in the preparation and execution of the study and this article's writing.

CONFLICT OF INTEREST

The authors declare there is no conflict of interest regarding this article publication.

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REFERENCES


