

# The Lived Experiences of Family Members Treating Gangrene Wound Patients with the Concept of Care

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**Abstract.** Family involvement in Diabetes Mellitus sufferers requires a lengthy healing time is needed. This study explores family experiences in treating Diabetes Mellitus patients who have gangrene wounds. The phenomenological qualitative design was chosen to obtain in-depth information by interviewing nineteen participants. Data obtained from interviews were analyzed using the content analysis technique. This study produced four themes, namely: families have limited knowledge about Diabetes Mellitus disease and wound care procedures; the family inpatient care gives instrumental support; the emotional support provided by the family has a positive impact on the patient's psychological condition and the wound healing process; the time limitation is a family inhibiting factor in treating patients. Care carried out by the family positively impacts the patient's health status. Therefore, families must be equipped with knowledge about wound care procedures and management of patients after being discharged to treat patients well and accelerate the healing time of gangrene.

**Keywords:** Family support; Gangrene wound; Phenomenology

## 1 Introduction

Diabetes Mellitus (DM) is increasing worldwide, predicted by 2030, and the majority will reach 366 million and projected double in urban populations in developing countries (1). The deaths of people with Diabetes Mellitus type 1 and 2 increased in the pandemic Covid 19. This increase in mortality is not only associated with diabetes but also glycemic control and body mass index (2) (3). The increasing prevalence of Diabetes Mellitus correlates with an increased risk of complications due to peripheral vascular disorders, in the form of gangrene by 3.8% (4). Gangrene is necrosis or soft tissue death due to cessation of peripheral circulation and accompanied by decomposition and putrefaction (5). Diabetic gangrene or ulcers are generally a complication of DM worldwide and have an impact on the socio-economic condition of patients, families, communities, and countries (6).

DM sufferers with gangrene complications can affect the role of family members, either increasing cohesion or causing psychological distress. In some families, the obligation to support patients is experienced as a burden. Disruptive family behaviors such as contention about medication and self-care management are obstacles to patient self-management (7). Families' role in diabetic patients involve support related to emotional support, and the most difficult is the provision of relevant support information (8). One of the functions of the family is to run the family health care function. Family health problems will influence and engage with each other (9). Severe wound diseases such as DM sores will become uncontrolled if the

family does not seek to control blood pressure (10). Family support is provided after the patient is diagnosed with DM so that complications do not arise, such as research conducted by Pesantes et al. (2018) (11) revealed that most of the family of DM sufferers prepare and endeavor in the practice of diabetes management.

The family provides a vital role in the care of family members such as economic, emotional, and instrumental support such as preparing healthy food, remembering to take medicine and helping to carry out physical activities (11). A family intervention to improve diabetes outcomes involves in a patient's disease management, involving them in self-care intervention (12). Family support can reduce the level of depression, stress and emotional patients. The family can give good health if the family can manage diabetes well. Although family support does not appear to be seen to reduce glycemic conditions directly, family ties can strengthen independent care management and patient satisfaction and happiness (13).

Family members or friends can help remember information provided by medical personnel and can help when needing immediate treatment (14). Providing gangrene care is a stressful experience for families. The task can arouse emotions, including fear and worry. Families need to learn and encourage patients with gangrene for wound care and self-care management to reduce symptoms of infection or complications (15). The aims of the study explore family experiences in treating Diabetes Mellitus patients who have gangrene wounds

## 2 Method

### 2.1 Sample and setting

The research design used in this study is qualitative with a phenomenological approach. The phenomenological approach is applied to get a comprehensive description of the experience of treating DM patients with gangrene from a family perspective so that a phenomenon can be described. Participants involved in the study were determined by purposive sampling. The selection criteria made for determining participants included: 1) over eighteen years old; 2) treating one or more family members with gangrene wound; 3) having experiences of caring for gangrene wound patients for at least six months; 4) living together in one house with gangrene wound patients. Data saturation was achieved after researchers conducted in-depth interviews with nineteen participants.

### 2.2 Data collection and analysis

Valid data are obtained by conducting in-depth interviews using open-ended questions. Interviews were conducted face to face for 45-60 minutes. Interviews are conducted in a flexible format and begin with questions that are general according to the participant's level of ability. Interview guidelines are used during the interview so that the interview process is interrelated with each other (Table 1). Information communicated by the participants was explored in more depth using the probing, such as "can you explain in more detail...?", and "can you tell me more...?".

**Table 1.** Interview Questions

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What is the meaning or the meaning of caring for your sick family member with gangrene?
How do you see the condition of your family members?
How do you see the meaning of family care for family members?
Are you lacking in caring for a family with gangrene?

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What are your hopes for the care that has been given to family members who are experiencing gangrene?

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Transcribe verbatims from data interview analyzed using the seven stages of the Colaizzi method 1978 including 1) each transcript of interview results was read repeatedly to get an understanding of all the information offered by participants; 2) identify significant statements from each transcript made; 3). interpret meaningful words that have been formulated; 4) grouping sentences that have the same meaning into categories; 5) fourteen categories arranged; 6) the same categories are then organized into large clusters, and four themes are formed; 7) the researcher reencounters the participants to clarify the suitability of the results of the themes that have been developed.

Researchers carry out the seventh stage of Colaizzi's analysis method to obtain a high level of data credibility, by visiting participants after data analysis to confirm and clarify the themes brought with the participant/ member checks. Guba & Linclon (1989) state that a high level of credibility of the data can be obtained if the participants involved in the research recognize the truth about the various things that have been told. Bracketing, intuiting, analyzing, and describing were used to obtain information from truly natural participants. During the interview, non-verbal information from participants who could not be recorded by the voice recorder was written in the field notes and would be used as additional information when interpreting family experiences when providing care for DM patients with gangrene.

### 2.3 Ethical considerations

Hospital of Surakarta before the study was conducted (Ethical code: 295/ III/ HREC/ 2018). Researchers protect and guarantee the confidentiality of participants involved in research by maintaining the confidentiality of the participant's identity. Also, only specific data will be reported and published with permission from the participants. Researchers and participants only knew the results of the interviews and verbatim transcripts.

## 3 Result

Nineteen participants (9 women and 10 men) with an age range of 20 and 65 years participated in this study. Based on educational history, most of the participants had a junior high school education and worked as private employees. Participants took care of their family members for a period of 1 month to 6 months (Table 2).

**Table 2.** Demographics' variables of participants

Variable		Frequency	
		Number (n:19)	Prents (%)
Sex	Male	9	47,4
	Female	10	52,6
Age (year)	20-40	13	68,4
	41-65	6	31,6
Education	illiterate	1	5,3
	junior high school	7	36,8
	senior high school	7	36,8

	college	4	21,1
Duration of taking care	1-3 month	10	52,6
	3-5 month	7	36,8
	6 months	2	10,6
Work	government	8	42,1
	employee	10	52,6
	private employees	1	5,3
	unemployed		

Interview results made by transcript were analyzed and found 112 codes were grouped in 6 categories and formed four themes. From the family's point of view, a phenomenon about the experience of caring for Diabetes Mellitus patients with gangrene is created from the themes found (Table 3).

**Table 3.** Categories and themes

Categories	Themes
Lack of knowledge	families have limited knowledge about Diabetes Mellitus and wound-caring procedures
Instrumental support	The family gives instrumental supports.
Emotional support improvement of psychological conditions Improvement of the wound-healing process	Emotional support from the family has given positive impacts on the patient's psychological condition and the wound-healing process.
The limited-time of the family	The limited-time of the family members has become the inhibiting factor in treating gangrene-developed diabetes patients.

**Families have limited knowledge about diabetes mellitus and wound-caring procedures.**

Researchers interpret lack of knowledge as a lack of family understanding of the signs and symptoms felt by patients so that families lack in providing care to patients with DM and treating wounds about wound care procedures. The results of the interview found that 2 participants said that they did not yet know the condition of diabetes suffered by their families. Lack of knowledge is shown by the response that does not understand the symptoms arising from diabetes. One of the inhibiting factors of families in providing the utmost care for family members who have diabetes is due to a lack of knowledge due to lack of information exposure. Family members entrust special care of wounds to nurses and paramedics. Quotations given by participants are as follows:

*"..... .. first do not know the signs that arise due to DM pain, at that time the body feels sick and cannot sleep, always feel thirsty and feel the desire to keep drinking" (while holding the throat) (P2)*

*"..... because when the hospital was treated by a family nurse, information was not given how to treat the wound, so at home the wound was treated according to family understanding..." (P1)*

(16) revealed that family members play an essential role in providing interventions to DM patients (17). Ignorance about the signs and symptoms of DM is influenced by the level of education of the participants, the average participant of high school graduates. Most participants stated that they asked for help from health workers when their families first experienced illness. Nurses have a crucial role in providing the information needed by the family to continue treatment at home (18). After participants feel they have the ability to treat patients, then participants try to treat DM patients independently at home.

#### **The family gives instrumental supports.**

Instrumental support is interpreted as the support given in the form of physical support to patients, such as providing services, financial assistance, and tangible material. This support is in the record of delivering goods, treatment or services by family members directly. Instrumental support provided by families to family members who suffer from DM in the form of offering healthy food, remembering the time to take medication and physical activity (11). Interview results from 3 participants revealed that they did care at home to help patients because of changes in the patient, so the ability to perform activities and self-care decreased. The role of the family is critical to help patients with self-care so that the basic needs of patients are met. The part of the family is vital to help patients with self-care so that the basic needs of patients are met. The following interview excerpts from participants:

*"... Eemm, when bathing only in cloth using a wet cloth and to defecate or urinate, the patient uses pampers" (P1)*

*"I just manage the food consumed by the patient, change the dressing and just replace the dressing..." (P3)*

*"... If you already feel the pain of his body, my mother asked to be massaged...." (5)*

According to (19), families are the primary source of support that can be done in the process of patient recovery. Family support also reduces stress on patients, controls diabetes better and improves management. Instrumental support provided by families in the areas of diet, exercise, medication meetings, doctor control, schedule meetings, blood safety monitoring and self-care (20). DM patients who are given emotional and instrumental support who need good self-care support, support therapeutic regimens and can reduce the stress that requires DM patients (21). Which states about family support give positive thinking to the discussion of a healthy diet, high self-efficacy, psychological conditions, and better glycemic control.

#### **Emotional support from the family has given positive impacts on the patient's psychological condition and the wound-healing process.**

Emotional support can be interpreted as giving a person a comfortable feeling, feeling loved when experiencing stress and depression in the form of empathy, giving self-confidence and giving enthusiasm and affection to fellow family members. Emotional support is the most

basic form of support provided by families with family members who experience health problems. The emotional support provided by families can be in the form of trust, empathy, understanding, attention, security, love and affection, and encouragement (22). Participants revealed that the patient's illness was one of the testers of a patient and patient patience. Patients and families always pray and submit all circumstances to God Almighty. Following are the expressions of the participants:

*"... Yes, we continue to encourage, so that you are also enthusiastic in your activities, Sir. If you are also hopefully, hopefully getting well soon..." (P2)*

Based on the results of research conducted by (17) a family is a place where individuals grow and develop, good emotional support in the family can cause feelings of security and comfort. It will also affect the emotions of each family member so that it will have a positive impact on the behavior of family members in caring for patients. Participants in this study always encourage, as explained by (9) that the role of the family consists of formal and informal functions. In a relaxed position, there is the role of caring for the family and providing motivation for family members who are sick.

#### **The limited-time of the family members has become the inhibiting factor in treating gangrene-developed diabetes patients.**

Time limitations are interpreted by the density of activities so that the free time they have is minimal. This has the effect of the limited time taken to provide care directly to sick family members. The family should be routinely involved in patient care because these actions can have a positive impact on the recovery of the patient health condition (23). The family should be routinely involved in patient care because these actions can have a positive impact on the recovery of the patient's health condition.

The family should be routinely involved in patient care because these actions can have a positive effect on the recovery of the patient's health condition (23). Most participants stated that they had a weakness in managing time to care for sick family members due to the difficulty in allocating time to work and time to care for patients. These conditions can cause their attention to caring also divided. Following is one excerpt from the participant's statement:

*"..... I lack a lot of caring for parents every day. Patience is tested and must be extra patient in caring ... I also work as a private employee. So, time is very limited to treat patients ....."  
(P13)*

## **5 Conclusion**

The research findings answer the research objectives that the instrumental theme supports to accommodate the meaning of care that given by the family of DM patients with gangrene wound and emotional support from the family has shown positive impacts on the patient's psychological condition and the wound-healing process. Family perceptions in treating DM patients with gangrene are accommodated by the theme of emotional support from the family, which has given positive impacts on the patient's psychological condition and the wound-healing process

This study aims to understand the perception of family weaknesses in treating DM patients with gangrene accommodated by the theme of the limited time of family members has become the inhibiting factor in treating gangrene-developed diabetes patients. This study has not explored the information needs and efforts that have been made by health care providers in preparing home care. Further researchers are expected to identify the fulfillment of information needs for patients and families of Diabetes Mellitus so that families and patients have independent in-home care.

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