Family Experience of Fluid Restriction In Heart Failure Patient : A Qualitative Study

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Abstract. Heart Failure (HF) is the highest cause of death worldwide which is chronic in nature characterized by heart problems as a pump unable to meet the needs of blood as a tissue metabolism. Decreased left ventricular contractility reduces cardiac output and increases ventricular volume, if the pulmonary capillary hydrostatic pressure exceeds vascular osmotic pressure, fluid transduction will occur exceeding the rate of lymphatic drainage, and oedema will occur. Heart failure patients need family support in their daily care because a number of clinical symptoms they experience can damage the body and interfere with the ability to meet the most basic needs. Limiting fluids is one way to deal with symptoms that arise and can be applied by the family independently without the supervision of medical personnel. Research objectives: the purpose of this study was to explore family experiences regarding fluid restriction in CHF patients at dr. Lokemono Hadi Kudus Hospital. Research method: this study uses a qualitative descriptive research method. Participants numbered 8 from the patient's family with the majority of women and analysis using Colaizzi data. The results of the study: Produced in this study, (1) family decisions are tasks in the health sector to overcome health problems. (2) health stability is adaptation to illness and recovery in taking back responsibilities. (3) control fluid requirements in order to achieve a homeostatic composition of body fluids in CHF patients. (4) family participation is to maintain the health condition of family members so that they have high productivity. Conclusion: Understanding of families in caring for patients with congestive heart failure needs to be explored and in this study families can independently help reduce symptoms by managing fluids that have been educated by health workers. Suggestion: Nurses are expected to be able to provide an explanation of fluid restrictions for families of CHF patients in the integrated heart service unit.

Keywords: Heart Failure, Family Experience, Fluid Restriction.

1. Introduction

Heart Failure (HF) is a complex clinical condition caused by a structural or functional cardiac abnormality that impair cardiac filling and ejection fraction. CHF means an inability to meet the systemic demand of circulation [1]. It's affected over 64 million people and characterized by high mortality, morbidity, poor quality of life, high cost, economic and

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social burden [2]. The symptoms of HF frequently include dyspnea, exhaustion, oedema and thrist. Patients with HF may receive diuretics and fluid restriction [3].

Fluid restriction in patients with HF as an effort to reduce preload that occurs when the heart's workload is heavier and edema in the lower extremities. Therefore, it has been standard therapeutic practice for many years to recommend that patients with chronic heart failure (HF) keep their fluid consumption to a daily maximum of, say, 1500mL.

Fluid restriction may become troublesome symptom and uncertain beneficial effect for in patients with Heart Failure (HF) [4]. Based on patients' perspectives, fluid restriction as difficult and burdensome because it requires them to constantly monitor their fluid intake that may lead to thirst distress, confront them with their chronic illness and decrease quality of life [5].

One of the discernible indicators and symptomatic presentations of congestive heart failure in patients is the occurrence of oedema. Addressing this condition involves the implementation of measures, including self-initiated or family-assisted fluid restriction, which serves as a significant determinant for preventing recurrences. The imperative of restricting fluid intake in individuals with congestive heart failure is underscored by its pivotal role in averting clinical manifestations, particularly oedema. This phenomenon manifests when heightened cardiac workload results in compromised blood supply to various organs, culminating in the accumulation of fluid and subsequent swelling in the lower extremities.

The diminished contractility of the left ventricle contributes to a reduction in cardiac output and an elevation in ventricular volume. Should the hydrostatic pressure in the pulmonary capillaries surpass the vascular osmotic pressure, fluid transudation occurs at a rate exceeding lymphatic drainage, thereby precipitating oedema[6]Timely intervention is paramount, as unaddressed clinical symptoms, such as oedema, may impede patients in their pursuit of independent activities, necessitating increased reliance on medical assistance. Consequently, a comprehensive understanding of the role of fluid restriction is imperative for families to facilitate the autonomy of patients [7].

Within the familial context, a crucial responsibility lies in the preservation of the holistic health, encompassing both physical and mental well-being, of its members. Non-compliance with prescribed treatments is often rooted in factors such as a lack of awareness or an inherent inability to adhere to therapeutic regimens [8]. Empirical findings from this study reveal that patients benefitting from robust familial support demonstrate heightened adherence to medication, with 58.8% compliance observed among 20 respondents. Moreover, the majority of congestive heart failure patients fall within the 41-50 age bracket, are male, possess a high school education, and are employed within the private sector [9].

The recurrence of symptoms in congestive heart failure patients, notably swelling in the lower extremities and dyspnoea, underscores the significance of family awareness and preparedness. Instances where families lack the requisite knowledge to mitigate swelling or

manage respiratory distress prompt immediate recourse to emergency medical care. A critical exploration of family experiences pertaining to preventative measures, including fluid restriction, emerges as a pivotal avenue for further inquiry.

2. Methodology

A phenomenological approach was used to explore the family experience as role in monitoring fluid restriction in heart failure patient. This study applied Colaizzi's 'descriptive phenomenology' to describe the meaning of experience from the family's perspective. Colaizzi (1978) stated that experiences made visible by events in people's daily lives can be clearly expressed in a way that makes the experiences' fundamental structures and meanings clear.

3. Participants

This study was conducted in one of regional governance hospital Central Java, Indonesia. The inclusion criteria in this research are patients affected by CHF A total 8 participant involved in this study.

4. Data Collection

Data were collected through semi-structured in-depth interviews with the participants and field notes from July to August 2023, after obtaining approval from Faculty on Nursing and Health Science Universitas Muhammadiyah Semarang review board. Prior to the interview, the participant was given two or three primary questions. Face-to-face interviews were conducted with all 8 participants. Interviews began with an open question such as *"What do you (sir/madam) know about heart failure?"* The additional questions were. The first author transcribed verbatim every interview that was audio recorded.

5. Ethical Considerations

This study was conducted after the permission ethic of Faculty on Nursing and Health Science Universitas Muhammadiyah Semarang review board's (010/KEPK/III/2023). In order to get written consents, the author described the study's goal and methodology (including the recording process, confidentiality assurances, and the right to withdraw from the study at any time).

6. Results

The majority of participants were females, with the highest age being 77 years, and most had completed high school education. CHF patients were predominantly male, spanning the age range of 33-98 years, with a majority experiencing the condition for less than one year. Participants extensively recounted and expressed various perceptions and experiences, yielding four themes with 11 subthemes.

The theme (1) Family decision-making resulted in 2 subthemes, namely primary health care centres and hospitals, as elaborated upon.

(P1): "I immediately took her to the local health center, ma'am, because it was the closest, and I was afraid of potential complications."

Theme (2) Health stability yields 2 subthemes, including regular medication intake and family concern, as elucidated in the following statement.

(P4): "Controlling eating and drinking patterns."

Theme (3) Fluid Needs Control results in four subthemes, namely fluid preservation, regulating intake patterns, managing drinking habits, and fluid regulation, as explicated by:

(P7): "Measuring the daily water intake, it's around 8 glasses.."

The final theme (4) Family Involvement encompasses three subthemes: health maintenance, symptom prevention, and the impact of prevention, as elucidated by:

(P6): "Certainly, to maintain health and prevent the illness from recurring, so that the heart functions properly."

7. Discussion

7.1 Characteristics of CHF Patients

The findings of this study reveal a predominance of male patients with CHF compared to females. This observation may be attributed to the presence of estrogen in females, which generates HDL with the function of preventing atherosclerosis (narrowing of blood vessels due to fat) [10].

7.2 Family Experiences in Caring for Congestive Heart Failure Patients

Family Decision-Making

Family decisions regarding bringing CHF patients to primary health centers and hospitals are driven by the desire for prompt medical attention. This aligns with the concept of family decision-making regarding whether a family member's illness should be addressed at home, in a clinic, at a primary health center, or in a hospital [11].

Health Stability

Health stability encompasses aspects such as maintaining dietary patterns, medication adherence, and assistance with daily activities. This study corresponds with the concept that families play a vital role in the health condition, representing a process where families work to enhance or sustain the physical and well-being of the family unit [12].

Fluid Needs Control

Controlling fluid needs in CHF patients aims to achieve homeostasis in bodily fluid composition by regulating fluid levels as a preventive measure against fluid accumulation. This corresponds with Lind et al.'s (2021) research, indicating that increased fluid intake can lead to elevated cardiac preload, resulting in an increased cardiac workload [12].

Family Participation

Family participation in preventing symptoms includes goals and impacts such as mitigating the rapid onset of thirst and dry lips. This corresponds with Roger's (2021) research, where the objectives of fluid restriction include reducing left heart failure-related shortness of breath, alleviating right heart failure-related leg swelling, preventing rapid weight gain, and minimizing abdominal distension. The impacts of fluid regulation include addressing rapid thirst through more frequent teeth brushing, adding lemon/citrus to drinking water, and consuming fruits and vegetables rich in water content [13].

8. Conclusion

1. The study encompasses four themes: (1) Family decision-making, (2) Health stability, (3) Fluid needs control, and (4) Family participation.
2. Family understanding in caring for congestive heart failure patients involves administering prescribed medication without the awareness that families can also contribute to symptom reduction through fluid management, as educated by healthcare professionals.

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Authors' Contributions

First and second authors contributed to design, concept, literature search. The second author contributed to literature search, data analysis, the third author contributed to manuscript preparation and the fourth author's contribution was literature search, data analysis and manuscript editing.

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