

Exploration Of Nurses's Perseptions Of Using The Myheart Telemonitoring Application In Preventing Readmission Of Heart Failure Patient In Tasikmalaya

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ARTICLE INFO	ABSTRACT
<p>Keywords:</p> <p>HealthMyHeart application, recurrent care, heart failure</p>	<p>Congestive Heart Failure tends to experience recurrence due to various factors, one of which is a decrease in the level of heart pumping ability, uncontrolled predisposing factors, patients not complying with the therapy that must be undertaken. There is a need for innovation that can reduce the number of repeat hospitalizations in CHF patients, one of which is telemonitoring. This study aimed to explore nurses's perceptions of the use of MyHeart telemonitoring in preventing readmission of heart failure patients. The design of this research is a qualitative phenomenological study using Focused Group Discussion (FGD) methods. The results of data analysis showed two major themes in this research, namely the experience of caring for inpatients and perceptions of telemonitoring applications for heart failure patients. Nurses feel this application is important because it will help patients adhere to treatment. Suggestions for further research are a qualitative approach with triangulation with the involvement of patients and families</p>

1. INTRODUCTION

Congestive Heart Failure tends to experience recurrence due to various reasons, this could be due to a decrease in the level of heart pumping ability, uncontrolled predisposing factors, or patients not complying with the therapy that must be undertaken. This is by research conducted by Fatoni et al (2015) regarding factors related to the incidence of re-hospitalization in CHF patients, where there was a relationship between the history of hypertension (0.009), drug therapy compliance (0.014), and adequacy of rest (0.030) with the incidence of repeated hospital admissions.

There is a need for innovation that can reduce the number of repeat hospitalizations in CHF patients, one of which is telemonitoring. Huey Chen et al. (2021) researched patient perspectives on the innovative telemonitoring enhanced care program for chronic heart disease (ITEC-CHF) where there are three telemonitorings, namely remote weight monitoring, structured telephone support, and nurse-led collaborative care. Patients are given electronic scales, and tablet computers, they are asked to weigh themselves every day, this telemonitoring is integrated with personal assistance and nursing services. After six months, it was evaluated using a Likert scale to see the benefits and barriers felt by

participants in using ITEC-CHF. The results showed that the majority agreed that telemedicine was useful (91%) and made them more confident in managing their weight (85%).

The problem currently occurring is the high incidence of CHF. This is by the AHA (2012) that CHF patients who experience rehospitalization are around 50% of the total CHF patients who have undergone previous hospitalization. Patients experiencing rehospitalization are most often due to a lack of knowledge about the rules for post-hospital management of CHF or the patient's lack of compliance and lack of post-hospital monitoring.

The specific objectives of this research are the creation of a telemonitoring application, the identification of recurrent hospitalizations in CHF patients and their causes, the identification of patient satisfaction using CHF telemonitoring, and the identification of recurrent hospitalizations before and after using the telemonitoring application. This research is a multi-year study starting from 2023 to 2023. 2024 with the PDUPT scheme. In 2023, research will design a post-treatment telemonitoring application for CHF patients. The trial will be carried out at Dr. Hospital. Soekardjo Tasikmalaya, 2024 application development and application implementation in East Priangan

2. METHODS

The research design is qualitative penomenology using Focussed Group Discussion (FGD) methods. Nurse participants from the polyclinic and treatment room at dr. Soekardjo Tasikmalaya Hospital and SMC Hospital in Tasikmalaya Regency totaling 12 partisipans.

3. FINDINGS AND DISCUSSION

Demographic Characteristics of Research Locations

The research was conducted in August 2023 in the Santika Hotel Meeting Room - Tasikmalaya City. It was recorded that there were two heart polyclinic nurses and an FGD of 10 heart care room nurses at Dr. Soekardjo Hospital Tasikmalaya and SMC Hospital Tasikmalaya Regency.

Participant Characteristics (n =12)			
No	Characteristics	Frequency	Percentage %
1.	Age		
	▪ < than 45 years	9	75
	▪ 45 years to 54 years	2	16
	▪ 55 years to 65 years	1	8
2.	Sex		
	▪ Male	6	50
	▪ Female	6	50
3.	Education		
	▪ D III Nursing	4	34
	▪ Nurse profession	8	63
4.	Marital status		
	▪ Married	9	75
	▪ Not Married	3	25
5.	Length of working		
	<5 Years	7	42
	▪ ≥ 5 years	5	58

From the table above it can be seen that the majority of participants were aged < 45 years (75%), the number of female and male participants was the same (50%: 50%), had a professional education as a nurse (63%), married status (75%) and have worked > 5 years (58%).

Qualitative Analysis Results

The results of qualitative data analysis are grouped based on the specific research objectives that have been prepared, namely exploring information about the phenomenon of repeated admissions in heart failure patients and the features that must be included in the application. The results of grouping data analysis into themes, sub-themes, and categories, there are two major themes in this research, namely the experience of caring for inpatients and perceptions of telemonitoring applications for heart failure patients. The following are the themes, sub-themes, and categories of the FGD results:

1. Theme: experience of caring for re-hospitalized patients.

The results of the thematic analysis with the specific aim of exploring the depth experienced by participants when re-treating patients produced sub-themes, namely (a) early onset (first treatment), (b) relapse, (c) signs and symptoms felt when relapsed, (d) history behavior that causes recurrence (e) Implementation of discharge planning for heart failure patients.

a. Sub Theme 1: early onset (first treatment)

The early onset (first treatment) theme has the category: of initial symptoms felt by heart failure patients.

Early onset is the first sign and symptom a patient with heart failure is treated which is often encountered by participants when caring for the patient. Obtained from FGD with nurses in the treatment room. This early onset is supported by the initial symptom category felt by heart failure patients, namely feeling short of breath. This is supported by the participant's statement:

"...Most often patients mention shortness of breath...like that...like gasping for air..." (P1)

"....Looks short of breath, breathing hard..." (P7)

"...You have to breathe in a sitting position, you can't sleep..." (P10)

Apart from that, another initial symptom that is often found by participants is getting tired quickly, this can be seen from the participant's expression:

"You look tired quickly...can't walk... Just walk tired...just sit down like that, first." (P4)

"...get tired quickly..., when you talk to him you look tired" (P5)

"The patient looks weak, often complains of being tired..." (P4)

Apart from that, another early symptom that is often found by participants is excess fluid, this can be seen from the participant's expression:

"When the patient arrived, he had edema, especially in the legs..." (P8)

"...Patients often complain that their legs are swollen..." (P7)

b. Sub Theme 2: Readmission

The sub-theme of recurrence has the following categories: The frequency and duration of recurrence of heart failure can be seen in the respondents' expressions below:

"..There are patients who have just been treated after returning from the hospital for two weeks..." (P1)

"..There were patients who were treated again two months after the first treatment..." (P5)

"...treated again for 5 days, after that control at the polyclinic..." (P8)

c. Sub Theme 3: Signs experienced by the patient during readmission

The theme of signs and symptoms felt during a relapse has the category: symptoms of a second or more attacks

Obtained from FGD with nurses in the treatment room. This initial onset is supported by the category of symptoms of a second or more attacks felt by heart failure patients when the attack recurs, namely:

(1) More crowded than before, this can be seen from the expressions of three respondents:
"... patients often complain that their chest is difficult to expand... it looks tighter than the first treatment..." (P1)

"...The patient stated that this was more congested than the first treatment..." (P2)

"...the patient mentioned chest pain like being crushed... ..like being crushed...chest pain like being crushed..., ..like being crushed, somewhat weak,...The main thing is chest pain..., throbbing...." (P2)

(2) Nausea

This can be seen from the expressions of two participants

"Patients often complain of nausea,..." (P2)

"There are patients who express nausea and want to vomit... (P1)

(3) Wet sweat

This can be seen from the expressions of two respondents:

"Sweating" (P3)

"Sweaty clothes" (P1)

d. Sub Theme 4: history of causes of recurrence

Sub Theme 4 has the category: the impact of non-compliance with self-care management in the form of non-compliance with medication which ends in drug withdrawal is caused by:

1) Embarrassed to ask for references too often

This can be seen from the expression of one respondent,

"..the patient said I had stopped taking treatment...because I was embarrassed...because I often asked for referrals, BPJS patients..." (P5)

"..Often asking for a referral to the hospital makes the patient embarrassed..." (P9)

2) Undisciplined

"...Patients drop out of medication because the patient is not disciplined, .. (P7)

"...Some patients say that sometimes they take the medicine, sometimes they don't..." (P11)

"...If the patient's blood pressure is already 120, they don't take medicine... if it goes up again, they take medicine" (P2)

"There was a patient who stated that he was taking medication not regularly, so I remember, that's how it works, that's how it works..." (P12)

'..Some patients say that sometimes it goes too far, like that.. ..sometimes it's a high-five routine at work, like that in the family, like that, sometimes you remember..... "(P3)

3) Fear of drug side effects

Participants stated that patients dropped out of medication because they were afraid of the side effects of the medication. This can be seen from the respondent's expression:

"...There are patients who don't take medication because their neighbours have kidney failure due to blood pressure medication, that's their perception..." (P2).

"There are patients who only take medication when they have symptoms because they are afraid of side effects..." (P11)

4) Long waiting queue for inspection

Participants stated that patients dropped out of medication because they felt lazy about seeking treatment due to long waiting queues for examinations, especially for BPJS patients, this can be seen from the following expressions:

".. Patients often say the wait in the queue is also long..." (P2)

"There are patients who are too lazy to go for treatment, to come to the Puskesmas, ask for a referral... You can queue from morning until noon, that's what the patient said..." (P3)

2. Theme: Application-based monitoring of heart failure patients at home

The sub-theme of application-based monitoring of heart failure patients at home consists of four sub-themes, namely:

a. Perception of the need for a heart patient monitoring application at home

Several participants expressed the importance of monitoring using applications:

"Today, it is necessary to monitor patients using technology... (P3).

"It's really necessary, this can help make patients more compliant (P12).

"If developed, this will be very useful (P9).

b. Supporting the implementation of patient monitoring through applications

Participants revealed supporting factors for implementing patient monitoring applications:

"On average, patients already have gadgets (P4)

"Patients and families have cellphones (P6)

c. Barriers to implementing patient monitoring through applications

Several participants expressed barriers to monitoring through the application

"Patients who are old and don't have a family find it difficult to use the application (P8)

"...someone must accompany (P4)"

"When you forget your cellphone, you forget to enter it... (P9)

d. Important features that need to be in the application

Important features that need to be in the application

"There needs to be blood pressure monitoring (P10)

"... the number of patients drinking per day... (P12)

"...weight monitoring (P4)

".. reminding med taking schedule, health education.. (P2).

"Dietary education.. (P1)

"Lifestyle education...reminds patients about treatment management..."

e. Family involvement in monitoring heart patients,

Several participants expressed the importance of family involvement in using the application;

".. must be accompanied by family, especially elderly patients..(P14)

"..for elderly patients it is difficult to be alone... (P13).

Discussion

Recurrence of heart failure can often occur in heart failure patients. The prevalence of recurrent hospitalization in heart failure patients in Indonesia in 2022 is quite high, 17% of heart failure patients experience recurrent hospitalization due to worsening symptoms and signs of heart failure (Risala, 2022). In another report, it was also stated that 17.2% of heart failure patients in Indonesia died while being treated in hospital, while 11.3% died within one year of treatment (Lestari, 2022).

The length of stay for the second or subsequent treatment for heart failure patients varies between 4 - 21 days (Rasyid, Syahrul & Tahir, 2021) and at RSUPN Ciptomangunkusuo the median length of stay is around 8 - 9 days (Djaya, Nasution, & Antono, 2015)

Symptoms felt during the second or subsequent attack are: more breathlessness than before, nausea, and wet sweat. A person suffering from heart failure can experience several symptoms that are more severe than the first symptom, namely sudden cold sweat, nausea, shortness of breath, slow heartbeat, and irregular heart rhythm (Lewis, 2014).

Non-compliance with self-care management for heart failure patients can result in complications and opportunities for more severe events in heart failure patients, failure to achieve improvements in heart failure treatment, and increased medical costs (Djaya, Nasution & Antono, 2015).

The causes of non-compliance resulting in heart patients being re-admitted are the patient's lack of understanding about heart failure and its treatment, financial problems which make it difficult for patients to buy medication, disability, and lack of motivation (Prihatiningsih & Sudyasih, 2018).

This is by what was expressed by respondents that patients feel embarrassed about asking for referrals too often, are not disciplined in their treatment, are afraid of the side effects of the medication, and wait long in queues which is the cause of relapses which result in being re-treated again.

Implementing discharge planning for heart failure patients is very important. Discharge planning can increase readiness to go home, compliance with taking medication, increase family knowledge in caring for patients, and reduce Average Length of Stay (ALOS) and hospital costs (Wahyuni, Nurrachmah & Gayatri, 2012). Effective discharge planning allows patients to receive treatment after hospitalization thereby speeding up the patient's recovery.

Apart from that, it also helps patients and families understand the patient's condition, and overcome health problems that arise. Discharge planning must be planned systematically by those involved in patient care. Things that need to be taught to patients are fluid restrictions, activity, medication compliance, diet, and controlling risk factors.

The HealthMyHeart Telemonitoring application is an application created by researchers for recording/monitoring patients at home. The formation of this application framework began with a qualitative study through FGDs and interviews with 12 nurse participants who worked in the heart care polyclinic at Doctor Soekarjo Hospital and SMC Tasikmalaya Regency to find out what information points were needed in this application. Based on the results of FGDs and interviews, the HealthMyHeart application can facilitate patient needs such as reminders for medication taking schedules, education on diet, and lifestyle, patient reminders and monitoring, medication management in the application, and warnings for control patients.

Participants felt the need for this application, there were several reasons put forward by participants including because there was no monitoring of heart patients at home, compliance was lacking because there were side effects, patients felt cured so they did not take medication, compliance with taking medication was lacking because they were bored, patients were not in control because distance and economic factors, patients cannot control because there are no symptoms, so an application is needed to save money.

This is by several studies that state that telenursing can provide education to patients about their condition and how to manage symptoms to improve self-management and avoid conditions that require re-treatment. Telenursing can help in monitoring the patient's condition regularly so that the medical team can identify changes in the condition. patients quickly, telenursing can provide counselling to patients and families about the patient's condition and treatment (Setiawan, et al., 2020).

4. CONCLUSION

1. There are two big themes from the results of the FGD and interviews, namely

a. The phenomenon of re-hospitalization in heart failure patients and the features that must be included in the application based on the results of the interviews, two major themes were found, namely the experience of caring for re-hospitalization patients with sub-themes, namely (a) early onset (first treatment), (b) recurrence, (c) signs and symptoms felt when it relapses, (d) history of behavior that causes recurrence (e) Application of discharge planning for heart failure patients and telemonitoring application for heart failure patients which consists of features

b. The HealthMyHeart application can facilitate patient needs such as reminders for medication schedules, education on diet, and lifestyle, patient reminders and monitoring, medication

management in the application, and warnings for control patients. Participants felt the need for this application because it would make things easier for patients and nurses.

2. The HealthMyHeart application design has been formed and is awaiting trial in 2024.

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