



READINESS FOR HOSPITAL DISCHARGE AMONG FAMILY CAREGIVERS OF PATIENTS WITH CHRONIC DISEASES

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ABSTRACT

Families often act as informal caregivers for family members who suffer from chronic diseases. Intensive family involvement improved patients' adherence in performing post-discharge treatment program, hospital readmission, clinical outcomes, and quality of life. To effectively help the patients managing their diseases, the family caregivers required not only understand but also must be ready for helping patients manage their conditions. This study aims to identify the readiness for hospital discharge among family caregivers of patients with chronic diseases. Data were collected from 121 family caregivers recruited consecutively from adult inpatients wards using the respondents' characteristics questionnaire and Readiness for Hospital Discharge Scale for Family with Adult Patients (RHDS Fam) questionnaire (inter-item correlation = 0.90, and Cronbach alpha 0.89). Descriptive analysis was applied. The results showed that most of family were female (77.7%), unemployed (69.4%), graduated from senior high school (57.9%), and had no chronic diseases (86.8%). Generally, family caregivers reported high readiness for hospital discharge (7.75 Out of 10). While the coping abilities identified as the readiness domain with highest average score (9.07±1.15), the personal domain identified as the lowest domain (7.07 ±0.68). Higher readiness was showed in the age group of 20-40 years, female, graduated from senior high school, employed, and are the siblings of the patients. It can be concluded that the family caregivers of chronic disease patients are ready to return home and help patients continue their post-discharge treatment program. However, interventions are needed to improve their readiness related to patient's personal status, particularly those who are male, lower educational background, unemployed, has a relationship as parents of the patients, and has a chronic illness.

Keywords: chronic patient; family readiness; hospital discharge

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INTRODUCTION

Chronic diseases are becoming a major health concern. Globally, the prevalence of this disease significantly increasing and contributes significant morbidity and mortality (WHO, 2020). Similar issues were also found In Indonesia A national study found as the prevalence of stroke 56%, diabetes mellitus at 23%, hypertension at 32%, and obesity at 47% (Ministry of health of Republic of Indonesia [MOHRI], 2018). Not only the number, these patients also often experienced a decline in physical and mental capabilities, requiring comprehensive care including long-term management that may incurable (Gertrude et al., 2019). To manage their conditions, they frequently experienced hospitalization and rehospitalization. Research conducted in Hongkong and Australia showed a range of 13-16% of unplanned readmission occurrences (Jayakody et al., 2018; Wong et al., 2011). In a survey, re-hospitalization of patients with chronic diseases ranked first as the highest unplanned readmission rate (Bureau of Health Information, 2012). Based on data from the Indonesian Health Insurance

Administration (BPJS Kesehatan), there has been an increase in the incidence of readmission in Indonesia. In 2021, there were 12.5% readmission cases, 12.9% in 2022, and 13.2% in 2023. These figures indicate that out of every 100 patients hospitalized, 13 of them will return to the hospital within 30 days post-hospitalization.

After hospitalization, patients were expected to continue the treatment program at home. Unfortunately, study found that this period is critical as many patients experienced difficulties in performing self-care and medication that caused them re-hospitalized or even death (Risky et al., 2021). To help these conditions, chronic patients need an intensive support (Adib, 2021). Families play a very important role as informal caregiver for their family members who are undergoing treatment for chronic diseases (Onsudina, 2017). Study by Levine (2011) found that family members are the primary source of support for patients. Additionally, Kang et al. (2016) found that intensive involvement of family caregivers motivated the patients to life more optimistic in facing life, both now and in the future. Involvement in the care of chronic patients improves their quality of life, optimizes their ability in doing activities, and minimizing the potential stress of undergoing treatment (Kusumawardani, 2023). Moreover, Rachmat et al., (2021) reported that one of the leading causes of death in chronic patients is lack of social support from their family.

In enabling family caregivers and patients for effectively manage patients' post-discharge conditions, they must be prepared in advance. Family readiness for hospital discharge therefore is a crucial indicator. A study among stroke patients found that family caregivers' readiness is an important factor for effective stroke management at home (Tanwir et al., 2014). Another study also showed that the key of care in diabetic patients was readiness of the family caregivers as the closest supports (Osundina, 2017). Additionally, a study among cancer patients found that lack of knowledge among family caregivers was negatively impact on unplanned readmission and the patients readiness to discharge from the hospital (Chang et al., 2016; Naoki et al., 2018; Dhollander et al., 2018). There is a lack of research specifically addressing the readiness of family caregivers of chronic patients, particularly in Indonesian context. Identifying the family caregivers' readiness for hospital discharge therefore is very important, not only to identify whether or not they ready for helping the patients after discharge from the hospital but also explore the area for improvement regarding the hospital discharge education and follow-up program. This study aims to identify the readiness for hospital discharge among family caregivers of patients with chronic diseases.

METHOD

A descriptive quantitative study was implemented with a cross-sectional approach. This study is part of the bigger project evaluating the impact of discharge education on patient and family readiness for hospital discharge among patients with chronic diseases. This manuscript depicts the descriptive analysis of the family readiness for hospital discharge. Family caregivers of patients with chronic diseases who were hospitalized in a secondary hospital in West Java Indonesia were consecutively recruited as the sample in this study. Inclusion criteria included: (a) identified as family caregiver who lived in the same house with the patient; (b) age ≥ 18 years old; (c) family caregiver of patients who have been decided for discharge. Family caregivers from chronic patient who decided to leave the hospital without following medical advice was excluded. Sample size was determined based on the monthly average of adult chronic patients hospitalized at this hospital in the previous year (around 120 patients).

The respondent recruitment was conducted after the permission letter and ethical approval were gained. Facilitated by the ward nurse, the principal investigator (1st author) approached the eligible family caregivers of chronic patients, informed the research aim and procedures, and asking their willingness to participate in the study. Those who were willing to participate were recruited as respondent in this study. These procedures were continued till the number of calculated respondents met. Data in this study were collected through respondents' characteristic questionnaire and The Readiness for Hospital Discharge Scale (RHDS) – Family Caregiver of Adult Patients. Respondents' characteristics questionnaire was developed by the research team consisted of 9 items, including respondent personal information such as initial, phone number, gender, age, level of education, occupation, relationship with the patients, has a chronic disease or no, and do they have an experienced on caring for chronic patients.

RHDS for family was adopted from Weiss et al. (2006). It consists of 22 items, including personal status (7 items with one question for patients and family for each item), knowledge (8 items), coping abilities (3 items), and expected support (4 items). All sub-scales are scored by using a 0-10 Likert-type scale, with 0-10 indicating 'not ready' 'totally ready' 'know all' and 'totally able'. Items 2a, 2b, 5a, and 5b are negative items so it was given a reverse score. All scores are calculated as the mean of item scores (sum of items divided by number of items). Higher scores indicate a higher level of readiness. Previous study already tested the RHDS Fam and resulted in validity and reliability tests and obtained *r* results (0.90) as well as a Cronbach alpha value of 0.89 which means this questionnaire is valid and reliable (Septianingrum, 2023).

As this questionnaire was developed in English, it was translated into Bahasa Indonesia through forward and back translation method by three bilingual nursing scholars independently. The first translator translated the questionnaire into Bahasa Indonesia, following by the second translator will translate the Indonesian questionnaire into the English version, and the last one the third translator will compare the original RHDS Fam questionnaire with the one that has been translated into English version and determined whether both items were totally similar, different but same meaning, or totally different. After the translation process, it was found that there were no items in the questionnaire with totally different meanings. Out of 22 questionnaire items, 10 totally similar, 12 items identified had different but similar. . Therefore, all items of Indonesian version then tested for face validity with 5 family caregivers. It was found that the Indonesian version of RHDS Fam could be understood by the respondents. However, most of respondents need additional explanation for the items no 1-7 as those items were consisted of two types of questions; one to assess the patient from the family's perspective and one to assess the family's conditions. After the recruitment processes, the principal investigator distributed to the respondents, accompanied them during filling out the questionnaires and answered respondent questions for unclear question items, and checked the completeness of the filled questionnaires. Totally, 121 filled questionnaires were gained from the respondents.

The collected data were descriptively analyzed. Additional analysis also performed to further extend the descriptions and the identified trends. This study adhered to the ethical principles for conducting research involving humankind. The study was approved by the University Ethical Committee (number: 032/KEPK/FITKes-Unjani/II/2024) and approved by the hospital as the research setting (number: ST.02.01.07/192/RSUD/II/2024). The study aims and procedures were explained to all potential respondents and they were informed that their participation is voluntary, and they freely participate or not participate and withdraw from the

study without any penalty. They also ensured that all information given were recorded anonymously and kept confidential.

RESULTS

Respondent’s characteristics are shown in Table 1. Generally, family caregivers reported that they have high readiness for hospital discharge (7.75 out of 10). The family readiness for hospital discharge and its dimension average scores were shown in Table 2. Different significance is shown between families who have a chronic illness and don’t ($p < 0.05$). Readiness for Hospital Discharge Family Caregiver Score of each characteristic were shown in Table 3.

Table 1.
Respondent characteristics (n=121)

Respondent characteristics	f	%
Age (Mean±SD = 42.84+12.02)		
20-40 years	48	39.7
41-60 years	64	52.9
>60 years	9	7.4
Gender		
Female	94	77.7
Male	27	22.3
Educational level		
Primary school	25	20.7
Junior high school	26	21.5
Senior high school and university	70	57.9
Occupation		
Actively Working	37	30.6
Unemployed	84	69.4
Caregiver relationship with the patients		
Spouse/wife		
Child	37	30.6
Parents	60	49.6
Siblings	6	5.0
Others (grandchild, uncles, nieces, aunties)	8	6.6
	10	8.2
Has a chronic illness		
Yes	16	13.2
No	105	86.8
Experienced in care for chronic patients		
Yes	119	98.3
No	2	49.6

Table 2.
The Family (Caregivers) Readiness for Hospital Discharge (n=121)

Items	Possible scores	Item number	Actual score	Average score
Personal status	0 - 100	14	99.00±9.26	7.07±0.68
Knowledge	0 - 80	8	68.59±12.30	8.57±1.53
Coping abilities	0 - 30	3	27.23±3.47	9.07±1.15
Expected support	0 - 40	4	30.86±12.16	7.71±3.04
Total RHDS	250	29	225.02±21.14	7.75±0.72

Table 3.
Readiness for Hospital Discharge Family (Caregivers) Score of each characteristic (n=121)

Responden characteristics	Mean±SD	p value
Age (Mean±SD = 42.84+12.02)	227.12±21.84	0.67
20-40 years	224.03±23.04	
41-60 years	221.77±36.15	
>60 years		
Gender		0.99
Female	225.84±23.86	
Male	222.48±22.78	
Educational level	220.76±26.00	0.07
Primary school	222.08±22.31	
Junior high school	227.93±24.88	
Senior high school and university		
Occupation	225.21±22.15	0.64
Working	225.03±24.30	
Unemployed		
Caregiver relationship with the patients		0.37
Spouse/wife	231.64±20.31	
Child	221.80±24.93	
Parents	216.33±39.86	
Siblings	237.62±11.01	
Others (uncles, nieces, aunts, grandchild)	208.33±12.39	
Has a chronic illness		0.04
Yes	212.37±28.62	
No	227.02±22.23	
Has experience in taking care patients with chronic diseases	225.01±23.74	0.48
Yes	229.50±10.60	
No		

DISCUSSION

In this study, the actual score of readiness for hospital discharge families with chronic illness patients is 225.02±21.14 and the average score of items for total RHDS Fam is 7.75 (95% CI 7.62-7.89). More than half of the participants, namely 107 people (88.6%) had an average score for items greater than or equal to 7. Compared with the reported readiness of families with other clinical characteristics, the readiness of families in this study was in the lower level (RHDS fam with post-surgery patients was 8). However, the scores depend on the situation of the family and how the nurse and other health workers give the discharge education to the patients and their families. In general, we can conclude that the total scores are good enough to describe the readiness for continuing care independently at home after being hospitalized. Readiness for hospital discharge is defined as the ability of the patients and their families to leave the hospital and continue the recovery phase. Discharge readiness is an important component in the discharge planning process and serves as an indicator to determine whether the patient will be readmitted to the hospital or not. For families, readiness for hospital discharge is highly influential in how they will care for patients at home because families play a crucial role as the closest caregivers for the patient. (Abu et al., 2020; Coffey et al., 2013; Weiss et al., 2011). Readiness for hospital discharge consists of four dimensions, namely personal status, knowledge, coping abilities, and expected support. Based on the research findings the family is ready to face the discharge.

Although the overall readiness score was good, there's still a low readiness score in the personal status dimension compared to other dimensions (7.07 ± 0.68). This domain addresses the physical and emotional readiness of families and the patient's condition based on the family's perspective in facing the discharge (Weiss & Piacentine, 2006). Our results were consistent with prior study that showed the personal status was low since some patients didn't get well but their families thought that they were ready for discharge even if this wasn't based on their physical state (Rattakanlaya et al., 2023). Nearly half of the participant's family returned to the hospital within 90 days after being discharged with the same diagnoses (41.14%). In this study, the majority of respondents were family caregivers of patients with CAD and stroke, which undoubtedly require extra care. In the personal status dimension, item 3A (patient strength from a family point of view) has the lowest score.

Additionally, low scores are indicated on item number 8 (how much do they know about caring for the family member), item 10 (how much do they know about the patient's medical needs), item 11 (how much do they know about problems to watch after going home), and item 13 (how much do they know about the patient's restrictions) with a score 5 out of 10. These items should be prioritized in improving the discharge planning. Family must have assured that they have adequate knowledge how to manage the patients at home including identifying patients needs and what patients restricted or allowed. Based on the characteristics of the respondents, high readiness was found among those aged 20-40 years, female, graduated from high school, working, spouse/wife and siblings, and those without a history of chronic illness. Different significance is shown between families who have a chronic illness and don't ($p < 0.05$).

Higher readiness scores are found in families who are spouses and siblings of the patient. This is similar to a previous study (Monin et al., 2019). When the patient is being cared for by their spouse, they tend to feel more comfortable asking for help when needed, and also they feel that their needs are better understood when they're with their spouse. Additionally, family members or caregivers who live with the patient are also considered determinants factor of family readiness. However, it cannot be proven as all respondents are family members living in the same household as the patient. Based on Table 3, low RHDS scores tend to be found in the elderly group (>60 years). It can be a focus for nurses to pay attention to because according to the previous study, caregivers in this age group have more emotional maturity, sufficient experience, and a better coping mechanism in dealing with stress when they're helping the patients (Zhang et al., 2017). Additionally, caregivers who are 40 years or older have a broader social connection and greater responsibilities that can help them to adapt more effectively in their lives (Potter & Perry, 2021).

Female has a higher score compared to males. It is consistent with previous research (Ris et al., 2022; Septianingrum, 2023). Informal care for patients with chronic conditions and other disabilities is usually provided by women (Sharma et al., 2016). Especially in Indonesia, there's still a perception that women play a role in managing household including care for their family members, while men are responsible for providing livelihoods. Women are also considered to have more patience in caring due to their maternal characteristics (Septianingrum, 2023). Individual level of education can also be a factor that influences family readiness. Based on the study, it was found that participants with an elementary school level have the lowest scores compared to other groups. Low educational attainment can affect their knowledge and how they're understanding related to their life management (Darmayanti et al., 2021). However, this can't be taken as a reference considering that all of the participants

have already been given discharge instructions and the majority of them already have experience in caring for chronic patients (98.3%).

Research findings that employed participants have a higher score (225.21±22.15). Previous studies showed that caregivers with lower economic status often experience increased depression and caregiving burdens, and it can lead to families being unprepared to continue patient care at home (Saito et al., 2018). Another study indicates that working caregivers have more opportunities to provide supportive resources for patient recovery (Howard et al., 2022). Some respondents also stated that they still need to adapt to changes in the patient's condition and changes in treatment plans such as an increase in the number of medications prescribed and how to consume them, which can affect the score of the patient's family's discharge readiness in the coping abilities and expected support.

CONCLUSION

Overall, families were ready to return home and continue their care independently. Both in total RHDS score and based on dimensions, they tend to be ready. However personal status is identified as the lowest score cause this dimension is perceived to mean that the family caregiver isn't ready enough compared to the other, indicating that improvement is still needed. Low scores on several items also indicate the unreadiness of the family in providing adequate care for the patient independently at home. In the future, health workers should pay more attention to the actual effect and timely adjust the form of education and teaching. There is a need for a program that can improve the quality of discharge planning provided to patients and families before they return home, especially in the personal status domain, male, and have a low level of education.

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