Original Research

Discharge Planning of STEMI Patients by Multidisciplinary Professionals to Improve the Health Services

Rahmatul Fitriyah, Nursalam Nursalam, and Ita Maulidiawati

Faculty of Nursing, Universitas Airlangga, Surabaya, East Java, Indonesia

ABSTRACT

Introduction: Discharge planning starts at admission and begins by determining the educational needs. A lack of knowledge results in a lack of awareness of the risk factors, healthy behavior, decreased compliance and increased stress and depression for the patients. The objective of this study was to explore the implementation of discharge planning held by multidisciplinary professionals for STEMI (ST elevation myocardial infarction) patients.

Methods: . The design of this study was descriptive and the data was collected through in-depth interviews with the participants. The results of the interview were transcribed verbatim, and then a FGD (Focus Group Discussion) was conducted. The participants consisted of 11 nurses, 1 nutritionist and 1 pharmacist with a minimum working period of 2-10 years. Sampling started with the purposive sampling method.

Results: Several things influence the implementation of discharge planning viewed from the perspective of multidisciplinary professionals according to productivity theory in the organization of a cooperative, namely the motivation of the health workers, the abilities and knowledge of the health workers, the job design and the work schedule involved. Of the 5 themes, motivation and work schedules were most often found to require completion, so the implementation of discharge planning according to the set standards and work schedules of the health workers can be optimized.Of the 5 themes that emerged, motivation and work schedules were the most frequently found and this needs to be addressed as soon as possible to avoid the worsening of the condition of STEMI patients.

Conclusion: For the future, it is necessary to have digital guideline/tools available that can be easily accessed by multidisciplinary professionals to make the work schedule for health workers optimal to improve the health services.

INTRODUCTION

Patient discharge planning refers to an activity that facilitates the transfer of the clients to other health care facilities safely and smoothly in order to maintain the continuity of the service provided. Patient discharge planning includes any education and special skills training that the clients and their families may need (Sutoto, 2017). The knowledge and attitudes of the clients with coronary heart disease regarding recurrence prevention was still lacking because information on recurrence prevention is only given to the clients who are going home (Agustin, 2017). A lack of knowledge on the part of the client and family had an impact on the client's unpreparedness to face repatriation, so they often return to the emergency room with minor problems. Optimal discharge planning is an important element

used to provide specific information, to reduce anxiety and to meet any educational needs (Andrew, Busingye, Lannin, Kilkenny, & Cadilhac, 2017). The influence of optimal discharge planning was already known by the health workers but discharge planning cannot be done optimally. Heart disease is the number one cause of death globally and an estimated 17.9 million people died of heart disease in 2016. This represents 31% of all global deaths (WHO, 2017). The incidence of heart disease in Indonesia reached 1.5% or 15 out of 1000 population in 2018 (KEMENKES, 2018).

The low level of readiness of the patients to go home was associated with a higher incidence of re-admission by 3 to 5 times (Bobay, Weiss, Oswald, & Yakusheva, 2018). The successful implementation of discharge planning was influenced by communication, coordination, collaboration and the roles and functions of the related parties in addition to the use of structured instruments and the evaluation of the preparation process of returning in order to produce standardized discharge planning (Weiss et al., 2015).

Educational tools for standardized patients can be an alternative choice (Veronovici, Lasiuk, Rempel, & Norris, 2014). In previous studies that were exploratory in nature, the implementation of discharge planning has been done but the implementation of discharge planning in terms of the medical personnel has not yet been developed. This study aimed to explore the implementation of discharge planning conducted by multidisciplinary professionals for STEMI patients from the viewpoints of the medical personnel. This allowed an evaluation and recommendations for further action to be carried out.

MATERIALS AND METHODS

This research was a qualitative study using a descriptive exploratory approach in order to describe events systematically and to emphasize the factual data rather than to infer (Nursalam, 2017). The study was conducted at a hospital in Surabaya between December 2019 and March 20th 2020. Sampling was done using a purposive sampling technique. The total participants in this study were 13 health workers including 11 nurses, 1 nutritionist and 1 pharmacist, with the inclusion criteria being that they had worked for more than 2 years and were older than 20 years old. The data collection was carried out from December 2019 to February 2020 at a hospital in Surabaya. Of the 13 participants, they consisted of 10 women (77%) and 3 men (23%). All of the participants in this study have worked for more than 2 years with an age range of 25-35 years old. The majority of the respondents' education was a Bachelor's for as many as 11 people (84.6%) while 1 respondent had a diploma level of education (7.7%) and 1 respondent had a Master's level of education (7.7%). The descriptive statistics of the characteristics of the participants are as shown in Table 1. This study followed the 13 health workers who took part in discharge planning. The majority of the participants (11 participants) were nurses. The other professionals were a nutritionist and a pharmacist.

In qualitative research, the instrument of the research is the researcher. The in-depth interview guide (in-depth interview) used was compiled based on the research objectives which were elaborated on in the questions that were able to explore the information both in-depth and broadly with the participants. Semi-structured interviews were conducted for around 20-40 minutes for each respondent. The interview started with the following questions: "How is discharge planning implemented?", "What method is used when implementing discharge planning?", "What is the response of the patients when you provide education?" and "Information related to the supporting and inhibiting factors in the implementation of discharge planning".

In this study, the researchers used supporting tools to help aid the researchers' performance including voice recording devices, cameras, paper and stationery in order to record the results of the interviews. Writing down the results of the data collection was done immediately after the interview process. The data was done verbatim before a Focus

Table 1. Characteristics of the participants

No	N	Gender	Age(Year)	Years of service (year)	Occupation	Education
1	P1	Female	29	5	Temporary employees (nurse)	Bachelor
2	P2	Female	32	8	Temporary employees (nurse)	Bachelor
3	P3	Male	31	2	Temporary employees (nurse)	Bachelor
4	P4	Male	31	10	Government employees (nurse)	Bachelor
5	P5	Female	31	8	Government employees (nurse)	Bachelor
6	P6	Female	31	8	Temporary employees (nurse)	Bachelor
7	P7	Female	31	8	Government employees (nurse)	Bachelor
8	P8	Female	29	5	Temporary employees (nurse)	Bachelor
9	P9	Female	31	6	Government employees (nurse)	Bachelor
10	P10	Female	34	6	Government employees (nurse)	Bachelor
11	P11	Male	31	6	Government employees (nurse)	Bachelor
12	P12	Female	26	4	Temporary employees (nutritionist)	Diploma
13	P13	Male	31	5	Temporary employees (pharmacist)	Master

Table 2. Identified and described process of undergoing multidisciplinary discharge planning

Theme	Sub-theme	Significant Statement
The motivation of the health workers	Health education - Educated modestly by the Information Provider - Willingness to give out leaflets Experience of the health workers - Form filling-in	'The method used was an oral discussion, sometimes with leaflets if available. There is no detailed explanation. There is no measurement of whether the patient understands or not... they are only given information. The form is not representative, they just ask for a signature (Participants 2, 6). 'The method used is verbally but it is a non-formal discussion. Sometimes we use leaflets because it is complicated to take and look for it [the information] otherwise. If I try to fill in the form, many people fill it in and some do not (Participant 5) 'It can be directed right at the beginning of the patient's admission. We perform the procedure of new patient admission and direct education as well as get signatures, but sometimes the patient's load and willingness is hampered (Participant 7)
Knowledge of the health workers	- Experience in discharge planning - Knowledge of the information that is to be provided	'The obstacle is that their colleague does not repeat the information, which refers to the level of education (Participant 2) 'Many new employees with varying levels of education. Sometimes they explain only in general terms (Participant 8)
Ability	- Ability to modify the form when filling it in	'Many new employees with varying levels of education... sometimes they explain in only general terms (Participant 8)
Job design	- Demands to complete the work - Delegation and administrative actions - Patients admitted and discharge at the same time - Multiple transportation actions - Perform actions that are considered to be priorities	'The patient turnover is high. Nurses are required to do work quickly including providing an explanation to the patients (Participant 1) 'There are many evaluations that are not filled in because they don't have time and because we take a lot of actions. There is also a lot of delegation. Sometimes we run out of time right there when trying to give medicines, drug mixtures and order medicines. We haven't gone out to radiology or sent patients to the ICU, not yet. When new patients arrive, we will complete everything: the assessment of new patients, doctor's report, etc., messages on nutrition, so sometimes we don't know anything ... (Participant 4) 'The average time for the patients to go home is in the morning and evening when the nurses also receive a lot of new patients, so they want to do discharge planning that is a bit longer because they cannot handle other patients. There is MRI 3, catheterization 2, go home a lot so they cannot discharge for long hurry up (Participant 6) 'The obstacle of" excitement "in the room, sometimes we forget to do that because we have a lot more priority than we do (Participant 11)
Work schedule	- Instructions (education standardization) - Revised forms	'It is better if there is paperless discharge planning media (Participant 1) 'I hope there is a guideline. For example, the patient must know about certain things, in writing and this is handed over to the patient (Participant 2) 'The form is too small. The form is general and still manual. The expectations are typed, so there is only a tick needed. There is a standardized education item for STEMI patients and it is in a tick condition, not filling in manually (Participant 3)

group discussion (FGD) was conducted. This research has passed the ethical test by the Health Research Ethics Commission with ethical certificate number 189 / KEH / 2019.

RESULTS

The respondents described the factors that influence, support and constrain the implementation of discharge planning based on select factors. These factors include: 1) the motivation of the health workers, 2) ability, 3) the knowledge of the health workers, 4) job design and 5) work schedule. The details of each theme have been described in Table 2.

DISCUSSION

The main principle of discharge planning is that it is a process that must be planned as soon as the patient is treated, facilitated by a comprehensive systemic approach that begins with the evaluation process. It is regulated by responsible people and coordinates all

caring professionals using an integrated and organized multidisciplinary approach. It is important to assess the patient's readiness to go home so then the patient is not readmitted (Sakai, Yamamoto-Mitani, Takai, Fukahori, & Ogata, 2016)(Wallace, Pierce, Davisson, Manges, & Tripp-Reimer, 2018)(Mennuni et al., 2017).

The motivation of health workers

The motivational themes in this study include support from the health professionals when providing discharge planning to the patients from when the patients are treated up until they are going home. This knowledge theme was identified through the following sub-themes: 1) health education and 2) information providers and the experience of health workers. The participants were asked what information has been given to patients with STEMI from the time of the initial admission up until discharge.

Ability

This refers to the ability of the health workers to conduct discharge planning and to document the implementation of discharge planning. This theme was identified through the sub-theme of the ability to modify the forms that need filling in.

Knowledge of the health workers

The theme of knowledge in this study includes the understanding of the health workers about STEMI according to the field of work and the knowledge of the effect of discharge on the patients. This is in addition to the consequences of not doing discharge planning properly. This theme was identified through the following sub-themes: 1) their experience of discharge planning and 2) the knowledge of the information that is to be provided.

Job design

Job design is a function related to determining the work activities of a person or a group of employees organizationally to regulate the work assignments in order to meet the needs of the organization. Besides the high ratio of patients to nurses, the rapid flow of patients in and out as well as the actions that require transportation also affect job design. This theme was identified through the following subthemes: 1) demands to complete the work, 2) the number of delegation and administrative actions, 3) inpatients and outpatients at the same time, 4) multiple transportation actions and 5) taking actions that are considered to be a priority.

Work schedule

In the course of an organization, there needs to be effective time management to obtain the expected results. This arrangement includes doing the work on time. To facilitate the implementation of discharge planning, it is expected that there will be media in place to support the implementation of discharge planning such as the revision of the discharge planning format and the media used in the discharge planning itself. This theme was identified through the following sub-themes: 1) guidelines (education standardization) and 2) form revisions. A study explained that the patients and staff identify that patient education is very important. Standard and appropriate educational tools could save resources but they are only effective if used together with individual education (Veronovici et al., 2014). RN plays a central role in inpatient discharge planning, coordination and teaching (Weiss et al., 2015). Other important things in discharge planning include communication, coordination, collaboration and the roles and functions of various professionals. In addition, the use of structured instruments and process evaluation will result in standardized discharge planning (Mennuni et al., 2017).

Based on Kopelmen's theory, work behavior (discharge planning) is influenced by organizational characteristics, individual characteristics and job characteristics. Work behavior affects performance and it will result in organizational effectiveness (patient and nurse satisfaction). Organizational characteristics include reward systems, goal setting, selection, training and development, leadership and organizational structure. Individual characteristics include knowledge, skills, abilities, motivation, character, values and norms. Job characteristics include objective performance, feedback, corrections, job design, and work schedules. Based on Kopelmen's theory (1986), the organizational determinants of leadership and reward systems influence the performance of individuals or organizations through motivation. Other organizational determinants of education affect the performance of individuals or organizations through the variables of knowledge, skills or abilities. Ability is built on work knowledge and skills (Nursalam, 2017). In this study, there were found to be 5 themes that emerged: the motivation of the health workers, ability, the knowledge of the health workers, job design and work schedule. The results of the assessment of the researchers into the 5 themes that emerges showed that some of the themes are interconnected and influence each other. The themes that are considered to be mutually influencing include the level of patient understanding and adherence. The themes that are considered to be influential include the motivation of the health workers, the knowledge of health workers and infrastructure. The experience of the health workers influences the implementation of discharge planning. The theme that often arose was the motivation of the health workers while the new theme and the hope of the majority of the respondents in the infrastructure showed that making discharge planning more digital would help. If the implementation of discharge planning is supported by adequate facilities such as forms that make it easy and if it is supported by attractive digital media that includes planning to go

home from the beginning of admission. This means that the work schedule will be carried out properly.

CONCLUSION

This research explores the implementation of discharge planning from the viewpoint of multiple medical personnel and it has been found that there needs to be a rearrangement of the work schedules involved and job design to support optimal discharge planning. The rearrangement includes a revised form and guidelines for discharge planning. This study also supports academic faculties and other researchers to continue to improve and innovate the implementation of discharge planning.

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