Effect of Therapeutic Communication on Anxiety and Depression Symptoms in Cardiovascular Disease Patients

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Abstract. Introduction: Patients with cardiovascular disease often suffer from anxiety symptoms and dpression, which can further affect their heart disease. Therapeutic communication is an approach to providing nursing care and is considered very imperative to reduce anxiety and depression in patients. **Purpose:** The study aims to determine the effect of therapeutic communication in reducing anxiety and depression symptoms among patients in the Intensive Cardiology Care Unit (ICCU). **Method**: This was a single group quasi experiment with pre-post tests research. 40 patients who were recruited using incidental sampling, received therapeutic communication during their staying in the ICCU. The intervention was performed by nurses who were certified and had minimum 3 years of experience in the ICCU. The nurses were observed single-blindly by two observers (Kappa test = 0.545) to ensure the implementation of appropriate therapeutic communication. Hospital and Depression Scale for anxiety (HADS) questionnaire was utilized to measure anxiety and depression. The data were analyzed using paired t-test. **Results:** The results showed there was a significant decrease in the mean (SD) score of anxiety symptoms from 11.88 (3,539) to 7.95 (3.809). Moreover, the depression mean (SD) score among patients with cardiovascular disease also significantly decreased from 11.45 (3.609) to 8.72 (SD 3.412), with p-value < 0.001. **Implication:** The application of therapeutic communication interventions is effective in reducing symptoms of anxiety and depression in patients treated in the ICCU. Screening for anxiety and depression should be done when the patient enters ICCU and before the patient goes home.

Keywords: Communication · Anxiety · Depression · Cardiovascular diseases

1 Introduction

Anxiety and depression are types of mental disorders which commonly occur throughout the world [1, 2]. Among fact, there is a link between heart illness, anxiety, and depression

I. Permana and E. Rochmawati (Eds.): ICOSI-HSN 2022, 55, pp. 201–209, 2022.
https://doi.org/10.2991/978-94-6463-070-1_25

as well as a high prevalence of mental diseases, including depression and anxiety in cardiovascular patients [3]. Patients with acute coronary syndrome frequently experience anxiety and depression, but these conditions are typically misdiagnosed and poorly managed [4, 5]. Morbidity of psychiatric disorders such as depression and anxiety is common in patients with coronary heart disease. The prevalence of anxiety is 19.2–48.4% and the depressive symptoms is 26.4–42.54% [4, 6]. Patients with cardiovascular disease who suffer from anxiety would have poor prognosis cardiovascular disease. These patients could also develop coronary artery disease (CAD) and heart failure (HF) [5]. Behavioral and physiological processes, such as autonomic dysfunction, inflammation, and platelet aggregation, mediate the link between anxiety and heart conditions [7, 8]. Patients with HF are reported to have poor quality of life. Moreover, severe anxiety and depression are also apparent in these patients [9].

The factors related to quality of poor life, anxiety level, depression are aging, low levels of education, unemployment, and low economic status [10]. Depressive and anxious symptoms are independently correlated with post-traumatic stress disorder symptoms, low self-esteem, a high level of somatic symptoms, and poor physical and mental health. Additionally, there is a strong correlation between anxiety and depression and health component scores, active smoking, physical activity, and prolonged disease duration. Additionally, patients with depression and anxiety symptoms report having less resilience and inadequate social support [7]. The anxiety and depression scores have a strong positive association. Families must provide their patients with anxiety and depression symptoms their undivided attention. Most importantly when they are hospitalized, appropriate attention from both healthcare providers and their family would be very imperative score [11].

Arterial hypertension, obesity and hyperlipidemia are the three factors associated significantly with Depression Anxiety Disorder (DAD) [12]. Cardiac rehabilitation using pharmacological and non-pharmacological therapies is an important step to improve the patients' condition. It is conducted by helping patients with cardiovascular disease understanding the effects of psychobiological risk factors, and developing strategies to manage daily stress [13]. Therapeutic communication is a non-pharmacological therapy which helps reducing the level of anxiety and depression symptoms for both patients and their families [14, 15], providing psychological support [15]. The results of Zarea's study [16] showed that the average level of anxiety and depression decreased in the group of patients who would undergo cardiac bypass surgery after therapeutic communication intervention ($p < 0.01$) in. This study focused on cardiac patients who were admitted to the ward without an operation plan. There was a correlation between nurse communication in the emergency rooms and the anxiety level of family members, an effective communication carried out by nurses would significantly lower the level of anxiety of patients' family members [14].

Furthermore, anxiety that occurs in patients can have a negative impact on patients. Anxiety will increase sympathetic nerve overactivity which can lead to increase contractility, high blood pressure and cause an increase of cardiac output [17]. A straightforward, affordable, and successful strategy for reducing anxiety and depression is therapeutic communication. Previous intervention studies have focused on the application of therapeutic interventions to reduce anxiety before surgery, families in the emergency room,

but have not examined patients who are treated in the cardiac room. This research aims to determine the effect of therapeutic communication to reduce anxiety and depression symptoms in patients with cardiovascular disease in the Intensive Coronary Care Unit (ICCU).

2 Method

This study was conducted in the Prof. Dr. Margono Soekarjo Hospital's Indonesia ICCU room as a single quasi-experiment group with pre and post-test designs. The study Population is all Cardiovascular disease patient in ICCU.The inclusion criteria were those diagnozed with cardiovascular diseases, treated for more than one day, with 15 GCS (Glasgow Coma Scale), able to communicate, write and read well. While the patients who were in emergency condition and experiencing pain were excluded. 40 patients who were admitted from March–April 2019 were recruited using incidental sampling. The first section of the questionnaires is demographic data consisting of age, gender, length of stay, history of hospitalization, education background, salary and medical diagnosis. Anxiety and depression were measured using the Hospital and Depression Scale for anxiety (HADS) questionnaire on the first day of admission and re-assessed after being given therapeutic communication intervention. The HADS questionnaire is an instrument used to measure levels of anxiety and depression. The measurement tool is designed for hospital setting. It has 7 items related to anxiety and 7 other items related to depression [18]. The score category is the sum of all the answers, namely no symptoms (score 0–7), mild (score 8–10), moderate (score 11–14) and severe (score 15–21).We used the therapeutic communication observation form adapted from Lukmanulhakim et al. [14]. It consists of 20 statements made based on the content of therapeutic communication interventions with "yes" and "no" answer choices. The tool's instrument validity value was ranging from 0.515 to 0.782. Moreover, its reliability using Cronbach's alpha coefficient yielded a value of 0.938.

Therapeutic communication intervention was performed by nurses who hold ICCU certification and have minimum 3 years of working experience in the ICCU. The communication was provided by the nurses using therapeutic communication guidelines adopted from a previous research [14] as well as Hospital Standard Operational Procedure (SOP) and then was consulted to two nursing experts. The therapeutic communication intervention that was given by the nurses was in the form of communication which consists of 3 stages, namely the stage of the orientation which includes saying greetings, introducing oneself, asking the patient's name, open attitude, maintaining distance, and neat appearance. The work stage includes creating a safe environment, asking for respondents' approval, explaining the purpose of the action, active listening, eye contact, quick response to complaints, clear intonation and voice, using language that is easy to understand, providing opportunities to ask questions). Furthermore, the termination stage includes not confrontation, empathy, calm and friendly, providing opportunities to ask questions, and concluding communication between nurse and patient). Intervention is given for approximately 10–15 min for each therapeutic communication session in each action taken, the nurse will be observed twice in conducting therapeutic communication with the patient for two weeks. Therapeutic communication that is assessed is communication that is complete and in accordance with the SOP. The nurses were observed single

blindly by two nursing observers to ensure the implementation of appropriate therapeutic communication. We used Kappa test to measure Inter-rated Reliability test from the two observers and it yielded coefficient value of = 0.545 (p value: 0.018). The data were analyzed using the SPSS version 20. Descriptive statistic was utilized to measure the frequency and percentage of demographic data. Paired t-test was used to compare the mean differences and standard deviation (SD) of anxiety level and depression before and after the intervention. Prior to signing the informed consent, the respondents received study details consisting of the objectives, benefits, and research procedures from the researchers. This research has been approved by the hospital ethical committee board with an ethical license Number: 420/004346/I/2019.

Result

The descriptive analysis is presented by mean (SD), frequency and percentage to describe the demographic characteristic (N = 40). Patients' demographic characteristics were presented in Table 1. Almost three quarter of the participants are female (72.5%), with the average age of 55 years old and experience three days of hospitalization. Moreover, the data shows 72.5% of the participants are firstly treated in the ICCU room and approximately two fifth of them diagnozed with a STEMI diagnosis (42.5%) (Table 1).

Based on the paired t-test (Table 2), it was found that there were differences in anxiety and depression before and after therapeutic communication interventions. The results show that there was a significant decrease mean (SD) score of anxiety symptoms on participants from 11.88 (3,539) (moderate anxiety) to 7.95 (3.809) (mild anxiety). Moreover, depression mean (SD) score among patients with cardiovascular diseases also significantly decreased from 11.45 (3.609) (moderate depression) to 8.72 (SD 3.412) (mild depression), with p-value <0.001.

3 Discussion

The results show that the anxiety score before the intervention was in the medium level. It then decreased to mild level after the patients received therapeutic communication intervention. This research results are in accordance with the study of Zarea et al. [16] that the positive role of therapeutic communication with the approach of Peplau concept in reducing patient anxiety and depression. Nurses and patients can better understand one other's ailments, worries, and queries according to Peplau's communication model. By outlining different nursing responsibilities, we can assist patients in maintaining their independence.

The findings of this study are consistent with those of Artini's study [19], stating that there was a significant correlation between the application of therapeutic communication and patient anxiety. Nurses are very important in providing health services and strengthening health systems. A nurse has a role as the first responder, patient advocate, communicator, and team coordinator. The qualified nurse's communication with patient has a big influence on patient health condition. Good communication can reduce medical errors, improve professional nursing practice [20]. The results of a research conducted by Eng [21], stated that there were differences in patients' anxiety and depression before and after being hospitalized in married patients with comorbid status. Anxiety and depression

Table 1. Demographic characteristics of the respondents (n = 40)

Respondent Characteristics	n (%)	Mean (SD)
Age (years)		55.20(11.83)
Duration of treatment(days)		2.85 (1.07)
Gender		
Male	11 (27.5)	
Female	29 (72.5)	
History of treatment in the ICCU		
1 times	11 (27.5)	
0 times	29 (72.5)	
Education		
Primary School Elementary School Secondary School University Education	19 (47.5) 11 (27.5) 5 (12.5) 5 (12.5)	
Monthly Salary (in IDR) ≤795.000 ≥795.000	15 (37.5) 25 (62.5)	
Medical Diagnosis		
Acute Miocard Infark (AMI)	2 (5.0%)	
Atrial Septal Defect (ASD)	2 (5.0%)	
Congestif Heart Failure (CHF)	8 (20.0%)	
Non-ST-segment Elevation Myocardial Infarction (NSTEMI)	7 (17.5%)	
ST-segment Elevation Myocardial Infarction (STEMI)	17 (42.5%)	
Unstable Angina Pecoris (UAP)	1 (2.5%)	
Ventricular Extrasystoles (VES)	1 (2.5%)	
Ventricular premature complexes (VPCs)	2 (5%)	

in cardiovascular patients are associated with low heart health and progressive disease [8] as well as postrauma conditions, low self-esteem, somatic complaints, mental and physical deterioration, inactivity, and length of illness [7]. The results of a study by Mastaneh [22] mentioned that 60% of nurses' therapeutic communication was at a moderate level. The duration and communication way with patients, especially those with chronic diseases, were very important in increasing positive attitudes towards treatment and follow-up after coming home from the hospital [15]. Since caring for patients physically and mentally necessitates right and continuous communication, patients actually received inspiration to overcome illness and trust from nurses through good therapeutic communication.

Table 2. Paired t test on anxiety and depression before and after intervention (n = 40)

	Mean (SD)	Difference	IK 95%	p value
Anxiety				
Before intervention After intervention	11.8 (3.929) 7.95 (3.809)	1.700	4.469–3.381	<0.001
Depression				
Before intervention After intervention	11.45 (3,609) 8.72 (3.412)	2.725	2.267–3.183	<0.001

The results of this study differ from the research of Mahmodi et al. [23] stating that there was no substantial difference between depression and anxiety in the control and intervention groups. Patients' levels of depression, tension, and anxiety were not significantly reduced by nurses following standards for therapeutic communication. This occurs because of differences in the character of the room, the emergency department is the first room with the aim of saving lives of patients in emergency and anxiety conditions. So the therapeutic communication of nurses may not be able to reduce anxiety and depression, but other factors must be maximized such as a quiet environment, family support and good service from the health team or medical staffs [21].

The current study confirm that therapeutic communication interventions implemented by nurses can reduce symptoms of anxiety and depression in the early stages of admission to hospital. Based on the results of patient observations, it shows that there is anxiety but does not show pathological symptoms. When being treated, the patient is accompanied by the family to help fulfilling his/her needs, including nurses. Family is an important factor and contributes to the efforts to lower anxiety and depression in patients. Previous research stated that the patient's environment with good social support from the family could be a buffering affect in the patient's coping mechanism in dealing with anxiety and depression [21, 24], this is in line with Allabadi et al. [7] stated that high levels of anxiety and depression need to be screened (monitored) and provide social support (environment and family) as well as physical activity.

While this research has achieved its objectives, there are several recognized limitations that will be resolved in the future. Although all patients in this study received family assistance, the researchers did not look at that factor which might affect patients' anxiety and depression. Patients' commorbid disease was also not recorded in this study. Based on the results of observations, it was found that there were nurses who did not communicate sequentially, but in general the communication stages were carried out well. Workshop activities on understanding and improving therapeutic communication competencies need to be carried out to raise patient satisfaction and nursing care quality.

Therapeutic communication aims to improve the quality of nursing care, patient safety and satisfaction [25]. Patient satisfaction can be raised and patient safety issues can be avoided with good and effective communication [26]. The presence of nurses is able to provide mental and physical support optimally which is an important point in patient healing, nurses always provide support and services even though their busy lives sometimes become obstacles [15]. The frequency of communication provided by

nurses can reduce patient anxiety and depression, including improving patient care and treatment [14]. Important things that are believed to strengthen the communication to be an effective therapy are elements of eye contact, delivery of good informed consent, speed in responding to patient needs, clear voice, understanding language, introducing oneself, active listening, empathy, calm and friendly.

4 Conclusions

Reducing patients' symptoms of anxiety and depression through the use of therapeutic communication techniques is beneficial. Every hospital ward should practice therapeutic communication. Before the patient leaves the ICCU and when they first enter the room, both should be screened for signs of depression and anxiety.

Acknowledgments. The researchers would like to extend our gratitude to all respondents, nurses and physicians in the ICCU, who have collaborated well and helped the research activities. We would also like to thank to Universitas Muhammadiyah Purwokerto for the research funding.

Conflict of Interests. None declared.

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