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Effects of positive self-talk on the level of anxiety of patients with coronary heart disease

Efectos del diálogo interno positivo sobre el nivel de ansiedad de los pacientes con enfermedad coronaria

Uswatun Hasanah[1a,*], Dede Nasrullah[2b], Rifma Yuniar[3b], Nugroho Ari Wibowo[4b], Reliani[5a]

SUMMARY

Background: *Coronary heart disease has an impact on the psychological aspect of the patients, including anxiety responses. Anxiety responses can be reduced with the positive self-talk technique. This study aims to analyze the effect of positive self-talk in reducing the anxiety level of patients with coronary heart disease.* **Methods:** *The study was a pre-experimental design with a single group pretest-posttest on 55 patients with coronary heart disease treated at Siti Khodijah Muhammadiyah Hospital in Sepanjang, Sidoarjo, Indonesia. The Zung Self-Rating Anxiety Scale (SAS/SRAS) was used to collect data.* **Results:** *Among 55 patients, most of the patients were in the age range of 58-64 years old (25 patients, 46.7 %), unemployed (22 patients, 40 %), and high school level of education (29 patients, 52.8 %). The pre-test data showed that dominant patients experience moderate anxiety (51 patients, 93.3 %). At the same time, the post-test results showed a decrease in anxiety levels to mild anxiety (50 patients, 93.3 %). There were significant differences between pre-test and post-test (p=0.001).* **Conclusion:** *Positive self-talk exerts a significant action in reducing the anxiety levels of patients with coronary heart disease.*

Keywords: *Positive self-talk, anxiety, coronary heart disease*

RESUMEN

Antecedentes: *La enfermedad coronaria tiene un impacto en el aspecto psicológico de los pacientes, incluidas las respuestas de ansiedad. Las respuestas de ansiedad se pueden reducir con la técnica del diálogo interno positivo. Este estudio tiene como objetivo analizar el efecto del diálogo interno positivo en la reducción del nivel de ansiedad de los pacientes con enfermedad coronaria.* **Métodos:** *El estudio utilizó un diseño preexperimental con un solo grupo de preprueba-posprueba en 55 pacientes con enfermedad coronaria tratados en el Hospital Siti Khodijah*

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ORCID ID: 0000-0002-8290-1747[1]
ORCID ID: 0000-0002-2075-0103[2]
ORCID ID: 0000-0001-6342-4570[3]
ORCID ID: 0000-0003-4442-5708[4]
ORCID ID: 0000-0003-4904-5720[5]

[a]Department of Mental Health Nursing, Faculty of Health Science, Muhammadiyah University of Surabaya, Surabaya 60113, Indonesia

[b] Faculty of Health Science, Muhammadiyah University of Surabaya, Surabaya 60113, Indonesia

Corresponding Author: Uswatun Hasanah
Department of Mental Health Nursing, Faculty of Health Science, Muhammadiyah University of Surabaya, Surabaya 60113, Indonesia
Sutorejo Street No. 59 Surabaya 60113, East Java, Indonesia
Tel.: +62 821 3267 5704; Fax.: +6231-3811967
E-mail: uswatunhasanah@fik.um-surabaya.ac.id

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Muhammadiyah en Sepanjang, Sidoarjo, Indonesia. Se utilizó la escala de ansiedad de autoevaluación de Zung (SAS / SRAS) para recopilar datos. **Resultados:** *Entre los 55 pacientes, la mayoría de los pacientes tenían un rango de edad de 58 a 64 años (25 pacientes, 46,7 %), desempleados (22 pacientes, 40 %) y nivel de educación secundaria (29 pacientes, 52,8 %). Los datos previos a la prueba mostraron que los pacientes dominantes experimentan una ansiedad moderada (51 pacientes, 93,3 %). Al mismo tiempo, los resultados posteriores a la prueba mostraron una disminución en los niveles de ansiedad a una ansiedad leve (50 pacientes, 93,3 %). Hubo diferencias significativas entre la prueba previa y la prueba posterior (p = 0,001).* **Conclusión:** *El diálogo interno positivo ejerce un efecto significativo en la reducción de los niveles de ansiedad de los pacientes con enfermedad coronaria.*

Palabras clave: *Diálogo interno positivo, ansiedad, enfermedad coronaria.*

INTRODUCTION

Coronary heart disease (CHD) is one of the leading health problems and the most common cause of death in developing countries. CHD ranks 7th as the most common cause of death from all hospitals in Indonesia, with 3 910 sufferers (1). In addition, it not only has a physical and physiological impact, but CHD has also an impact on psychological conditions, such as adjustment disorders, anxiety, stress, and depression (2). Basic Health Research records that 1.5 % or 15 of 1 000 Indonesians suffer from CHD. Besides, in East Java Province in 2013, the prevalence of heart disease was 0.5 % based on the diagnosis of health workers, and it increased in 2018, which is above the national average of 1.5 % (3). Data are obtained from the Arafah Room at Siti Khadijah Muhammadiyah Hospital, Indonesia throughout the year. It is stated that the number of CHD patient visits during 2017 in 198 patients and tends to increase in 2018 as many as 233 patients.

CHD affects the physical and physiological, and psychological responses of the patients. There are CHD sufferers aged more than 60 years who experience anxiety, and the level of the anxiety mostly experienced is the level of severe anxiety (4). The results of other studies demonstrate that factors that affect the quality of life of patients with coronary heart disease include depression and anxiety (5). The level of anxiety experienced mainly by patients with CHD is severe anxiety at 34.78 % (6). Environmental factors cause that anxiety in CHD sufferers, and the most common anxiety experienced is moderate anxiety, reaching 93.3 % (7). Anxiety responses in feelings of fear, worry, discomfort, and other unclear feelings can be caused by self-talk with negative sentences and the lack of self-awareness (8). Patients with coronary heart disease often experience anxiety, and that feeling can worsen their condition (4). Symptoms of anxiety can be reduced through psychological therapy both with assistance and independently by the patients. One of which is using positive self-talk (9).

Positive self-talk is the way to dialogue with ourselves (inner voice) dealing with various situations (10). Positive self-talk is a psychological strategy that is believed to help build self-confidence (11). Positive self-talk can build confidence from within (12). The practice of positive self-talk is something that can be learned, and which can be extremely useful in managing the mental and physical symptoms of anxiety. Self-talk can train mental aspects to regulate cognition, emotion, behavior, and appearance (11). Positive self-talk can reduce anxiety in patients with cardiovascular disease, especially in patients with CHD. Handling CHD patients should focus on the patient's physical problems and the psychological and emotional conditions through positive self-talk. Thus, with a stable psychological condition, the healing process becomes more optimal. This study aims to analyze the effect of positive self-talk in reducing the anxiety level of patients with CHD.

METHODS

This study was a quantitative study using a pre-experimental with one group pretest-post-test design. The pre-experimental study was used to assess the effect of specific treatments on individuals under controlled conditions (13). The population of this study was adults with a diagnosis of CHD treated at the private Hospitals in Sidoarjo, Indonesia. Respondents were selected using the non-probability sampling

technique. Accidental sampling was done based on the inclusion and exclusion criteria. The inclusion criteria were patients diagnosed with CHD treated at the Siti Khodijah Muhammadiyah Hospital in Sepanjang, Sidoarjo, Indonesia. The patients experienced anxiety and were willing to become respondents. Meanwhile, the exclusion criteria were CHD patients with hearing loss and uncooperative CHD patients (experiencing speech impediments or being oxygenated). The instruments used to collect the data in this study were the demographic data questionnaire, positive self-talk activity unit, and Zung Self-Rating Anxiety Scale questionnaire to measure the patient's level of anxiety. Positive self-talk was carried out for 30 minutes in each meeting three times a week.

Before taking direct action on the patient, we explained the study and applied an informed consent sheet for each patient. Furthermore, at the first meeting, we conducted a trusting relationship, including having an initial assessment of demographic data and anxiety levels, writing on the way of patient overcoming his anxiety through a pre-test, and providing anxiety explanation related to the definition, causes, signs, symptoms, impacts, and how to overcome this anxiety with positive self-talk. At the second meeting, an evaluation on the patient's condition was carried out, discussing how to use positive self-talk sentences and difficulties encountered in its implementation, then practiced training against negative self-talk to become positive self-talk and asked the patient to write positive sentences to make it a habit to control anxiety. The sample sheet of positive self-talk sentences was given to the patients as a reference in the exercise, and they were asked to write another positive sentence to fight the negative self-talk appearing in their minds. Finally, at the third meeting, a final evaluation and post-test were carried out to determine changes in the level of the patient's anxiety.

Finally, the collected data were processed through the stages of editing, coding, scoring, and tabulating, then analyzed using the non-parametric Wilcoxon Signed Rank Test using the SPSS 25 software. A $p<0.05$ was considered significant.

RESULTS

Fifty-five CHD patients were included in this study. The characteristics of patients are shown in **Table 1,** where is indicated that the dominant intervention group is in the range of 58-64 years old (25 patients, 46.7 %), female (33 patients, 60 %), high school level of education (29 patients, 52.8 %), and unemployed (22 patients, 40 %).

Table 1

Characteristics of patients (n = 55)

Variable	Total	Percentage (%)
Age (Years)		
43 -50	11	20.0
51-57	11	20.0
58-64	25	46.7
72-78	4	6.7
79- 85	4	6.7
Gender		
Male	22	40.0
Female	33	60.0
Education level		
Elementary school	15	27.2
Middle school	7	12.8
High school	29	52.8
College	4	7.2
Occupation		
Private sector	15	26.7
Self-employed	18	33.3
Unemployed	22	40.0
Total	55	100.0

Table 2 shows that the pre-test data showed that dominant patients (51 patients) experienced moderate anxiety (93.3 %) and four patients (6.7 %) experienced severe anxiety. At the same time, the post-test results showed that the previous 50 respondents decreased in anxiety levels to mild anxiety (93.3 %), and five-person experienced moderate anxiety (6.7 %).

Table 2

The level of anxiety of CHD patients before and after being given positive self-talk

Level of Anxiety	Pre Test		Post Test		P-value
	Total	Percentage (%)	Total	Percentage (%)	
None	0	0.0	0	0	
Mild	0	0.0	50	93.3	0.001
Moderate	51	93.3	5	6.7	
Severe	4	6.7	0	0	
Total	55	100	55	100	

The results of the statistic of the Wilcoxon sign rank test showed a change between the pre-test and post-test. There was a positive and significant effect of self-talk on reducing anxiety levels in patients with CHD (p=0.001).

DISCUSSION

CHD is the single most common cause of death globally. However, more people now live with heart disease and may need support to manage symptoms and reduce the risk of future problems such as heart attacks. Psychologic support is a common element of cardiac rehabilitation, which aims to improve the health and outcomes of people with heart disease. In our study we show that CHD patients being given positive self-talk demonstrate, a significant improvement in their level of anxiety, changing from moderate to mild. An anxiety response comes from the patient's negative thoughts and is manifested in the form of negative self-talk, which will affect the health condition and the healing process. Negative self-talk and the ratio of negative thoughts in children with anxiety disorders significantly predict anxiety (14). Negative cognitions and negative thought ratios predict increased anxiety after treatment and gains in the treatment process. So that the patient is trained to do positive self-talk because it is believed to be effective in reducing the patient's anxiety level. Self-talk can increase self-confidence and reduce cognitive anxiety (15). Evidence suggests that self-talk also plays a role in facilitating various cognitive processes (16), including emotion regulation (17), and coping and adaptation to painful experiences (18). Positive self-talk is easy to do, and the effort required is also very minimal, especially for the elderly who have experienced a cognitive and physical decline. This kind of self-talk is also associated with certain forms of brain activity, which are effortless self-control (19) and emotion regulation (17).

Positive self-talk is a coping strategy that can potentially transform your way of being in the world and can break this vicious circle whereby negative thoughts lead to a more physical symptom. Positive self-talk can help patients control themselves because it gives positive energy to the body and mind. Positive self-talk directs individuals to think, speak, and act positively to build a sense of self-confidence in reducing anxiety levels. In general, self-talk functions as self-criticism, self-reinforcement, self-management, and social assessment (20). The application of positive self-talk requires first identifying the existing negative self-talk. The negative self-talk is converted into positive sentences spoken as often as possible and repeatedly to foster self-motivation and self-confidence. Positive self-talk helps individuals to maintain focus on something they are facing, ignore past failures, and look to the future (21). Someone who has positive self-talk will not easily give up but will continue to achieve goals by making mistakes or failures as lessons. Better psychotherapy aims to show patients that positive self-talk has been the primary source of emotional disturbances experienced (14). Patients who have done positive self-talk show better responses, such as stable emotions, better sleep quality, and no nightmares. The decreased anxiety levels are also reflected in the results of the ZRAS anxiety evaluation. However, anxiety due to hospital treatment is still felt.

We show that in CHD patients submitted to positive self-talk there is a decrease in anxiety from moderate to mild and from severe to moderate levels. The concept of health anxiety on a continuum from mild to moderate and severe levels is certain. Besides, the definition, model, and level of anxiety in all chronic diseases involve affective, cognitive, behavioral, and perceptual aspects (22). Thus, in interacting and

providing interventions to the patient, anxiety responses are found in those various aspects. Some patients with moderate anxiety state that they are worried about their health condition and being hospitalized. They suffer difficulty of sleeping and headaches (23). Patients who experience severe anxiety even say that they often have nightmares that cause poor sleep. The symptoms of anxiety suffered by individuals are excessive worry about illness, restlessness, anxiety, irritability. Then the patient states that disturbing thoughts appear, such as thoughts of death, incurability, old age, and chronic illness (24). Many chronic diseases present symptoms of health-related anxiety, including fear of relapse, fear of disease/cancer worsening, fear of hypoglycemia, and anxiety about heart disease (22).

The general data in this research consist of age, gender, education level, and occupation. The research respondents are dominantly female in the age range of 58-64 years. Age and gender are the internal factors that influence the occurrence of anxiety. The average age of the research respondents is included in the elderly category. This is based on the classification and definition made by the World Health Organization (WHO) in which considers that elderly is a person who is in 55 years or over (25). While based on the Ministry of Health of the Republic of Indonesia, a person between the age of 56 to 65 is included in the late elderly group (26). At this time, the aging process occurs so that the body loses many cells and decreases body functions resulting in changes both mentally and psychologically (27). There is also a decrease in brain ability at this age, which makes the elderly more susceptible to stress, anxiety, irritability, sleeping difficulty, decreased concentration, unstable emotions, and other health problems (28). Because of these changes, many elderly cannot solve the psychological problems they face (29). Decreased physical and cognitive functions influence anxiety in the elderly due to decreased organ function (30). Other studies reveal different results in which older people have a more remarkable ability to cope with their emotions (31). However, they have more significant anxiety about their health and illness (32). Older adults are more concerned about their health than young adults (33).

Women have a high risk of having several types of psychiatric disorders in which their risk of anxiety is higher than men (34). Women consistently have a higher prevalence of anxiety disorders. Besides, those women have a higher possibility to experience lifelong anxiety disorders than men (35). Disrupted estrogen levels at menopause may also contribute to pathological anxiety in women (36). Higher anxiety and depression scores are also associated with physical inactivity in women (34). Furthermore, anxiety is associated with a more significant disease burden, and it is more common and more deadly in women than in men (35). The level of education and occupation are other factors that can cause anxiety. This is related to the situation and helplessness of patients who are hospitalized, and they feel ashamed because they cannot fulfill the family needs of life, which causes fears that they will become a burden of the family.

CONCLUSION

Several factors cause anxiety responses, including age, gender, occupation, and health conditions. Positive self-talk can be applied with good results to patients with CHD who experience anxiety in various healthcare settings to maximize the patient's healing process.

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Conflict of Interest

The authors confirm that this article contains no conflict of interest.

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