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The Effect of Emotional Freedom Technique (EFT) to Anxiety Level of Pre-Percutaneous Coronary Intervention

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Abstract: Coronary Heart Disease (CHD) is a heart function disorder due to a lack of heart muscle blood due to narrowing of the coronary arteries. One of the invasive measures that the usual way to treat CHD is Percutaneous Coronary Intervention (PCI). The problem that often arises in pre-PCI patients is anxiety. The anxiety must be treated, because it can disrupt the patient's hemodynamic condition becomes unstable. This study aims to determine the effect of EFT on the anxiety of patients who will be treated undergoing PCI. This research design uses a quasi-experimental with the approach of one group pre-post test with control group. Number of samples in the study. These are 24 respondents who are divided into 2 groups, so that 12 respondents become intervention group and 12 respondents became the control group with a sampling technique sample using purposive sampling. The statistical test used is Paired T-Test to compare the pre-test and post-test scores in each group and Independent T-Test was used to compare the difference in anxiety between groups intervention and control groups. The results showed that EFT administration had significant effect on the level of anxiety of patients who will undergo PCI with difference in score 2.833 and p-value 0.05 (0.0001). The recommendation of this research is that EFT can be one of the additional interventions to overcome the anxiety of pre PCI patients.

Keywords: Coronary Heart Disease, Anxiety, Emotional Freedom Technique, Percutaneous Coronary Intervention

INTRODUCTION

Coronary heart disease (CHD) is a general term used for all disorders involving obstruction of blood flow through the coronary arteries (Müller-Nordhorn & Willich, 2016). The main cause of CHD is narrowing of the large coronary arteries in the proximal to

atherosclerosis. When the lumen diameter is reduced by 60-70%, the supply of O2 goes to the network will be disrupted (Maharani et al., 2019).

Various techniques have been developed to open blood vessels and return blood through the coronary arteries, one of which is Percutaneous Coronary Intervention (PCI). PCI or commonly called cardiac catheterization is an invasive procedure in which one or more catheters are inserted into the heart and certain blood vessels (Smeltzer & Bare, 2014). The catheter is inserted through a peripheral vessel, usually the femoral, then into the heart chamber. Currently PCI is recommended because it is a procedure invasive non-operative so that complications can be minimized (Wijaya & Putri, 2013).

Data from the World Health Organization (WHO) in 2012 showed 17.5 million people in Indonesia world died from cardiovascular disease or 31% of the 56.5 million deaths worldwide world. Meanwhile, RISKESDAS data in 2013 showed that the highest prevalence for Cardiovascular disease in Indonesia is CHD, which is 1.5%. While the number of patients who undergoing PCI based on the results of a preliminary study regarding the number of patients both PCI and PAC at Harapan Kita Hospital in July 2018 as many as 273 PCI patients, while in October 2018, 296 patients underwent both PCI and PAC.

Jomansyah (2013) revealed that PCI can cause complications in the form of myocardial infarction, stroke, arrhythmia and death. This causes someone feels threatened. Zhang & Qi et al (2021) said that the state of a person feeling himself threatened can cause the effect of anxiety (anxiety). Anxiety response to the cardiovascular system. including hemodynamic disorders such as palpitations, heart palpitations, increased blood pressure, decreased blood pressure, decreased heart rate, pulse and fainting (Stuart 2010). Whereas a stable hemodynamic condition is one of the patient's preparations before PCI is performed because unstable hemodynamic conditions due to anxiety will certainly interfere with the smooth process.

PCI to be performed (Aziz, 2011). In order not to interfere with the smoothness of PCI, an action is needed that can overcome the anxiety of pre PCI patients. One of those actions is the Emotional Freedom Technique (EFT). EFT is a therapy technique that is quite often used in practice psychology. Besides being easy to learn, EFT is also practical to use on your own. The goals of EFT usually include maximizing personal potential, relieving pain and eliminating excessive negative feelings such as anxiety (Half, 2016). This is in accordance with research conducted by Shari, Suryani and Ethics (2014) with the title Emotional freedom techniques and the level of anxiety of patients who will undergo Percutaneous Coronary Intervention shows that there is a significant difference in the level of anxiety before and after EFT therapy (p = <0 ,05).

This study to aims to determine the effect of EFT on the anxiety of patients who will be treated undergoing PCI.

METHODS

This study uses a quasi-experimental design with a one group pre-post test approach with a control group. Where this study divides respondents into two groups, namely: intervention and control groups. In the intervention group, EFT was given and the level of anxiety was measured pre-test and post-test. Meanwhile, the control group only measured the level of pre-test and post-test anxiety and then compared the level of anxiety in the two groups.

This study aims to determine the effect of EFT on the anxiety of patients who will undergo PCI. The sample size is 24 respondents which are then divided into 2 groups, so that there are 12 respondents in the intervention group and 12 respondents in the control group. The sampling technique used purposive sampling in a way where the respondents who were met first entered the intervention group and the respondents who were found then entered the control group and alternated so on.

This study uses the Paired T-Test to compare the values of the pre-test and post-test in each group and the Independent T-Test is used to compare the difference anxiety between the intervention and control groups. The measuring instrument used in this study is the Zung Self-Rating Anxiety Scale (ZSAS) anxiety instrument.

RESULT AND DISCUSSION

Characteristics of Respondents

Gender

Black and Hawks (2009), p.84) revealed that men have a higher risk have a heart attack because men do not have the protection of the hormone estrogen such as women who make cholesterol levels better and blood vessels become more flexible. Wulandari Dyah's research (2009) also states that there is a relationship between types of gender with the incidence of CHD ($p = 0.008$). Meanwhile, research from Zahrawardi, Herlambang and Anggraheny (2013) regarding the number of CHD patients by gender, the results of the analysis of the majority of the sample are male, namely: as many as 88 patients (68.80%).

Age

The age of the majority of respondents is 56-65 years, which means above 45 years. This result supported by research by (Roziika et al., 2020) that the sufferer CHD was found more in the age group 45 years. Likewise with research conducted by Wulandari Dyah

(2009) which shows a relationship between age and the incidence of CHD (p = 0.003) in the heart clinic of Muhammadiyah Hospital Palembang.

Kowalak (2013) and Lemone (2016) mention that age is a risk factor for CHD where increasing age will increase the risk of CHD. The older the age, the less optim al organ function. One of which is blood vessels and heart muscle are no longer elastic. Plaque that contains Fat and fibrous tissue progressively narrows the coronary artery lumen This reduces the volume of blood flowing through the arteries.

Education

The results showed that the education level of the most respondents was in the two group, namely SMA with 16 out of 24 respondents. This is supported by research that carried out by Damayanti (2017) at the Sultan Gung Hospital Semarang with the results that it was found that the highest number of respondents with CHD was high school education (63%). (Rolley et al., 2019)stated that the level of individual education has an effect on thinking ability. The higher the level of education, the easier it is for individuals to think rationally and capture new information. Analytical skills will make it easier for individuals in solving new problems.

Work

Most of the respondents' occupations in both groups were not working. This result different from the research conducted by Salim and Nurrohmah (2013) which found that the results show that the majority of CHD sufferers are still working, while those who are not working are only 31 respondents from 60 samples used. The results of several studies show that work is not a factor of CHD. The results that the researchers got were that most of the respondents did not work related to the age of the respondents, most of whom are elderly and have retired or quit work. Respondents who do not work will tend to be minimal in doing physical activity.

Lemone (2016) mentions this lack of physical activity that increases risk factors for CHD in respondents because fat continues to be stored in the body and does not occur breakdown into energy, fat stored in the body, occupies body cavities especially blood vessels causing plaque and atherosclerosis.

Characteristics of respondents based on gender, age, education, and occupation.

Table 1
Description of Respondents Characteristics
based on Gender, Age, Education and Occupation

No	Variable	Intervention Group		Control Group	
		f	%	f	%
1	Sex				
	Female	6	50	7	58.3
	Male	6	50	5	47.1
2	Age				
	35-45	1	8.3	1	8.3
	46-55	2	16.7	1	8.3
	56-65	6	50	6	50
	66-75	2	16.7	4	33.3
	76-85	1	8.3	0	0
3	Education				
	Elementary School	0	0	1	8.3
	Secondary Level 1	3	25	0	0
	Secondary Level 2	8	66.7	8	66.7
	College	1	8.3	3	25
4	Occupation				
	Yes	5	41.7	3	25
	No	7	58.3	9	75
		12	100	12	100

Based on table 1, it can be seen in both groups that gender most respondents were male (54.1%) with the highest age being 56-65 years (50%). The education level of the most respondents is SMA (66.7%) with the most occupations in both groups that is not working (66.7%).

Description of pre-test and post-test anxiety levels in numerical data

Table 2

Description of the Anxiety Scores of the Pre-Test and Post-Test Respondents in the Intervention Group and Control Group

Anxiety Level	Intervention Group		Control Group	
	Pre	Post	Pre	Post
Mean	13.50	10.50	12.92	12.75
Median	13.50	10.50	12.50	12.50
Maximum	16	14	16	16
Minimum	12	9	11	11

Based on table 2, it can be seen that the highest anxiety score in both group that is 16 and there is a decrease in the intervention group to 14. The average score of anxiety in the intervention group patients pre test post test decreased by 3.00 while the control group experienced a decrease of 0.169.

Description of Pre-Test and Post-Test Anxiety Levels in Categorical Data

Table 3

Description of the Anxiety Categories of Pre-Test and Post-Test Respondents in the Intervention Group and Control Group

Anxiety Level	Mild		Moderate		Severe	
	f	%	f	%	f	%
Intervention						
Pre	3	25	7	58.3	2	16.7
Post	11	91.7	1	8.3	0	0
Control						
Pre	6	50	4	33.3	2	16.7
Post	6	50	4	33.3	2	16.7

Based on table 3 it can be seen that there is a change in anxiety in the group intervention from mild 3 (25%), moderate 7 (58.3%) and severe 2 (16.7) to mild 11 (91.7%), moderate 1 (8.3%) and severe 0. While in the control group there was no change anxiety, namely mild 6 (50%), moderate 4 (33.3%) and severe (16.7%).

Differences in Anxiety Reduction Between the Intervention Group and the Control Group

Table 4

Differences in Respondents' Anxiety Reduction in the Intervention Group and the Control Group

Variabel	Intervention Group	Control Group	Average	p-value
Anxiety levels	3.00	0.169	2.381	0.0001

The results of the Independent T-Test test on the difference in respondents' anxiety given Emotional Freedom Technique (EFT) with those not given Emotional Freedom Technique (EFT) obtained the difference in the decrease in anxiety that is 2.831 with a p-value of 0.0001 (<0.05) which means Ha is accepted and it can be concluded that there is a significant difference on the anxiety of patients who were given the Emotional Freedom

Technique (EFT) with not given Emotional Freedom Technique (EFT). This value indicates that there is a significant effect of giving Emotional Freedom Technique (EFT) on anxiety level of pre–Percutaneous Coronary Intervention (PCI) patients.

In this study, the intervention group was given one of the hypnotherapy techniques, namely: Emotional Freedom Technique (EFT). Iskandar, (2010) explains how it works Emotional Freedom Technique (EFT) is to use the respondent's own mind. Technique It is an applied tool based on the theory that states that emotions Exaggeration is inherently negative. To free these emotional factors, EFT provides a healing method called set up, namely saying affirmations and tapping is by tapping the energy points of the body meridians. Emotional freedom technique (EFT) is an alternative treatment for physical pain and emotional distress. It's also referred to as tapping or psychological acupressure. People who use this technique believe tapping the body can create a balance in your energy system and treat pain. According to its developer, Gary Craig, a disruption in energy is the cause of all negative emotions and pain. This therapy is believed to help lower levels of the hormone cortisol, which in turn lowers stress levels. Cortisol hormone is known as a stress hormone which if levels in the body spike, then a person will experience stress. EFT therapy is said to be able to make the part of the brain in charge of regulating one's emotions more effective, so that it can reduce stress. This therapy can also help with headaches and even joint pain. Emotional freedom technique therapy can help make the muscles of the body become more relaxed. It can also reduce tension, so headaches and stress can be reduced. People who undergo this therapy are also known to experience less headaches than people who do not do it at all.

Affirmations are positive sentences and suggestions that are said by the patient so that will indirectly make respondents more confident and believe in the power of in him that comes from God. While tapping or tapping done gentle will make the respondent relax (Half, 2016). The mixture of the two, namely affirmation and tapping makes respondents feel more comfortable calm, resulting in stimulation to the hypothalamus to reduce the production of CRF (Corticotrophin Releasing Factor) which in turn stimulates the anterior pituitary gland to reduce the production of ACTH (Adreno Corticotrophin Hormone), this hormone will stimulates the adrenal cortex to reduce cortisol secretion which will suppress the work of the system the body's immune system so that it reduces the level of anxiety and will slowly release emotions excessive (Mitchell, 2019).

The results of the comparison of the two groups showed that group anxiety given the intervention can decrease compared to the group that is not given intervention. This happens because the administration of EFT can affect the physiological state respondents with the final result of decreasing anxiety as evidenced by the results of significant, while

in the control group it can only affect the psychological state, namely increase in knowledge but cannot be proven by the results of the analysis significant.

CONCLUSION

The gender characteristics of the respondents are mostly male with the respondent's age Most are 56-65 years old. The education level of the most respondents is SMA and not work. The difference in anxiety between the intervention and control groups is 2.831 and

the p-value 0.0001 (<0.05). So it can be concluded that there is a significant effect administration of EFT on the anxiety level of pre PCI patients.

AUTHOR CONTRIBUTION

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CONFLIC OF INTEREST

The author declare there is no conflict of interest

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