



EFFECTIVENESS OF COPING THROUGH AUDIO VISUAL EDUCATION OF J. WATSON'S CARING CONCEPT MODEL ON REDUCING ANXIETY PRE PERCUTANEOUS CORONARY INTERVENTION (PCI) OF CAD PATIENTS IN THE HOSPITAL

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ABSTRACT

Coronary Heart Disease (CHD) is the leading cause of death globally, including in Indonesia. One of the procedures to treat CHD is Percutaneous Coronary Intervention (PCI), but this action often causes significant anxiety in patients. Unmanaged anxiety can worsen the physical and mental condition of patients. This study aims to analyze the effectiveness of audio-visual education based on the Caring Jean Watson concept in reducing anxiety in pre-PCI patients at Dr. Loekmonohadi Hospital, Kudus. The study design was a quasi-experiment with a "nonequivalent control group design", involving 40 patients divided into two groups: intervention (Watson's audio-visual caring education) and control (conventional education). Anxiety levels were measured using the Hospital Anxiety and Depression Scale (HADS) before and after the intervention. The data obtained before being analyzed was tested using the Shapiro-Wilk test to ensure that the data was normally distributed, then a parametric paired T-test was carried out to see the difference in anxiety between before and after being given education. The results showed a significant decrease in anxiety in the intervention group, where 45% of patients reached normal anxiety levels and only 10% still experienced severe anxiety. In contrast, in the control group, 70% of patients remained at severe anxiety levels. The paired T-test statistical test produced a p-value of 0.000 ($p < 0.05$), indicating a significant difference before and after education. Caring-based audio-visual education has been shown to be effective in reducing pre-PCI patient anxiety.

Keywords: anxiety; audio-visual education; caring; jean watson; PCI

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INTRODUCTION

Coronary Heart Disease (CHD) is one of the leading causes of death in the world, with a significant impact on the quality of life of sufferers. According to the World Health Organization (WHO), in 2015, CHD caused 7.4 million global deaths, with the majority being caused by heart attacks (WHO, 2017). In Indonesia, CHD is also one of the leading causes of death with an increasing prevalence, recording around 2.66 million sufferers in 2014 (Ministry of Health of the Republic of Indonesia, 2014). One of the medical procedures often performed to treat CHD is Percutaneous Coronary Intervention (PCI), which functions to open blocked or narrowed blood vessels. Although this procedure is relatively safe, patient anxiety before the PCI procedure remains a challenge that must be overcome, with the prevalence of anxiety in PCI patients reaching 24-72% (Hastuti & Mulyani, 2019).

Anxiety in heart disease patients, especially those who will undergo PCI, can affect the physical and mental condition of the patient. Physical symptoms such as palpitations, decreased blood pressure, and even shock can worsen the patient's cardiac prognosis (Blair & Ramones, 1996; Stuart, 2013). In this context, anxiety management becomes very important

to improve patient comfort and clinical outcomes. Effective education is one method to reduce anxiety. However, more modern educational methods, such as audio-visual-based education, can offer a more comprehensive and adequate approach in providing clear information and reducing the uncertainty felt by patients.

Audio-visual based education, especially using Jean Watson's Caring model, focuses on providing emotional support, empathy, and a deep understanding of the medical procedure to be undertaken. This model emphasizes the importance of a therapeutic relationship between nurse and patient, where the nurse provides full attention to improve the patient's health holistically (Watson, 2009). In the context of PCI, Watson's Caring model can play a major role in helping patients cope with anxiety by providing in-depth explanations of the procedure, conveying expectations, and supporting their emotional health. This study aims to examine the effectiveness of audio-visual education based on the Caring J. Watson model in reducing patient anxiety before PCI at Dr. Loekmonohadi Hospital, Kudus. It is hoped that the results of this study can contribute to developing more effective and humanistic education methods to improve the quality of patient care, especially in managing pre-PCI anxiety in hospitals.

METHOD

This study used a quasi-experimental design with a "nonequivalent control group design" method involving two groups, namely the experimental group and the control group. The experimental group was given audio-visual education based on the Caring Jean Watson concept, while the control group was given conventional education without using audio-visual media. This study was conducted at Dr. Loekmonohadi Hospital, Kudus in February 2025. The sample of this study consisted of 40 patients who would undergo *Percutaneous Coronary Intervention* (PCI), which were divided into two groups (20 patients each) using a purposive sampling technique. The instrument used to measure the level of patient anxiety was *the Hospital Anxiety and Depression Scale* (HADS), which was administered before and after the educational intervention in both groups. The data collection procedure was carried out by distributing the HADS questionnaire to measure the level of patient anxiety before and after education was provided. The data obtained before being analyzed were tested using the Shapiro-Wilk test to ensure that the data were normally distributed, after obtaining normally distributed data, a parametric paired T-test was then carried out to see significant differences in anxiety levels between before and after education was given. This study aims to analyze the effectiveness of audio-visual education based on the *Caring Jean Watson concept* in reducing patient anxiety before PCI at Dr. Loekmonohadi Hospital, Kudus. This study has received approval to pass ethical review from the Health Research Ethics Commission of Dr. Loekmono Hadi Hospital, Kudus with the number: 051 / KEPK / XII / 2024 and from the Research Ethics Commission of Karya Husada University, Semarang number: 171 / KEP / UNKAHA / SLE / X / 2024.

RESULT

Respondent Characteristics

Based on table 1, it is known that the gender of the majority of respondents is male, as many as 26 respondents (65%). Age characteristics are known that most respondents are aged 51-59 years as many as 17 respondents (42.5%). Education characteristics are known that most respondents have a high school education as many as 15 respondents (37.5%). Occupation characteristics are known that most respondents have self-employed jobs as many as 14 respondents (35.0%).

Table 1.
Characteristics of Respondents

Characteristics		f	%
Gender	Man	26	65.0
	Woman	14	35.0
Age	≤ 50 Years	15	37.5
	51-59 Years	17	42.5
	≥ 60 Years	8	20.0
Education	Elementary school	6	15.0
	Junior High School	14	35.0
	Senior High School	15	37.5
	Higher Education	5	12.5
Work	ASN	2	5.0
	Laborer	11	27.5
	housewife	8	20.0
	Retired	1	2.5
	Farmer	4	10.0
	Self-employed	14	35.0

Anxiety Level Before Education

Table 2. Frequency Distribution of Respondents Based on Anxiety Level Before J.Watson Audio Visual Caring Education

Level Anxiety	Group				Total	
	Intervention		Control		n	%
	f	%	f	%		
Light	4	20.0	0	0.0	4	10.0
Currently	5	25.0	3	15.0	8	20.0
Heavy	11	55.0	17	85.0	28	70.0

Based on table 2, the frequency distribution based on the level of anxiety before J. Watson's audio-visual caring education is known that the majority of the proportion of anxiety levels in both the intervention and control groups is severe anxiety. Each intervention group (55%), while the control group (85%).

Anxiety Level After Education

Table 3.
Frequency Distribution of Respondents Based on Anxiety Level After J. Watson Caring Audio Visual Education

Level Anxiety	Group				Total	
	Intervention		Control		n	%
	f	%	f	%		
Normal	9	45.0	0	0.0	9	22.5
Light	7	35.0	0	0.0	7	17.5
Currently	2	10.0	6	30.0	8	20.0
Heavy	2	10.0	14	70.0	16	40.0

Based on table 3, the frequency distribution based on the level of anxiety after J. Watson's audio-visual caring education is known that the proportion of severe anxiety levels in the intervention group (10%) is smaller than the control group (70%). Meanwhile, the proportion of normal anxiety levels in the intervention group is greater (45%) than the control group (0.0%).

Differences in Anxiety Before and After Audio Visual Caring Education J.Watson

Table 4.

Analysis of Anxiety Before and After J.Watson Audio Visual Caring Education

Anxiety	Mean	t	df	p-value
Before Education	19.55			
After Education	14.50	7,683	39	0.000*

*Paired T-test

Based on table 4, the analysis of anxiety before and after J. Watson audio-visual caring education is known that the p-value is $0.000 < 0.05$, which means that there is a difference in the average anxiety before education (19.55) and after education (14.55), so J. Watson audio-visual caring education is effective in reducing anxiety levels with a difference in the average anxiety score before and after education of 5.050.

DISCUSSION

Anxiety Level Before Education

The results showed that most patients, both in the experimental and control groups, experienced severe anxiety before being given education, with a prevalence reaching 55% in the experimental group and 85% in the control group. This high level of anxiety is very likely influenced by patients' ignorance about the Percutaneous Coronary Intervention (PCI) procedure, which is considered an invasive and risky medical procedure. Patients often feel anxious about the possibility of pain, the risk of complications, and uncertainty about the results of the procedure (Anggraini & Andani, 2018). Previous studies have also shown that coronary heart disease (CAD) patients who face invasive procedures often experience significant anxiety, with feelings of fear of pain and death that can worsen their quality of life (Hastuti & Mulyani, 2019).

Pre-PCI anxiety is greatly influenced by the patient's lack of knowledge about the procedure to be performed, as well as psychological factors such as fear of the procedure and its impact on the patient's life. This is in line with findings from various studies stating that patients who do not receive clear information about the PCI procedure tend to have higher anxiety (Mea et al., 2018; Stuart, 2013). In this study, the anxiety experienced by patients before this education shows the importance of providing adequate information and emotional support to patients, which can reduce anxiety levels and increase their mental readiness to undergo the procedure (Hastuti & Mulyani, 2019).

Anxiety Level After Education

After being given audio-visual education based on the Caring Jean Watson concept, there was a significant decrease in patient anxiety levels, especially in the experimental group. Most patients in the experimental group experienced a clear decrease in anxiety, with 45% of them reaching normal anxiety levels, and 35% experiencing mild anxiety after receiving education. In contrast, only 10% of patients in the experimental group still experienced severe anxiety, much lower than 70% of patients in the control group who still experienced severe anxiety. This shows that the education provided not only provides clear information about the PCI procedure, but is also able to provide a sense of security and reduce uncertainty which is often a trigger for anxiety (Hudiyawati et al., 2022).

The significant decrease in anxiety after audio-visual education is in accordance with previous research findings showing that providing information through visual media can effectively reduce anxiety in patients undergoing invasive medical procedures such as PCI. Research by Hastuti and Mulyani (2019) showed that patients who were given education about PCI procedures through various media, including videos or audio-visual materials, had lower anxiety than those who only received verbal explanations. This confirms that the use of audio-

visual methods not only helps in understanding the procedure, but also provides much-needed emotional support for patients, in accordance with the principles of caring in the Jean Watson model, which emphasizes the importance of empathetic relationships and providing in-depth information to patients to relieve anxiety (Watson, 2009).

Differences in Anxiety Before and After Audio Visual Education Caring J. Watson

The results of the analysis showed that there was a significant difference in the level of patient anxiety before and after being given audio-visual education based on the Caring Jean Watson concept. Before education, most patients in the experimental group (55%) and the control group (85%) experienced severe anxiety, indicating a high level of anxiety related to the uncertainty of the PCI procedure. After being given education, the level of anxiety in the experimental group decreased significantly, with 45% of patients reaching normal anxiety levels and 35% experiencing mild anxiety. These results reflect the effectiveness of audio-visual education in providing a clearer understanding of the procedure and reducing the uncertainty that often triggers anxiety in patients (Hudiyawati et al., 2022).

The significant decrease in anxiety in the experimental group indicates that audio-visual-based education can serve as an effective intervention in reducing pre-operative anxiety. Previously, patients who did not receive education often felt anxious because they did not know clearly what would happen during the PCI procedure, which increased their emotional tension. In contrast, by using an approach involving visualization and in-depth explanation of the procedure through audio-visual media, patients gained a better understanding, thereby reducing their anxiety. Research by Sidauruk et al. (2023) also showed that visual media-based education was able to reduce patient anxiety by providing a clearer picture of the medical procedure to be undergone, and these results are in line with the findings of this study.

The Jean Watson Caring Model, which emphasizes empathetic relationships and deep attention to patients, has been shown to play an important role in reducing patient anxiety. In this study, the use of audio-visual education methods applied with Watson's caring principles allowed patients to feel more valued and supported, which in turn increased their mental readiness to undergo PCI procedures. This is supported by research by Watson (2009) which states that caring in nursing practice involves not only physical aspects but also attention to the patient's emotional needs, which contributes to reducing anxiety levels and improving the patient's quality of life. Based on this analysis, Watson's caring-based audio-visual education has been shown to be an effective intervention in reducing pre-procedural anxiety, increasing patient understanding, and supporting them emotionally in facing stressful medical procedures.

CONCLUSION

Audio-visual education based on the Caring Jean Watson concept is effective in reducing anxiety levels in patients undergoing Percutaneous Coronary Intervention (PCI). A significant decrease in anxiety occurred in the experimental group, where 45% of patients reached normal anxiety levels and 35% of patients experienced mild anxiety after being educated. In contrast, in the control group, 70% of patients still experienced severe anxiety after education. The results of the analysis using the paired T-test showed a significant difference between anxiety before and after education (p-value <0.05). This decrease indicates that the educational approach through audio-visual media can provide a clearer understanding of the procedure, reduce uncertainty, and reduce patient anxiety emotionally.

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