

# Anxiety Heart Cateterization Of Coronary Heart Disease Patients

*by* Rolly Rondonuwu

---

**Submission date:** 29-May-2023 07:41AM (UTC+0700)

**Submission ID:** 2104046601

**File name:** iety\_Heart\_Cateterization\_Of\_Coronary\_Heart\_Disease\_Patients.pdf (246.05K)

**Word count:** 2732

**Character count:** 15260

## Anxiety Heart Cateterization Of Coronary Heart Disease Patients

Rolly Rondonuwu, Esrom Kanine, Grace Kapugu, Dorce Sisfiani Sarimin

<sup>1(CA)</sup>Department of nursing, Health Polytechnics of Manado, Indonesia ; [rollyhsr@yahoo.com](mailto:rollyhsr@yahoo.com)  
(Corresponding Author)

<sup>2</sup>Department of nursing, Health Polytechnics of Manado, Indonesia; [esromkanine@gmail.com](mailto:esromkanine@gmail.com)

<sup>3</sup>Department of nursing, Health Polytechnics of Manado, Indonesia; [kapugugrace@gmail.com](mailto:kapugugrace@gmail.com)

<sup>4</sup>Department of nursing, Health Polytechnics of Manado, Indonesia; [sisfiani1sarimin@gmail.com](mailto:sisfiani1sarimin@gmail.com)

### ABSTRACT

Coronary heart disease can be detected by non-invasive diagnostic examination or invasive examination. Invasive examination performed is cardiac catheterization. In cardiac catheterization or coronary Cath Lab many patients feel anxious because they are afraid of the pain that will be caused. The purpose of this study was to analyze differences in anxiety levels before and after cardiac catheterization in coronary heart patients.

The research design used was a *quasi-experimental* method using the method *one-group pre-test-post-test* to see differences in anxiety levels before and after cardiac catheterization. The population of this study is coronary heart patients who will undergo cardiac catheterization. The sample uses the slovin formula, size as many as 16 people. Analysis with *Paired Sample t-Test*.

The test results showed that there were differences in the level of anxiety before and after cardiac catheterization in coronary heart patients ( $\alpha < 0.05$ , i.e.  $p$ -value = 0.000). The conclusion is that cardiac catheterization affects the patient's level of anxiety. Suggestions are expected that the hospital and nurses can pay attention and improve efforts to handle anxiety in cardiac catheterization patients.

**Keywords: Anxiety, Cardiac Catheterization.**

### INTRODUCTION

According to statistics from the *American Heart Association* from 2004 to 2015, deaths from coronary heart disease decreased by 35.5% but risk factors for coronary heart disease remained high. Coronary heart disease is 2 of 10 diagnoses in hospitals with the most expensive cost, which is around 10.4 billion (AHA, 2017)

. Coronary Heart Disease (CHD) is a health problem faced in various countries in the world. The number of factors that influence, causing the diagnosis and therapy of the disease continues to grow. In Indonesia, economic progress is one of the factors in the increasing prevalence of coronary heart disease. The progress of

the economy that continues to grow will change people's lifestyles and cause changes in public health patterns (Ramandika, 2012).

Coronary Heart Disease can be detected by non-invasive diagnostic tests or invasive tests. Invasive examination performed is cardiac catheterization. Cardiac catheterization is a supporting examination by inserting a catheter into the cardiovascular system to examine the anatomy and function of the heart. Cardiac catheterization is a technique that is internationally recognized as the best and most accurate technique for detecting blockages in the coronary arteries (Ramandika, 2012).

Coronary Artery Disease (CAD) is still a problem that causes high morbidity and mortality, although many medical interventions exist to treat coronary heart disease. Depression and anxiety are often experienced by patients and this interferes with the treatment and healing process. Askin L et al 2020.

In Indonesia, in 2010 the number of cardiac catheterization procedures increased to 3 million annually. In particular, Cipto Mangunkusumo Hospital, Jakarta, has performed 650 catheterization procedures in 2006 and 1125 procedures in 2007. Data from the National Heart and Blood Vessel Hospital Harapan Kita, on average almost 15-20 patients are treated each day and around 350-400 who seek treatment at the polyclinic. Patients undergoing catheterization examinations are about 25-30 patients per day (Simajuntak, 2014).

Cardiac catheterization or coronary Cath Lab actions have a lot of psychological effects on patients, especially anxiety, fear because they feel sick and worry about the side effects that will be caused. This feeling of fear becomes a form of anxiety that is difficult for heart disease patients to overcome, so holding pain is better than having to check it (Dakota, 2010). This is also supported by research from Xiao Y et al 2019, which says that the highest anxiety is experienced before the percutaneous coronary intervention by patients with coronary heart disease.

Anxiety is a vague worry, related to feelings of uncertainty and helplessness. Anxiety is experienced subjectively and communicated interpersonally. Anxiety is different from fear. Anxiety is an emotional response to an intellectual judgment of danger (Suliswati, 2009).

According to Simanjuntak Gohana's research conducted in 2014 with the title Overview of anxiety levels in patients who will undergo cardiac catheterization at Haji Adam Malik General Hospital Medan, it was found that almost half of the respondents experienced moderate levels of anxiety as much as (55.3%), supported by a score of 55.3%. The patient's average score is 32.55 which shows the criteria for moderate anxiety level and has a standard deviation of 11.76, while respondents who experience mild anxiety (31.6%), and respondents who experience severe anxiety (13.2%). Research conducted by Mea CPD (2018) on the level of anxiety in patients undergoing cardiac catheterization found that the level of anxiety before cardiac catheterization was higher than post cardiac catheterization.

One of the hospitals that has cardiac catheterization room facilities in North Sulawesi is Prof. RSUP. Dr. R.D Kandou Manado. In 2016, RSUP Prof. Dr. R. D Kandou Manado has performed 1206 catheterization procedures, and 1475 procedures in 2017 for the period from January to October. The results of the initial survey conducted through interviews and observations with patients who will undergo surgery in the Cath Lab room in January 2018 for 1 week about 21 people, there were 9 patients complaining of anxiety before the procedure was carried out and 3 patients feeling anxious after the procedure. Based on the description above, the authors are interested in analyzing the differences in the level of anxiety before and after cardiac catheterization in coronary heart patients in the Cath Lab room of RSUP Prof. Dr. R.D Kandou Manado. The purpose of this study was to analyze differences in anxiety levels before and after cardiac catheterization in coronary heart patients in the Cath Lab room.

## METHOD

Type of research used is descriptive analytic research. The researcher will measure the independent and dependent variables, then will analyze the collected data to look for differences between the variables. The design of this study used a *quasi-experimental* method using a method *one-group pre-test-post-test design* to see differences in the level of anxiety pre and post cardiac catheterization in coronary heart patients in the Cath Lab room. The population in this study were patients who underwent cardiac catheterization in the cath lab at RSUP. The sample was determined using the Slovin formula and obtained 16 respondents. Determined according to the inclusion and exclusion criteria. The inclusion criteria were patients

with indications for cardiac catheterization and coronary heart patients. The data collection technique used to determine the anxiety level of pre and post cardiac catheterization patients was using the HARS (*Hamilton Anxiety Rating Scale*) questionnaire. The HARS scale consists of 14 question items. With an assessment of scores between 0-4, given 0 if there are no symptoms, 1 if symptoms are mild, 2 if symptoms are moderate, 3 if symptoms are severe, 4 if symptoms are very severe. Anxiety levels consist of 0-13 no anxiety, 14-20 mild anxiety, 21-27 moderate anxiety, 28-41 severe anxiety, 42-56 very severe anxiety. Five-finger hypnosis relaxation techniques will be given through lecture and simulation methods according to the standard operating procedures. Relaxation techniques are given to overcome or reduce the patient's level of anxiety. Statistical test using *paired t test* with 95% CI. Ethical Approval was obtained from the health research ethics commission of the Manado Health Polytechnic.

## RESULTS

### a. Characteristics of Respondents

**Table 1. Distribution by Age of Respondents**

No	Age	n	%
1	46-55 years	4	25
2	56-65 years	7	43.75
3	>65 years	5	31.25
<b>Total</b>		<b>16</b>	<b>100</b>

Based on table 1, it shows that some of the 16 respondents large age 56-65 years 7 people (43.75%).

**Table 2. Distribution by Gender of Respondents**

No	Gender	n	%
1	Male	12	75
2	Female	4	25
<b>Total</b>		<b>16</b>	<b>100</b>

Based on table 2, it shows that out of 16 respondents most of the respondents were male 12 people (75%).

**Table 3 Distribution Based on Respondent Education**

No	Education	n	%
1	Elementary School	1	6,25
2	Junior High School	3	18,75
3	Senior high school	11	68,75
4	College	1	6,25
<b>Total</b>		<b>16</b>	<b>100</b>

Based on table 3, it shows that most of the 16 respondents have high school education 11 people (68.75%).

b. Anxiety Levels

Characteristics of respondents based on anxiety levels before and after cardiac catheterization in coronary heart patients can be seen in the following table.

**Table 4. Characteristics of respondents based on Anxiety Levels Before dan after undergoing Cardiac Catheterization**

Variable	Category										Total	
	Not Anxiety		Mild		Moderate		Severe		Very Severe		n	%
	n	%	n	%	n	%	n	%	n	%		
Anxiety of coronary heart patients Pretest	2	12.5	6	37.5	5	31,25	4	25	0	0	16	100
Anxiety of coronary heart patients Posttest	13	81.25	3	18.75	0	0	0	0	0	0	16	100

Based on table 4, it shows that the respondents' anxiety before cardiac catheterization was mostly in the moderate category, there were 5 people (31.25%). Respondents' anxiety after undergoing cardiac catheterization was mostly in the non-anxious category, there were 13 people (81.25%).

Table 5. Results of analysis using Paired Sample t-Test Anxiety Level Difference Pre and Post Cardiac Catheterization Coronary Heart Disease Patients

Variable	N	Mean	SD	t	p-value
anxiety pre-catheterization	16	2.69	1.014	6.708	0.000
anxiety post-catheterization	16,	1.19	0.403		

The difference in mean anxiety before and after cardiac catheterization in coronary heart patients analyzed by Paired Sample t-Test. Table 5 shows that the average value of the patient's anxiety before cardiac catheterization are mean SD of 2.69 to 1.014 and after cardiac catheterization and was given five fingers hypnotic relaxation techniques are *mean* SD of 1.19 to 0.403.

Based on the results of data analysis, it was found that there was a difference between pre and post cardiac catheterization anxiety levels. Where the mean level of post-cardiac catheterization anxiety is lower. Based on the results of statistical tests using the Paired Sample t-Test, the p value < 0.05 was p = 0.000.

## DISCUSSION

After presenting the data in the form of a frequency distribution table, a discussion of the research results was carried out according to the variables studied from the research results in accordance with the variables studied from the research results, it was obtained:

### 1. Characteristics of Respondents

Based on the results of research in the Cath Lab Room of RSUP. Prof. Dr. RD Kandou Manado, from 16 respondents showed that the most respondents were aged 56-65 years and the least was 46-55 years. According to Hastuti 2019, that anxiety that occurs when undergoing percutaneous coronary intervention (PCI) can occur because of feelings of discomfort both physically and psychologically and is also influenced by demographic factors, namely gender, age, and level of education most respondents were male 12 people (75%). According to the results of research

by Ramandika (2012), male respondents are at high risk of coronary heart disease because most have a history of smoking.

Based on the frequency of education, it shows that the education level of most respondents is SMA, totaling 11 people (68.75). This shows that in terms of education, most of the respondents are good. According to Notoadmodjo (2003) education can influence a person, including a person's behavior regarding lifestyle, especially motivation for attitudes, participating in education is needed to obtain information, for example, that supports health. This means that **the higher the level of education**, the easier it **is** for someone **to** receive and understand information. So it can reduce the level of anxiety.

## 2. Anxiety levels pre and post cardiac catheterization by providing hypnotic techniques five fingers

According Oktavamdani et al 2019, anxiety is often found in patients undergoing invasive measures, which are marked by an increase in heart rate. Interventions that can reduce anxiety are distraction techniques, hypnosis, cognitive behavioral approaches and the involvement of nurses and other health teams in patients (Hastuti 2019).

Based on research conducted, it was found that from 16 samples of heart patients before cardiac catheterization showed the highest number of mild anxiety, amounting to 6 respondents (37.5%). This study is in line with Simanjuntak Gohana's (2014) study which said that patients who will undergo cardiac catheterization with mild anxiety levels (31.6%) are the second most experienced patients.

Anxiety or anxiety can be overcome with relaxation techniques, distraction, spiritual activities and hypnotherapy (Keliat, 2015). The five finger hypnosis technique is an act of helping clients change perceptions of anxiety, stress, tension and fear. The client is in a relaxed state, given suggestions and moves the fingers on command (Long, 2010).

In this study, patients were given a five-finger hypnosis technique after cardiac catheterization showed the highest number at the level of not being anxious, amounting to 13 people (81.25). These results indicate that five-finger hypnosis can reduce anxiety. This study is in line with the research of Widyanti (2013) in patients who will undergo surgery who said that anxiety decreased before and after being



given the five-finger hypnosis technique at dr. Soedarso Hospital Pontianak, West Kalimantan.

## CONCLUSION

There is a difference in the anxiety level of pre and post cardiac catheterization patients after being given the five finger hypnosis relaxation technique. The anxiety level of the pre-cardiac catheterization patient was in the moderate level of anxiety. The post-cardiac catheterization patient's anxiety level was in the non-anxious category. The results of this study recommend that the five-finger hypnosis technique can be used to reduce anxiety in post-cardiac catheterization patients.

## REFERENCES

- American Heart Association* <http://www.scribd.com/document/356210833/BAB-I-1>  
accessed on 23 January 2018
- Askin L, Uzel KE, Tanriverdi O, Kavalci V, et al, The Relationship Between Coronary Artery Disease and Depression and Anxiety Scores, *North Clin Istanb* 2020 : 7 (5) : 523-526
- Dakota. (2010). *Cardiac Catheterization at Harapan Kita Hospital*
- Hastuti YD, Mulyani ED, Anxiety of Patients With Coronary Heart Disease Post Percutaneous Coronary Intervention, *Indonesian Nurse Journal*, Vol 3 No 3 Page 167-174, 2019
- Keliat, BA (2015). *Mental Nursing Care Standards (disorders, risks and health). Mental Nursing IX Depok 2015*. Psychiatric Nursing Specialist Study Program. Faculty of Nursing UI.
- Long, BC (2010). *Medical Surgical Treatment*. Padjadjaran BTPK Foundation. Bandung
- Mea CPD, Bettinelli LA, Pasqualotti A, Anxiety and Depression Symptoms in Adults and Elderly in Post-Percutaneous Coronary Intervention, *Acta-Colomb Psicol*. 21 (2) : 236-246, 2018

- Notoadmodjo. (2003). *Introduction to Health Education and Health Behavioral Sciences*. I. Andi Offset Printing. Yogyakarta
- Notoadmodjo. (2012). *Health Research Methodology*. Rineka Cipta. Jakarta
- Oktavamdani T, Mudjaddid, Muhadi and Shatri H, Increased Heart Rate Variability Following Elective Percutaneous Coronary Intervention in Patients With Stable Coronary Artery Disease and Preprocedural Anxiety, *Cardiology Research and Practice* Vol 2019, Article ID 3696825
- Ramandika AE (2012). *Correlation between Major Risk Factors for Coronary Heart Disease with Coronary Vessel Score from the results of Coronary Angiography at Dr. RSUP. Karladi Semarang*. *Journal of Medika Muda*
- Simanjuntak Gohana. (2014). *Description of Anxiety Levels in Patients Who Will Undergo Cardiac Catheterization at Haji Adam Malik Hospital Medan*
- Widyanti F, Wardani IY (2013) The effect of the five finger technique on the anxiety level of preoperative patients at dr Soedarso Hospital Pontianak West Kalimantan
- Suliswati, et al. (2009). *Basic Concepts of Mental Health Nursing*. EGC. Jakarta

# Anxiety Heart Cateterization Of Coronary Heart Disease Patients

## ORIGINALITY REPORT

15%

SIMILARITY INDEX

9%

INTERNET SOURCES

0%

PUBLICATIONS

6%

STUDENT PAPERS

## PRIMARY SOURCES

1	Submitted to Badan PPSDM Kesehatan Kementerian Kesehatan Student Paper	6%
2	<a href="http://www.scribd.com">www.scribd.com</a> Internet Source	5%
3	<a href="http://www.scilit.net">www.scilit.net</a> Internet Source	3%
4	<a href="http://www.researchgate.net">www.researchgate.net</a> Internet Source	2%

Exclude quotes  On

Exclude matches  < 2%

Exclude bibliography  On

# Anxiety Heart Cateterization Of Coronary Heart Disease Patients

---

## GRADEMARK REPORT

---

FINAL GRADE

**/0**

GENERAL COMMENTS

**Instructor**

---

PAGE 1

---

PAGE 2

---

PAGE 3

---

PAGE 4

---

PAGE 5

---

PAGE 6

---

PAGE 7

---

PAGE 8

---

PAGE 9

---