



## ANXIETY LEVELS AND PERCUTANEOUS CARDIAC INTERVENTION (PCI) IN STEMI AND NSTEMI PATIENTS AT BANGIL HOSPITAL

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ABSTRACT	Keywords
<p>According to the World Health Organization, coronary heart disease, including STEMI and NSTEMI, is the leading cause of noncommunicable disease-related mortality worldwide. First treatment for STEMI-NSTEMI patients was reperfusion with Percutaneous Coronary Intervention (PCI). Anxiety increases the difficulty of controlling cardiac disease in patients with a diagnosis of STEMI and NSTEMI who will undergo PCI surgery. This study employs a cross-sectional correlation analysis methodology. Patients with coronary heart disease diagnosed with STEMI and NSTEMI who are receiving treatment at Bangil Hospital constituted the population. Forty respondents were selected using a technique called purposive sampling. Percutaneous Coronary Intervention (PCI) is the independent variable. While apprehension levels are the dependent variable. At a Sig (2-tailed) value of 0.05, <math>H_0</math> was rejected and <math>H_1</math> was accepted, indicating that there was a correlation between preparation for surgery (Giving Informed Consent) Percutaneous Coronary Intervention and anxiety levels in STEMI - NSTEMI patients at Bangil Hospital. Consent was obtained prior to the decision to perform PCI. If the patient agrees to informed consent, the procedure will continue; if the patient refuses, the procedure will not be performed. The conclusion of this study is that Percutaneous Coronary Intervention (PCI) procedures are associated with a lower level of anxiety the better the preparation for surgery (providing informed consent) is.</p>	<p><i>Operational Preparation, Giving Informed Consent, PCI, Anxiety</i></p>

## INTRODUCTION

Coronary heart disease (CHD) or Coronary Artery Disease (CAD) is a disease caused by narrowing and blockage of the heart's blood vessels (Khan et al., 2020). The World Health Organization determines coronary heart disease such as STEMI and NSTEMI as a non-communicable disease that causes the highest number of deaths in the world (World Health Organization, 2021). Reperfusion with Percutaneous Coronary Intervention (PCI) is the first treatment for STEMI-NSTEMI patients. Control of

heart disease with diagnoses of STEMI and NSTEMI who will undergo Percutaneous Coronary Intervention (PCI) surgery is worsened by the emergence of psychological problems (Gooding et al., 2020). Preparation for surgery (giving informed consent) for Percutaneous Coronary Intervention (PCI) can be hampered by the emergence of psychological problems, one of which is anxiety. (Meng et al., 2020).

Based on data from the World Health Organization, 17.9 million people die every year due to coronary heart

disease (World Health Organization, 2021). Based on 2018 Basic Health Research (Riskesdas) data, the incidence of heart and blood vessel disease is at least 15 out of 1000 people, or around 2,784,064 individuals in Indonesia suffer from coronary heart disease (Indonesian Ministry of Health, 2019). Meanwhile, data in East Java province shows that the prevalence of coronary heart disease is still high compared to the average prevalence in Indonesia, which is 1.5% (Indonesian Ministry of Health, 2019). The process of preparing for surgery (giving informed consent) for Percutaneous Coronary Intervention (PCI) in coronary heart disease can affect the patient's physiological and psychological condition. One of the serious psychological disorders is anxiety and stress (Nabila et al., 2020). Psychological problems experienced by patients with coronary heart disease are caused by intrinsic and extrinsic factors. Psychological problems are caused by several factors such as daily hassles, personal stressors and appraisal. Meanwhile, anxiety is caused by heredity factors, environmental factors and precipitation factors. (Allabadi et al., 2019). Patients who will undergo surgery will experience various kinds of stressors that cause anxiety and fear, even the waiting time can cause anxiety (Brahmbhatt et. al, 2021).

Apart from that, anxiety also makes clients aggressive and they always ask for continuous attention from the nurse. Clients can also become nervous and worried about the operation they will undergo (Wondmieneh, 2020). Anxiety with reasonable intensity can be considered to have positive value as motivation. If the intensity is very strong and negative, it will actually cause harm and can disrupt the patient's physical and psychological condition (Suryanto et al., 2021). If this anxiety does not receive adequate treatment from doctors, nurses or family, it is possible that the anxiety will get worse, resulting in the patient not

being ready to undergo surgery (Salzmann et. al, 2021).

The problem of anxiety when preparing for surgery (giving informed consent) for Percutaneous Coronary Intervention must be handled immediately properly and in the right way. Nurses as professional health workers have a role to provide comprehensive nursing care by helping patients meet holistic and unique basic needs for changes in health or in critical situations (Yuan & Yuan, 2021). Interpersonal communication is the core of a nurse's work. All nursing tasks revolve around the need for nurses to be effective providers of information, one of which is providing informed consent. Based on the problems above, the author is interested in conducting research with the title "The Relationship between Preparation for Surgery (Providing Informed Consent) for Percutaneous Coronary Intervention (PCI) with the Level of Anxiety in Stemi-Nstemi Patients at Bangil Regional Hospital".

## RESEARCH METHODS

The design used in this research is a non-experimental quantitative research design with a correlation analysis method. The research approach used is cross sectional. The population studied was all coronary heart disease patients diagnosed with STEMI and NSTEMI who were undergoing treatment at Bangil Regional Hospital. The samples that met the inclusion and exclusion criteria were 40 coronary heart patients diagnosed with STEMI and NSTEMI who were undergoing treatment at Bangil Regional Hospital. The sampling technique in this research uses nonprobability sampling with the sampling technique "Purposive Sampling".

The research instrument used was the Preparation for Surgery (Providing Informed Consent) Percutaneous Coronary Intervention (PCI) questionnaire. The questionnaire for PCI operations uses the Informed Consent reference provided by Bangil Regional Hospital. The Amsterdam preoperative anxiety and information scale (APAIS) is an instrument used to measure

preoperative anxiety that has been validated, accepted and translated into various languages in the world.

## RESEARCH RESULT

**Table 4.1 Characteristics of respondents based on gender in Stemi – Nstemi patients at Bangil Regional Hospital**

No.	Gender	N	Persentase (%)
1.	Man	21	52.5
2.	Woman	19	47,5
	Amount	40	100

Sumber : Data Primer (2023)

Based on table 4.1 Characteristics of respondents based on gender in Stemi - Nstemi patients at Bangil Regional Hospital, the results showed that the majority of respondents were male, namely 21 people (52.5%).

**Table 4.2 Characteristics of respondents based on age for Stemi – Nstemi patients at Bangil Regional Hospital**

No.	Age	N	Persentase (%)
1.	17 – 25 year	0	0
2.	26 – 35 year	0	0
3.	36 – 45 year	5	12.5
4.	46 – 55 year	19	47.5
5.	56 – 65 year	11	27.5
6.	> 66 year	5	12.5
	Amount	40	100

Source: Primary Data (2023)

Based on table 4.2 characteristics of respondents based on patient age for Stemi - Nstemi patients at Bangil Regional Hospital, the results showed that almost half of the respondents were aged 46 - 55 years, namely 19 people (47.5%).

**Table 4.3 Characteristics of respondents based on education for Stemi - Nstemi patients at Bangil Regional Hospital**

No.	Education	N	Persentase (%)
1.	No school	5	12.5
2.	Elementary school	1	2.5
3.	Junior high school	3	7.5
4.	Senior high school	24	60
5.	D3 / S1	7	17.5
	Amount	40	100

Sumber : Data Primer (2023)

Based on table 4.3 Characteristics of respondents based on education of Stemi - Nstemi patients at Bangil Regional Hospital, it was found that the majority of respondents had a high school education, namely 24 people (60%).

**Table 4.4 Characteristics of respondents based on work for Stemi – Nstemi patients at Bangil Regional Hospital**

No.	Work	N	Persentase (%)
1.	Doesn't work	4	10
2.	Private	18	45
3.	Self-employed	12	30
4.	Civil servants	6	15
	Amount	40	100

Sumber : Data Primer (2023)

Based on table 4.4 Characteristics of respondents based on work for Stemi - Nstemi patients at Bangil Regional Hospital, the results showed that almost half of the respondents worked in the private sector, namely 18 people (45%).

**Table 4.5 Identification of surgical preparation (giving informed consent) for Percutaneous Coronary Intervention (PCI) in Stemi – Nstemi patients at Bangil Regional Hospital**

No	Operation Preparation Criteria	N	Persentase (%)
1.	Agree	28	70
2.	Reject	12	30
	Amount	40	100

Sumber : Data Primer (2023)

Based on table 4.5, identification of preparation for surgery (giving informed consent) to Stemi - Nstemi patients at Bangil Regional Hospital, the results showed that the majority of respondents agreed to the informed consent that had been submitted with a total of 28 people (70%).

**Table 4.6 Identification of anxiety levels in Stemi – Nstemi patients at Bangil Regional Hospital**

Sumber : Data Primer (2023)

Based on table 4.6, identification of the level of anxiety in Stemi - Nstemi patients at Bangil Regional Hospital, the results showed that the majority of respondents had a mild level of anxiety, namely 23 people (57.5%).

**Table 4.7 Crosstab results of the relationship between surgical preparation (giving informed consent) for percutaneous coronary intervention (PCI) with the level of anxiety in Stemi – Nstemi patients at Bangil Regional Hospital**

Preparation for surgery (giving informed consent)	Tingkat Ansietas									
	The re isn't any		Light		Currently		Heavy		Panic	
	N	%	N	%	N	%	N	%	N	%
Agree	0	0	2	3	4	1	3	1	0	0
Reject	0	0	0	0	0	0	0	0	0	0
Amount	0	0	2	3	4	1	3	1	0	0

Reject	0	0	0	0	0	0	1	3	0	8	2	1	1	1
Amount	0	2	3	4	1	1	2	4	0	3	7	0	0	0
Significance	Sig. (2-tailed) = 0.000 < 0.05													

Sumber : Data Primer (2023)

Based on the results of the crosstab data, it was found that of the respondents who agreed, almost all of the respondents had a mild level of anxiety, namely 23 people (82.1%). Meanwhile, for respondents who refused, the results showed that almost all respondents had severe stress levels, namely 10 people (83.3%).

## DISCUSSION

### Identify surgical preparations (giving informed consent) for Percutaneous Coronary Intervention (PCI) in Stemi – Nstemi patients at Bangil Regional Hospital

Based on the results of the research conducted, it was found that the majority of respondents agreed to the informed consent for Percutaneous Coronary Intervention (PCI) which was submitted by 28 people (70%). Meanwhile, 12 respondents (30%) refused the informed consent for

No.	Anxiety Criteria	Level	N	Persentase (%)
1.	No anxiety		0	0
2.	Mild Anxiety		23	57.5
3.	Moderate Anxiety		4	10
4.	Severe Anxiety		11	27.5
5.	Panic		2	5
	Amount		40	100

Percutaneous Coronary Intervention (PCI). Based on theory, preparation for surgery by providing informed consent for Percutaneous Coronary Intervention (PCI) is

an integral assessment of the patient's function including physical, biological and psychological function through written consent regarding the Percutaneous Coronary Intervention (PCI) procedure which will be carried out by the doctor with the patient's permission (Filia, 2019).

Preparation for surgery (giving informed consent) for Percutaneous Coronary Intervention (PCI) in STemi – NSTEMI patients at Bangil Regional Hospital is influenced by several factors such as age and education. In the first factor, namely age, the research results showed that almost half of the respondents were aged 46 - 55 years, namely 19 people (47.5%).

At this age, individuals have maturity in terms of both physical and psychological growth which is characterized by mental maturity and strength, ability to think, ability to understand, and ability to remember (Evans et al., 2020). In the second factor, namely education, the research results showed that the majority of respondents had a high school education, namely 24 people (60%). A person's level of education will influence the individual's knowledge about environmental health and knowledge of disease. The lower the level of education causes the individual's knowledge about the disease process to be less (Nedesa et al., 2020). The higher an individual's education, the easier it is for that individual to receive information, and ultimately the more knowledge he or she has. On the other hand, if a person's level of education is low, it will hinder the development of a person's attitude towards acceptance, information and newly introduced values (Al-Hanawi et al., 2020).

#### **Identify the level of anxiety in STEMI – NSTEMI patients at Bangil Regional Hospital**

Based on the results of the research conducted, it was found that the majority of respondents had a mild level of anxiety, namely 23 people (57.5%). Respondents who had a severe level of anxiety were 11 people (27.5%). Respondents who had a moderate level of anxiety were 4 people (10%). And respondents who had panic

anxiety levels were 2 people (5%). Anxiety is a mental condition full of worry and fear about what might happen, whether related to limited problems or strange things (Alnazly et al., 2021).

Based on the research results, it was found that the majority of respondents had a mild level of anxiety, namely 23 people (57.5%). This is due to several factors including age and education

In the first factor, namely age, the research results showed that almost half of the respondents were aged 46 - 55 years, namely 19 people (47.5%). Physiologically, the growth and development of respondents in this research was described in terms of increasing age. As age increases, it is expected that there will be growth in motor and sensory abilities in accordance with growth and development which is synonymous with high idealism, high enthusiasm and excellent energy (Hu et al., 2021). In the second factor, namely education, the research results showed that the majority of respondents had a high school education, namely 24 people (60%). A person's level of education has an influence on responding to something that will come from both inside and outside. Individuals who have higher education will provide more rational responses than those with lower education or those with no education (Wang et al., 2022). Education can be a predisposing factor for excessive anxiety.

#### **The relationship between surgical preparation (giving informed consent) for Percutaneous coronary intervention (PCI) with the level of anxiety in STEMI – NSTEMI patients at Bangil Regional Hospital**

Based on the results of the crosstab data, it was found that of the respondents who agreed, almost all respondents had a mild level of anxiety, namely 23 people (82.1%). Meanwhile, for respondents who refused, the results showed that almost all respondents had severe stress levels, namely 10 people (83.3%). Most patients who agree to PCI have a mild level of anxiety because



informed consent decision making is based on a good individual mindset and coping mechanisms (Pietrzykowski & Smilowska, 2021). The preoperative phase begins when the decision for surgical intervention is made using informed consent and ends when the patient is sent to the operating table (Jenie & Yuni Lestari, 2019). If the patient agrees to informed consent then the operation will continue, if they refuse then the operation will not be carried out (Filia, 2019).

When facing Percutaneous Coronary Intervention surgery, patients will experience various stressors, while the time span waiting for surgery will cause fear and anxiety in patients (Hidayat & Siwi, 2019). However, in this study there was one respondent who agreed to PCI but had a severe level of anxiety. Based on the assessment, it was found that the patient was 65 years old, did not go to school and did not work. When observing the patient and the patient's family through interviews with researchers, the patient initially refused to undergo PCI. Meanwhile, when the patient refused PCI, many of the patient's families came and provided support. So that the patient, even though he is in a state of severe anxiety, changes his mind and agrees to undergo PCI.

Based on theory, someone who enters old age will experience a physical and psychosocial setback or decline which can cause the elderly to have poor self-acceptance. Meanwhile, anxiety in the elderly occurs due to psychological changes including short-term memory, frustration, loneliness, fear of losing freedom, fear of facing death, changes in desires, depression and anxiety. In general, elderly people experience a decline in cognitive and psychomotor function. From a mental-emotional perspective, pessimistic feelings often arise, feelings of insecurity and anxiety arise, acute mental confusion, feeling threatened by an illness or fear of being abandoned because they are no longer useful (Kim et al., 2021). Meanwhile, at the education level, respondents did not attend school. A person's level of education will influence the individual's knowledge about

environmental health and knowledge of disease.

In this study, there was one respondent who was the oldest, namely 72 years old, male, not at school and not working. Respondents refused PCI action and had a level of panic anxiety. Based on theory, someone who enters old age will experience a physical and psychosocial setback or decline which can cause the elderly to have poor self-acceptance. Elderly people have a higher chance of experiencing anxiety disorders than depression. Meanwhile, anxiety in the elderly occurs due to psychological changes including short term memory, frustration, loneliness, fear of losing freedom, fear of facing death, changes in desires, depression and anxiety. Meanwhile at the level of education, a person's level of education will influence individual knowledge regarding environmental health and knowledge. against disease. The lower the level of education causes the individual's knowledge about the disease process to be less (Nedesa et al., 2020).

## CONCLUSION

Based on data tabulation and crosstabs, the results obtained from all respondents who had undergone preparation for surgery (giving informed consent) for percutaneous coronary intervention (PCI), the majority of respondents agreed to percutaneous coronary intervention (PCI) with a total of 28 respondents (70%), next from Of the 28 respondents who agreed, almost all respondents had a mild level of anxiety, namely 23 people (82.1%). Meanwhile, of the respondents who refused, 12 people (30%) found that almost all respondents had a severe level of anxiety, namely 10 people (83.3%).

Based on the spearman test table with correlation coefficient results of 0.868 and sig. (2-tailed) 0.000 shows that there is a very strong and significant relationship between preparation for surgery (giving informed consent) for percutaneous

coronary intervention (PCI) in STEMI – NSTEMI patients and the level of anxiety with a positive relationship direction, which means the better the preparation for surgery (giving informed consent ) agree that percutaneous coronary intervention (PCI) will reduce the anxiety level of respondents diagnosed with STEMI-NSTEMI at Bangil Regional Hospital.

## SUGGESTION

### 1) For Respondents

For patients to seek information regarding percutaneous coronary intervention (PCI) procedures, one way is to read the leaflets that have been prepared by researchers in order to increase their knowledge, ask for family support and pray a lot so that they can reduce anxiety levels. Respondents can also use other methods by listening to music, reading the Koran, doing dhikr and asking for guidance from a spiritual teacher

### 2) For Research Sites

Bangil Hospital can improve the surgical preparation process (providing informed consent) for percutaneous coronary intervention (PCI) STEMI - NSTEMI, for example by making leaflets, videos about percutaneous coronary intervention (PCI) procedures so that it is hoped that all patients will understand and agree to the operation and reduce anxiety levels.

The preparation of standard operational procedures for providing informed consent is expected to be in accordance with the latest Minister of Health Regulation (RI Minister of Health Regulation Number 290/MENKES/PER/III/2008)

### 3) For Educational Institutions

Educational institutions are expected to hold regular seminars or workshops related to the diagnosis of Stemi and Nstemi along with percutaneous coronary intervention (PCI) procedures.

### 4) For Further Researchers

Future researchers should expand the scope of the research, considering that the research carried out cannot fully describe the factors that can influence anxiety levels.

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