

## Psychological Aspects in Invasive Cardiac Procedures

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### Abstract

*There are many invasive cardiac procedures that help to identify cardiac diseases. Even though these diagnostic procedures are the helping hands in the field of medical science but there are some hidden factors like anxiety, fear of unknown diagnostic procedures leads to false results & interpretations. This may interfere with the choice of treatment selected for the patients. A clear explanation of diagnostic procedures and prediagnostic counseling of the patients can help to reduce the false alterations within the results of test.*

**Keywords:** anxiety, cardiovascular diseases, prediagnostic counseling

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### INTRODUCTION

“Understanding the fear can reduce its interference on your health”

Cardiovascular diseases (CVDs) are life-threatening conditions. These are the first cause of death among population.<sup>[1]</sup> The golden standards for treating these diseases include invasive cardiac procedures but on other hand these procedures also provoke anxiety.

Patients throughout the world with cardiac disease experience high anxiety and culture itself do not explain variations in reported anxiety. Due to this, patients awaiting invasive cardiac procedures might experience certain amounts of cardiac anxiety (CA), state anxiety (SA), and/or trait anxiety.<sup>[2]</sup>

Anxiety causes an increase in various physiological symptoms, such as, increased heartbeat, breathing, and blood pressure, all of which put the cardiac system of patients at risk, by triggering the mechanism of body heating, which can even lead to death.<sup>[3]</sup>

Although psychological factors play an important role in heart diseases, the most important factors that contribute to it include depression, anxiety, and stress. Roest *et al.* (2010) in their meta-analysis studied the association between anxiety and the risk factors of coronary artery disease, and observed that anxiety is an independent risk factor associated with congestive heart diseases and cardiac deaths.<sup>[4]</sup>

Hence, treating such reactions can speed up recovery and increase the life time of the patient. High prevalence of anxiety can delay recovery from cardiac diseases.<sup>[5]</sup>

### Factors Aggravating Psychological Changes

- Fear of unknown
- Physical harm or bodily injury resulting in discomfort, pain, mutilation, or death
- Separation from family and dealing with strangers in the absence of a familiar, trusted person
- Lack of information
- The critical care unit environment

- Waiting for procedure.
- Post procedure changes in the body, appearance, or emotional responses<sup>[6]</sup>

### Symptoms of Psychological Changes While Waiting for Invasive Procedure

#### Physical symptoms<sup>[7,8]</sup>

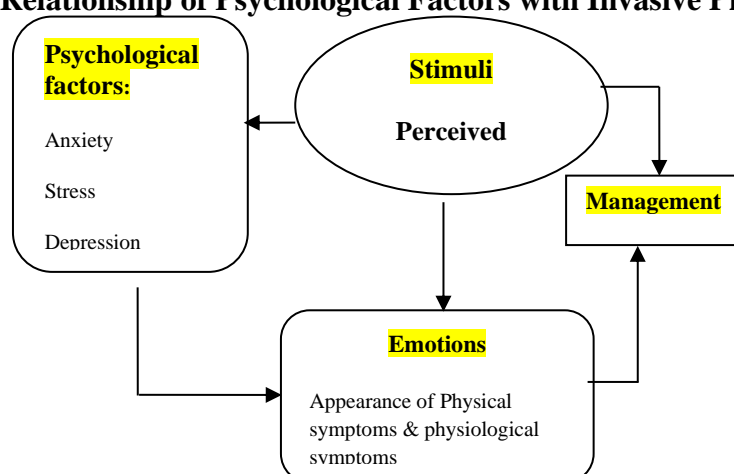
- Hot and cold flushes
- Tightening of the chest
- Snowballing worries
- Obsessive thinking and compulsive behavior.
- Felt restless or on edge
- Felt easily tired

- Had difficulty concentrating
- Felt irritable
- Had trouble sleeping before the night of procedure

#### Physiological changes

- Increased heart rate
- Respiratory rate
- Arterial blood pressure
- Myocardial oxygen demand and anxiety levels
- Sudden cardiac death
- muscle pain (e.g. sore jaw or back)

### Model Showing Relationship of Psychological Factors with Invasive Procedures



### Management of Anxiety

#### Nonpharmacological intervention

- Education to patient regarding pre procedural and post procedural instructions.<sup>[9,10]</sup>
- To keep relatives or other companions as long as possible close to the patient
- Music therapy for 20 minutes<sup>[7]</sup>
- Video information<sup>[11]</sup>
- Reflexology – foot massage<sup>[12]</sup>
- Yoga
- Multiple approach method
- Orientation to the area of lab

#### Pharmacology intervention

- Sedatives: Given 30 minutes before the procedure.<sup>[12]</sup>

### SUMMARY

Anxiety is a general symptom that causes nervousness, fear, apprehension, and worrying.<sup>[1,13]</sup> these symptoms affect how person feel and behave, and it's manifested by real physical and physiological symptoms. People often experience a general state of worry or fear before confronting something challenging such as a test, examination.

The system that is mainly influenced by anxiety is the activity of the heart when anxiety activates the automatic part of the nervous system that affects many organs, including the heart. Such actions and others could negatively affect the heart in several ways.

Hence, patients are already suffering from diagnose related anxiety moreover the invasive diagnostic procedure unknowingly increase patients anxiety & effects the test results.

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