

## EDUCATIONAL PRACTICES ON THE ANXIETY CONTROL OF PATIENTS IN PRE-OPERATIVE HEART SURGERY: INTEGRATION REVIEW

Práticas educativas no controle da ansiedade de pacientes em pré-operatório de cirurgia cardíaca: revisão integrativa

Prácticas educativas en el control de la ansiedad de pacientes en pre-operatorio de cirugía cardíaca: revisión integrativa

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### ABSTRACT

**Objective:** to describe, based on the literature, the contributions of the educational practices to the control of the anxiety of patients in the preoperative period of cardiac surgery. **Method:** this is an integrative review carried out from November to December 2017 in the PubMed, Bases de Dados de Enfermagem (BDENF), Biblioteca Regional de Medicina (BIREME), Scientific Electronic Library Online (SCIELO) and Medical Literature Analysis and Retrieval System Online (MEDLINE), databases, with the inclusion of 24 articles that composed this study. **Results:** on the anxiety diagnosis, the articles analyzed showed greater presence of anxiety among women, in different age groups, but more prevalent at more advanced ages. Health education has demonstrated excellent results in the reduction of anxiety, which once performed by the nurse, potentiates the care. **Conclusion:** educational processes performed in the preoperative period of cardiac surgery, contribute to a good recovery, because with the patient's involvement in the process, it makes them calm and comfortable.

**Descriptors:** Anxiety; Cardiac surgery; Nursing; Health education; Empathy.

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## RESUMO

**Objetivo:** descrever, com base na literatura, as contribuições das práticas educativas para o controle da ansiedade de pacientes em pré-operatório de cirurgia cardíaca. **Método:** trata-se de uma revisão integrativa realizada no período de novembro a dezembro de 2017 nas Bases de Dados PubMed, Bases de Dados de Enfermagem (BDENF), Biblioteca Regional de Medicina (BIREME), Scientific Electronic Library Online (SCIELO) e Medical Literature Analysis and Retrieval System Online (MEDLINE), com a inclusão de 24 artigos que compuseram esse estudo. **Resultados:** sobre o diagnóstico ansiedade, os artigos analisados mostraram maior presença no sexo feminino, em diferentes faixas etárias, mas mais prevalente em idades mais avançadas. Educação em saúde tem apresentado excelentes resultados na diminuição da ansiedade, que uma vez realizada pelo enfermeiro, potencializa o cuidado. **Conclusão:** processos educativos realizados no pré-operatório de cirurgia cardíaca, auxiliam para uma boa recuperação, pois com o envolvimento do paciente no processo, o tornará tranquilo e confortável.

**Descritores:** Ansiedade; Cirurgia cardíaca; Enfermagem; Educação em saúde; Empatia.

## RESUMÉN

**Objetivo:** describir, con base en la literatura, las contribuciones de las prácticas educativas para el control de la ansiedad de pacientes en preoperatorio de cirugía cardíaca. **El método:** se trata de una revisión integrativa realizada en el período de noviembre a diciembre de 2017 en las Bases de PubMed, Bases de Datos de Enfermagem (BDENF), Biblioteca Regional de Medicina (BIREME), Scientific Electronic Library Online (SCIELO) y Medical Literature Analysis and Retrieval System Online (MEDLINE), con la inclusión de 24 artículos que compusieron ese estudio. **Resultados:** sobre el diagnóstico ansiedad, los artículos analizados mostraron mayor presencia en el sexo femenino, en diferentes edades, pero más prevalente en edades más avanzadas. La educación en salud ha presentado excelentes resultados en la disminución de la ansiedad, que una vez realizada por el enfermero, potencializa el cuidado. **Conclusión:** procesos educativos realizados en el preoperatorio de cirugía cardíaca, auxilian para una buena recuperación, pues con la participación del paciente en el proceso, lo hará tranquilo y confortable.

**Descriptorios:** Ansiedad; Cirugía cardíaca; enfermería; Educación en salud; Empatia.

## INTRODUCTION

The act of caring is part of human nature and has a wide range of meanings. However, depending on the circumstance, it can be perceived either as a solidarity or as an obligation. It is the exercise of putting oneself in another's shoes, understanding all one's personal and social complexities.

In the health field, care has been increasingly demanding and should be practiced focusing not only on the disease or problem presented by the patient, but on the human being as a whole, objectively and subjectively.

In this context, Nursing is an essential profession, incorporating, since its inception, caring as a central focus of its work. Based on holistic care, it has a broad approach and adapted to different clinical situations, focused on the physical, biological, emotional, social and economic dimensions of cared people. In addition to the patient's illness, they should

be aware of their life experience, customs and beliefs in order to be able to demonstrate compassion, action and trust in the therapeutic relationship, in search of better results.

Benefits can be generated by establishing a trusting relationship between nurse and patient, including his/her family. Anguish, fears, doubts and anxieties, feelings common to people living the health-disease process, can be minimized, facilitating care and the negative impacts that certain procedures could cause due, for example, to a lack of dialogue and clarity.

When thinking about a specific care, focused on the conditions of illness, we can highlight those of cardiovascular disease, which require more complex care from nurses, due to its particularities and more intense changes and greater impact on the patient's life.

According to the World Health Organization (WHO)<sup>1</sup>, "An estimated 17.5 million people died from cardiovascular disease in 2012, representing 31% of all deaths worldwide." Most deaths due to this cause occur in low- and middle-income countries, among them Brazil, where cardiovascular disease (CVD) is the leading cause of death.

Emotional imbalances are common in these situations, as well as increased stress levels, especially in the preoperative period. The patient who waits for a surgical procedure becomes more vulnerable, more prone to feelings that may negatively affect their health and conduct that will be performed, including anxiety.

Nursing staff can be ally in the care of this patient, adding efforts to minimize preoperative anxiety through therapeutic listening in which the patient is heard and their anguishes, doubts and fears are partially or totally eliminated. This is achieved by providing a quality service to the unique needs of all who will undergo surgical procedures. Another tool to be used may be an educational intervention, which will decrease the anxiety level of the patients in the preoperative period of cardiac surgery.

Given this context, we sought to understand what the contributions of educational practices to the anxiety control of patients in preoperative cardiac surgery are. Therefore, this study aims to describe, based on the literature, the contributions of educational practices to the control of anxiety in patients undergoing preoperative cardiac surgery.

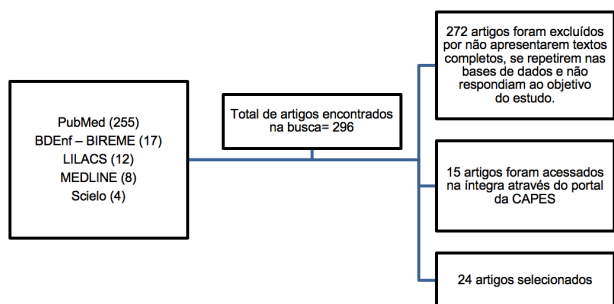
## METHODOLOGY

An Integrative Literature Review (IR) was performed, following the following steps: the identification of the theme and the elaboration of the guiding question; establishment of criteria for inclusion and exclusion of studies; definition of the information to be extracted from the selected studies; evaluation of studies included in the integrative review; interpretation of results and presentation of the review / synthesis of knowledge.<sup>2</sup>

The search was performed from November to December 2017 in the PUBMED, BDENF - BIREME, SCIELO AND MEDLINE Databases, using as keywords *anxiety*, *thoracic surgery* and *nursing* in search for articles published in Portuguese, English and Spanish between 2000 and 2017.

Boolean operators 'and' and 'or' were used. The selection process was performed as shown in Figure 1.

**Figure 1** - Integrative Review selection process. Fortaleza, Ceará, 2017



Source: prepared by the authors.

In the search, 296 articles were found. Of these, 272 articles were excluded because they did not have full texts, were repeated in the databases and/or did not respond to the objective of the study. 15 articles were accessed in full through the Capes portal. Finally, 24 articles were selected. Those included in the sample are presented and discussed below.

## RESULTS

Next, the results obtained will be presented in tables.

**Chart 1** - Breakdown of selected studies with journal title, year of publication, methodology used and level of evidence, Fortaleza, Ceará, 2017

Nº	Periódico	Ano	Método	Nível de evidência
01	Revista de Enfermagem UFSM	2013	Cohort study. <sup>3</sup>	III
02	Master's thesis	2010	Descriptive and exploratory research, with critical-reflexive perspective, with qualitative approach, such as field research. <sup>4</sup>	IV
03	Master's thesis	2001	Comparative-descriptive-exploratory study. <sup>5</sup>	IV
04	Revista Brasileira de Enfermagem	2014	Randomized clinical trial. <sup>6</sup>	II
05	Escola Anna Nery	2016	Correlational and cross-sectional study. <sup>7</sup>	III
06	Revista Brasileira de Enfermagem	2016	Cross-sectional, descriptive study with approach quantitative. <sup>8</sup>	IV
07	Revista Latino-americana de Enfermagem	2006	Case Study. <sup>9</sup>	V
08	Heart Lung	2000	Randomized controlled trial. <sup>10</sup>	I
09	J Clin Nurs	2014	Randomized controlled trial. <sup>11</sup>	IV

Nº	Periódico	Ano	Método	Nível de evidência
10	Heart Lung	2011	Qualitative experimental study. <sup>12</sup>	IV
11	J Adv Nurs	2002	Descriptive study. <sup>13</sup>	IV
12	Int J Nurs Stud.	2002	Descriptive study. <sup>14</sup>	IV
13	Heart Lung.	2001	Descriptive study. <sup>15</sup>	IV
14	Int J Nurs Stud	2002	Descriptive study. <sup>16</sup>	IV
15	J Cardiovasc Nurs.	2012	Descriptive study. <sup>17</sup>	II
16	Heart.	2001	Prospective, randomized study. <sup>18</sup>	II
17	Heart Lung.	2003	Randomized controlled trial. <sup>19</sup>	IV
18	Br J Nurs.	2000	Prospective cross-sectional study. <sup>20</sup>	II
19	J Clin Nurs.	2015	Randomized controlled trial. <sup>21</sup>	I
20	BMC Nurs	2006	Review of essays. <sup>22</sup>	II
21	Heart Lung.	2005	Prospective randomized controlled trial. <sup>23</sup>	IV
22	J Clin Nurs.	2016	Descriptive investigation of repeated measures. <sup>24</sup>	I
23	Am J Crit Care.	2007	Randomized Controlled Study. <sup>25</sup>	IV
24	Patient Educ Couns.	2014	Descriptive study. <sup>26</sup>	II

The articles found had, as authors, nurses. Many even worked with a multidisciplinary team, which makes the research broader and more complete in terms of the integrality of the care provided. Thus, it appears that nurses are interested in developing such activities, although gaps still exist, and their interest in the scenario presented so far.

The selected studies are classified into levels of evidence from 1 to 5. The table above discriminates the studies in terms of this level.

In discussing the levels of evidence, it is interesting to note that level 1 is that of evidence resulting from the meta-analysis of multiple randomized controlled clinical trials; level 2 is evidence obtained in individual studies with experimental design; level 3 is evidence from quasi-experimental studies; level 4 is evidence of descriptive (non-experimental) or qualitative studies; level 5 is evidence from case or experience reports and level 6 is evidence based on expert opinion.

The analysis of the data present in the articles found in this study, referring to the research theme sought, showed results compatible with what most of the literature already shows. However, some differences and gaps in the theme of discourse should be investigated and resolved, especially in Brazil. Table 2 presents the main results and conclusions analyzed in the studies.

**Table 2** - Selected studies: the main results and conclusions, Fortaleza, Ceará, 2017

Nº	Results and conclusions
01	- After patients' participation in the group, there was a decrease in anxiety level. Women are more anxious than men. - Anxiety level of patients undergoing cardiac surgery decreased significantly after group preoperative guidance. <sup>3</sup>
02	- Nurse care is considered as an important and relevant activity, but patients report care focused on biological aspects. <sup>4</sup>
03	- According to the survey, 99.3% (group B) and 66.67% (group A) of the patients were anxious because they did not know what would happen to them. - Preoperative guidance received was significant for postoperative recovery from group A. <sup>5</sup>
04	- Patients welcomed by family members improved anxious symptoms. <sup>6</sup>
05	- Women had more symptoms of anxiety and depression in the preoperative period of cardiac surgery, with higher averages and statistically significant differences. <sup>7</sup>
06	- The patients evaluated presented 63 (59.4%) in the minimum anxiety and 21 (19.8%) (21) in the severe range. - Women had higher scores than men; as well as patients who had already undergone previous cardiac surgery. <sup>8</sup>
07	- Among the 20 patients studied, when they received news of the need for cardiac surgery, they had feelings of apprehension, such as anxiety. - Over time in the preoperative period, there is an inversion of these feelings, with a predominance of positive feelings and hope. <sup>9</sup>
08	- After the first intervention, the experimental group showed a significant decrease in anxiety during hospitalization. - The didactic support is a valuable tool for the recovery of cardiac surgery that needs to be maintained and explored by nursing. <sup>10</sup>
09	- Patients with short waiting periods before myocardial revascularization graft experience specific and non-specific fears the day before surgery. - In contrast to patients with long waiting times, uncertainty and frustration about waiting times and feelings of disability are not concerns. <sup>11</sup>
10	- Anxiety scores were the highest pre-procedure. His preprocedural predictor was taking medication for anxiety and depression. <sup>12</sup>
11	- It is important that the hospital staff take good care of patients during the waiting period for surgery. This applies more to women because they have higher rates of anxiety. - One way to reduce uncertainty and anxiety is to inform. <sup>13</sup>
12	- Higher levels of fear and anxiety were measured in the waiting period for myocardial revascularization. <sup>14</sup>
13	- Half of patients experienced low fear and anxiety. Of the patients with medium or high anxiety, majority were under 55 years of age and had depression. <sup>15</sup>
14	- Most patients received social support from nurses and a large amount of multidisciplinary consulting. -When social support was high, patients experienced lower levels of fear and anxiety. <sup>16</sup>
15	- After surgery, the rate of complications such as urinary retention and constipation in the study group was lower than in the control group. - Nurse-initiated education and pre-op counseling have been associated with a reduced complication rate and reduced anxiety level after CABG. <sup>17</sup>
16	- Other improvements include anxiety and depression levels. - The nurse led the shared care intervention that proved effective in improving relevant variables. <sup>18</sup>
17	- The participants cited 5 sources of anxiety: chest pain, uncertainty, fear of the operation, physical disability and dissatisfaction with the care offered to them. <sup>19</sup>

Nº	Results and conclusions
18	- Fears and anxieties were reduced through the preoperative period with important information shared. - All patients felt they benefited from the pre-admission program and 76% felt anxiety relief. <sup>20</sup>
19	- Some trials have shown the effects of preoperative education on improving psychosocial recovery in cardiac patients, while others have found no evidence that patient anxiety is reduced or of any other effect. Additional research is required. <sup>21</sup>
20	- There is strengthening of the effects of a concise and specific information program that meets patients' needs for information. <sup>22</sup>
21	- At T1, 16% of men and 24% of women had anxiety results. - Specialized nurses have greater potential in identifying people at risk of developing anxiety and depression. <sup>23</sup>
22	- Anxiety reduction was observed in the intervention group compared to the control group before myocardial revascularization and five days after. - These results advocate training for nurses and doctors to provide emotional support to patients before the procedure. <sup>24</sup>
23	- Anxiety levels did not change from before to after surgery, remaining low to moderate. - Being female and having more worries about waiting for surgery, being in pain / discomfort and lifestyle recovery were predictors of increased anxiety before surgery - Interventions should be multifactorial, including pain management support and realistic information. <sup>25</sup>
24	- The first step is to make nurses aware of the potential of their care to alleviate anxiety and depression symptoms among cardiac surgical patients. - In health care systems, interventions designed to inform patients about their treatment are likely to have the greatest impact on their psychological health. <sup>26</sup>

After reading the selected articles in full, an analysis of their data was performed, and discussed with the relevant literature.

## DISCUSSION

According to the articles analyzed, as to the reason for the submission of patients to cardiac surgery, the most prevalent cause was myocardial revascularization, followed by valve surgery.

Other studies corroborate this finding, indicating coronary artery bypass grafting (RVM) as one of the most commonly performed surgical procedures. This surgery is not curative and should be accompanied by other therapeutic measures such as medication and lifestyle changes to control the progression of coronary disease.<sup>27</sup>

Regarding the diagnosis of anxiety, the articles found showed a relevant difference in its prevalence in relation to the patient's gender. According to studies reviewed, women had more symptoms of anxiety and depression in the preoperative period of cardiac surgery when compared to men, and the differences were statistically significant. The authors state that in cardiac surgeries these data must be considered by nurses when preparing education plans for surgical patients.<sup>7</sup>

In this sense, patients who are afraid are mainly women, without professional education, are on sick leave, depressed, prone to anxiety and have a brief waiting time for the surgery.<sup>15</sup>

Similarly, other studies show that 16% of men demonstrate anxiety, while in women this figure goes up to 24%. In addition, it appears that being female and having more concerns about waiting for surgery, being in pain / discomfort and resuming lifestyle were predictors of increased anxiety before surgery.<sup>19,23</sup>

Regarding the level of anxiety, there are 63 (59.4%) in the minimum anxiety and 21 (19.8%) in the range considered severe. Women had significantly higher scores than men; as well as patients who had already undergone previous cardiac surgery. There was no significant difference between elderly and younger adult patients, neither regarding weight variations, presence of diabetes or alcoholism.<sup>8,25</sup>

Thus, what contributes most to the development of anxiety is gender and health status; whether the patient has already undergone any other surgical procedure and their experiences in relation to it.

Regarding preoperative orientation before cardiac surgery, the research was effective in most of the identified studies. However, in one study, preoperative orientation was not significant for one of the groups postoperatively.

The uncertainties regarding vital organ surgery, seen as essential for life, are numerous. Several tools can be used by the multidisciplinary team so that patients do not suffer and worsen their health situation. The articles found showed good results related to anxiety management after preoperative interventions.

From this perspective, it is important that hospital staff take good care of patients during the waiting period, especially when it comes to patient uncertainty about the disease, research and treatment. Any uncertainty and anxiety have a negative effect on their heart and body. One way to reduce anxiety is to inform patients about their illness and treatment, ensuring that hospital staff are involved and empathetic.<sup>13</sup>

This can be corroborated by research such as an experimental group that showed a significant decrease in anxiety during hospitalization. At all measurement times after the first intervention, the experimental group reported significantly lower anxiety levels compared to the control group.<sup>3,10</sup>

In this context, the importance of nurses recognizing preoperative anxiety and intervening through health education strategies and nursing visits is reinforced. Nurses' social support can effectively reduce preoperative fear and anxiety.<sup>8,15</sup>

In a prospective randomized study, in which two groups were formed and only one of them, in addition to preoperative guidance, received a structured course of education and counseling supervised by nurses, the results regarding anxiety reduction were distinct. Nurse-initiated preoperative education and counseling were associated with a reduced rate of perioperative complications and a reduced level of anxiety after CABG in the study group.<sup>17</sup>

Similarly, in a two-group study, where one of them participated in a shared-care program consisting of health education and motivational interviews, according to individual needs, anxiety and depression levels improved. A shared care intervention proved to be effective for improving some relevant variables.

Informing the patient about the upcoming surgery, the care to be taken for a good recovery, clarifying doubts and a more careful listening can contribute positively to this process.

Fears and anxieties were reduced preoperatively by sharing important information prior to admission for surgery. All 20 (100%) patients interviewed felt they benefited from the pre-admission program and 15 (76%) felt that their anxieties had been alleviated.<sup>20</sup>

Another point to be mentioned is family participation in this process. Including family in the preoperative period of cardiac surgery may be an option that, if well used, yields good results for the patient in terms of reducing symptoms that may adversely affect health.

Patients welcomed by family members reduce symptoms of anxiety. Research indicates that the best sources of social support are related to family members, reflecting on the importance of family members being present during the preoperative period of cardiac surgery, being active in treatment and contributing to the recovery of the patient.<sup>6</sup>

One of the obstacles to more effective preoperative care is the fact that many nurses still attribute importance only to bureaucratic and technical procedures rather than empathy and do not see the patient in a context, establishing bond and trust.

Thus, nursing care is considered an important and relevant activity, but patients report nursing care centered on biological aspects, performing functions such as: venipuncture, verification of vital signs, referral for exams, among others.<sup>4</sup>

After analyzing the studies, it is clear that there are many gaps related to the diagnosis of preoperative anxiety that must be filled. Increasingly, a better understanding should be sought by the health team as to the positive outcomes that can be generated through organized teamwork.

A multidisciplinary preoperative coordinated nurse with educational approach can provide basis for effective and efficient treatment. Training staff in developing and delivering such interventions is a priority.<sup>26</sup>

Short-term psychosocial intervention in patients undergoing myocardial revascularization had a beneficial effect in reducing preoperative and postoperative anxiety. These results advocate training for nurses and physicians on how to provide emotional support to patients before coronary artery bypass grafting.<sup>24</sup>

In this sense, clearly the interventions should be multifactorial, including information and support for pain management and realistic information about surgical hours and post-surgery lifestyle resumption.<sup>25</sup>

Thus, there should be an interaction among health professionals of different specializations, forming multidisciplinary teams, so that work on reducing anxiety in patients undergoing preoperative cardiac surgery occurs. Strategies should include the family of the patient. Nursing, a profession in which care appears as one of the pillars, should be encouraged to consider the importance not only of technical and objective factors, but also of subjective factors.

## FINAL CONSIDERATIONS

Studies have shown that nurses are aware of the negative impact that the anxiety diagnosis has on patients undergoing cardiac surgery. In addition, they know that a multiprofessional team can conduct educational activities with the patients they are taking care of, which do not require major investments and will reduce the level of anxiety.

Women were more anxious than men. Thus, they need a different preoperative care plan so that this anxiety level at least becomes the same as that of the other gender. Patient's health situation was another factor that interfered with the anxiety diagnosis and should be another point of attention when preparing care plans.

There are few studies on the subject in the world and even less in Brazil. Thus, the idea that the contact of the professionals responsible for the care of the patient who will undergo cardiac surgery, together with the proximity of this team with their family, positively influences the course of treatment and recovery and, consequently, the institution, should be disseminated.

Patients with reduced anxiety levels may significantly decrease complications that may occur during surgery and afterwards. Thus, they will be discharged faster, reducing the costs for the institution related to prolonged hospitalization due to postoperative complications.

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