

Spiritual well-being, anxiety and depression in the preoperative period of cardiac surgery

Bem-estar espiritual, ansiedade e depressão no pré-operatório de cirurgia cardíaca

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 Eduardo Tavares Gomes¹

 Simone Maria Muniz da Silva Bezerra¹

¹Universidade de Pernambuco.
Recife, PE, Brazil.

Corresponding author:

Eduardo Tavares Gomes
Av. Dr. Enéas Carvalho de Aguiar, 419
Cerqueira César, CEP: 05403-000,
São Paulo, SP, Brazil.
E-mail: edutgs@hotmail.com

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ABSTRACT

Objetivo: correlacionar a religiosidade e o bem-estar espiritual com a ansiedade e a depressão em pacientes no período pré-operatório de cirurgia cardíaca. **Métodos:** estudo transversal realizado com 174 pacientes internados em um hospital universitário, utilizando a Escala Hospitalar de Ansiedade e Depressão, a Escala de Bem-Estar Espiritual e o Índice de Religiosidade de DUKE. **Resultados:** o bem-estar religioso e as dimensões da religiosidade não apresentaram diferenças significativas entre ansiosos e não ansiosos. O bem-estar existencial apresentou escores mais baixos do que o religioso, sendo significativamente menor entre pacientes ansiosos. Entre pacientes com sintomas depressivos, o escore de bem-estar existencial foi significativamente mais baixo. A religiosidade e o bem-estar religioso não foram diferentes entre pacientes depressivos e não depressivos. **Conclusão:** a religiosidade e a espiritualidade não isentaram os pacientes de apresentar ansiedade e depressão no período pré-operatório de cirurgia cardíaca, embora sejam citadas como mediadoras de estratégias de enfrentamento e adaptação psicológica. **Contribuições para a prática:** o presente trabalho fornece evidência de que a religiosidade não isenta o paciente de se apresentar ansioso à espera da cirurgia cardíaca.

Descritores: Período Pré-Operatório; Ansiedade; Depressão; Espiritualidade; Enfermagem Perioperatória.

RESUMO

Objective: to correlate religiosity and spiritual well-being with anxiety and depression in patients in the preoperative period of cardiac surgery. **Methods:** cross-sectional study conducted with 174 patients admitted to a university hospital using the Hospital Anxiety and Depression Scale, the Spiritual Well-Being Scale, and the DUKE Religiosity Index. **Results:** the religious well-being and religiosity dimensions did not present significant differences between anxious and non-anxious patients. Existential well-being showed lower scores than religious well-being, being significantly lower among anxious patients. Among patients with depressive symptoms, the existential well-being score was significantly lower. Religiosity and religious well-being were not different between depressed and non-depressed patients. **Conclusion:** religiosity and spirituality did not exempt patients from presenting anxiety and depression in the preoperative period of cardiac surgery, although they are cited as mediators of coping strategies and psychological adaptation. **Contributions to practice:** the present study provides evidence that religiosity does not exempt patients from being anxious while waiting for heart surgery.

Descriptors: Preoperative Period; Anxiety; Depression; Spirituality; Perioperative Nursing.

Introduction

The binomial spirituality-religiosity provides the individual, besides facing the disease, the possibility of spiritual growth and existential gains with the experience. The spiritual dimension of the individual must be considered as something necessary to the understanding of health, from the perspective of integrality. Such a perspective must contemplate the construction of health policies, in addition to guiding care practices at the bedside and the training of professionals with competencies for such an approach. By looking at this dimension, the understanding of health is also broadened as harmony of being, in essence, with its transcendence and integrality⁽¹⁾. This look at health that includes the integrality and subjectivity of the individual, in the psycho-emotional and spiritual dimensions, requires professional training, ambience, appropriate relationships, and availability to embrace the needs of the other in a holistic way⁽²⁾.

All these dimensions have repercussions in the way the individual faces illness, hospitalization or surgery. The possibility of failure and the repercussion of the event make surgeries, in general, major sources of stress⁽³⁾. In particular, cardiac surgery stands out as a stressor for several aspects, from the fact that it approaches an organ considered the most noble and related to life, to the unknown that surrounds it. This context causes emotional and spiritual anguish in individuals, often translated into anxiety and depression⁽³⁻⁶⁾.

The lack of knowledge about the surgical procedure should be amenable to intervention by nurses, and it can be addressed with active communication and health education strategies⁽⁶⁾. Previous studies were able to identify the importance of knowledge about surgery and outcomes such as perioperative anxiety and depression, giving significant focus in recent decades to the role of nurses as educators in the hospital environment and as promoters of health and well-being through educational interventions. However, evidence on how religiosity and spirituality can be used in the same direction has only recently and sparsely been raised^(2,5-8).

Investigating the relations of psychospiritual aspects provides subsidies to a holistic understanding of the individual. This research sought to broaden the understanding of the relationships of spiritual well-being and religiosity with anxiety and depression in the preoperative period of cardiac surgery. As a hypothesis to be tested, it is assumed that a greater religiosity and spiritual well-being would correlate with lower preoperative anxiety and depression, favoring the understanding of psychological adaptation strategies.

In light of the above, this study aimed to correlate religiosity and spiritual well-being with anxiety and depression in patients in the preoperative period of cardiac surgery.

Methods

Cross-sectional, analytical study conducted in the wards of a reference university hospital in cardiac surgery in Northeast Brazil, between May and October 2019. The hospital has 256 inpatient beds dedicated to cardiology, as well as a cardiology emergency and outpatient clinic.

The sample was calculated using the software R, version 4.1.2, considering an α error of 5% and a confidence level of 95%, with reference to another study that used the same scale in the same population⁽⁶⁾. A maximum error of 1.5 points in the mean was adopted. A sample of 130 patients was calculated, considering an estimate of 200 cardiac surgeries performed, on average, in a five-month collection period. However, it was decided to collect 30% more than the value calculated by formula, and in the end, a total of 174 patients were collected. A convenience sampling process was adopted, according to the surgical schedule.

The inclusion criteria were: being hospitalized in the preoperative period of coronary artery bypass grafting, valve replacement or repair, and being aware of the surgery. Exclusion criteria were: patients with any clinical or psychological condition that would make the interview difficult or impossible or uncom-

fortable; previous use of antidepressants, regardless of the period of use; previous medical diagnosis of mood disorders, anxiety disorders, or any other psychiatric disorder in any period of life. Among those approached, only eight patients were not included, due to the use of antidepressants or previous diagnosis of mood or anxiety disorders. There were no refusals.

The researchers used as research instruments a printed form, containing a questionnaire for socio-demographic characterization and recording of surgery and preoperative data, the Hospital Anxiety and Depression Scale (HADS)⁽⁴⁾, the Spiritual Well-Being Scale⁽⁵⁾ and the DUKE Religiosity Index⁽⁶⁾. The researchers had previous training and experience from other research with the scales used.

The HADS is composed of 14 questions, divided into two seven-item subscales to assess each outcome separately. A cut-off point of nine points was adopted for each subscale to define the presence of anxiety and depression. This scale has an estimated application time of up to 10 minutes, having been validated in this same population, with the advantage of not containing somatic symptoms assessment that could bring confusion bias with the symptoms of the underlying heart disease⁽³⁻⁴⁾.

The Spiritual Well-Being Scale (SWBS) is divided into a Religious Well-Being subscale (RWBS) and an Existential Well-Being subscale (EWBS). The scale is a six-option Likert type (from 1 to 6 points per item), with 20 items, and the higher the resulting score, the greater the dimension of well-being measured. The Portuguese version of the scale was also validated for the same population of inpatients awaiting cardiac surgery⁽⁵⁾.

The Duke Religiosity Index (DUREL) is a Likert-type scale of five items, which evaluates: Organizational Religiosity (OR, item 1, from 1 to 6 points, and the higher the score, the better the result), Non-Organizational Religiosity (NOR, item 2, from 1 to 6 points) and Intrinsic Religiosity (IR, items 3, 4, 5, from 3 to 15 points)⁽⁶⁾. For this scale, the higher the score, the better the assessment of religiosity in each dimension.

Data were compiled in Microsoft Excel 2013 software and analyzed in SPSS 20.0. The Kolmogorov-Smirnov normality test confirmed normal distribution ($p \geq 0.05$). For comparison between the mean scores of the scales between anxious and non-anxious, the t-test was used, with a significance level of 5%. Pearson's correlation coefficient was calculated to verify correlation between the scales and, finally, the internal consistency of the items of the scales was evaluated by Cronbach's alpha. Correlations were considered weak if < 0.3 , moderate between 0.3 and 0.7, and strong if > 0.7 .

The research was designed in accordance with Resolution No. 466/12, and was approved by the Research Ethics Committee of the Hospital Complex of the Federal University of Pernambuco (Opinion No. 1,915,220/2017).

Results

The sample totaled 174 patients evaluated. The gender distribution was balanced, with a slight majority of men (50.6%). Most patients (54.6%) were married or with a partner, catholic (55.2%), and from the interior of the state (49.1%). Of the interviewees, 55.7% were over 60 years old, with a mean age of 59.16 ± 13.86 years. Of the sample, two-thirds said they had no work activity (66.7%). The mean income was 1.31 ± 0.96 minimum wage in the period (R\$998.00), and 70.7% reported receiving up to one wage. Previous experiences of having undergone heart surgery were reported by 22.5%, and the experience of having a surgery cancelled for any reason was 34.5%.

On average, the patients were hospitalized for a time considered long (22.06 ± 11.08 days), being longer than 15 days for 70.7%. The average preoperative period was 20.95 ± 29.78 days, with 56.9% of the patients staying up to 15 days and 43.1% staying longer than 15 days. For the vast majority of patients, there was a companion (85.6%), and most reported at least one religious visit on the ward during hospitalization (65.5%), but a daily visit by family members was not

as frequently observed (25.3%). In only 6.9% of cases was there a request for a religious visit.

Pearson's correlation analysis was performed between the quantitative variables age, years of study, number of children, length of hospitalization, pre-operative time, number of cancellations and anxiety and depression. Anxiety had a weak inverse correlation with age ($r=-0.209$; $p=0.006$) and a weak positive correlation with the number of cancellations ($r=0.193$; $p=0.011$). Depression, on the other hand, also showed a weak positive correlation with length of stay ($r=0.159$; $p=0.036$), as well as having a weak correlation with the number of cancellations ($r=0.269$; $p\leq 0.001$). In the other analyses, there was no significant correlation.

For the same quantitative variables, there was no significant association with either organizational or non-organizational religiosity. There was also no significant association between these variables and spiritual well-being and its domains.

Table 1 presents relevant data from the relationship between the variables anxiety, religiosity, and spiritual well-being. The religious well-being and religiosity dimensions evaluated did not present significant differences between anxious and non-anxious patients. However, existential well-being showed lower scores than religious well-being, being significantly lower among anxious patients ($p<0.010$), which had repercussions on the lower total spiritual well-being also in this group ($p<0.010$).

Table 1 – Means and standard deviations of spiritual well-being and religiosity scores in anxious and non-anxious patients (n=174). Recife, PE, Brazil, 2019

Variables	Anxious	Non-anxious	p*	Depressed	Non-depressed	p*
Well-being						
Religious	55.83±9.67	55.10±7.42	0.570	55.87±6.12	55.18±8.46	0.670
Existential	38.19±8.53	48.45±6.92	<0.010	39.45±8.79	46.96±8.11	<0.010
Spiritual	94.02±15.19	103.56±12.73	<0.010	95.32±11.35	102.14±14.35	0.010
Religiosity						
Organizational	3.92±1.29	4.30±1.47	0.110	4.22±1.31	4.19±1.45	0.890
Non-organizational	4.83±1.37	4.65±1.22	0.390	4.74±1.18	4.69±1.27	0.840

*Test t

Among patients with depressive symptoms, the existential well-being score was significantly lower than among the non-depressed, which also had a lower result for total spiritual well-being. Religiosity and religious well-being were not significantly different between depressed and non-depressed patients (Table 1).

Finally, Table 2 shows that there was a moderate and inverse correlation between existential well-being and anxiety and depression, that is, the higher the latter, the lower the existential well-being scores, which also had a significant impact on spiritual well-being ($p<0.010$). Organizational and non-organizational religiosities did not correlate with anxiety and depression in a statistically significant way.

Table 2 – Correlation of spiritual well-being and religiosity with anxiety and depression in individuals in the preoperative period of cardiac surgery (n=174). Recife, PE, Brazil, 2019

Variables	Anxiety		Depression	
	r*	p	r*	p
Religiosity				
Organizational	-0.030	0.695	0.005	0.950
Non-organizational	0.078	0.309	0.012	0.872
Well-being				
Religious	0.033	0.668	-0.062	0.419
Existential	-0.543	<0.010	-0.467	<0.010
Spiritual	-0.316	<0.010	-0.324	<0.010

*r: Pearson's correlation coefficient

Regarding the use of the scales, it can be stated that the reliability of the application in the

sample was considered high, both for the outcome Anxiety (Cronbach's alpha = 0.815) and Depression (Cronbach's alpha = 0.845). Both dimensions of spiritual well-being (religious and existential) had good reliability ($\alpha=0.844$; $\alpha=0.703$), as did the spiritual well-being scale showed good reliability ($\alpha=0.789$). Intrinsic religiosity did not obtain sufficient reliability ($\alpha=0.482$) in the sample and was not included in the other analyses.

Discussion

Symptoms of preoperative anxiety and depression may persist for weeks after surgery, and may interfere with the recovery and adaptation of patients to the changes resulting from surgery in the evolution of postoperative pain, and may even be related to an increase in postoperative mortality⁽⁹⁻¹¹⁾.

Preoperative feelings of cardiac surgery involve fear and expectation of the future, religiosity and introspection⁽³⁾, and there are references that family support and spirituality are the main factors that individuals use to face the surgical procedure and control preoperative anxiety^(9,12-13). Surgery may also favor individuals to revisit their own lives and relationships, relating to the possibility of existential well-being from the resolution of other crises or from a new valuation for them⁽¹²⁾.

A pilot study found a strong correlation between anxiety and depression and perceived symptoms, but could not find a significant association between perceived symptoms and religiosity⁽¹³⁾. Probably, considering these studies and our findings, the impact of religiosity on coping with cardiac surgery is mediated by anxiety, i.e., religiosity impacts anxiety and thus improves the sense of well-being and coping with symptoms and the surgery itself.

In our study, existential well-being, related to the existential crises experienced in the period, presented less expressive results than religious well-being, being significantly lower among anxious and depressive patients, which entails a lower total spiri-

tual well-being in this group as well. It can be inferred that patients maintain high levels of religious well-being in their relationship with God and their religiosity, but that this religiosity does not translate with the same strength when facing the crises experienced⁽¹⁴⁾.

The moderate and inverse correlation found here between existential well-being and anxiety and depression also significantly affected spiritual well-being, corroborating the idea that existential crises express themselves in anxiety and depression. The absence of significant correlation with the religiosity domains evidences that anxiety and depression can occur even in those who report high scores of religiosity.

The experiences of patients waiting for a heart surgery, related to the changes and limitations resulting from the surgery, are potential generators of existential conflicts, and spirituality can be a source of possibilities amidst the unknown that the surgery represents, being a way for the uncertain prognosis not to be so gloomy⁽¹⁵⁾.

Two other studies pointed out that patients with high scores of religiosity present lower levels of preoperative anxiety, however, in both studies, the distinction between constructs religiosity and spirituality was not clear^(2,16). In our study, the scales used were translated and validated for the constructs proposed and to reduce confounding bias in their analysis.

Coping, or religious-spiritual coping, is of utmost importance. There are studies that show that the sustaining coping, which includes spirituality, is used by up to 50% of the patients, and that the patients try to maintain positive feelings and search for faith and hope. These patients use religious and spiritual resources for this, demonstrating how important religiosity and spirituality are for the patient and, therefore, should receive attention from nurses and professionals involved in care⁽¹²⁻¹³⁾. Studies point out that there are no differences between the beneficial influence that psychological intervention can bring in relation to spiritual intervention, favoring the evidence of the importance of addressing spirituality and religiosity for these patients⁽¹⁵⁻¹⁷⁾.

Study limitations

The present study had the limitation that the findings reflect the reality of only one service and do not directly consider cultural issues about religious belief systems or religiosity itself. A qualitative approach could deepen the study of this object, offering a valuable contribution. The results may be different in other services or in other cultures with different nursing visit routines and preoperative education.

Contributions to practice

Contributes to care practice the evidence and reflection on how spirituality and religiosity can positively correlate with less anxiety and depression in the preoperative period of cardiac surgery. Professionals who assist patients in similar conditions to those of the research have more evidence on the importance of developing skills to address the spirituality and religiosity of patients and the impact of interventions in this direction.

Conclusion

Religiosity and maintenance of spiritual well-being are more associated with a personality trait than with a situational condition, even if one considers cardiac surgery and length of hospitalization as major stressors. In this study, significant correlation was observed between existential well-being and anxiety and depression. These outcomes were not significantly correlated with religiosity.

In the study sample, religiosity and spirituality did not exempt the individual from presenting anxiety and depression in the face of the existential crises experienced; however, as mentioned in the literature, they serve to facilitate coping.

Authors' contribution

Conception and design or analysis and inter-

pretation of data; Writing of the article or relevant critical review of the intellectual content; Final approval of the version to be published; Agreement to be responsible that all aspects of the manuscript related to the accuracy or completeness of any part of the work are investigated and resolved appropriately: Gomes ET, Bezerra SMMS.

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