



Religion and belief in God in the preoperative period of cardiac surgery: an exploratory study

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ABSTRACT

Aim: To analyze the relationship between belief in God and religiosity in the preoperative period of cardiac surgery. **Method**: A qualitative exploratory study, in which we used semi-structured interviews and the Bardin analysis to extract the contents. 12 patients who presented themselves as believers in God of any religion and a high rated spiritual well-being by a previously validated scale were interviewed. The guiding question for the research was: *is there any relationship between your God and your illness?* **Result**: The patients spoke about the relationship between God, illness and cardiac surgery and coping with the disease and the surgical proceeding. The illness was not strongly related to divine punishment, but the knowledge of the progression of heart disease related to modifiable lifestyle habits proved to be linked to feelings of guilt. **Conclusion**: Belief in God had a positive effect in finding a new meaning for the surgical proceeding.

Descriptors: Spirituality; Preoperative Period; Thoracic Surgery; Nursing.

INTRODUCTION

Spirituality and religion are topics that have attracted more and more academic interest. The spiritual needs can be understood as the fulfillment of a spiritual growth that makes people more sociable, hopeful and at peace with their divinity or transcendence. And in another way, the religious concepts are directly related to the individual's relationship with a religion, a divine being or God which can be experienced individually or collectively⁽¹⁾.

Cardiac surgery has implications for anxiety and depression that have been studied in recent years, but recent research has demonstrated significant relationships with spirituality and religiosity of patients⁽¹⁻²⁾. Nevertheless, targeted interventions to patients in this area are scarce, often linked to hospital chaplaincy or religious and rarely institutionalized groups.

In the list of subjects related with anxiety and depression in the preoperative surgery period, a study conducted with 150 patients in the preoperative period of general surgery found that those who had high levels of religiosity had lower levels of anxiety(3). When assessing the coping strategies used by patients in the preoperative period of cardiac surgery, another national study reported that supportive coping mode, which includes spirituality, was used in 50% of cases(4). Qualitative analysis has also shown the presence of positive feelings and the search for faith and hope in religion before the event of cardiac surgery⁽⁵⁻⁶⁾. Another study noted, through interviews, the high value of using spiritual resources in coping with heart surgery(6).

A cohort of 335 patients undergoing cardiac surgery, excluding emergency surgery and cardiac transplantation patients, was held for 30 months and concluded more than the implication of religiosity in decreased anxiety

and preoperative depression. Making use of validated scales for evaluation of spirituality, religion, religious practices and beliefs, religious / spiritual coping, optimism and hope, the cohort presented results over time and showed that the best indices in these aspects had repercussions in better existential growth and psycho-spiritual development of individuals who underwent a surgical experience⁽⁷⁾.

Another publication by the same authors, also in a cohort to evaluate anxiety and depression in the long term (30 months) in relation to spiritual-existential aspects preoperative surgery time, revealed prayer, optimism and hope as predictors of lower rates of depression, and the intrinsic religiosity and hope as predictors of less anxiety⁽¹⁾. Also in this same cohort, the authors reported prayer as a protective factor against fatigue during the whole period, while the preoperative anxiety was assessed as an increasing factor in the assessment of physical and mental fatigue⁽⁸⁾.

The belief in God is the basis of religiosity and has implications both in positive and negative ways for the patient fighting disease. Using the guidelines as reference these studies have been pointing at the understanding of this phenomenon, a deeper analysis is necessary and possible, by diving into question and seeking to understand how belief in God resonates in coping with heart disease, particularly in surgical proceeding.

Through this research we aimed to analyze the relationship between belief in God and the spiritual well-being in the preoperative period of cardiac surgery.

METHOD

This is an exploratory study with a qualitative approach, performed in surgical wards of the

Cardiology Emergency Room at the University of Pernambuco.

We used a semi-structured interview that contained as the initial script a questionnaire to characterize the subjects (gender, age, income, labor activity, education, marital status, number of children and religion) and surgery data (type of surgery, hospitalization time, preoperative time etc.). This data is presented with descriptive statistics of resources (mean \pm standard deviation, absolute and relative frequencies).

For selecting the participating subjects, patients were invited to participate and, after signing the Informed Consent Form, were assessed through the Spiritual Well-Being Scale (SWBS). The SWBS is an instrument divided into two subscales (10 items each): a religious well-being (RWB) and another of existential well-being (EWB). Items for the RWB contain a reference to God, expressing how the patient feels with the demands of their religion at the time; and of the EWB refers to the feeling of meeting with the meaning and commitment to something meaningful in life, depicting existential crises and subjective conflicts. The scale has 20 questions that should be answered through a Likert scale of six options. The total range is the sum of the scores of these 20 questions and the scores can range from 20 to 120⁽⁹⁾.

We selected 12 patients who reported believing in God's existence, practitioners of a religion and who obtained scores higher than 100 on the SWBS, indicating a high amount of spiritual well-being in the preoperative period. The types of surgery included were myocardial revascularization and heart valve repair or replacement. The patients were all aware of the surgery and its imminent date (up to five days). Patients with congenital heart disease or impaired verbal communication due the clinical picture were excluded from the study.

After the initial approach we proceeded with the interview, with the following guiding question: is there a relation between your God and your illness? Interviews were recorded, transcribed and subjected to Bardin's content analysis. By this analysis, we can infer beyond the transcribed message itself, by means of indicators, quantitative or not, on the condition that the content has been produced.

Interviews were conducted in the wards, at the bedside, in October 2014 and lasted 21 minutes on average. After the clarification of the purpose for the contact, the patient was given the opportunity to choose between the presence and absence of companions during the interview. To those who agreed with companion presence, we clarified that companions could not participate in the answers, give an opinion or express any reaction. The transcribed speeches are presented identifying the patients by the letter P followed by the numbers 1-12, in order to prevent the identification of those involved. The study was approved by the Ethics Committee of the institution (CAAE: 30622414.7.0000.5192).

RESULTS

Subject Characterization

The sample was taken for convenience by size, observing the inclusion criteria. There was no predominance between genders, the average age was 58.58 ± 11.8 years, most were retirees (83.33%), with low education level (5.5 ± 5.14 years of study) and an average income of 1.83 ± 1.32 minimum wages (considered R\$724.0 as the minimum wage). There was a predominance of married patients (53.8%) with an average of 3.2 ± 2.6 had children. (Table 1)

Table 1: Socio-demographic and surgery data of interviewed patients. Recife, 2014

Age (avg±sd)	58,58±11,8		
Gender (n/%)			
Male	6 / 50,0		
Female	6 / 50,0		
Place of origin (n/%)			
Countryside	8 / 66,7		
Capital	1 / 8,33		
Metropolitan area	3 / 25,0		
Work activity (n/%)			
Unemployed	1 / 8,33		
Retired	10 / 83,3		
Freelancer	1 / 8,33		
Education time (avg±sd)	5,50±5,14		
Income (avg±sd)	1,83±1,32		
Marital Status (n/%)			
Married	7 / 53,8		
Divorced	2 / 16,67		
Single	2 / 16,67		
Widower	1 / 8,33		
Religion (n/%)			
Catholic	5 / 41,7		
Protestant	7 / 58,3		
Surgery type (n/%)			
Bypass	8 / 66,67		
Heart valve repair ou repla-	4 / 33,33		
cement			
Hospitalization time	22,58±14,39		
(avg±sd)			
Preoperative period	18,42±11,86		
(avg±sd)			
Previous heart attack (n/%)	1 / 8,3		

avg±sd: average ± standard deviation
Source: author's research.

As for the surgery, 33.33% had a diagnostic for replacement or repair of heart valves and 66.67% for myocardial revascularization. Only one patient (8.33%) had undergone previous cardiac surgery. The average time of hospitalization until the interview was 22.58 ± 14.39 days, with an interval of 18.42 ± 11.86 days between the moment they were informed about surgical decision and the interview. (Table 1)

In the analysis of spiritual well-being, all the patients in the sample had a maximum value for the religious well-being, relating to the issues of relationship with God. There was variation in the

existential well-being, which had a high average score (48.25 \pm 7.48). In total, the high average score (108.25 \pm 7.48) of the sample is consistent with the inclusion criteria. (Table 2)

Table 2: Evaluation of spiritual wellbeing of patients preoperative period before cardiac surgery. Recife, 2014.

Variable	AVG±SD	Min	Max
Religion Well Being (RWB)	60,0±0,0	60	60
Existence Well Being (EWB)	48,25±7,48	35	58
Total Spiritual Well Being (SWB)	108,25±7,48	101	118

Source: author's research.

Relation between God, disease and cardiac surgery

This category united common views about the relationship between God and the stressful time the patients were undergoing.

The disease is presented in the statements either as punishment, demonstrating a great feeling of guilt, or as a challenge. Considering that heart disease is related to known risk factors that may be modifiable, being in the condition of needing surgery by advancing disease was sometimes associated as a punishment for past history and neglect of their own health.

I must be paying for some sin. (P2)

I did it to myself. (P11)

Life is like a plantation: you reap what you sow. (P11)

God, in general, was not associated with blame for the disease, but somehow *allowed* the respondents to get severely sick and undergo serious surgery. He does not want anything bad, but He allows it to happen. (P5)

God allowed it. I'm just sick because God allowed it. (P10)

In this regard, some patients reported they did not quite know why they got heart disease but said that God knew the reason while others could give a meaning to the moment they were in.

We don't do everything He commands, that's why we deserve it. (P1)

We get sick to be at the feet of the Lord. (P2)

Others found sense for surgery on probation by associating their current situation to issues in their own lives or theological aspects such as the original sin.

We've been getting sick because of our sins, since Adam and Eve. (P3)

If Jesus suffered, imagine us! (P3)

I am not sure what I did to deserve it, but God made me get sick for me to learn to trust Him more. (P4)

It was to value what is good in life. We forget to thank a lot, and ask too much. (P11)

The last lines also depict that for Christian patients, the disease is not just God's way of punishing an offense or is just associated with the original sin, the sick, but even drastically, is a way that God also uses to make the individual re-

connect to Him or His law and commandments.

God and coping with disease and the surgical process

Undergoing heart surgery has proved to be an anguished and a stress-generating event, both from the point of view of the surgical risk and the limiting possibilities after the procedure, to the issues related to the preoperative period itself.

Many times I feel the desire to go and give up. (P11)

I feel like it's a nightmare, like I was sleeping and would wake up without the disease. (P11)

Regarding the preoperative period, the extended period in hospital from the hospitalization moment to the surgery decision time, and from this to the surgical event itself deepens the feeling of existential angst - related to issues of daily life, rupture in routine, unplanned changes - and the possibility of anxiety and depression.

The process here is too slow. This waiting is terrible. (P9)

My problems fall into the hands of the people, for other people to solve. (P9)

This waiting time intensifies an issue that usually presents itself in advanced heart disease before hospitalization: the impossibility of participation in church worship and normal religious activities. The following lines have emerged from that point:

I'm only worried about going to church. I'm stuck... (P10)

Before coming to this emergency I was already missing church because I could not go up the street there! I also couldn't stand until the end of the service, I got too tired and I couldn't sing the hymns. (P8)

A singular trust in God and in His theological attributes common to any religion, such as justice, wisdom and goodness, can be perceived as an important religious and spiritual coping complex.

Man studies so much and can't even make a bunch of banana so perfectly! If God put me in this, He knows how to get me out too. (P8)

If the Holy Book says and I believe, I do not worry. (P10)

My strength comes from God, I trust in Him, He wants the best for all of us! (P3)

Even for patients who cannot make sense of the illness or recognize the direct intervention of God in favor of a better prognosis with the possibility of recovery or healing, the next speech reflects that trust in God extends to beyond this life, based on the common spiritual belief by Christian religions about afterlife. Regardless of the outcome of the disease to the patient, divine intervention can take place in the salvation of his soul. This feeling was one of the main focuses of the coping strategy developed by this patient.

From this disease I just hope for one thing: my redemption! He takes me or I stay here a little longer, it doesn't matter, I just want my salvation. (P6)

Patients in general, shortly referred to the

possibility of direct intervention by God in their healing through miracles, possibly due to the advancing disease and the proximity to the surgery. The following patient does not rule out the possibility of a miracle cure however, he demonstrates acceptance of the surgical proceeding trusting that the medical team will be the instrument of God to serve for his healing.

It is God who heals the diseases. He uses the doctors, but also makes miracles. (P12)

Some of the patients reported personal evidence of divine manifestation which served as positive reinforcement to coping and a significant increase in confidence in the procedure. This first patient was interviewed days after receiving a temporary pacemaker. During the procedure, before sedation, the patient reports that:

I saw an angel in white come into the room. Everybody was wearing green and only he was in white. Jesus sent an angel to hold the hands of the doctors. (P7)

Some others perceive the intervention of God more intimately through prayer.

God told me that I had to undergo this to give my testimony of Him. (P2)

God speaks to me when I pray and I know it will be all right. (P10)

Finally, we transcribe the report of a manifestation of God through a dream. The following patient described the dream experience with vivid memory and details. Without help from others, he extracted meanings from the dream

that gave him the condition of acceptance of the disease and the strength for the surgical proceeding.

> Oh, doctor, I know I'll be fine, everything will be OK! [...] God spoke to me. I had a dream that was just God wanting to talk to me. [...] I dreamed I was in a very crowded fair, with many poor and sick people, an ugly and dirty place. Then an angel came down from heaven with a giant staircase, golden, full of lights and said it would lead us to heaven. Everybody rushed to the stairs to get out of that ugly and dirty place. But at the foot of the stairs, it was written: 'Only go if you have faith'. So everyone ran up the stairs, there were people who didn't even read it. When we passed the clouds, a lot of people began to fall. And the angel told me that who was falling were the ones who had little faith. Some people started to go back because they said they had faith, but they knew that, they really did not have enough. I kept going up. I got so high that I couldn't see anything underneath the clouds. Then I saw, on the top of the stairs, a small church with a cross. And the angel said: 'José, Jesus is inside this little church waiting for you, but only enter if you have faith!' And I was happy because I was going to see Jesus, I have faith and I had already gone up all that way! Then the angel said, 'José, go back again, some day you're going to see Jesus if you keep your faith, but go back because your time is still far from now.' After this dream, the pain appeared, really intensely and I got sick and I ended up in here. So, I know this time I won't

die! [...] I am calm, doctor, this is not my time yet! (P3)

The experience of the dream took place prior to admission for emergency surgery, without the patient having previously presented angina or other cardiac symptoms. The certainty of success of the surgical procedure became clear after the announcement by the character of the dream and the clear memory that it was not his time to "go into the little church of heaven and meet Jesus".

DISCUSSION

The sample was selected in order to deepen the question of the relevance of God to patients in the preoperative period of cardiac surgery. Considering the selection from a high score of spiritual and religious well-being as an inclusion criterion, the study showed no issues of negative coping, such as questioning the will of God etc.

Spirituality can be expressed in various forms in the health-disease process, including the search for meaning and purpose to life, connections with family, friends, nature and with God⁽¹⁰⁾. The illness situation triggers, most often, deep reflections on the relationships of the individuals themselves, with their peers, their social groups and their beliefs about the sacred.

The preoperative period is a moment of the diseases with profound crises, perceived as an emotional period of vulnerability because of the exposure of the person to the issues that emerge shrouded in uncertainty (recovery, sequels, finitude etc.)⁽¹¹⁾. A study about the preoperative period revealed that patients had, on receiving the news regarding the surgery, many feelings of apprehension, such as fear, worry, anxiety, stubbornness and nervousness that, over time, change in a positive way to hope at the possi-

bility of healing and rehabilitation, to a sense of tranquility (through the renewal of faith in God, seeing other patients who had already been operated on and realizing that the risk of death is greater without surgery) and relief for recognizing the need to keep on living⁽⁵⁾. This study, while following the positive changes throughout the hospitalization reinforces the assumed need to take advantage of the time between the surgery decision and the preparation of patients for educational interventions and others in the context of spirituality and religiosity.

Belief in God's control over life events ranging from the simple and routine to decision-making moments as well as other constructs about the theological attributes of God, has been evidenced in positive association with better health indices when evaluated in subjective areas⁽¹²⁾. In a sample of patients with HIV/AIDS, significant association was proven statistically between a positive view of God and psychological factors such as depression, and also quantitative ones such as the CD4 lymphocytes rate⁽¹³⁾.

In a sample of 150 cancer patients, it was shown that the increase or stimulation of religious beliefs and practices and trust in God favored better acceptance of illness and confrontation to psychological problems. Of the religious coping strategies used, the dimension that was most effective in reducing depression levels was the relationship with God⁽¹⁴⁾.

Although the divine contact is a dimension measured by other scales, given the importance of this aspect in religious / spiritual coping, a specific scale was recently developed and validated, the *Perceived Support From God Scale*, still not translated and validated for Portuguese or among non-Christian populations⁽¹³⁾. The relationship with God at the time of pain and illness can also be measured in terms of relationship with the divine love. A Likert type scale, the *Sorokin Multidimensional Inventory of*

Love, is used to evaluate the perception of the individual with love to God and about the love dispensed to Him⁽¹⁶⁻¹⁷⁾.

In previous research with ten survivors of severe heart disease and nine survivors of cancer, the lines were much like in the ones extracted in this study, especially with regard to views about God and the illness, the approach to God after illness and the strength they had gained after connecting to a higher power⁽¹⁰⁾.

In a prospective study of 142 patients to assess implications of religiosity and recovery from heart surgery, it became clear that the strong religious belief was related to fewer complications, including depression, and shorter hospitalization time; in that study religious belief showed more relevance than social support⁽¹¹⁾. Also with regard to the cited study, positive religious belief was presented as a more important and significant support and as a better predictor of results than optimism, from which we observe how spirituality and religiosity aspects are important for coping with the disease conditions and how much they should be studied⁽¹¹⁾.

It's important to note that these terms still require better definition and differential validation, as they are often seen as alike on academic grounds. Whereas religiosity is related to religion as spirituality is to the transcendent. Renowned authors in the area suggest that we prefer to use the latter to address the patients, due to the difference of religions and belief systems found in the population⁽¹⁾.

Two weeks after coronary artery bypass surgery, 177 patients were interviewed in order to prove that prayer was associated with fewer complications, while the sense of reverence in the secular context was associated with fewer complications and shorter hospitalization time⁽¹⁸⁾. The sense of reverence towards God is part of the belief system of most of religious people.

As for trust in God manifested in trust in his will, a qualitative study with kidney transplant patients revealed in one of the thematic categories that patients recognize the challenge as God's will.⁽¹⁷⁾ Another study, comparing depressed patients in clinical treatment, found that patients who believe in God have lower rates of hopelessness, dysfunctional attitudes and depressive symptoms⁽¹⁹⁾.

The possibility of the intervention of God through the miracle, i.e., through an event beyond scientifically recognized means and which has bases in evidences in the healthcare environment, keeps, for the patients, the possibility of bargaining with God about their own health (20).

The mystical experience through visions, hearing and dreams, as reported by respondents, generates an interpretation and favors a meeting with the meanings for their lives in difficult and probationary times, in addition to enhancing the concept of God as real and palpable, in constant interaction with humans⁽²⁰⁾.

CONCLUSION

Despite the previous theoretical preparation by researchers and professional experience acquired under a holistic approach - which motivates the continuing academic interest in the subject, addressing patients and conducting the interviews, guided by the question posed to meet the goals, proved to be challenging before the subjectivity of the theme and its related terms.

The findings are relevant to show a direction to understanding the effect of belief in God in coping with surgical proceedings, opening up different perspectives for further research studies to investigate the same relationships in other populations, in different cultures and religions, and with different emotional situations consider-

ing that patients were selected from high scores of spiritual well-being, but there are also patients who do not remain this way.

Transcendence issues, of what is beyond the individuals themselves, pile up on the illness, particularly on the eve of surgery, and require attention from health professionals. Those involved in health care should have a special look at the issues of religiosity because of the subjective aspects of the patients' spirituality and religiosity are neglected dimensions, in spite of the great relevance for coping with the disease.

The patients' religiosity was proved to be deeply related to the belief in God. This study found significant positive relationships between the belief in God and coping with the disease, in a perspective that must be increasingly studied.

The disease was not strongly related to divine punishment, but the acknowledgement of the progression of heart disease related to modifiable lifestyle habits proved to be linked to feelings of guilt.

Finally, the belief in God and its manifestations reflected positively in the encounter with a new direction for the surgical proceeding, being presented as encouraging and a support to the motivation to undergo surgery.

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