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ORIGINAL ARTICLE

STRESS AND COPING STRATEGIES OF WOMEN IN PREOPERATIVE PERIOD OF VALVE SURGERY

ESTRESSE E ENFRENTAMENTO DE MULHERES EM PRÉ-OPERATÓRIO DE CIRURGIA VALVAR ESTRÉS Y ENFRENTAMIENTO DE MUJERES EN PRE-OPERATORIO DE CIRUGÍA VALVAR

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ABSTRACT

Objective: to identify the stressors experienced by women during preoperative of heart valve surgery, check and correlate the level of stress and the focus of coping. **Method:** descriptive study with a quantitative approach conducted with 65 women. A visual analog scale and the Modes of Coping with Problems Scale were used in the study and their correlation was analyzed through Spearman test and two open questions whose answers were categorized and quantified. **Results:** The stress level was 5.3. Stressors were related to perioperative, family and paid work. Religious practices by EMEP were the first focus. There was a positive correlation between emotional focus and stress level ($p = 0.019$) and between some aspects of coping among themselves. **Conclusion:** Women have a medium level of stress and they recognize stressors related to family, work and the surgery itself finding support in faith and in problem solving. Nursing actions can be developed in the immediate preoperative period. **Descriptors:** Psychological Stress; Psychological Adaptation; Woman; Cardiac Surgery.

RESUMO

Objetivo: identificar os estressores percebidos por mulheres em pré-operatório de cirurgia valvar, verificar e correlacionar o nível de estresse e os focos de enfrentamento. **Método:** estudo descritivo com abordagem quantitativa, realizado com 65 mulheres. Utilizou-se: escala analógica visual e Escala de Modos de Enfrentamento de Problemas cuja correlação foi identificada pelo teste de Spearman e duas perguntas abertas cujas respostas foram categorizadas e quantificadas. **Resultados:** o nível de estresse foi 5,3. Os estressores se relacionaram ao perioperatório, família e trabalho remunerado. Focou-se primeiro em práticas religiosas pela EMEP. Houve correlação positiva entre foco emoção e nível de estresse ($p=0,019$) e entre alguns enfrentamentos entre si. **Conclusão:** as mulheres apresentam nível médio de estresse e reconhecem estressores relativos à família, trabalho e à própria cirurgia amparando-se na fé e na resolução de problemas. Ações de enfermagem podem ser desenvolvidas no pré-operatório mediato. **Descritores:** Estresse Psicológico; Adaptação Psicológica; Mulheres; Cirurgia Cardíaca.

RESUMEN

Objetivo: identificar los estresores percibidos por mujeres en pre-operatorio de cirugía valvular, verificar y correlacionar el nivel de estrés y los focos de enfrentamiento. **Método:** estudio descriptivo con enfoque cuantitativo, realizado con 65 mujeres. Se utilizó: escala analógica visual y Escala de Modos de Enfrentamiento de Problemas cuya correlación fue identificada por el test de Spearman y dos preguntas abiertas cuyas respuestas fueron categorizadas y cuantificadas. **Resultados:** el nivel de estrés fue 5,3. Los estresores se relacionaron al perioperatorio, familia y trabajo remunerado. Se enfocó primero en prácticas religiosas por la EMEP. Hubo correlación positiva entre el foco emoción y nivel de estrés ($p=0,019$) y entre algunos enfrentamientos entre sí. **Conclusión:** las mujeres presentan nivel medio de estrés y reconocen estresores relativos a la familia, trabajo y la propia cirugía amparándose en la fe y en la resolución de problemas. Acciones de enfermería pueden ser desarrolladas en el pre-operatorio mediato. **Descriptors:** Estrés Psicológico; Adaptación Psicológica; Mujeres; Cirugía Torácica.

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INTRODUCTION

Cardiovascular diseases remain as the leading cause of death worldwide. Among the cardiovascular disease is the rheumatic heart disease,¹ a chronic disease caused by damage to the heart muscle and heart valves after pharyngitis/tonsillitis caused by infection of the Group A streptococci if not treated with antibiotics or when treated inappropriately.¹

It is estimated that the global distribution of rheumatic fever and rheumatic heart disease falls disproportionately on children and young adults living in low-income countries, accounting for about 233,000 deaths per year. About 15.6 million people are affected by rheumatic heart disease with a significant number of patients requiring repeated hospitalizations and even heart surgery after 5-20 years.¹ In Brazil, in the period 1991-2011, a study shows that among 1,000 individuals, 1 or 2 have rheumatic heart disease.²

In the world, among cardiovascular diseases, the WHO data shows that the prevalence of deaths caused by rheumatic heart disease is higher among women (1.5%) than men (1.0%).¹ The clinical manifestations include dyspnea on exertion and progressive fatigue as a result of low cardiac output³, what can affect the satisfaction of biological human need of sleep and rest, exercise and physical activity, body care, sexuality, as well as the psychosocial need of acceptance, self-esteem and self-image, which are affected by the limited physical conditions for practice of daily activities.^{4,5}

Studies on cardiac woman with valve impairment are necessary, as women, at the same time that have to live with the limitations imposed by the disease, are faced with demands concerning family and home care along with the demands of paid work taking into account that there has been a growing number of women entering in the labor market (35.4% in 2000 to 43.9% in 2010), rates that are greater than those for men (61.1% in 2000 to 63.3% in 2010).⁶

In addition to the limitations that the valve disease causes to the satisfaction of physiological and psychosocial basic human needs mentioned above, the evolution of valve disease may require surgical treatment. This may lead the individual to face other potentially stressful situations

from the moment when receives the diagnosis to the decision-making related to the therapeutic approach to be adopted. In the case of surgical therapy, this includes a preparation in the preoperative stage awaiting surgery.

Regarding stress and coping, Lazarus and Folkman developed a concept of stress that emphasizes the importance of individual evaluation of the event, through a cognitive process. This model is called Transactional or Stress Interactionist Model and conceptualizes stress as "a complex series of subjective phenomena experienced when the demands of an event rates or exceeds the person's adaptation capabilities"^{7:13}. They highlight that stress does not exist in the event, but is the result of the interaction between the individual and the environment where there are three types of individual assessment: primary, where it is evaluated the demand and if there are coping resources, and secondary where, in face of the threat or challenge, coping strategies are determined, in order to establish the organic balance. *Coping* is defined as "a constantly changing cognitive and behavioral effort to manage external and/or internal demands that are evaluated as exhaustive or exceeding the resources of the person".^{7:11}

With regard to potentially stressful situations and experiences of women with valve heart disease with surgical indication, it is important to know the level of stress during the preoperative period, the perceived stressors and the coping strategies used by them to direct actions of nursing care that may help reduce the stress in this period.

Given the above, this study aims to identify the level of stress, the perceived stressors and the coping strategies of women during the preoperative period of heart valve surgery, in order to contribute to the knowledge of care needs that these patients have in the preoperative phase. It is aimed also to provide base for a reflection on humanized and individualized nursing care from the knowledge of the stress level, intervention focuses (stressors) and tools for intervention (knowledge of coping) to planning of nursing care in the preoperative heart valve surgery. Therefore, the following specific objectives were established: characterize the socio-demographic profile of women participating

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in the research; identify stress levels, perceived stressors and coping strategies of participants; relate the stress levels with the coping strategies commonly adopted by participants.

METHOD

Descriptive study with cross-sectional quantitative approach⁸ carried out at the clinic of the valve sector in a public hospital in São Paulo that is a reference in cardiology.

The sample consisted of 65 women with mitral valve and/or aortic disease with surgical therapeutic indication and aged over 19 who consented to participate in the study and who had already been informed by their doctor about the need for surgical treatment and who were aware of the probable date of preoperative hospitalization. Prior to the collection period, this study was approved by the Research Ethics Committee of the local hospital (protocol nº 3977/2010).

Data were collected between October 2010 and September 2011 after clarification of the objectives and purpose of the research, and of the content of the Informed Consent (IC) to patients and after women expressed willingness to participate in the study by signing the IC.

A Visual Analog Scale was used to survey the self-attributed stress level. The Visual Analogue Scale (VAS) is a kind of psychosocial measure that can be used to measure subjective experiences, among them the perception of stress. The VAS consists of a 100 mm line where the limits of sensation or feeling that the researcher wants to investigate are measured.⁸ Participants were asked to assign a value that corresponds to the stress experienced from the moment they learned of surgical need until the day of their participation in the study, highlighting that 0 corresponds to no stress and 10 the most intense stress as possible. To survey stressors, it was used the open question *"What has stressed you the most since the moment the surgery was scheduled until now?"*.

In order to identify ways of coping of participants, the Modes of Coping with Problems Scale (MCPS) was used. This has been adapted for the Brazilian population and has shown positive results as to its psychometric capacity.¹⁰ THE SCALE consists of 45 items covering actions and thoughts

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used to handle external and internal demands of a particular stressful event and is divided into four modes of coping, namely: Problem (search for problem resolution or re-evaluation of the situation), Emotion (negative emotional responses), Social support (search for social support) and religious practices/illusory thinking (thoughts related to religious practices). Responses to the items were given on a scale from one to five points (1 = I never do this, 2 = I do this, but rarely; 3 = I do it sometimes; 4 = I do it very often; 5 = I do it always). To complement this assessment about coping an open question was made *"Are you are using other ways to deal with the situation?"*.⁹

Data were organized in tables in Microsoft Office 2007 spreadsheets. The Statistical Package for Social Sciences (SPSS 16) was used for statistical analysis of quantitative data. In order to homogenize data collection, the items related to socio-demographic characteristics, survey of stressors and items of the Modes of Coping with Problems Scale were filled or marked by the researcher along with the patient, considering the possibility of participation of women who have difficulty in reading and writing. After completing filling the form regarding open questions, verbal validation of responses along with participants was conducted.

As for analysis of data, normality of quantitative variables was checked with the KS (Kolmogorov-Smirnov) test and the verification of the relationship between variables was carried out with Spearman coefficient. The Cronbach's alpha coefficient was used to verify the internal reliability of the MCPS instrument for the studied sample, where a value of 0.801 was obtained, which demonstrates good reliability of the instrument used. Results with $p < 0.05$ were considered statistically significant.

The answers arising from open questions were classified and categorized using the Bardin content analysis technique with quantitative approach, which is based on the frequency of appearance of certain elements of the message through the process of categorization. Categorization is a classification of elements of a message through differentiation, followed by regrouping into categories. Categories are rubrics or classes that bring together a

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group of elements with common characteristics (recording units) under a generic title.¹⁰

RESULTS

Regarding valve heart disease, 44 (67.7%) out of the total sample, 65 women, showed predominantly mitral valve disease. The time elapsed after receiving the diagnosis of valve lesion was on average 13.5 years (median 10 years, SD = 12.8 years), ranging from 2 months to 40 years. The average time elapsed from the moment the patient learned the need for surgery until the date of probable pre-operative hospital admission was 53 days (median = 30 days, SD = 71.9 days), varying between 2 and 480 days, period in which participants were able to recognize stressful situations and develop coping strategies to deal with them.

As for sociodemographic characteristics, participants had a mean age of 55.8 years (median = 56, SD = 13.9), ranging between 26 and 81 years. As for education, 37 (56.9%) had incomplete primary education and 23 (35.3%) had incomplete basic cycle.

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Regarding marital status, 36 (55.4%) women were married/common-law marriage, 57 (87.7%) had children, 21 (32.3%) lived with husband/partner and children. Regarding activity generating income, 27 (41.5%) were retired/pensioners, 17 (26.2%) reported being "housewives", 12 (18.5%) said they were unemployed or away from work and 9 (13.8%) women said they were employed and among these, 35 (53.8%) said that were the breadwinners. As for religion, 60 (92.3%) have a religion, and 46 (70.8%) of these are practitioners.

The self-assigned level of stress of participants ranged from 0 to 10 and the average was 5.3 (median = 5.1 and SD = 3.1).

Regarding stressors, to answer the question *"What has stressed you the most since the moment the surgery was scheduled until now?"* The 65 women experienced the mediate preoperative, but reported 115 (100%) stressors related to the anticipation of situations inherent to the entire perioperative period, as shown in Table 1.

Table 1. Responses of women to the open question about stressors, distributed into categories according to periods of the perioperative, 2011.

Perioperative Period	n	%
Preoperative		
Waiting time: examinations, consultations, surgery	18	15.7
Clinical situation and pharmacological treatment	10	8.7
Relationship with the family in face of the surgery	9	7.8
Fear of the unknown	4	3.5
Labor activity (domestic or paid)	3	2.6
Past experiences	2	1.7
sub-total	46	40.0
Intraoperative		
Fear of complications and death	25	21.7
Fear of anesthesia	4	3.5
Age as surgical risk	3	2.6
Sternotomy	3	2.6
sub-total	35	30.4
Postoperative		
Events after the surgery: in the home and in the family	15	13.0
Labor activity (domestic or paid)	13	11.3
Fear of recovery and evolution for the state of physical disability	6	5.2
sub-total	34	29.6
Total	115*	100.0

* There was more than one answer for each of the participants

For the **preoperative** period in the category **waiting time**, stood out: the delay in the consultation service so to avoid delay in transport given by the source county (ambulance), the delay for performing preoperative tests and waiting for the hospital admission for surgery.

Concerning the **clinical situation and pharmacological treatment**, the expressed stressors were related to the type of prosthetic valve and time to re-change the valve, the need for the use of several drugs,

and the presence of clinical symptoms such as dyspnea and edema.

In the category **relationship with the family in face of the surgery**, the stressor was evidenced by concern about interference in the routine of family members (children, husbands, grandchildren), as well as the physical separation from them.

Work activities were also cited as stressors in the preoperative, as illustrated by the fact that they are unable to perform

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household chores and/or paid work activities that require more effort, due to physical limitations of malaise and dyspnea caused by heart valve disease.

The **fear of the unknown** emerged as a stressor for some women, because of the fear of needing something that is not known, not knowing what they will face or who will accompany them to the hospital. For other women, the fact of having had previous surgical experiences evaluated as negative experiences was also cited as a stressor and also the compulsory hospitalization in the preoperative period shows that the hospital was perceived as a threat or challenge.

In relation to **the intraoperative period**, women also expressed fear of **complications during surgery and death** and **fear of anesthesia**. The older women cited **age** as something worrying for recognizing that this factor can interfere with the progress of the surgery and recovery.

As for the **sternotomy**, because they know how the access to the chest cavity happens, with disruption of bodily integrity with chainsaw, was also cited as a stressor.

In relation to the **postoperative period**, **events after surgery were mentioned**. In this category, women predominantly expressed their willingness to be an active

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and independent person, for the home organization and the desire of not having to be inactive during the postoperative period, during recovery. On the other hand, they also expressed concerns and fears related to the recovery and post-operative care that could cause changes in the routines of family members, due to their work activities, showing their perception regarding the exchange of roles in the relationship caregiver x care object.

For other women, thinking of **domestic and remunerated activities** generated stress by the fear of failing to exercise their activities as mother, home caregiving and worker, including the fulfillment of responsibilities (demand) on the financial provision and care of home and children.

The **fear of recovery and evolution to state of physical disability** also emerged as a stressor before the fear of complications related to anesthesia and surgery, fear of surgery itself, anesthesia, death, ICU and scars that could remain.

The coping strategies and their average scores, according to MCPS, focused predominantly on religious practices/ illusory thinking as shown in Table 2.

Table 2. Mean scores of coping focuses of MCPS. São Paulo, 2011.

Coping focuses	Mean	Median	Standard deviation
Religious practices/ illusory thinking	3.95	4.00	0.52
Problem	3.79	3.83	0.64
Social support	3.31	3.25	0.86
Emotion	2.07	2.07	0.48

The answers given to the question "*Are you are using other ways to deal with the situation?*" totaled 144 answers, because sometimes the same participant reported more than one way to deal with the

situation. These answers generated four categories: emotion, religious practices, social support and problem, as shown in Table 3.

Table 3. Women's responses to the open question about coping, distributed into categories. São Paulo, 2011.

Category	Nº of citations	%
Emotion	64	44.4
Religious practice	38	26.4
Social support	27	18.8
Problem	15	10.4
Total	144*	100.0

* There was more than one answer for each of the participants

The category Emotion consisted of looking for stories to get away or escape the problem before the desire of not talking about the disease and sleep. These would be efforts targeted to compensate anxiety such as intensification of eating habits, self-

control of feelings in an attempt to transpire that it's all right and trying to forget the problem through distractions such as television, performing household activities, volunteering and hand-made

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activities such as performing crochet and own paid work and social isolation.

The category Religious practices consisted of reports of prayer and faith as sustenance and strength to face the situation, trust in God as a force of provider and as support, Bible reading and going to the church and use of media (TV) to watch religious programs and use of gospel music/Catholic/evangelical.

The category Social support consisted of reports describing the presence of family, friends and neighbors, through family ties for strain relief expressed by quotations such as giving and receiving higher family care, looking not to be alone, going out and being in the presence of friends, having conversations with siblings, relatives and friends of the religious community, dialogues about the surgery and examinations with children and neighbors, walks with children.

The category Problem was composed by the search for the unknown through information about the surgery and the fact that they seek to control the problem by adhering to drug therapy and changing lifestyle. This is illustrated by quotations that discuss the proper use of medicines, attempt to quit smoking, use of media (internet) to study about the surgery, talk with health professionals about the surgery and with people who have gone through cardiac surgery and by seeking to know the hospital and professionals.

As for the correlation between the stress level and the Modes of Coping with Problems scale, it was found that there was a weak but positive and significant correlation (Spearman $r = 0.294$ and $p = 0.019$) between the level of stress and the focus of emotion, where the greater use of strategies focused on emotion was related to greater self-assigned stress.

Coping strategies focused on the problem presented a positive and significant relationship with other two strategies: social support (Spearman $r = 0.378$ and $p = 0.002$) and religious practices (0.397 and $p < 0.001$). Therefore, the higher the coping focused on the problem, the higher is the search for social support and the higher is the religious practice.

DISCUSSION

Regarding valvular heart disease, the prevalence of mitral valve disease (67.7%) is

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in accordance with findings in literature.¹¹ According to the results presented, the responses from women who composed the sample of this study showed the biological sphere (physical limitations caused by the illness, drug therapy, sternotomy and concern about the impact of age on the progress of surgery as stressors), psychological sphere (the waiting time for surgery and examinations, fear of the unknown, fear of death, fear of anesthesia and of the evolution of surgery towards the state of disability and past experiences as stressors, and as for coping strategies, the escape and avoidance, self-control of feelings, intensification of food habits were identified), social sphere (concern with family, home and paid work as stressors, and as coping strategies, search for interaction with family, friends and neighbors and members of the religious community were identified) and espiritual sphere (Bible reading, prayer, quest for religious programs on TV, visits to church and quotation of faith as ways of coping).

It was observed that the stress of the women in this sample was related to family and this comes from the non-fulfillment of internal responsibility and demand⁷ as caregiver, that is, the performance of their social role as mothers and caregivers, where the period of hospital stay may cause uncertainty about the safety and well-being of their children, a belief consistent with gender stereotypes (beliefs about activities that are proper to men and to women,¹² where women themselves, as the present sample exemplifies, report their association with activities related to family and home (with organizational responsibilities of the everyday life of the family).^{13,14}

It is noteworthy that external and internal requirements and demands (responsibilities with family and work) with which these women are faced may expose women to health impairment to numerous factors that can cause stress and suffering on the search for meeting and playing the activities of wife, mother and worker. In this sense, women with valvular heart disease need to be cared for and assisted in their entirety. The woman should be seen as a human being inserted in the current social context as woman-mother, woman-wife and woman-worker, because according to the Funds for Development of the United Nations to Women, women who fall outside

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the labor market in Brazil are older, married and mothers.¹⁵

The delay for performing preoperative tests, waiting for the hospital for surgery generated stress. This can be explained by the expectation of rapid resolution to the health problem or the desire for improved quality of life which often compromised by physical limitations induced by the chronicity of the disease, since the symptoms and need for pharmacological treatment appeared to interfere in basic human necessities of breathing and sleeping, causing limitations in the realization of domestic and labor activities.

In a study on women with mitral valve disease, it was reported that women felt limited for everyday tasks and that life had been changed by the disease.⁴ A study with patients in the preoperative period of cardiac surgery describes that the patients' concerns revolve around the recovery process and the implications to daily activities; maintenance of life goals; concern for non-fulfillment of responsibilities toward people that are important for them.¹⁶

Fear appeared as a stressor in this sample, related to anesthesia, surgery, death and the unknown, the hospital and home recovery after surgery, because of the submission to general anesthesia and major surgery. Similarly, a study with patients in the preoperative period of cardiac surgery found that during the experience of the pre-operative period, the patient feels threatened, afraid to die.¹⁷

Fear of surgery, anesthesia, death, intensive care unit, tissue damage has been experienced by the women with conflicting emotions and expectations, because at the same time that women report being afraid, they want the surgery to occur, not having to wait for admission. This data is strengthened by authors who mention that surgery is seen as a paradoxical event by the patient because, while it relieves pain and is effective in treating diseases, it is also an act of aggression to the body, which induces to develop coping mechanisms.¹⁸ Such findings were related to the identification of surgery as a threat to the individual, while the challenge to overcome it is understood as a new opportunity to live with a better quality of life.

Regarding the ambiguity threaten x challenge, the Stress Interactionist Model

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while conceptualizing stress explains that there are some factors that can influence the evaluation and an event as a threat, namely: the number and complexity of the situation/event, novelty of the situation, self-esteem, personal values, social support, the duration of the threat and the controllability of the situation, all interact in the perception and manifestation of stress.⁷

Also with respect to the surgical procedure, knowledge about how the chest cavity will be accessed and the fear of scars were cited as stressful factors, corroborating data found in a study with patients in the preoperative period of cardiac surgery, where concern with physical integrity was reported.¹⁷

Another aspect related to the surgical procedure is the type of valve prosthesis. The choice of this valve has been cited as a stressor when considering the time to re-change, that is, the anticipation of a new pre-operative time in the future, besides the moment experienced at present.

Concern about the postoperative recovery was permeated by the factor "age". The recognition of age as a stressor may arise from the recognition of the loss of functional capacity as something uncontrollable that evades governance.¹⁹ In fact, age is a factor that deserves attention, because the elderly have lower physiological reserves when compared to younger patients³ and perhaps the patients in this study directly or indirectly were aware that the physiological changes in the body could interfere with the smooth progress of surgery and postoperative recovery.

The anticipation of experiences related to postoperative moments also appeared as an stressor related to family and work. The fact of becoming the object of care at the same time that they fail to fulfil their social roles as mother, housewives and employees, financial providers to the household and children were stressors for these women.

Faced with these stressors, it is clear that although didactically presented in pre, intra and postoperative periods in this study, these factors have been recognized as such throughout each woman's experience after receiving the diagnosis of surgical treatment for valvular heart disease during mediate preoperative period, thus anticipating possible future events. Many of these stressors could be worked out during the

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pre-operative nursing visit, since this is seen as a tool to know the feelings of patients in the preoperative period of cardiac surgery and psychosocial need for health education, with respect to the guidelines for the preoperative preparation and the guidelines for trans and post-operative period.²⁰ In fact, the study found that patients undergoing cardiac surgery cited some issues to be addressed in the preoperative period that could help them. These are, for example, guidelines regarding the postoperative recovery environment, the surgical procedure, the environment of the operating room, use of devices (drains, probes), safety and emotional support and guidance to families.²¹

Regarding the Modes of Coping with Problems Scale, the women in this study focused their coping first in religious practices/ illusory thinking, in the problem, in social support and in emotion.

Religious practices were evident in the MCPS, in line with the sociodemographic profile of women where 92.3% had religion and 70.8% considered themselves practitioners. This was also the second most cited category (26.4%) in the responses to the open question. Still, religious practices had positive and statistically significant association with coping focused on the problem, so that the greater focus on religious practices, the greater focus on the problem.

These results can be reflected in the notes of a study that says that religious beliefs act as a mediator of cognitive assessment of events in cases of established disease.²²

Regarding coping focused on the problem, this was the second form of coping adopted by the women as deduced from the MCPS. Corroborating these findings, coping focused on the problem was also found (along with how coping that prevailed among cardiac surgery patients),²³ but when women were given the open opportunity to verbalize other ways they have found to deal with the preoperative situation, this type of coping was the least reported (10.4%). Their answers turned around the search for knowing the unknown through information about surgery and self-care with respect to lifestyle.

Coping with a focus on social support was the third form of coping identified by the MCPS and the third most reported by women

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in answer to the open question (18.8%). They seek to be in the presence of family, friends and neighbors linked to support through family ties for strain relief expressed by interaction between social groups in which women are embedded. Corroborating these results, social support was also found as a way of coping among patients undergoing cardiac surgery.¹⁶

Still about social support, this was significantly associated with coping focused on the problem according to the analysis of the MCPS. This leads to a reflection on the source of support that family and friends can offer, not only emotionally but also as regards the informative support in their search for resolution of the problem.

In this study, with respect to the question open about other ways to cope with the situation, it was found that the category Emotion was predominant (44.4%) with notes of actions to avoid the problem before the desire of not talking about it, of sleeping, efforts to compensate for anxiety, self-control of feelings, use of distractions, leisure activities making use of television, performing household activities, manual activities (handicraft), as a ways to forget the problem, while in the MCPS, the focus of coping that prevailed was the focus on religious practices/illusory thinking.

This result may have come from the fact that the MCPS does not contemplate the use of distractions as a way of coping and also by the fact that before the closed questions of the MCPS, the coping response may have been punctual while when there is openness to listening, problems emerge and resolutions permeate other priorities and attitudes.

Another possible explanation for the contrast between coping focused on religious practice (MCPS) and emotion (open question) may have been generated before the consideration that coping through religion may be associated with both, the strategies oriented to the problem as to emotion.²⁴

The question about the distractions that can be understood as avoidance/escape from the problem is related to the own distribution of items in the domains of the MCPS. The item "I try to forget the problem" is within the domain "religious practices/ illusory thinking". In the article of analysis of the mentioned scale, the authors report that this item was kept in the field of

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religion before the consideration of the population they studied, that the attempt to forget the problem is an attitude of avoidance and that religious or mystical actions could help in keeping the problem out of the mind, keeping this way the stressful situation distant with thoughts turned to faith.⁹

Despite the difference between the classifications of use of strategies focused on religious practices (MCPS) and quote (in open question of the MCPS) of actions contributing to coping focused on emotion, it is undeniable that one should pay attention to the psycho-spiritual aspect of patients during the preoperative situation, since the patient brings its beliefs and values as tools to cope with the stressors that start to be recognized.

CONCLUSION

The patients in mediate preoperative period showed medium level of stress with stressors related to the family especially the children, care for the home and maintenance or ability to return to work after hospital discharge and post-operative recovery and they develop actions primarily focused on religious practices (MCPS) and emotion (open question). In these situations, by understanding the patient as a human being that develops its various social roles, nursing can and should act on comprehensive care as a promoter and facilitator in addressing the preoperative stress.

The importance of supporting patients by providing information regarding the perioperative period needs to be considered. It is possible that the patient who knows what it is and how he/she will face the surgical situation (if this information is wanted) will react with less stress and more quality life during the perioperative period of cardiac valve surgery. A good opportunity for providing information is the nursing consultation in the immediate preoperative period and nursing visits in the immediate preoperative period. It is important to work with a multidisciplinary team, encourage participation of family and friends in the consultation and preoperative examinations and throughout the perioperative period, to invite religious leaders during hospitalization if the patient wishes, because social and religious support

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networks were proved as relevant factors in addressing the preoperative stress women in this study.

Furthermore, the functioning of the system of reference and counter-reference is important, taking into account that these women, when have hospital discharge after surgery, will be reinserted in society.

Given the present findings and previous discussions, studies with larger sample sizes can be very useful to study in more detail the issues surrounding the recognition of stressors that women experience and coping strategies that they use in the preoperative moment of heart valve surgery in view of the perioperative period, the social roles developed by women in today's society and the chronicity of the disease with its limitations and its impact on social and family life. Perhaps studies which give the opportunity for open reporting of participants, without the use of closed scales, may identify more deeply questions concerning the perception of stress and strategies of coping of women living chronicity of valvular heart disease.

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