

QUALITY OF LIFE OF PATIENTS IN THE POSTOPERATIVE CARDIAC SURGERY PHASE

QUALIDADE DE VIDA DE PACIENTES NO PÓS-OPERATÓRIO DE CIRURGIA CARDÍACA

CALIDAD DE VIDA DE PACIENTES EN EL POSTOPERATORIO DE CIRURGIA CARDIACA

Fernanda Marcela Custodio¹
Renata Cristina Gasparino²

¹RN. Jundiaí, SP – Brazil.

²RN. Ph.D. student at Universidade Estadual de Campinas. Assistant Professor at the Department of Nursing of Faculdade de Medicina de Jundiaí, Jundiaí, SP – Brazil.

Corresponding Author: Renata Cristina Gasparino. E-mail: regasparino@yahoo.com.br

Submitted: 04/01/2012

Approved: 25/06/2012

ABSTRACT

Cardiovascular diseases are directly related to the increasing numbers of patients that need to undergo a cardiac surgery procedure. Such interventions directly affect physical, productivity, social and emotional issues, as well as bringing sequelae that can result in difficult changes in behavior and lifestyle, compromising the quality of life of patients. Thus, the objective of this study was to evaluate the quality of life of patients in ambulatory services in a public institution in the interior of the Brazilian state of São Paulo. Thirty-eight patients were approached, with a mean age of 59.2 years, who were postoperative for cardiac surgery. We applied the WHOQOL-Bref (World Health Organization instrument for assessing the quality of life) and a sociodemographic questionnaire. The WHOQOL-Bref (the international cross-culturally comparable quality of life assessment instrument created by the World Health Organization) and the socio-demographic survey were answered by each patient. The majority of the patients was male (63,2%), married (76,3%), didn't finish Middle School (63,2%) and received a financial benefit from the government (50%). The majority of subjects were male (63.2%), married (76.3%), had not completed elementary school (63.2%) and received financial benefit from the government (50%). The WHOQOL-Bref scores were: physical domain (62.9), psychological domain (76.1), social domain (74.3), environmental domain (69.2), general evaluation of quality of life (75.0) and satisfaction with health (73.7). Expressive difference was observed between the practice of physical activities and the physical and social issues. A significant difference was observed between the practice of physical activities with the physical and social domains. There was also a significant correlation between the physical domain and age. In the psychological domain, significant gender differences were observed; and in the environmental domain, higher means were found among non-smokers. It was concluded that the participants presented elevated perception of quality of life when compared to other studies.

Keywords: Quality of Life; Thoracic Surgery; Postoperative Period.

RESUMO

As doenças cardiovasculares estão diretamente relacionadas aos crescentes números de pacientes que precisam ser submetidos a procedimento cirúrgico cardíaco. Tais intervenções afetam diretamente questões físicas, de produtividade, sociais e emocionais, além de trazerem sequelas, que podem acarretar difíceis mudanças de comportamento e hábitos de vida, comprometendo a qualidade de vida dos pacientes. Diante disso, o objetivo com este estudo foi avaliar a qualidade de vida de pacientes em seguimento ambulatorial numa instituição pública do interior de São Paulo. Foram abordados 38 pacientes, com idade média de 59,2 anos, que estavam em pós-operatório de cirurgia cardíaca. Aplicou-se o WHOQOL-Bref (instrumento de avaliação da qualidade de vida da Organização Mundial de Saúde) e o questionário sociodemográfico. Os sujeitos, em sua maioria, eram do sexo masculino (63,2%), casados (76,3%), não completaram o ensino fundamental (63,2%) e recebiam benefício financeiro do governo (50%). Os escores do WHOQOL-Bref foram: domínio físico (62,9), psicológico (76,1), social (74,3), ambiental (69,2), avaliação geral da qualidade de vida (75,0) e satisfação com a saúde (73,7). Observou-se diferença significativa entre a prática de atividades físicas com os domínios físico e social. Houve, ainda, correlação significativa entre o domínio físico e idade. No domínio psicológico, foi observada diferença significativa entre os sexos e no domínio meio ambiente, foram encontradas maiores médias entre os não tabagistas. Concluiu-se que os participantes apresentavam elevada percepção da qualidade de vida quando comparada a outros estudos.

Palavras-chave: Qualidade de Vida; Cirurgia Cardíaca; Período Pós-Operatório.

RESUMEN

Las enfermedades cardiovasculares están directamente relacionadas con los crecientes números de pacientes que precisan ser operados del corazón. Estas intervenciones afectan directamente aspectos físicos, de productividad, sociales y emocionales de los pacientes. Además, tienen secuelas y requieren difíciles cambios de comportamiento y costumbres de vida que pueden comprometer la calidad de vida de los pacientes. Ante tal realidad, este estudio ha buscado evaluar la calidad de vida de los pacientes en seguimiento ambulatorial en una institución pública del estado de San Pablo. Se consideraron treinta y ocho pacientes con edad media de 59,2 años que estaban en postoperatorio de cirugía cardíaca. Se utilizaron el WHOQOL-Bref (instrumento de evaluación de calidad de vida de la Organización Mundial de Salud) y el cuestionario sociodemográfico. La mayoría de los entrevistados era de hombres (63,2%), casados (76,3%), con educación básica incompleta (63,2%) que recibía beneficios del gobierno (50%). Los escores del WHOQOL-Bref fueron: dominio físico (62,9%), psicológico (76,1%), social (74,3%), ambiental (69,2), evaluación general de la calidad de vida (75,0) y satisfacción con la salud (73,7%). Se observó una diferencia

significativa entre la práctica de actividades físicas y los dominios físico y social. Además, hubo una correlación significativa entre el dominio físico y la edad. En el dominio psicológico, se observó diferencia significativa entre los sexos y en el dominio medio ambiente, fueron encontrados escores más altos entre los que no fumaban. Podemos concluir que los participantes presentaban elevada percepción de la calidad de vida en comparación con otros estudios.

Palabras clave: Calidad de Vida; Cirugía Torácica; Periodo Postoperatorio.

INTRODUCTION

Cardiovascular diseases (CVD) are the leading causes of morbidity and mortality in developed and developing countries, given the increase in life expectancy, lower rates of mortality from infectious diseases and changes in habits and lifestyle.¹ The high rates of CVD complications, such as hospitalizations, surgical interventions, difficulties in performing daily activities, disturbances of self-image and of self-esteem, and depression interfere with the quality of life of patients.¹

This said, the evaluation of the quality of life of patients undergoing cardiac surgery proves to be of great relevance, since it has been considered an important indicator of different therapeutic results, in different clinical situations.

The World Health Organization (WHO) defines health as a complete state of physical, mental and social well-being, and not merely the absence of disease itself.² Authors state that to obtain an assessment of quality of life, the well-being and subjective state of health of the subjects should be considered in addition to physical, mental and social aspects.³

Quality of life is defined as "an individual's perception of his position in life, in the context of culture and value systems in which he/she lives, and in relation to his/her objectives, expectations, standards and concerns".⁴

In recent years, several studies about quality of life have been published in national and international journals,⁵ but few used the *World Health Organization Quality of Life Assessment Bref* (WHOQOL-Bref) to evaluate the quality of life of patients in the postoperative phase after cardiac surgery. Among the studies that have used this instrument, one was conducted with patients in the postoperative period of cardiac transplantation⁶ and another with patients with surgery for valvular diseases.⁷ None of these used the WHOQOL-Bref to evaluate other types of cardiac surgery.

Given the above, the objective of this study was to evaluate, by means of the WHOQOL-Bref, the quality of life of patients in the postoperative period of several modalities of cardiac surgery, because the result may help health professionals to better plan the assistance provided, developing strategies that seek to maximize the effects of cardiac rehabilitation, and to improve the quality of life of these patients.

METHOD

The research was of a descriptive, cross-sectional nature, and was conducted in a public teaching institution in the interior of the state of São Paulo that provided medical and hospital care to users of the Unified Health System (SUS).

The project was approved by the Committee on Ethics in Research of the Medical College of Jundiaí (Protocol No 88/2011) and by the board of the institution where the study was conducted.

Data were collected in the period from June to August of 2011, and the sample consisted of patients who met the following inclusion criteria: in outpatient treatment, in the postoperative phase of cardiac surgery, more than 18 years of age, agreed to participate in the research, and signed the Terms of Free and Informed Consent (TFIC).

For data collection, the patients received a sociodemographic form and an instrument developed by the WHO for the assessment of quality of life.

The sociodemographic data form was developed by the researchers and the following patient characteristics were addressed, among others: age, gender, marital status, family income, associated diseases, use of medications, type of surgery.

The generic instrument of the World Health Organization, WHOQOL-Bref, for the evaluation of quality of life was adapted and validated for the Brazilian culture.⁸ It is a self-report instrument, consisting of 26 questions with two being general, addressing the perception of quality of life and satisfaction with health, and the remaining 24 were divided into four domains: physical (seven items), psychological (six items), social relationships (three items) and environmental (eight items).⁸

The physical domain (items 1, 2, 3, 9, 10, 11 and 12) involved questions with respect to the inability to perform activities because of pain, the need for medical treatment, sufficient energy for activities of daily living, capacity for walking and work, and sleep patterns.

The psychological domain (items 4, 5, 6, 7, 8 and 24) was characterized by questions that sought to demonstrate the meaning and the way of enjoying life, the ability to concentrate, acceptance of physical appearance, satisfaction with oneself, and the frequency of negative feelings. The social relationships domain (items 13, 14 and 15) portrayed the personal relationships

and support received from friends and family, as well as satisfaction with one's sexual life. The environmental domain (items 16, 17, 18, 19, 20, 21, 22 and 23) portrayed the feeling of safety in relation to life, to the healthy physical environment and living conditions, income, availability of information, the opportunities for leisure, the means of transport, and access to health services.

The issues were evaluated by a *Likert-type* scale with five points, in which the participant is asked to mark his perception of the last two weeks. The lower the score, the worse the perception of quality of life and the higher the score, the better the perception.⁸

For the analysis, the means were calculated for each domain. There was no cutoff points and interpretation was based on the higher the score, the better the perceived quality of life of the subject.⁸

Patients were approached individually, before ambulatory medical care, to explain the research objectives, and those who agreed to participate signed the TFIC. Participants, after signing, received an envelope containing the sociodemographic form and the WHOQOL-Bref. The envelopes containing the forms were delivered to the researchers immediately after they were completed.

Data were analyzed using the *Statistical Analysis Software* (SAS), version 9.2. For categorical variables, descriptive analysis was used and for continuous variables, measures of position were calculated.

For the study of the domains, in the variables without normal distribution, in relation to nominal variables with two categories, the Mann-Whitney was used and for variables with three or more categories, the Kruskal-Wallis test was used.

For those that had presented a normal distribution, in relation to nominal variables of two categories, the Student t-test was used, and for those with three or more categories, the ANOVA model was used.

The Spearman correlation coefficient was used between domains and the variables of intervallic nature. The instrument's reliability was evaluated by means of calculating the Cronbach's alpha coefficient, in which the lower limit value of 0.70 and significance level of 0.05 was considered to be acceptable.

RESULTS

Of the 38 patients who comprised the sample, 28 were post-operative for myocardial revascularization, nine for valve replacement, and one was post-operative for correction of interatrial communication. The mean age of participants was 59.2 years (SD ± 11.9) and the mean postoperative time was six months (SD ± 0.5 years).

Of the patients, the majority were male (63.2%), married (76.3%), had not completed elementary school (63.2%), received financial benefit from the government (50%), did not practice physical activity (89.5%), and possessed a family in-

come less than three minimum wages (73.7%), with a mean of 2.7 (SD ± 1.3) people living on this income.

Among the associated diseases, the most prevalent was heart failure (76.3%), followed by arterial hypertension (73.7%) and dyslipidemia (52.6%). The habit of smoking was verified in 7.9% of the sample, and alcohol consumption was not reported by any patient. Regarding the use of medications, 97.4% used these, with a mean of 5.8 (SD ± 3.3) medications per patient.

The mean and standard deviation for each subscale of the instrument are presented in Table 1.

Table 1 - Mean and standard deviation of the subscales of the WHOQOL-Bref – Jundiaí, 2011

Variables	Mean	Standard Deviation
Physical domain	62,9	19,0
Psychological domain	76,1	18,5
Social Relations Domain	74,3	21,0
Environmental Domain	69,2	18,2
Evaluation of quality of life	75,0	20,1
Satisfaction with health	73,7	25,3

Source: Research data.

There was a significant difference between the physical domain and the practice of physical activity: those who practiced physical activity obtained higher means than those who did not practice ($p = 0.03$). With regard to the social relationships domain, it was again observed that those who practiced physical activity obtained higher means ($p = 0.03$).

In the psychological domain, there was a significant difference observed between genders: men obtained higher means in relation to the women ($p = 0.01$). Regarding the environmental subscale, higher means were encountered among the nonsmokers ($p = 0.01$).

No significant differences were encountered between the study variables and the general issues of the instrument.

The analysis of the instrument's reliability was calculated by the Cronbach's alpha and the following results were obtained: 0.84 for the physical domain; 0.81 for the psychological domain; 0.86 for the social relationships domain; and, 0.83 for the environmental domain. For the two general questions, the results were 0.84 for the quality of life and 0.83 for the satisfaction with health. For the total of the items of the instrument, the alpha of 0.86 was found, indicating good internal consistency.

DISCUSSION

The results of this study showed that the sample had an age similar to other studies that evaluated the quality of life of cardiac patients.⁹⁻¹² This finding can be explained by the fact that the majority of cardiovascular diseases represent chronic

diseases, and therefore, they primarily represent people with more advanced age.⁶

Several authors affirmed that the prevalence of surgical treatment in cardiac patients occurs in males,^{6,9,11-12} as occurred in this research, because males have been shown to be more resistant to seeking care and do not give attention to their true state of health.⁶ Another point to be considered is that being male is a risk factor for cardiovascular diseases. According to a study on cardiovascular risk factors,¹³ the incidence of coronary artery disease is lower among women, both before and after menopause, due to hormonal protection factor at this stage.

With regard to education, other studies have confirmed the prevalence of patients with low literacy levels.^{9,11,14} This could perhaps explain why most patients depend on government assistance, since, due to the low level of education, the subjects tend to work in activities that require more physical effort and, because of the surgery, patients are many times unable to perform such activities.¹¹

Most patients reported that they did not perform physical activities. With the surgical procedure, it is expected that the physical ability of the patient will be slowly restored. In a study with patients with postoperative myocardial revascularization, however, it was found that the performance of physical exercise exerts the function of a physiological stressor to the body, given the increase in energy demand compared with being at rest.¹⁵ In this study, the performance of physical activity before the surgery was not addressed, but it is noted that sedentary lifestyle is a major risk factor for cardiovascular diseases.

Among the associated diseases, the most prevalent was heart failure, followed by arterial hypertension and dyslipidemia. Because of the increase in life expectancy, we have more people with coronary heart disease and associated comorbidities, since some risk factors are not only related to the habits of life of patients, but also with other factors such as genetic inheritance and environmental conditions. Currently an important modifiable cardiovascular risk factor is arterial hypertension, which is more frequent in the elderly and it is associated, primarily, with coronary artery disease and heart failure.¹⁶

The number of patients who used medications proved to be high, which leads to the conclusion that, irrespective of the clinical condition, they are used for controlling the therapeutic regimen. A study conducted about the medication and non-medication adherence of cardiac patients showed that¹⁷ the majority of patients adhered more to medication therapy, perhaps because they were not convinced of the real importance of changing their habits and believed only in medication adherence.

It is noteworthy that after a cardiac event and for its prevention, it is necessary to introduce measures aimed not only at adherence to medication therapy, but also to changes in lifestyle, since the best treatment is prevention, combating risk factors.¹⁶

In the physical domain, the mean found in this sample was practically equivalent to another study that evaluated the quality of life of patients with valve disease surgeries.¹⁷ Despite not having measured quality of life preoperatively, it is believed that all patients undergoing surgical treatment have a better perception of quality of life in this domain, because the intervention reduces the physical limitations gradually, giving the patient a better capacity to perform their activities postoperatively.¹¹

In the social domain, the results of this study were similar to other research.⁷ Patients who practiced physical activity reported a better perceived quality of life in this domain, perhaps due to the fact that the practice of physical activity brings together patients with friends, and by means of these social relationships the patients receive support for overcoming this phase of the disease.⁶

In the psychological domain, the sample obtained higher scores than the other study.⁷ The women demonstrated poorer perception of quality of life than men, because they bring with them the consequences of creation geared towards domestic roles, the good mother and wife, necessitating more psychological support during illness and treatment.¹⁸

In the environmental domain, the perception of quality of life was found to be high in relation to the study with heart valve disease.⁷ It was observed, in this domain, that nonsmokers had a better perception of quality of life than those who smoked. This can be explained by the fact that non-smokers feel that they live in a more healthy physical environment and do not feel restricted in frequenting environments of leisure and means of transportation.¹⁹

FINAL CONSIDERATIONS

The quality of life of patients in this study undergoing cardiac surgery averaged a mean of 62.9 points for the physical domain; 76.1 for the psychological domain; 74.3 for the social relationships domain; 69.2 for the environmental domain; 75.0 for general evaluation of quality of life; and, 73.7 for satisfaction with health, revealing better scores than that in another national study.

The questioning with respect to the quality of life of patients in the post-operative period for cardiac surgery enabled reflection about the real needs of the patient in relation to their health status, quality of life and satisfaction with oneself, which can directly assist nurses in planning the rehabilitation process, providing necessary support for the implementation of assistance focused on the real needs of each patient.

The lowest score obtained by the sample related to physical and environmental areas, highlighting the need for greater attention in relationship to these domains during the rehabilitation period of the patient, but also following a line of research in this area since the performance of surgery of this size directly affects the physical capacity and, consequently, the maintenance of healthy habits.

REFERENCES

1. Gasperi PD, Randuz V, Prado ML. Procurando reeducar hábitos e costumes: o processo de cuidar da enfermeira no pré e pós-operatórios de cirurgia cardíaca. [Looking to reeducate habits and customs: the process of nursing care in pre and postoperative cardiac surgery]. *Cogitare Enferm.* 2006; 11(3):252-7. (Portuguese).
2. Organização Mundial da Saúde. Constituição de Nova Iorque: OMS; 1946. [Constitution of New York]. [Accessed May 05, 2011]. Available at: <<http://www.direitoshumanos.usp.br/index.php/OMS-Organiza%C3%A7%C3%A3o-Mundial-da-Sa%C3%BAde/constituicao-da-organizacao-mundial-da-saude-omswho.html>>. (Portuguese).
3. Farias GM, Mendonça AEO. Comparando a qualidade de vida de pacientes em hemodiálise e pós-transplante renal pelo "WHOQOL – BREF". [Comparison of quality of life of patients in hemodialysis and post-renal transplant by the "WHOQOL-BREF"]. *REME Rev Min Enferm.* 2009; 13(4):565-73. (Portuguese).
4. The Whoqol Group. The development of the World Health Organization quality of life assessment instrument (The Whoqol). *Quality of life assessment: international perspectives.* Heidelberg: Springer Verlag; 1994. p 41-60.
5. Kluthcovsky ACGC, Kluthcovsky FA. O WHOQOL-bref, um instrumento para avaliar qualidade de vida: uma revisão sistemática. [The WHOQOL-Bref, an instrument for the evaluation of quality of life: a systematic review]. *Rev Psiquiatria Rio Gd Sul.* 2009; 31(3). [Cited 2011 May 05]. Available from: www.scielo.br/pdf/rprs/v31n3s0/v31n3a07s1.pdf
6. Aguiar MIFA, Farias DR, Pinheiro ML, Chaves ES, Rolim ILTP, Almeida PC. Qualidade de vida de pacientes submetidos ao transplante cardíaco: aplicação da escala Whoqol-Bref. [Quality of life of patients undergoing cardiac transplant: application of the WHOQOL-Bref scale]. *Arq Bras Cardiol.* 2011; 96(1):60-7. (Portuguese).
7. Guimarães CPA. Qualidade de vida, depressão e ansiedade em pacientes valvopatias cirúrgicas [monografia]. [Quality of life, depression and anxiety in patients with valvular surgeries]. São Paulo: Universidade de São Paulo; 2003. (Portuguese).
8. Fleck MPA, Louzada S, Xavier M, et al. Aplicação da versão em português do instrumento abreviado de avaliação da qualidade de vida "WHOQOL-bref". [Application of the Portuguese versions of the abbreviated WHOQOL-Bref instrument for the evaluation of quality of life]. *Rev Saúde Pública.* 2000; 34(2):178-83. (Portuguese).
9. Favarato MECS, Favarato D, Hueb WA, Aldrighi JM. Qualidade de vida em portadores de doença arterial coronária: comparação entre gêneros. [Quality of life in coronary artery disease patients: comparison between genders]. *Rev Assoc Med Bras.* 2006; 52(4):236-41. (Portuguese).
10. Nogueira CRSR, Hueb W, Takiuti ME, et al. Qualidade de vida após revascularização cirúrgica do miocárdio com e sem circulação extracorpórea. [Quality of life after myocardial revascularization surgery with and without extracorporeal circulation]. *Arq Bras Cardiol.* 2008; 91(4):238-44. (Portuguese).
11. Gois CFL. Qualidade de vida relacionada à saúde, depressão e senso de coerência de pacientes, antes e seis meses após revascularização do miocárdio [tese]. [Quality of life related to health, depression and sense of coherence of patients, before and six months after myocardial revascularization]. Ribeirão Preto: Universidade de São Paulo; 2009. (Portuguese).
12. Dantas RAS, Rossi LA, Costa MCS, Vila VSC. Qualidade de vida após revascularização do miocárdio: avaliação segundo duas perspectivas metodológicas. [Quality of life after myocardial revascularization: secondary analysis of two methodological perspectives]. *Acta Paul Enferm.* 2010; 23(2):163-8. (Portuguese).
13. Kannel WB, Hjortland MC, Mcnamara PM, Gordon T. Menopause and risk of cardiovascular disease: the Framingham study. *Ann Intern Med.* 1976; 85(4):447-52.
14. Vila VC, Rossi LA, Costa MCS. Experiência da doença cardíaca entre adultos submetidos à revascularização do miocárdio. [Experience of cardiac illness among adults undergoing myocardial revascularization]. *Rev Saúde Pública.* 2008; 42(4):750-6. (Portuguese).
15. Titoto L, Sansão MS, Marino LHC, Lamari NM. Reabilitação de pacientes submetidos à cirurgia de revascularização do miocárdio: atualização da literatura nacional. [Rehabilitation of patients undergoing myocardial revascularization surgery: updating of national literature]. *Arq Ciênc Saúde.* 2005; 12(4):216-9. (Portuguese).
16. Sociedade Brasileira de Cardiologia, Sociedade Brasileira de Hipertensão, Sociedade Brasileira de Nefrologia. VI Diretrizes Brasileiras de Hipertensão Arterial. [VI Brazilian Directives on Arterial Hypertension]. *Arq Bras Cardiol.* 2010; 95(supl.1):1-51. (Portuguese).
17. Lunelli RP, Portal VL, Esmério FG, Moraes MA, Souza EN. Adesão medicamentosa e não-medicamentosa de pacientes com doença arterial coronariana. [Medication and non-medication adherence in patients with coronary artery disease]. *Acta Paul Enferm.* 2009; 22(4):367-73. (Portuguese).
18. Silvério CD, Dantas RAS, Carvalho ARS. Avaliação do apoio social e da auto-estima por indivíduos coronariopatas, segundo o sexo. [Evaluation of social support and self-esteem of patients with coronary pathologies, according to gender]. *Rev Esc Enferm USP.* 2009; 43(2):407-14. (Portuguese).
19. Castro MRP, Matsuo T, Nunes SOV. Características clínicas e qualidade de vida de fumantes em um centro de referência de abordagem e tratamento do tabagismo. [Clinical characteristics and quality of life of smokers and a referral center for the evaluation and treatment of smoking]. *J Bras Pneumol.* 2010; 36(1):67-74. (Portuguese).