EVALUATION OF SOCIAL SUPPORT AMONG SURGICAL CARDIAC PATIENTS: SUPPORT FOR NURSING CARE PLANNING

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This descriptive and cross-sectional study aimed to measure social support among subjects hospitalized for surgical treatment of cardiac diseases and to verify the relations between social support and socio-demographic variables. Data were collected between May, 2004 and June, 2005. A total of 86 patients were studied, 47 men, 58 married and the average age was 53 years old. Regarding social support, in an interval from 1 to 5, we found an average of 4.2±0.74 (interval of 1.92 to 5) for the emotional support and 4.2±0.6 (interval of 2.3 to 5) for the instrumental support, which indicate high satisfaction and availability of received supports. We found weak but statistically significant correlations between instrumental and emotional supports and the participants' age and between instrumental support and years of education. We did not find any differences in the perception of social support in terms of participants' gender and marital status.

DESCRIPTORS: social support; thoracic surgery; rehabilitation

EVALUACIÓN DEL APOYO SOCIAL ENTRE PACIENTES CARDÍACOS QUIRÚRGICOS: SUBSIDIO PARA LA PLANIFICACIÓN EN LA ATENCIÓN DE ENFERMERÍA

Las finalidades de este estudio descriptivo y transversal fueron medir el apoyo social de individuos hospitalizados para tratamiento quirúrgico de cardiopatías y verificar las relaciones existentes entre el apoyo social y las variables sociodemográficas. La recopilación de datos ocurrió entre mayo de 2004 y junio de 2005. Participaron del estudio 86 individuos, 47 de los cuales eran hombres, 58 casados, con edad promedio de 53 años. Con respecto al apoyo social, en un intervalo de 1 a 5, se observó una media de 4,2±0,74 (intervalo de 1,92 a 5) para el apoyo emocional, y de 4,2±0,6 (intervalo de 2,3 a 5) para el apoyo instrumental, lo que indica alta satisfacción y disponibilidad con relación a los apoyos recibidos. Se constató correlaciones bajas y estadísticamente significativas entre los apoyos instrumental - emocional y la edad; y entre el apoyo instrumental y la escolaridad. No fueron encontradas diferencias entre el apoyo social con relación al sexo y situación conyugal de los participantes.

DESCRIPTORES: apoyo social; cirugía torácica; rehabilitación

AVALIAÇÃO DO SUPORTE SOCIAL ENTRE PACIENTES CARDÍACOS CIRÚRGICOS: SUBSÍDIO PARA O PLANEJAMENTO DA ASSISTÊNCIA DE ENFERMAGEM

Estudo descritivo e transversal com objetivo de medir o suporte social de indivíduos internados para tratamento cirúrgico de cardiopatias e verificar as relações existentes entre suporte social e variáveis sociodemográficas. Os dados foram coletados no período de maio de 2004 a junho de 2005. Participaram do estudo 86 sujeitos, sendo 47 homens, 58 casados, com idade média de 53 anos. Quanto ao suporte social, em um intervalo possível de 1 a 5, constatou-se média de 4,2±0,74 (intervalo de 1,92 a 5) para o suporte emocional e de 4,2±0,6 (intervalo de 2,3 a 5) para o suporte instrumental, indicando elevada satisfação e disponibilidade quanto aos suportes recebidos. Houve correlações fracas e estatisticamente significantes entre os suportes instrumental e emocional e a idade dos participantes e entre suporte instrumental e escolaridade. Não foram encontradas diferenças na percepção do suporte social quanto ao sexo e a situação conjugal dos sujeitos do estudo.

DESCRITORES: apoio social; cirurgia torácica; reabilitação

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INTRODUCTION

*S*ocial support has been presented as a contributive factor to decrease stress and to improve coping mechanisms in people with different chronic health conditions, including heart diseases[1]. Social support perceptions can vary according to these persons' gender, age, education level and civil status[2].

When people get ill, the support of family and friends is important during hospitalization. However, it is after they are discharged that they will need this support even more. In the case of heart disease, the relatives' support in cardiac rehabilitation programs has been extremely important. After the cardiac event or therapeutic interventions, the support patients perceive, mainly when coming from their husband/wife, has been related with favorable effects on their rehabilitation, making it possible for them to reassume their professional activities[3] and decreasing depression levels[1]. Individuals with greater social support have displayed better physical and mental performance after they were submitted to coronary artery bypass grafting[4] and heart transplantation[5]. On the other hand, the lack of social support and social isolation have been associated with high mortality rates among people with heart failure[6] and patients submitted to coronary artery bypass grafting[7].

Another aspect that justifies looking at social support among heart patients is the observation of a positive association among social support, treatment adherence and quality of life. Studies have detected that married persons present greater emotional support, which is positively related with their emotional state (decreasing anxiety and depression) and improved quality of life[8]. On the other hand, living alone can be related with increased rehospitalization rates among patients with chronic diseases[9]. A higher risk of rehospitalization was found among single heart patients, supposedly justified by the fact of living alone, social isolation or lack of a social support system[9].

A study carried out to verify the relation between social support, self-esteem and coping in the quality of life of patients submitted to coronary artery bypass grafting found positive or converging correlations between these variables[10]. In this study, the inclusion of the social support measure in the multivariate regression model contributed to explain a 15% variation in the quality of life measure after controlling for sociodemographic and clinical variables. According to the authors, these results confirm the importance of this variable to determine the quality of life of patients after surgical treatment of coronary heart disease[10].

This study aimed to assess the social support of heart disease patients hospitalized for surgical treatment of their cardiac disease. To develop the study, social support was considered as assistance received from other people, which contributes to the individuals' perception that they are being cared for, valued, esteemed, loved and secure that they can count on this support[11]. The assessment of support is based on the subjects' perception of the frequency at which they receive support and their satisfaction with the instrumental and emotional domains of social support[11]. The instrumental domain refers to the availability of help that helps the person in handling or solving practical or operational everyday situations through material or financial support or for different daily activities. Emotional or esteem support, on the other hand, consists in behaviors like listening, giving attention or keeping company. These behaviors or attitudes contribute to the person's feeling cared for and/or estimated[12].

We believe that the assessment of social support among cardiac patients submitted to surgical treatment can support health professionals, mainly nurses and social workers, to better plan the preparation of heart patients' discharge and outpatient follow-up, with a view to a better rehabilitation.

OBJECTIVES

This study aimed to measure the social support of cardiac patients hospitalized for surgical treatment and to check existing relations between social support and the variables gender, age, education level and marital status.

METHODOLOGY

Design and sample

The study was approved by the Ethics Committee at the University of São Paulo at Ribeirão Preto Medical School *Hospital das Clínicas* and is part of a broader research on quality of life and social support among individuals with different heart diseases. The potential participants were invited to participate in the research and informed about the study objectives. If the subjects agreed, they signed the free and informed consent term together with the researchers.

We carried out an observational, cross-sectional study. The potential population consisted of male and female individuals who were hospitalized at the heart surgery wards of the study hospital. A convenience sample was composed of subjects who attended to the following inclusion criteria: being hospitalized for surgical treatment of congenital or acquired cardiac diseases, between May 2004 and June 2005; older than 18; in appropriate physical and emotional conditions to be interviewed and agreeing to participate in the study.

Data collection and measures

Sociodemographic data were collected through individual interviews with the subjects, while the participants' files were examined for clinical data. To assess social support, we used an instrument that was adapted for application in cardiac patients: the version adapted to Portuguese[12] of the scale called *Social Support Inventory for People who are HIV Positive or Have Aids*[11]. The Brazilian author who adapted this instrument to Portuguese consented with the use of the translated instrument[12].

The adapted scale consists of two social support categories or dimensions, the instrumental and the emotional. The instrumental dimension, assessed in ten items, addresses individuals' perception and satisfaction with the availability of support to: solve operational issues related to their health treatment, practical activities of daily living, material and/or financial help. The emotional dimension includes 12 items and assesses perception and satisfaction with the availability of listening, attention, information, esteem, company and emotional support with respect to their health condition and treatment[12]. This five-point Likert scale assesses the perceived support frequency (1=never to 5=always) and satisfaction with it (1=very dissatisfied to 5=very satisfied). In the instrumental support component, the support score is calculated by adding up the scores of its ten items and dividing this result by ten. In the emotional support component, on the other hand, the scores of the 12 items are added up and the result divided by the same figure. Thus, the mean values of the components indicate that, the higher the score, the greater the perceived availability and satisfaction with the assessed supports, that is, the higher the score obtained by adding up the items, the greater the social support[12].

In order to guarantee the understandability of the instrument, we decided to semantically analyze the social support scale first[13]. We interviewed three subjects, asked them about the understandability of the scale items and requested their suggestions to make each item as understandable as possible. This step resulted in the reformulation of some items, which favored the understanding of the final instrument but without changing these items' meaning. Next, we carried out a pilot test with five other subjects that attended to the sample inclusion criteria, with a view to checking the adequacy of the collection instrument, including the social support scale. After the pilot test, we found that there was no need for alterations in the instrument, which was considered adequate for data collection. Hence, we decided to include these subjects in the final study sample.

Data analysis and statistical methods

After processing the collected data in the software program *Statistical Package for Social Science* (SPSS) version 13.0, they were analyzed through descriptive statistics, including position (mean and median) and variability (standard deviation) measures. Cronbach's alpha was used to analyze the reliability of the social support measure in terms of the adapted scale items' internal consistency.

To achieve the second study objective, we decided to select the sociodemographic variables that had been indicated in the literature review as associated with social support. Hence, we analyzed the relations between the (instrumental and emotional) social support measures and the variables of gender, age, education and marital status.

The relations between the (instrumental and emotional) social support measures and the continuous variables (age and years of education) were analyzed through Spearman's correlation coefficient. The correlation strength was verified according to the following classification: weak ($r < 0.03$), moderate ($0.03 \leq r < 0.5$) and strong ($r \geq 0.05$)[14]. For the category variables (gender and marital status), Mann-Whitney's test was carried out to compare the social support measures among the groups, at a significance level of 0.05.

Concerning the missing data for the scale used in this study, we adopted the criterion that establishes that participants who did not answer 20% or more of the scale items will be excluded from the sample[15]. In the case of the scale we used, this criterion implied the loss of four or more items. Two participants reached this criterion and were excluded from the sample. For two patients who did not want to answer one instrument

item, related to their satisfaction with one received support aspect, we adopted the criterion of replacing the lost data by the mean score of the scores the individuals attributed to the other scale items[10].

RESULTS

In the study period, 192 patients were hospitalized at the heart surgery wards. Eighty-eight (45.8%) of them attended to the above mentioned inclusion criteria. This percentage can be explained by the patients' hospital discharge before they had contact with the researchers, non-agreement to participate in the study and unfavorable clinical situations. Hover, two of the 88 patients initially included in the sample were excluded because they did not manage to answer more than 80% of the social support assessment items. Hence, the final sample consisted of 86 participants, equivalent to 44.8% of the potential study population.

Table 1 shows the participants' sociodemographic and clinical characterization.

Table 1 - Sociodemographic and clinical characterization of the study sample. Ribeirão Preto, SP. 2004/2005

Variables (N=86)	Mean (SD)* or number (%)	Median (interval)
Age (years)	53,3 (15,35)	53,2 (16 - 77)
Gender		
female	39 (45,3%)	
male	47 (54,7%)	
Education (in years)	4 (3,97)	4 (0 - 16)
Family income (in reais)	710 (605,3)	710 (65 - 3000)
Civil status		
married/living with a significant person	58 (67,4%)	
widowed/separated/single	28 (32,6%)	
Number of persons the patient lives with		
from 0 to 3 persons	68 (79%)	
4 or more persons	18 (20%)	
Professional situation		
Active	20 (23,3%)	
Retired with paid activities	08 (9,3%)	
Retired	30 (34,9%)	
Work at home, unpaid	17 (19,8%)	
Others	11 (12,8%)	
Hospitalization time (in days)	6 (6,75)	6 (0 - 33)
Number of associated diseases	2 (1,43)	2 (0 - 6)
Hospitalization period		
Pre-operative	56 (65,1%)	
Post-operative	30 (34,9%)	
Heart disease		
Coronary Heart Disease	38 (44,2%)	
Valve Disease	32 (37,2%)	
Both	05 (5,8%)	
Others	11 (12,8%)	
Surgical indication		
Coronary artery bypass grafting	41 (47,7%)	
Valve replacement/repair	32 (37,2%)	
Both	02 (2,3%)	
Other indication	11 (12,8%)	

*SD: Standard deviation

The sample's sociodemographic characteristics showed that, in the group of 86 participants, 47 (54.7%) were men; 58 (67.4%) were married or lived with a significant person; ages ranged from 16 to 77 years (mean 53.3). In terms of income and education, the study group displayed precarious economic and education conditions, with a mean family income of 710 *reais* and four years of education.

What the subjects' clinical characteristics is concerned, 56 (65.1%) were awaiting surgery (pre-operative period). Coronary heart disease and valve diseases were the most frequent diagnoses, which justify the surgical indication of coronary artery bypass grafting (47.7%) and valve replacement or repair (37.2%).

Results for the instrumental and emotional dimensions of social support are shown in Table 2.

Table 2 - Assessment of instrumental and emotional dimensions of social support scale. Ribeirão Preto, SP, 2004/2005

Dimensions	Instrumental SSC*	Emotional SSC*
Number of Items	10	12
Possible Interval	1 - 5	1 - 5
Obtained Interval	2,3 - 5	1,92 - 5
Mean (S.D.)**	4,2 (0,6)	4,2 (0,74)
Cronbach´s Alpha	0,74	0,86

* Social Support Scale
**S.D.: Standard deviation

In a possible interval from 1 to 5, we found a mean score of 4.2 (interval ranging from 1.92 to 5) for the emotional dimension and a mean score of 4.2 (interval from 2.3 to 5) for the instrumental dimension. As to the reliability of the scales (total and dimensions), the items' internal consistency revealed to be adequate in the study sample, with Cronbach's alpha corresponding to 0.88 (total), 0.74 (instrumental support) and 0.86 (emotional support).

With respect to the social support sources the participants mentioned, we observed that these were relatively equal in the two support categories (Table 3). In the two support types we analyzed, the three sources the participants most mentioned were, in decreasing order: "relative not living in the same house", "husband/wife/partner" and "relative living in the same house".

Table 3 - Frequency of instrumental and emotional support sources mentioned by the participants (N=84). Ribeirão Preto, SP. 2004/2005

Support Source	Instrumental SSC*	Emotional SSC*
Relative not living in the same house	70 (81,4%)	69 (80,2%)
Husband/wife/partner	61 (70,9%)	61 (70,9%)
Relative living in the same house	49 (57,0%)	50 (50,8%)
Neighbor(s)	30 (34,9%)	29 (33,7%)
Friend(s)	28 (32,6%)	41 (47,7%)
Health professionals	04 (4,7%)	16 (18,6%)
Boss/colleague	03 (3,5%)	07 (8,1%)
Others	02 (2,3%)	06 (7,0%)

* Social Support scale

To achieve the second study objective, that is, to check the existing relations between social support and sociodemographic variables, we used non-parametrical linear correlation tests and comparisons between the groups' mean social support scores.

To test the correlation between the social support measures and the continuous variables (age and years of study), we used Spearman's correlation coefficient. The obtained results were: weak but statistically significant correlations between age and the emotional ($r=0.26$; $p<0.05$) and instrumental dimensions ($r=0.26$; $p<0.05$). What the correlation between support and education is concerned, we found weak correlations for both dimensions, but statistically significant for the instrumental dimension ($r=-0.21$; $p<0.05$) and not significant for the emotional dimension ($r=-0.13$; $p>0.05$). Both correlations revealed to be inverse, confirming the relations found in the literature review, which indicated decreased perception of social support as the subject's education level increased.

To analyze the relation between social support and categorical variables (gender and marital status), we used Mann-Whitney's test. We found that there was no difference between the two social support dimensions' scores in terms of the participants' gender and marital status ($p>0.05$). With respect to instrumental support, we found no differences between men (M=4.2; SD=0.51) and women (M=4.0; SD=0.69) and between participants who were married or lived with someone (M=4.2; SD=0.52) and single/separated/widowed patients (M=3.9; SD=0.72). The same was true for emotional support and women, with a mean score of 3.9 (SD=0.85) and men, with a mean score of 4.1 (SD=0.63). The mean score among subjects who were married or lived with someone was 4.1 (SD=0.7), against 3.9 (SD=0.82) among single/separated/widowed participants.

DISCUSSION

After concluding data analysis, we observed that the participants received high levels of social support for the emotional as well as for the instrumental dimension. These results were similar to those obtained for HIV/AIDS patients in a study that used the same assessment scale in Brazil[12].

The results found for the correlations between social support and the participants' age indicated direct or converging statistically significant correlations, although these were weak. These results suggest that older participants assessed the support they received as being more available and satisfactory than younger subjects. Other authors had already highlighted that, among older patients, greater tolerance is perceived about the support received from relatives and friends[2]. They emphasize that, as opposed to younger adults, elderly do not receive that much pressure as responsible for maintaining their family and for daily household and child care tasks. On the other hand, the experiences they have accumulated during their lives allow the elderly to better cope with the losses caused by their chronic health conditions[2].

The analysis of the relation between the perceived support measure and the subjects' education level showed weak and statistically non-significant correlations for the emotional support dimension. However, the direction between the measures confirms the inverse relation between the variables, indicating that, the longer the participants have studied, the lower the perceived social support seems to be[2]. These results are different from those obtained among HIV/AIDS patients, where individuals with higher education levels assessed the support they received more positively[12].

With respect to the relation between social support and marital status, we found no difference between the groups (married/living with a significant person and single/separated/widowed) for the two perceived social support dimensions. A different result was found in another study, in which people who were married or lived with someone obtained higher mean scores, mainly on the emotional support dimension[12].

Another result that attracted our attention was related to the support sources the participants mentioned. We found that, for the two support dimensions, the husbands/wives/partners were not the most mentioned sources, but relatives who did not live in the same house as the patients. In this respect, our study differs from other research that presents higher perceived availability and satisfaction with support, especially in the instrumental dimension, by people living with their husband/wife/partner[16-17]. Some authors believe that individuals who are married or live with a significant person receive greater support in comparison with single, separated or widowed individuals. The perception of greater availability and satisfaction with instrumental support seems to derive from the fact that this modality implies material and operational support in health treatment, which is facilitated by the sharing of expenses and by the spatial proximity between the person providing and receiving the support[16-17].

However, we found diverging opinions, with researchers who have questioned the extent to which the individuals' being married or having a partner guarantees the support they need. They argue that some factors like gender, age and the presence of diseases can justify existing differences in the support obtained from husbands/wives/partners[2]. Moreover, they emphasize that this premise about husbands/wives being the most available support source can create problems among adults in the productive phase. These generally do not expect to assume the role of caregivers for their partner in this phase of their lives[18].

CONCLUSION AND IMPLICATIONS FOR NURSING PRACTICE

We found high levels of instrumental and emotional social support among the participants. Weak but statistically significant correlations were observed between the two dimensions of social support and the study subjects' age. What education is concerned, we found a weak and inverse but statistically non-significant correlation between years of study and instrumental support. No differences in emotional and instrumental support were proved when we analyzed the participants' gender and marital status.

As social support has been a facilitating factor for heart disease patients' coping and recovery, and as the presence of high social support levels has been associated with low stress and depression levels after heart surgery, we suggest that nurses include social support assessment in their care planning.

We believe that social support assessment can contribute to detect persons with greater rehabilitation difficulties. To give one example, people who perceive social support as unsatisfactory or unavailable may feel incapable of changing and behaviors that benefit cardiovascular health, such as: physical exercise, an adequate diet and giving up smoking.

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