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Significant Personal Networks of Patients who Underwent Cardiac Surgery[1]

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Abstract: The personal network established by the patient when facing the cardiac surgical process has a significant impact regarding patients' recovery and rehabilitation. This qualitative study aimed to comprehend the relational dynamics of significant personal networks of patients who underwent cardiac surgery. Twelve post-surgical patients participated in the research. Data collection was carried out through semi-structured interviews and the Social Networks Map. Data analysis was based on Grounded Theory. Family was the most emphasized group mentioned by the participants. The predominant function of the members of the personal network of participants was emotional support, evidencing the relational competencies of the health care professionals. Results highlight actors who are generally invisible in processes of health care, but who are also responsible for it, evidencing the relevance of the relational dynamics of different subjects present in the cardiac surgery process, regarding health care actions that consider patients as protagonists of their treatment.

Keywords: social networks, heart disorders, surgery, coping behavior

Rede Pessoal Significativa de Pacientes Submetidos à Cirurgia Cardíaca

Resumo: A rede pessoal estabelecida frente ao processo cirúrgico cardíaco tem um impacto expressivo na recuperação e na reabilitação dos pacientes. Este estudo teve como objetivo compreender a dinâmica relacional das redes pessoais significativas de pacientes submetidos à cirurgia cardíaca. Doze pacientes pós-cirúrgicos participaram, por meio da realização de entrevistas semiestruturadas e da construção do Mapa de Redes. A análise dos dados foi baseada na Teoria Fundamentada. A família foi o grupo citado com maior ênfase pelos participantes. A função predominante exercida pelos membros da rede pessoal foi o apoio emocional, evidenciando as competências relacionais dos profissionais da saúde. Os resultados salientam atores geralmente invisibilizados pelos processos de atenção à saúde, também corresponsáveis pelo cuidado. Constata-se a relevância da dinâmica relacional entre as diferentes pessoas presentes no processo cirúrgico cardíaco, na construção de ações de cuidado favorecedoras do protagonismo dos pacientes.

Palavras-chave: redes sociais, distúrbios do coração, cirurgia, enfrentamento

La Red Personal Significativa de Pacientes Sometidos a Cirugía Cardíaca

Resumen: La red personal establecida frente al proceso quirúrgico cardíaco tiene impacto significativo en la recuperación y en la rehabilitación de los pacientes. La finalidad de este estudio cualitativo fue comprender la dinámica relacional de las redes personales significativas de pacientes sometidos a cirugía cardíaca. Doce pacientes postquirúrgicos fueran sometidos a entrevistas semiestructuradas y construyeron el Mapa de Red. El análisis de datos fue basado en la Teoría Fundamentada. La familia fue el grupo citado con mayor énfasis por los participantes. La función predominante de los miembros de la red personal de los participantes fue el apoyo emocional, evidenciando las competencias relacionales de los profesionales de la salud. Los resultados destacan actores generalmente invisibles en los procesos de atención a la salud, también corresponsables por el cuidado. Se evidencia la relevancia de la dinámica relacional entre las diferentes personas presentes en el proceso quirúrgico cardíaco, en la construcción de acciones de cuidado que favorecen el protagonismo de los pacientes.

Palabras clave: redes sociales, cardiomiopatías, cirugía, enfrentamiento

The focus of health care policies and practices has shifted, over time, away from actions of conservation and cure and toward health promotion – given that the health-illness process has implications which go beyond the sphere of individual decisions, and recognizing that disease is a stressor which affects the subject and her interpersonal relationships. Within this comprehension, the present study understands the phrase "significant personal network" to refer to the person's interpersonal needs – the sum of all the relationships that the person distinguishes and defines as significant, in her greater relational context. The designation "significant" alludes to the fact that it is the subject who perceives the relationships as such, when she names the network's members, based on the degree of relational/affective bond established. That is to say, the term is defined by the subject, and is strictly related to her experiences and perceptions of relationships (Sluzki, 1997). It is also considered that the topic "social networks" has interfaces with different theoretical and practical stances.

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The interface selected for the interlocution with the hospital/cardiac/surgical context was the psychological/sociological perspective, whose exponent is Sluzki (1997).

Considering this scenario as a starting point, in the ambit of Cardiology, Coronary Artery Bypass Graft Surgery (CABG) can be understood as a process which has repercussions on the individual and family cycles of development. It addresses temporally sequential, although not linear, occurrences, which must be understood in their own multifaceted, multifactorial and complex reality, around which physiological, psychological, social and cultural aspects affect each other recursively (Morin, 1982/2011). This operation is characterized as one of the possible treatments for Coronary Artery Disease (CAD), a chronic and therefore incurable disease. The above-mentioned characteristic of being chronic means that the process of treatment, in relation to the cardiac disease, does not come to an end after the surgery has been undertaken and therefore requires the patient to adopt habits which contain better conditions for the continuation of her life trajectory (Banner, Miers, Clarke, & Albarran, 2012).

In this scenario, it is understood that the personal network established by the patients has a significant impact on their health conditions. Regarding the interlocutions between the "personal network" and "health", Sluzki (1997) emphasizes that a stable, sensitive, active and reliable personal network is an element that protects against illnesses and influences increase in survival. Indeed, one international epidemiological study on the networks of relationships configured around cardiac patients, conducted based on a cohort in the famous Framingham Study observed that the social relationships, even those which are less close, influenced these people's health-related behaviors and habits (Christakis & Fowler, 2009, 2013).

In the light of this information, in the ambit of cardiology, the personal network's importance for the management of the experiencing of surgery is evidenced. It should be highlighted that studies found on the topic, in the context of cardiology, focus on the "social support", a single definition of this concept not being found in the literature, which sometimes refers to the institutional support network, sometimes to specific actors, and sometimes to the teams of health professionals. Furthermore, the studies found on "social support" are based on an epistemological perspective which differs from that adopted in the present study, including studies operationalized through structured evaluation instruments.

In research studies, the relevance of "social support" is highlighted, beforehand, when one finds positive correlation between the frequency of contact with friends and relatives, and the availability of help as reported by patients in life, in general, and also the absence of cardiac symptoms in the postsurgical period (Jenkins, Jono, & Stanton, 1996). Marriage was specified as having a strong protective effect on survival in a five year period after cardiac surgery (Idler, Boulifard, & Contrada, 2012). Consistent with this perspective, the study of King and Reis (2012) evidenced that married people showed a 2.5 times higher probability of being alive 15 years after revascularization surgery of the myocardium than people who were not married, especially when the marriage was seen as highly satisfactory.

Based in the universe of studies found, it is possible to suppose that the functioning of the significant personal network is presented as a complex process, whose understanding requires a dynamic and relational study perspective. In this perspective, the term "dynamic and relational" may be understood as ways through which the subjects relate and interact, being affected recursively.

According to the references of Sluzki (1997), a person's significant personal network may be made up of members from the context of the family, friendships, work colleagues, study colleagues and the community, including – in the context of the community – health systems and social agencies. The significant personal networks can, furthermore, also be analyzed in terms of structural characteristics, functions performed by their members, and features of the bonds (Moré & Crepaldi, 2012; Sluzki, 1997).

The structural characteristics of the network include the properties of the network as a whole, described in the present study in terms of size (number of members). The network's functions, on the other hand, cover the characterization of the type of interpersonal exchange and are categorized as social company (being together), emotional support (supporting, understanding, being empathetic), providing cognitive advice and guidance (sharing personal information and providing role models), social regulation (reasserting responsibilities, neutralizing side-tracking of behaviors), providing material help and help related to services (contributing in specific ways, based in specialist knowledge, or helping in financial or instrumental terms), and access to new contacts.

Finally, the features of the bonds cover specific characteristics of the bonds established by the members of the network. In the present study, these are analyzed in terms of their predominant function or functions. These functions must be understood as the network's "qualifying characteristics", as it is based on these that the personal network is considered significant – in terms of the history of the relational bond established between its members (Sluzki, 1997).

In the light of this characterization, and of the observation that studies were not found addressing the influence of social networks in the context of cardiac surgery, and considering a dynamic and relational perspective, this study aimed to understand the relational dynamic of significant personal networks of patients who have undergone cardiac surgery, in the perspective of postsurgical patients. It is argued, through this proposal, that access to the resources of the subject's significant personal network can instrumentalize professionals and researchers to understand the scenarios with which they work, that being configured as a means of planning interventions in the hospital context and in the context of the community in general.

Method

Participants

This is a qualitative study, whose participants were 12 postsurgical patients, who were service users of a hospital specialized in cardiology in the South of Brazil. The number of interviewees was based on information from a rigorous

study whose methodological objective was to establish the appropriate number of interviews in the scenario of qualitative research for achieving data saturation regarding the topic studied (Guest, Bunce, & Johnson, 2006).

The present study's participants were recruited intentionally, through the selection of people whose characteristics could bring significant information regarding the topic in question, considering the objectives proposed by the study (Turato, 2013). The inclusion criteria for the participants, aiming to achieve homogeneity in terms of the characteristics of the profiles (Guest et al., 2006), were: (a) to be over 18 years old; (b) to have undergone cardiac surgery for the first time; (c) to have undergone the surgery on an emergency basis; (d) to have undergone only coronary artery bypass graft surgery, without concomitantly having undergone other cardiovascular surgery; and (e) that the surgery should have taken place in the 6 to 12 months period prior to the meeting with the researcher for carrying out the research.

The participants' ages varied between 54 and 79 years old. The length of time since their surgery varied from five months 13 days to one year and one month. Seven men and five women participated in the study. Regarding their marital situation, five patients mentioned being in a stable relationship. Of these, three lived only with their partner, and two with a partner and another family member. Four participants were widowed, of whom two lived with their children, and two lived alone. One participant was separated, and lived with a grandson. The participant who reported being single lived with a brother, and the participant who reported being divorced lived alone. It is worth emphasizing that none of the interviewees had participated or were participating in institutional programs for cardiovascular rehabilitation.

Instruments

Semistructured interview. An interview script was devised, consisting of two parts. The first addressed items for characterizing the interviewees' profile through a questionnaire on sociodemographic data. The second part of the script was made up of questions which aimed to build up knowledge of the process of cardiac surgery, seeking to understand the perspective of the networks which were configured around the experience.

Network Map. The interview script offered support for constructing the Network Map (Sluzki, 1997). This instrument was used as a form of support, in step with the progression of the interview, in order to characterize the participants' significant personal network graphically – deepening understanding of the content related to the personal network named by them. The instrument is made up of three concentric circles, divided into four quadrants, providing an objective view of the characterization of the patient's potential significant personal network in relationships with friends, family, work and study colleagues and the community. In graphic terms, the subject studied is represented by the central circle, while the members of her personal network are to be located in terms of the content in which they are found and the extent of the commitment and closeness between them. Bearing in mind that – in the context of the community – the present study focused on the health services, this item was included in the Diagram and was subdivided into two contexts of healthcare – Hospital Care and Primary Care, as shown in Figure 1.

To clarify: as some participants mentioned, beside specific people, groups of people who were included as members of the significant personal network, the present study will use the following terms: member (referring to a specific person named as constituting part of the participants' network), group (referring to groups of people, named by the participants as part of their network as a set) and Participant (a generic term for both members and groups named by the participants as parts of their personal networks).

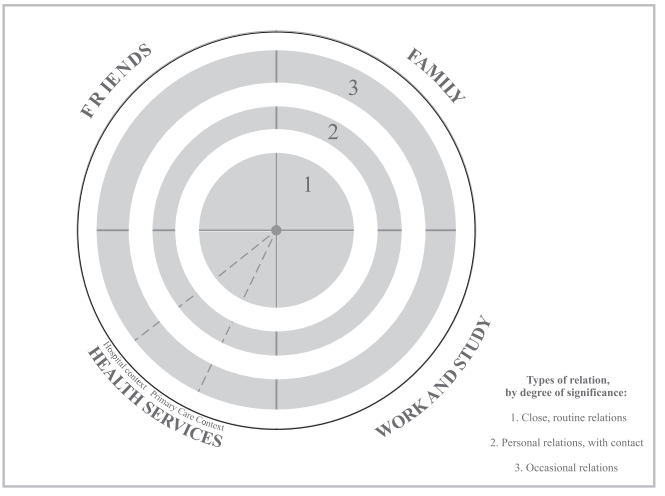

Figure 1. Model of Network Map (Sluzki, 1997). Adapted with the addition of the items Hospital Context and Primary Care Context, with permission.

Procedure

Data collection. Contact with the institution was made via the person responsible for the hospital's Clinical Psychology Service. After the procedures for formalizing the study with the Research Ethics Committee had been considered, access to the potential participants took place personally, through the mediation of the medical team, which indicated the patients whose profile made them suitable to participate in the study. Data collection took place between March and May 2014, with the interviews being held in a space which was appropriate for this purpose, made available by the hospital institution. The group of participants was made up of three patients who used the outpatient consultation service through health insurance, and nine patients using the Unified Health System's (SUS) outpatient service. The semistructured interview was held first (main instrument), followed by the Network Map (supporting instrument) constructed with the participants, in accordance with the proposal of Moré and Crepaldi (2012). The entire process was recorded and transcribed so that it could be analyzed.

Data analysis. The process of organization and analysis of

the data was based in the precepts of Grounded Theory (Strauss & Corbin, 2008). Successive readings of the material were made, which was organized in categories, based in the recursive process of open, axial and selective codification. This process was facilitated by the use of the Atlas-ti software, which enhanced the process of organization and systematization of the data.

Ethical Considerations

The present investigation was undertaken subsequent to the approval of the Ethics Committee for Research involving Human Beings, under Opinion No. 20968713.0.0000.0121, of 9th September 2013. The study complied with the precepts of Resolution 466/2012, of the National Health Council, which regulates the conditions of studies involving human beings, considering ethics and the preservation of the participants' anonymity. In order to preserve anonymity, the participants will be identified throughout the presentation and discussion of the results by the letter P, followed by a number indicating the order in which the interviews were held, by the participants' age, sex (M for male and F for female) and post-operative time (PO).

Results and Discussion

The set of categories of analysis centered around the present study's objective aims to systematize the data, so as to depict and present the specific characteristics of the relational dynamic of the personal networks. The analysis was anchored in the Network Map instrument, which analyzes the specificity of the relational commitment, with support in the analysis of the bonds constructed, in four different contexts, based in which the categories below are named.

Relationships in the Context of the Family

This category emphasizes the dynamic of the bonds, established based in the relational commitment constructed by the participants with the members of their significant personal network, in the context of the family, as well as the functions attributed to the members in this context. In the general ambit of the Network Map, the family is the group mentioned with the greatest emphasis by the participants, whether quantitatively (in terms of numbers of members mentioned, and of distribution in the different levels of proximity), as may be observed in Figure 2, or qualitatively (in terms of emphasis in the narratives).

Figure 2 emphasizes the mention, by the participants, of 66 members and one group in their networks in the context of the family, totaling 47.86% of the total number of members mentioned on the Map. In this scenario, mentions of children as sources of support predominated (18 members, representing 26.86% of the total number of members in the relationships in the family). This scenario may be understood through the allusion to the stage of development in the family life cycle in which the participants find themselves, as the stages of mid- and late life are characterized by the construction of a more egalitarian, adult-to-adult relationship between parents and children, and also have a more central function than in other phases, in relation to the care for the parents (Carter & McGoldrick, 2001).

Figure 2. Networks Map configured around postsurgical cardiac patients who participated in the study.

The functions mentioned most as being exercised by family members were emotional support, material support, and support in terms of services. In order to understand better the meaning of the family for the participants, it is appropriate to emphasize that it was to the family that the following characteristics were attributed: "support . . . Giving words of encouragement, that everything would go okay" (P4, 57 years old, M, 8 months P.O.), as well as material help and help related to services, and for the performance of routine tasks, as the following account notes: "Doing everything that I need. Washing the clothes, washing everything . . . Going to the bank, everything is her. " (P3, 54 years old, M, 5 months 18 days P.O.).

These functions may be understood as analogous to those found in the study of Bin, Costa, Vila, Dantas and Rossi (2014), in the perspective of "social support" (emotional and instrumental support). In that study, the participants indicated the relationship of dependence on the family established after the cardiac event, to the extent that the members of this relational nucleus were indicated, in the study, as the main articulators of the relationships established by the patients with the other relational contexts.

Complementing the quantitative data glimpsed through the analysis of the maps (Figure 2), the analysis of the narratives regarding the relational commitment established between the participants and their family members allows one to underline, from the qualitative point of view, regarding the establishment of bonds, the presence of ambivalent feelings given rise to within the family relationships. These relationships, on the one hand, provide the participants with the feeling of security which sustains them (emotionally and instrumentally); but on the other, they are characterized as causing a context of dependency to emerge, in which the care provided is considered excessive.

As a result, it is evidenced that some family members may exercise functions which exceed the performance of the material and instrumental support, for example. This is

a type of function of support understood by the participants, eventually, as having a counterproductive effect for their rehabilitation, to the extent in which some family members exercise a hindering attitude, hindering the subjects' return to their activities and tasks, as the account below taken from P6's narrative evidences: "My husband, he is, like . . . No, you're not doing this, you're not doing that' . . . I think that he wants to do so much, to protect me so much, that he ends up suffocating me." (P6, 63 years old, F, 8 months P.O.).

It may be observed, as exemplified in the above report, that the existence of a relationship permeated by care which is considered excessive by the participants can act as a factor that hinders the processes of recuperation and rehabilitation. Analogous data were observed in the study of Erdmann, Lanzoni, Callegaro, Baggio and Koerich (2013), which observed that the postsurgical condition can accentuate situations of family conflict, mainly regarding the family's demands in relation to changes in the patient's lifestyle.

In this regard, it is emphasized that the function and effectiveness of the bonds constructed, in terms of support, must be considered in terms of more than just the quantitative aspects (number of members in the network, as expressed in Figure 2) – valuing, in a complementary fashion, the quality of the relational commitment established and the meaning of the bonds, in the perspective of the subjects involved in the relationships. Through this complementary analysis, one can observe all the relational dynamic established, that, in terms of different levels of relational commitment, hides and presents dilemmas constructed in the patients' relationships with the members of the networks, through the demands made to adopt healthy lifestyles compatible with the health care related to the cardiac problems.

Relationships of Friendship

This category brings together the set of relationships of friendship established by the research participants, based in the different levels of relational commitment established and in the different functions attributed to the networks' members. In comparative terms, regarding the number of members and the different contexts of the personal network, Figure 2 emphasizes that the relationships of friendship appear in second place – totaling 30 members and three groups. Furthermore, from the participants' perspective, the predominant function of the members in the context of the relationships of friendship was emotional support.

According to the results found, it is clearly evidenced that the friendships configure relevant elements, as resources in coping with cardiac surgery, for the subjects who undergo this procedure – agreeing with the results of the study of Bin et al. (2014), which, studying from the perspective of "social support", observed that the most important people in the personal network, for the patients who undergo the surgery, were the family members and friends.

Besides this, when one analyzes the quadrant of the relationships of friendship in the Map (shown in Figure 2), it is worth noting the reduced number of friends mentioned in the participants' personal network; three participants did not mention friends, and eight participants mentioned only from one to three members in the quadrant for relationships of friendship. Differing from this scenario, one participant mentioned 20 friends in her significant network. This discrepancy may be understood in the light of the uniqueness of the participants' experiences (Sluzki, 1997), in terms of relational dynamics. It is understood that, as a general rule, it is the relationships in the family context that most consistently act as foundations for the subject, in terms of functions performed, for coping with crisis situations, represented by the disease. In the case of P11, however, considering the weakening of the network of family relationships, the relationships in the context of friendships shaped bonds which strengthened her for managing the crisis situation represented by the operation, as the following narrative illustrates: "As I told you, our family is small. I have one friend, who is like family, and if I need anything, I tell her, I can tell her" (P11, 59 years old, F, 10 months P.O.).

In a general reading, the present category depicts that although the relationships of friendship are not significant numerically, when one considers the personal networks of each participant, they may be effective – to the extent that the qualitative aspects of the relationships established (features of the bond constructed) supplant the need to have many people close as supporters in relation to the surgical process. Aligned with the same understanding, however, based on a perspective which does not focus on the issue of "social networks", King and Koop (1999) evidenced that the perceived satisfaction with social support by the patients in the process of undergoing cardiac surgery is related to the qualitative aspect of the care, and not necessarily to the number of people capable of offering support.

In the light of this perspective, it is understood that the relationships of friendship can be rendered invisible by the very dynamic of the surgical process, in the context of healthcare; given that, comparatively, the family members are evidenced more than friendships, regarding the planning of care actions. Based in this idea, the present category points to the relevance of considering the relationships established by the patient in the context of friendship, in the sense that these relationships can be used as strategic alliances in the planning of health interventions.

Relationships in the Context of the Community

This category brings together elements which evidenced the relational commitment, in terms of bonds established by the participants with persons in the context of the community, in general, as well as with people in the context of the health services, emphasizing the functions of support taken on by the members mentioned in this context.

In terms of the size of the networks, as shown by Figure 2, the data reveal little reference made to members in the context of the community, with six participants mentioning having nobody in this context as a member of their significant personal network. Of the other six participants who mentioned participators of their network in the ambit of the friendships, emphasis is placed on the mentioning of neighbors by three people, a context also present for postsurgical cardiac patients studied in the perspective of "social support"

(Bin et al., 2014). In the above-mentioned study, the relationship of "neighborliness" was indicated as providing emotional and instrumental support after the surgery. Under the same logic, the results emerging in the present study indicate emotional support as a predominant function of the members of the participants' significant network, in the ambit of the community.

It is also observed, when the four quadrants on the map are compared, that the context of the community (including the scenario of health services) is the space in which more "groups" were mentioned as participators in the participants' significant personal network (Figure 2). These data emphasize that – although it may not be possible to individually name some participators in the network, their functionality appears in the collectivity – that is, specific groups of subjects are signified as exercising the same function of supporting the patient who undergoes cardiac surgery.

This reality may be better understood when the bonds established with the health professionals are analyzed, both in the hospital ambit and in the context of primary care. It may be observed that, in these contexts, four groups were mentioned as participators of the participants' significant personal network, indicating that, in the scenario of healthcare, the participants mention that there is a team contribution on the part of health professionals who treat them, validating the joint effort of the care in relation to their condition. Contrasting these results, patients who had undergone CABG and who participated in the study of Bin et al. (2014) on social support mentioned that there was no type of continuous support on the part of the health professionals subsequent to discharge from hospital, highlighting the perception that they did not feel cared for once they were out of the hospital's doors. Emphasis is placed, therefore, on the demand for continuity of care and continued treatment by the health team throughout the surgical process, which includes the period of recovery and rehabilitation. This relevance is reiterated through a study conducted with patients with CAD, the results of which point to the relationship between "perceived social support" on the part of the patients, offered by the health professionals, and the undertaking of physical activity (Won & Son, 2017).

In relation to the health scenarios which the patients were passing through, as can be ascertained in Figure 2, the numbers of participators mentioned in the ambit of hospital care and primary care were similar. In addition to this, it should be highlighted that the actors mentioned in this context were physicians, nurses and a psychologist. The centrality of the physician in the health care services in cardiology is mentioned by the participants in the present study, as the physician was the professional mentioned most by them (of the 13 members and four groups mentioned as participators in the interviewees' significant network, eight were physicians).

Based in the analysis of the narratives and of the maps, it is also observed that although the flow of care for the health of the patient linked to the Unified Health System (SUS), in a period after discharge from hospital directs him to Primary Care, the hospital ended up continuing to be the reference for seeking care. Of the nine participants who were service users of the Unified Health System (SUS), two mentioned only professionals from the hospital context, two mentioned professionals from the Primary Healthcare Center, and one mentioned professionals from both contexts. This panorama confirms the relevance of hospital care in the scenario of healthcare, in the ambit of cardiology, principally because it involves practices which are supported by technological resources involving diagnosis and treatment, modelled on a perspective of understanding the health-illness process which is highly biomedical (Wottrich & Moré, 2015).

The present study's results indicate, however, that – in the patients' perspective – the relational schemes and bonds constructed between health professionals and service users occupy a prominent position. Such importance is apparent from the mentioning of the function of emotional support, attributed predominantly, by the participants, to the health professionals in their networks, as evidenced in the narrative of P9: "Even nowadays . . . I drop in there, to get my blood pressure measured, to see my glucose level, things like that, and they (the nurses in the Primary Healthcare Center) are great. They say things like: 'Oh, how well you are!'" (P9, 67 years old, M, 9 months P.O.).

Based in this narrative, one can understand that "feeling listened to" in the relationship with the health professionals who undertake care actions in cardiology was valued overwhelmingly by the patients. Similar data may be found in the results obtained by Sarkar et al. (2011), who equally refer to this being an important element for building relationships in which the patient feels respected and included in her treatment.

The discussions woven in this category relate to the importance of the context of the community as a space for articulating healthcare. Above all, emphasis is placed on the relevance attributed to the health professionals as potential members of the patients' significant personal networks, allowing one to see that, in addition to their technical and instrumental competencies, they are valued fundamentally for their relational competencies and by the bond constructed with the subject who is sick.

Relations in the Context of the Work

This category relates to the relational scheme established by the participants in the context of work, taking into account structural characteristics of the networks established, the degree of relational commitment present, and the functions taken on by the participators. The data which emerge depict little reference to members of the significant personal network in the work context (in the General Map of Networks there are seven members, shown in Figure 2). As a resource for understanding this panorama, it is appropriate to mention that, of the 12 interviewees, six were not undertaking work activities at the time of the interview, due to the surgical process itself or to the phase of their life cycle the participants were experiencing (two were retired due to length of service). The difficulty in the scenario of professional life after surgery is a context corroborated by other studies, according to which restrictions in relation to carrying out work activities after cardiac surgery entail emotional and financial repercussions for the patients (Callegaro, Koerich, Lanzoni, Baggio, & Erdmann, 2012; Erdmann et al., 2013).

Based in the different levels of relational commitment

indicated in the map, the set of data allows one to infer that, although few in number, work colleagues occupy a relevant place, in terms of affective proximity, as four participators were named in the level of close relationships, and five participators in the level of intermediary relationships (Figure 2). This relevance is confirmed, furthermore, by the observation that four participants included ex-colleagues and an ex-boss in the network named by them, even though they were no longer working, confirming that the bonds in this scenario lasted and were accepted as available resources, which were actioned during the coping with the surgical process, as it is possible to see in the following account: "But every time I come round, she (the ex-employer) always makes me take something home, gives me some money, you know. She is always helping me" (P10, 52 years old, F, 1 year P.O.).

The present category emphasizes important data to be considered in the ambit of the management of people in the organizations, in the sense of considering the functions of the bonds constructed in the work context. On the one hand, emphasis is placed on the existence of few members in the context of work in the participants' significant personal network, a fact which may be understood due to the subjects' withdrawal from professional activities. On the other hand, it is evidenced that the relationships established in the context of work are configured as potential resources to be activated in the situation of crisis represented by the surgical process. The possibility of activating these resources seems to involve the existence of a history of constructing bonds, which allows the participants to feel authorized to access people who – although remote physically – keep themselves available as a potential source of support.

Considering the set of data presented in the present study, and in terms of the same's final considerations, through a comprehensive perspective on the dynamic of the relational plot constructed around the surgical process, the results emphasize actors who are generally invisibilized in health care processes, indicating the existence of people who are co-responsible for the care, who significantly affect the directions of the processes of adherence to the treatment and of quality of life. These data relate to the relevance of the configuration of alliances between the various people present in the cardiac surgical process, as a base for the construction of care actions, with a view to the patients' protagonism. The data which emerge from the present work validate that, in the light of the demands generated by the surgical process, their network of relationships is structured around the function of emotional support. In this perspective, an important evaluative burden is attributed to the affective aspects around which the process of bonding takes place in the context of the family, community, work-related and friendship-related relationships, in the interviewees' relational universe.

It should be indicated that in the scientific literature, in the context of cardiology, there is recognition of the effective influence of the social network configured around an individual, through the epidemiological study undertaken with the cohort of the Framingham study, mentioned in the introduction to this text. The present study advances in the sense of penetrating the dynamic of the networks configured around the cardiac surgical patients, emphasizing the specific characteristics of the members and of the functions of these networks, in different scenarios (family relationships, relationships of friendship, in the context of the community/health services and of work), taking into account that studies that discuss the relational dynamic existing between the different actors present in this breadth of contexts are not to be found in the literature.

In methodological terms, in the ambit of the study, the Network Map made it possible to penetrate the participants' relational world, allowing a comprehensive perspective on the bonds constructed around the surgical process, within a relational and dynamic aspect. Bearing in mind that the original proposal for the application of the Map is based on the context of clinical intervention in health, given the instrument's potential, in the ambit of the study, as well as its easy application, it is suggested that this instrument should be incorporated not only in studies focusing on the health-illness process, but also in the routines of professionals in contexts of healthcare.

The study was centered on the relational universe of patients from a single healthcare center, in a specific region of Brazil, in a specific part of the experience of the surgical process. It is considered, based in the understanding that context generates meanings, that longitudinal studies, held in different socio-cultural and institutional contexts, could be added to this one. In this regard, it is suggested that studies should be undertaken which represent contextual and time differences in the configuration of the patients' relational universe, seeking to compare the different contextual and temporal configurations of the map with the people's lifestyles and health-related habits.

The results discussed in the study make it possible to see the personal networks in the health care practices as a possible strategy for promoting health and individual, family and relational development in situations of illness and crisis. In this regard, the characteristics of the health professional, included as an actor and potential actioner and/or mediator of the patients' personal networks, are created in the milestone of an epistemological position of recognition of the complexity of the analysis of the health-illness phenomenon, which requires an integrative perspective and which tensions the care model currently in place. The present study's results allow, based in this tensioning, the recursive effect of constructing health practices, in the ambit of cardiology, marked out by the principle of Integrality.

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