SIGNIFICANT SOCIAL NETWORKS OF HIGH-RISK PREGNANCIES: A QUALITATIVE STUDY

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ABSTRACT. Significant social networks are important resources to cope with periods of transition during which adaptations are required in the face of unknown situations, such as high-risk pregnancies. This study aimed to understand the relational dynamics of significant social networks of high-risk pregnant women. This is a qualitative study carried out with 13 women who were cared for in a high-risk prenatal outpatient clinic located in the southern region of Brazil. Data collection was done through a semi-structured interview and the construction of social network maps. Data were submitted to content analysis proposed by Bardin and organized using the Atlas.ti 7.0 software. Results showed that there was a predominance of large networks, with a higher concentration of family members, especially the partner and the mother of the pregnant woman. It is worth mentioning the emotional support of the members of the network, the centrality of the doctor in high-risk care, and the importance of the support given to pregnant women for them to practice healthy habits and self-care.

Keywords: Social networks; high-risk pregnancy; qualitative research.

REDES SOCIAIS SIGNIFICATIVAS DE GESTANTES DE ALTO RISCO: UM ESTUDO QUALITATIVO

RESUMO. As redes sociais significativas constituem importantes recursos de enfrentamento diante de períodos de transição, em que são exigidas adaptações frente a situações difíceis, como no caso de uma gestação de alto risco. Este estudo objetivou compreender a dinâmica relacional das redes sociais significativas de gestantes de alto risco. Trata-se de uma pesquisa qualitativa, da qual participaram 13 mulheres que estavam sendo acompanhadas em um ambulatório de pré-natal de alto risco, localizado na região Sul do Brasil. A coleta dos dados ocorreu por meio de um roteiro de entrevista semiestruturada e da construção de mapas de rede. Os dados foram submetidos à análise de conteúdo proposta por Bardin e organizados com auxílio do *software* Atlas.ti 7.0. Os resultados mostraram que houve predomínio de redes grandes, com maior concentração de membros da família, em especial do companheiro e da mãe. Destaca-se o apoio emocional como principal função desempenhada pelos integrantes da rede, a centralidade

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do médico nos cuidados de alto risco e a importância do apoio prestado às gestantes, na prática de hábitos saudáveis e no autocuidado.

Palavras-chave: Redes sociais; gestação de alto risco; pesquisa qualitativa.

REDES SOCIALES SIGNIFICATIVAS DE GESTANTES DE ALTO RIESGO: UN ESTUDIO CUALITATIVO

RESUMEN. Las redes sociales significativas constituyen importantes recursos de afrontamiento ante períodos de transición, en los que se requieren adaptaciones frente a situaciones difíciles, como en el caso de una gestación de alto riesgo. El estudio objetivó comprender la dinámica relacional de las redes sociales significativas de gestantes de alto riesgo. Se trata de una investigación cualitativa, en la que participaron 13 mujeres que estaban siendo acompañadas en un Ambulatorio de Pre-natal de alto riesgo, localizado en la región Sur de Brasil. La recolección de los datos ocurrió por medio de un guión de entrevista semiestructurada y de la construcción de Mapas de Red. Los datos fueron sometidos al análisis de contenido propuesto por Bardin y organizados con ayuda del software Atlas.ti 7.0. Los resultados mostraron que hubo predominio de redes grandes, con mayor concentración de miembros de la familia, en especial del compañero y de la madre. Se destaca el apoyo emocional como principal función desempeñada por los integrantes de la red, la centralidad del médico en los cuidados de alto riesgo y la importancia del apoyo prestado a las gestantes, en la práctica de hábitos saludables y en el autocuidado.

Palabras clave: Redes sociales; gestación de alto riesgo; investigación cualitativa.

Introduction

Pregnancy is one of the most significant transition processes in the individual and family life cycles. It is marked by the beginning of a new generation and the acquisition of a new role in the family, in addition to changes in the personal, marital, and professional spheres (Cerveny & Berthoud, 1997; Li, Long, Cao, & Cao, 2017; Piccinini, Carvalho, Ourique, & Lopes, 2012). The hormonal, physical, psychological, and social changes experienced by the pregnant woman can represent a moment of crisis in psychological development. This is characterized by a temporary period of disorganization in the face of intrapsychic and interpersonal changes imposed by pregnancy, which can generate emotional instability and, at the same time, be an opportunity for personal growth (Cerveny & Berthoud, 1997; Maldonado, 2005; Piccinini, Gomes, Nardi, & Lopes, 2008).

According to the Brazilian Ministry of Health, approximately 10% of pregnancies are high-risk pregnancies. Such a condition can negatively affect the health and well-being of the baby and mother, contributing to negative outcomes for both during pregnancy, childbirth, and/or puerperium (Gestação de alto risco: manual técnico, 2012). The high-risk diagnosis may be due to individual characteristics and sociodemographic conditions of the pregnant woman; history of abortion; previous premature birth; hemorrhagic syndrome; arterial hypertension; diabetes; infectious diseases; autoimmune diseases; neoplasms; obstetric diseases in current pregnancy; and newborn malformation (Gestação de alto risco: manual técnico, 2012).

Individualized care, changes in routine, concerns about the baby's health, the imminence of labor, and maternal responsibilities can make pregnant women fearful and

insecure, which can intensify their state of vulnerability and need for attention (Cankorur, Abas, Berksun, & Stewart 2015; Maldonado, 2005). Therefore, a significant social network (SN) is an important coping resource in periods of transition and change in which adaptations are required in the face of challenging and unknown situations during pregnancy (Li et al., 2017; Mlotshwa, Manderson, & Merten, 2017).

According to Sluzki (1997), a significant SN is the set of people who the individual considers important due to their history, level of intimacy, and quality of the relational commitment and has a different relationship when compared to other socially established relationships. A significant SN includes family, friends, and members of the community (neighbors, religious connections, health and care services), work and school, and the support offered by them can be an enhancer of the individual's personal resources (Sluzki, 1997).

Moreover, Sluzki (1997) points out that a network which is accessible, stable, and attentive to the individual's needs contributes to the recognition of competence, self-esteem, identity, belonging, and adaptation when facing stressful events. In the context of pregnancy, as reported by Maldonado (2005), feeling cared for and supported during this period can favor the availability of the mother's affection toward her child after birth.

A meaningful social network can be understood based on its structural characteristics, functions performed, and types of bonds. The structural characteristics are related to a) size, that is, the number of individuals that constitute it; b) density, the quality of the relationships between members of the network and the importance it has on the individual; c) composition or distribution, the location of each member in each quadrant and circle; d) dispersion, the distance between the individual and the members of the network and the accessibility of contact with them; and e) homogeneity or heterogeneity, which are related to variables such as age, sex, culture, socioeconomic level, as a way to identify the differences and similarities of the members of the network (Sluzki, 1997).

The functions performed by people in the network include a) social companionship, that is, sharing the company of someone for carrying out activities or just being together; b) emotional support, for emotional exchanges such as empathy and support; c) cognitive guide and advice, for assisting with the sharing of information and reference models; d) social regulation, for reiterating responsibilities and roles and contributing to conflict resolution; e) material support and services, aiding financially or health services; f) access to new contacts, the possibility of establishing a relationship with individuals who were not part of the network (Sluzki, 1997).

The types of bonds, on the other hand, correspond to the characteristics of the relationships established between the individual and the members of the network. They are: a) predominant functions, that is, the main functions of this bond; b) multidimensionality, how many functions it has in the network; c) reciprocity, if both people perform the same functions; d) intensity, the degree of intimacy/commitment to the relationship; e) frequency of contact, regularity in which people establish contact, the greater the distance, the greater the importance of the contact to ensure the intensity; f) history of the relationship, how long they have known each other and what motivates the maintenance of the relationship (Sluzki, 1997).

Studies on social networks during pregnancy have pointed out family members as the main members of pregnant women's networks, especially the partners and the emotional support provided by them (Aktas & Calik, 2015; Cankorur et al., 2015; Oliveira & Dessen, 2012; Gebuza, Kaźmierczak, Mieczkowska, Gierszewska, & Kotzbach, 2014; Mlotshwa et al., 2017). Friends are the second-most mentioned when considering the frequency of

support offered (Bäckström et al., 2017; Khooshehchin, Keshavarz, Afrakhteh, Shakibazadeh, & Faghihzadeh, 2016; Li et al., 2017; Mlotshwa et al., 2017).

The support of important people has been positively related to healthy habits on the part of pregnant women (Khooshehchin et al., 2016). Bäckström et al. (2017) demonstrated that pregnant women who feel supported and protected by their partners tend to seek more educational information about care during pregnancy. For the authors, knowing that they can share the experiences of the pregnancy period with the partner makes pregnant women feel more relaxed and motivated for practicing self-care.

On the other hand, Khooshehchin et al. (2016) found that having good relationships with family and friends favors the development of healthy lifestyles when considering care with food and other daily activities during pregnancy. Thus, the perspective of relational dynamics, which is the understanding of the structure and functioning of its members, how they organize, establish, and maintain bonds (Cerveny & Berthoud, 1997), can help with the comprehension of how significant social networks assist pregnant women and good gestational development.

Regarding studies on high-risk pregnancies, there has been little research at national and international levels on this subject (Kliemann, Böing, & Crepaldi, 2017). Similarly, there is a lack of investigations that aim to understand in depth the singularities of social networks, given that the scientific literature has based itself predominantly on the perspective of 'social support', one of the functions performed by the social network (Gonçalves, Pawlowski, Bandeira, & Piccinini, 2011), and on analyses using psychometric assessment instruments (Aktas & Calik, 2015; Cankorur et al., 2015; Gebuza et al., 2014).

Considering this scenario, this study aimed to understand the relational dynamics of significant social networks of high-risk pregnant women. The results of this study may assist theoretical and practical advancements in this field of knowledge, thus, enabling a better performance of health professionals and improvement of the action planning to promote prenatal care. It is believed that understanding the relationships established with the significant social network may contribute to the personal, marital, and family development of high-risk pregnant women, making these significant people co-producers of the bonds and active agents in the pregnancy process and the support offered to these women.

Method

Participants

This is a qualitative, descriptive, and exploratory study. Thirteen accompanied pregnant women participated in this trial at a high-risk prenatal public outpatient clinic in a hospital in the southern region of Brazil. The selection was done following this inclusion criteria: a) pregnant women in the third trimester of high-risk pregnancies who b) aged 18 and over. Pregnant women with the following diagnoses were excluded: a) fetal malformation; b) chemical dependency; c) severe and/or disabling mental disorder.

Participants were chosen by convenience sampling of the intentional type (Sampieri, Colado, & Lucio, 2013) and the number of respondents was defined by the theoretical saturation criterion, as proposed by Guest, Bunce, and Johnson (2006).

Collection instruments and techniques

The following data collection instruments and techniques were used:

a) Semi-structured interview script guided by 1) sociodemographic data, 2) open questions about high-risk pregnancies, and 3) open questions about their significant social network. After the interview, the social network map was built.

b) Social network mapping, aiming to register, using a graphic model, the members that make up an individual's significant social network at a certain point in their life (Moré & Crepaldi, 2012; Sluzki, 1997). The design was based on the network map model proposed by Sluzki (1997). It is composed of four quadrants, family, friendship, community (including health and care services), and work and/or study relations, and three concentric circles that portray the participant's level of intimacy and relational commitment (Figure 1). The inner circle represents the most intimate relationships; the intermediate circle, the personal relationships with a lower level of commitment; and the outer circle, occasional relationships (Sluzki, 1997).
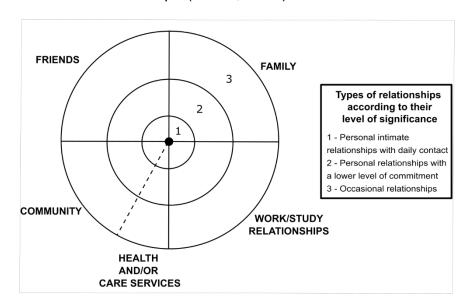
Figure 1. Model for a personal social network map (Sluzki, 1997).

Data collection

The contact with the institution was established through the person responsible for the psychology department within the outpatient clinic, who helped the authors with setting and understanding the working dynamics. The health professionals who worked at the outpatient clinic were asked to select pregnant women who fit the inclusion criteria according to the information obtained from their medical records. The researcher, then, contacted the pregnant woman directly while she waited for a medical consultation to invite her to participate in the trial. The collection took place in offices available at the clinic. It started with the gathering of sociodemographic information, followed by a semi-structured interview and the construction of a social network map. The interviews were recorded for later transcription and analysis.

Data organization and analysis

Data analysis was carried out through thematic content analysis, as proposed by Bardin (2011), in three phases: 1) pre-analysis; 2) exploration of the material; and 3) treatment, inference, and interpretation of the results. Categorization, that is, the establishment of categories after the collection, was performed together with the data analysis (Bardin, 2011). The interview data were organized with the aid of the Atlas.ti software (version 7.0) and the category names were based on the participants' narratives, network map quadrants, and literature.

Ethical considerations

This study was approved by the Human Research Ethics of the university of the authors under number 2.572.242. All rules applicable to research in human and social sciences were respected, according to Resolution no. 510/2016 of the Brazilian National Health Council. In order to preserve the anonymity of the participants, they were identified by the letter P, followed by the number in the order of the interviews, age, and high-risk condition, for example, P01, 24 years old, twin pregnancy.

Results and discussion

Characterization of participants

Thirteen pregnant women, aged between 18 and 38 years, participated in this study. Four subjects had completed higher education; three had incomplete higher education; three had completed secondary education; two had incomplete secondary education; and one had incomplete elementary education. As for religion, six were Catholic, five evangelical Protestants, and two Spiritualists. Eight participants were in a stable relationship and five were married. Five women already had children and eight were in their first pregnancy. All participants worked and their average monthly family income was R$2,861.53.

Regarding the pregnancy period, the gestational week ranged from 28 to 37 weeks. The high-risk conditions were twin pregnancy (four cases), diabetes mellitus (three cases), and arterial hypertension (three cases). There was also one case of each of the following health problems: thrombocytopenia, Von Hippel-Lindau syndrome, obesity, intestinal adherence, thalassemia, and chronic urticaria. It is noteworthy that three pregnant women had more than one high-risk condition.

The results and discussion of the categories created from the data analysis are presented next. They are structural characteristics of significant social networks, family relations, friendship relations, community relations, and work and study relations.

Structural characteristics of significant social networks

This category concerns the structure of the pregnant women's significant social networks as to size, composition, dispersion, and homogeneity, which was subcategorized. Regarding size, large networks were predominant, with nine participants reporting SN of 13 to 29 members. Three respondents had medium networks (8 to 9 members) and one had a small network (6 members). Oliveira and Dessen (2012) found different results from these in their qualitative research on support networks for pregnant women, as they observed the predominance of small networks. Such a difference may be because the participants in their

study restricted their network mainly to family members, whereas the ones in this research also listed friends and people from the community. Moreover, Sluzki (1997) points out that neither small nor large networks are ideal. The author argues that medium-sized ones are the most effective, as they are organized better to offer support. Networks with few members can overwhelm them, which may cause emotional distress and lead to their social disengagement. On the other hand, large networks can be ineffective because the support function, as they have many members, is attributed to others.

Considering the composition, a total of 194 members formed the social network maps of the 13 participants. Out of these, most (98) were in the family quadrant, and from these, 58 were in the inner circle of the map (which indicates the highest level of intimacy). The friendship and community networks had a similar number of members, 42 and 46, respectively, and a predominance of members in the inner circle. The work and study relations was the one with the lowest number of members, totaling 8. These results reveal that, in all quadrants, most individuals belonged in the most intimate circle. That is, of a total of 194 members cited in all network maps, 111 were in the circle with the highest level of relational proximity for these pregnant women. It is possible to consider that the greater the proximity, the greater the intimacy and the relational commitment between those involved, and this can result in a greater frequency of contact during which the participants are surrounded by important people to whom they can turn during pregnancy.

With respect to dispersion, members who migrated to other cities, states, and/or countries were only included in the family quadrant and these people, in their majority, were placed in the most distant circles. However, the physical distance was not decisive for the emotional distance of the pregnant woman and the members of the network, as their contact occurred through electronic means and the internet. Thus, Sluzki (1997) states that the distance between the individual and the members of the network affects the contact and support received, since the lower the dispersion, the greater the ease of access and the agility in responding to support needs. However, the author recognizes that the transformations that have occurred with the internet have opened possibilities for interaction and maintenance of interpersonal relationships.

Family relations

This category includes the family members who integrated the networks of the participants throughout the pregnancy, as well as their relational commitment and functions. Similar to the results evidenced by Bäckström et al. (2017) and Khooshehchin et al. (2016), in which family members were the most significant and mentioned in terms of frequency, family corresponded to 51% of the total members of the network maps in this study. Among the most cited people, there were those from the nuclear and original families, especially the partner and the mother, indicated by 13 and 12 participants, respectively. One single woman did not name her mother as she was already dead. Among the five pregnant women who had children, four included the other child in their maps. Father and siblings were mentioned by eight women and included in the inner circle. As for the extended family, there was a predominance of mothers-and sisters-in-law, appointed by seven participants, who were also placed in the most intimate circle.

Emotional support was highlighted by the participants as one of the most important functions performed and offered by all family members. Partner, mother, and father fulfilled mainly the functions of emotional support and material help and services. These involve caring for the health of the pregnant woman and baby, assisting her when there are physical symptoms, housekeeping, preparing healthy food, and caring for the child.

Such results were also demonstrated by Gebuza et al. (2014), who found that family members predominated as emotional supporters. According to the authors, this support makes pregnant women feel welcomed and understood when they are worried about childbirth and the baby's health which, in turn, has an impact on their well-being. Among the family members, partners had a key role regarding the emotional support they offered the pregnant woman. Bäckström et al. (2017) showed that the emotional support the partner provides can improve communication, making the participants feel more open to share their desires, as well as contributing to the increase in intimacy and trust in their relationship. In contrast, according to Kliemann et al. (2017), the fragility of marital and family relationships and the lack of support from these are important risk factors for the development of depressive and anxious symptoms during pregnancy.

Regarding the singularities of the cases, the particularities of each high-risk condition brought about changes in the habits of the pregnant women, who required specialized care. Consequently, a sense of protection grew in the family members, which was sometimes considered excessive, as reported: "He [partner] does not let me do anything in the house. He is mega protective. You have no idea how protective he is. He suffocates me" (P08, 27 years old, Von Hippel-Lindau syndrome). Through these reports, it could be observed that the support offered by family members is not always perceived as positive and can be characterized as excessive, for example, through exaggerated protection and restrictions due to pregnancy or even from negative experiences shared by family members (Piccinini et al., 2012). Thus, it is important to consider how support is offered, as it could have the opposite effect on the pregnant woman, generating fear and insecurity (Bäckström et al., 2017).

The narratives also revealed how fragile the relationships between some participants and their mothers were even before pregnancy: "She was not my friend in my adolescence [...] she never sat down and talked to me" (P02, 20 years old, twin pregnancy). Conversely, there was the desire to reconnect with the mother, for wishing that "she were closer to me and my daughter" (P11, 29 years old, diabetes mellitus) and for having the possibility of strengthening bonds during pregnancy. It is noteworthy that, even though some mothers were referred to as more distant, they were placed in the inner circle of the network maps nonetheless. The results call attention to the possible beliefs related to 'being a mother' and the meaning attributed to the maternal function, even if not being one of the closest people, the history of the relationship and the biological connection stand out.

As for the role played by the children, their emotional support was translated through the affection, care, and understanding of the moment. Participants pointed it out as a positive surprise, as illustrated by the report: "considering everyone who was important, his reaction [son] was the one that worried me the most and was the best of all" (P01, 24 years old, twin pregnancy). The concern regarding the other children's reaction is mixed with those of the high-risk pregnancy, childbirth, and adaptations to the new routine that will be established with the birth of the baby (Cankorur et al., 2015).

Female members, namely, mothers, sisters, and mothers-and and sisters-in-law were sought after the most for advice and directly related to the role of cognitive guides. All the women mentioned were mothers and the advice offered was related to their experience of pregnancy, attention to the health of the pregnant woman, and care for the baby. These results can be understood from what Sluzki (1997) calls homogeneity among members of the network, such as, for example, having the same gender and going through the same stage of the life cycle. These similarities may favor identification with the current experiences of those involved and assist in the strengthening of bonds (Sluzki, 1997).

Friendship relations

This category refers to significant people with whom the pregnant woman has a friendly relationship during the whole pregnancy, considering their proximity and the functions they perform. By constructing network maps, it was possible to identify the predominance of small friendship networks (1 to 6 members). There was also a greater concentration of people at the two inner circles of intimacy, showing that, despite being small networks, participants have a high degree of intimacy with their friends.

According to the participants, friends were important for emotional support, material support and services, and cognitive guide and advice, as demonstrated by this account: "[a friend] is a loving person. She has good advice [...] and helps me with many things. Diapers for the baby. She asks me how I'm doing and if I'm having prenatal care" (P10, 31 years old, hypertension and obesity). Emotional support involves the expression of concern through questions about the well-being of the pregnant woman and baby, demonstration of affection and attention, and listening to their needs. As for material support and services, these comprise the assistance in caring for the child and help with the baby's layette, while cognitive guide and advice are characterized by orientations regarding care during pregnancy, practical tips on nutrition, and exchange of experiences with friends who have children.

Even though few friends were mentioned by the participants, size did not affect the support offered by them, as they provided different types of support. This result is similar to those found by Bäckström et al. (2017) and Mlotshwa et al. (2017), who pointed out that friends can provide support in different ways, such as practical support, for resolving doubts regarding physical symptoms during pregnancy, childbirth preparations, and newborn baby care (Bäckström et al., 2017), and emotional support, for providing a listening space where pregnant women can exchange and share their experiences and emotions about pregnancy (Mlotshwa et al., 2017).

According to the participants, the pregnancy itself and the similarities related to life cycle experiences (gender, age, having a child, and/or having children of the same age) contributed to the (re)strengthening of bonds of friendship. Sluzki (1997) demonstrates that the homogeneity of the members of the network due to similar demographic characteristics, such as age, sex, economic, and cultural issues, favors the sense of identification and recognition with the other, which may facilitate the sharing of experiences and the reciprocity in support. On the other hand, the possible fragility of these bonds of friendship during pregnancy is also seen: "It seems that after we get pregnant, friends forget about us. They are kind of absent, those who do not have children. They live in another reality; they are experiencing a different phase than mine. I miss them" (P13, 24 years old, twin pregnancy).

It is worth mentioning that the weakening of these friendship bonds includes other elements, as the fact that people are going through different stages in their individual development distance themselves because they are living different experiences and challenges. Pregnancy itself and motherhood are linked to a series of changes in the development of women. Oliveira and Dessen (2012) affirm that the pregnancy cycle is one of the periods of greatest change in an individual's life and can have an impact on the health of the pregnant woman and influence her withdrawal from daily activities and socializing with friends. Moreover, Khooshehchin et al. (2016) warn that such distancing, associated with the lack of support from friends, may result in a greater sense of abandonment and vulnerability of the pregnant woman, thus, contributing to her social isolation.

Community relations

This category embraces significant people from the community (neighbors, religious connections, health and care services) along with their degree of relational commitment to the pregnant woman and the functions performed. Among the members of this network, 13 were neighbors who offered material support and services and emotional support. The functionality of the neighborhood appeared related to its collectivity and not to the individual characteristics of the members. Although neighbors were placed on the circle with the lowest level of relational commitment, their physical proximity was considered important, which may be attributed to the perception of safety, for there is someone to turn to, if necessary. The relationship between pregnant women and their neighbors may have an influence on maternal psychological health. Giurgescu et al. (2015) identified that low-quality relationships with neighbors were associated with the perception of low social support and higher levels of depressive symptoms and stress during pregnancy.

One participant mentioned the existence of a group of 10 pregnant women, developed in a community health center (CHC), focused on providing emotional support and cognitive guide and advice. This group was mentioned as an important space for exchanging experiences and emotions regarding the gestation process. The support received from women who were experiencing or had already experienced pregnancy made other pregnant women feel tranquil and safe, as pointed out by Bäckström et al. (2017). In their study, the sharing of experiences with other pregnant women favored the sense of recognition and belonging to a group, which stimulated the learning and searching for information to clarify doubts about motherhood with the other members (Bäckström et al., 2017).

Still in the community quadrant, health services were the most prominent in relation to the frequency of contact (out of 46 people, 29 were healthcare professionals) and the majority (16 members) were placed at the inner circle of relational proximity. All participants mentioned at least one healthcare professional, the doctor being the most listed by all pregnant women (21), followed by nurses (7) and a nutritionist (1). Among these, most of the professionals worked in a hospital setting, totaling 18 members (17 were physicians, 9 from the high-risk prenatal outpatient clinic and 8 from other departments of the hospital), and 11 members worked at the community health center.

Among the functions performed by doctors, nurses, and nutritionists, the most important was that of cognitive guide and advice, as they helped the pregnant women with their doubts and provided them with guidance about care during pregnancy. This function was mainly directed at monitoring the baby's development, pregnancy symptoms, and continuous assessment of the high-risk status. The attention and concern demonstrated toward the pregnant woman and baby were seen as significant expressions of emotional support and, in one case, access to new contacts through the referral to a nutritionist. In this sense, according to Oliveira and Madeira (2011), the information and guidance provided by health professionals make pregnant women feel confident and supported when facing a high-risk pregnancy, as corroborated by the participant: "I trust 100% in whatever he [doctor] tells me. He makes me feel at ease and is always very attentive. He is very kind to me" (P01, 24 years old, twin pregnancy).

The importance of having a cognitive guide and advice was also identified in the works of Oliveira and Madeira (2011) and Khooshehchin et al. (2016). The former reinforce the importance of the quality of the bonds developed during pregnancy since a good relationship established between the pregnant woman and health professionals tends to facilitate their trust in them and the adoption of their guidelines during the gestation process, childbirth, and puerperium (Oliveira & Madeira, 2011). In the study by Piccinini et al. (2012), in addition

to the attention to the organic dimension and educational information, the participants pointed out the lack of attention paid to their emotional well-being, as such support was not effectively offered by health professionals, making them resort to emotional support in other social circles.

Considering the centrality of the physician in healthcare, the results found in this research are similar to those by Oliveira and Mandú (2015) and Piccinini et al. (2012), who demonstrated that physicians were indicated by pregnant women as being the most important professional in prenatal care. This indicates the meaning attributed to health and the high-risk condition from the perspective of the pregnant women, which, in turn, reflects the concepts and practices exercised in health spaces that, above all, value behaviors focused on good physical performance and symptom control (Oliveira & Mandú, 2015). Furthermore, since high-risk pregnancies are associated with mainly biological problems and a greater chance of complications, doctors become the most valued professional for the care of such a condition.

The services provided at the CHC were compared to those from the high-risk prenatal outpatient clinic. Patients indicated feeling safer at the outpatient clinic, as it is a place specialized in high-risk care management, where the frequency of consultations and the agility in having tests done and receiving their results proved to be an important factor. "At the [community health] center the tests take longer to be done and we have to wait longer for consultations. Not here, I leave the doctor's office and go there to schedule the test. I already have a date set for returning [...] I feel safer" (P09, 20 years old, thalassemia and chronic urticaria).

The preference for care in a specialized service in cases of high-risk pregnancies is corroborated by the scientific literature (Oliveira & Madeira, 2011; Oliveira & Mandú, 2015). This may be associated with the regularity of consultations, the performance of tests, the resources not provided at the CHC, the prescription of drugs, the continuous assessment of complications, and the possibility of hospitalization at any time if necessary (Oliveira & Mandú, 2015). It is noteworthy that, when a high-risk pregnancy is diagnosed, prenatal care is carried out in a specialized outpatient clinic, which provides a more complex follow-up, because it has a wider range of resources and a better flow of the process in order not to aggravate the pregnancy.

Work and study relations

This category is related to the bonds the pregnant women established and to the functions performed by people from their work and/or study relations who were considered important for the participants during their pregnancy. There were few members (8) in the women's significant social network in this quadrant. Seven pregnant women reported having no one important in this context. It should be noted that none of the participants studied at the time of the interview and all of them had jobs. Six participants were still working and seven were on leave because of the pregnancy. This may be related to the size of this network, considering the decrease in the frequency of contacts with co-workers. Studies on the topic during pregnancy and even after childbirth demonstrated that the priority becomes the care of mother and baby health, which can result in being away from work (Oliveira & Dessen, 2012; Piccinini et al., 2008).

Only one participant mentioned a former classmate, who had provided emotional support by expressing concern about the well-being of the pregnant woman and baby. Among the colleagues, co-workers, bosses, and associates were mentioned. Emotional support was highlighted because of their understanding of the moment experienced by the

pregnant woman, as well as material support by providing them with a comfortable environment and giving gifts such as clothes and diapers for the baby.

Based on the understanding that pregnancy is a moment of emotional instability and there is the need for reorganization in professional and economic terms, the establishment of meaningful relationships in the workplace can be an important resource during pregnancy and a potential support network for when the mother returns to work. Thus, Sluzki (1997) adds that physical distancing can make the frequency of contacts between members more difficult, but when they start to reconnect, it can increase the possibility of strengthening the bonds.

Final considerations

The present study aimed to understand the relational dynamics of significant social networks of high-risk pregnant women who have to deal with a period of great psychological changes. The emotional support provided by the members of the network stood out, reinforcing the need for paying attention to the mental health of these women. Family members were the most predominant and, in general, different functions were performed by all members of the networks, being an important resource throughout the gestation process.

Regarding the comparison made between the services offered at the community health center and the high-risk prenatal outpatient clinic, the therapeutic practices must occur in a complementary and not conflicting way. That is, it is important that the pregnant women continue going to the CHC and that it continues to be a reference for their health care. Moreover, at the CHC, the gestation process should be monitored and there should be the promotion of educational actions for pregnant women and the other members of their networks, thus, strengthening prenatal and postpartum care.

It can be said that the present study contributed to the scientific production about significant social networks of high-risk pregnancies by detailing and deepening the configuration of the context of such networks. It also made it possible to identify the different types of functions performed by the members of the network, which are hardly found in the scientific literature. Moreover, this study allowed for the identification of the proximity of the relationships, the functions fulfilled by each member, and the particularities of each relational context (family, friendship, community, work, and study).

In terms of methodology, the use of network maps favored the acknowledgment of the members and contributed to raising the visibility of social networks as important resources for coping with challenging situations experienced by pregnant women. Moreover, network maps can be used professionally as a way for healthcare professionals to identify the significant people in the pregnant woman's network and plan any treatment together with them.

Understanding the relational dynamics between pregnant women and their social networks allows for possibilities to plan health promotion actions that involve these networks, encouraging active participation of pregnant women in health practices. The results of this study may foster reflections upon the development of public policies for pregnant women and their families, both during pregnancy and postpartum. It can also be an important means of raising the visibility of different health professionals so that they can develop integrated health strategies.

This study was limited by the difficulty in contacting the participants and conducting the interviews. This obstacle was related to the proposed inclusion criteria which restricted

the number of women who could participate in the trial. Furthermore, the pregnant women at the clinic were afraid to be late for their medical appointments, even though they knew the time of these appointments and were told how long the interview would last and that there was an arrangement between the researchers and the clinic to make sure the patients would not miss their consultations.

Further longitudinal studies should be carried out to monitor changes during pregnancy, the period that follows the birth of the child, and child development. In addition, more details about the participants should be taken into consideration, such as ethnicity, cohabitants, neighborhood conditions, and the geographical distance from the healthcare service provider. Studies on the significant social networks of high-risk pregnant women, specifically about these women's access to health services and their decisions concerning it, can strengthen the relationship between them and the professionals who care for them, providing a greater sense of safety to these women about their choices and health behaviors during and after pregnancy. Furthermore, new research could be developed with health professionals in order to study their practices in the context of high-risk pregnancies and how they understand the significant social networks in pregnant women's lives during this specific period. Finally, studies about the other members of these women's social networks could favor the sharing of experiences and the mutual support between those involved in the pregnancy.

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