

ANALYSIS OF INFORMAL SOCIAL NETWORKS OF FRIENDSHIP, TRUST AND LEARNING IN A RESTAURANT

ANÁLISE DE REDES SOCIAIS INFORMAIS DE AMIZADE, CONFIANÇA E APRENDIZAGEM EM UM RESTAURANTE

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ABSTRACT

Purpose – The objective of the research was to analyze informal social networks that are part of the informal organization of a restaurant, specifying relational and structural aspects of the networks of friendship, trust and learning established amongst its workers.

Design/methodology/approach – The approach of Social Networks Analysis was used, which adopts as a principle the perspective that the actors and their actions are interdependent and they establish connections amongst themselves. The study counted on the participation of 24 workers from a restaurant in the city of Fortaleza-CE, Brazil, whose social networks were mapped and analyzed with the help of Ucinet and NetDraw software.

Findings – As a result, it was found that informal networks are quite active in the restaurant. Their formation and functioning are part of the work culture of the informal organization, and do not necessarily have a direct association with formal positions and sectors. Informal organization assumes a certain independence from the formal structure, but not entirely, since the configuration of the friendship, trust and learning networks are associated with the dynamics of the restaurant's operation and the relevance of the activities performed by the workers.

Originality/value – The research shows that the analysis of social networks allows a better understanding of the relationships established between workers, as well as the intermediated content, formation of informal groups, identification of actors who are leaders and mapping of information flows, contributing to the understanding of the informal organization of work.

Keywords - Social Network Analysis. Work. Informal Organization. Organizational Behavior. Ucinet.

RESUMO

Objetivo – O objetivo da pesquisa foi analisar redes sociais informais que compõem a organização informal de um restaurante, especificando aspectos relacionais e estruturais de redes de amizade, confiança e aprendizagem estabelecidas entre seus trabalhadores.

Design/metodologia/abordagem – Foi utilizada a abordagem da Análise de Redes Sociais (ARS), que adota como princípio a perspectiva de que os atores e suas ações são interdependentes e que estabelecem conexões entre si. Participaram da pesquisa 24 trabalhadores de um restaurante da cidade de Fortaleza-CE, cujas redes sociais foram mapeadas e analisadas com o auxílio dos softwares Ucinet e NetDraw.

Resultados – Como resultados, identificou-se que as redes informais são bastante atuantes no restaurante. Sua formação e funcionamento fazem parte de uma cultura de trabalho da organização informal, não tendo necessariamente associação direta com cargos formais e setores. A organização informal assume uma certa independência em relação à estrutura formal, mas não totalmente, já que a configuração das redes de amizade, confiança e aprendizagem se associam à dinamicidade de funcionamento do restaurante e à relevância das atividades desempenhadas pelos trabalhadores.

Originalidade / valor – A pesquisa demonstra que a análise de redes sociais permite um melhor entendimento das relações estabelecidas entre trabalhadores, bem como dos conteúdos intermediados, formação de grupos informais, identificação de atores que são lideranças e mapeamento de fluxos de informação, contribuindo para a compreensão da organização informal do trabalho.

Palavras-chave: Análise de Redes Sociais. Trabalho. Organização Informal. Comportamento Organizacional. Ucinet.

1 INTRODUCTION

Studies on social network analysis have been growing in the last decades, demonstrating an increasing trend in scientific production, specifically in Portuguese, since the 2000s (Varanda et al., 2012). This growth is part of a movement that is seeking relational, contextual, and systemic explanations for the current social configuration, rather than those that are individualistic, essentialist, and atomistic (Martes et al., 2006). Recent studies in Brazil have addressed diverse topics such as work, health, the solidarity economy and research networks, indicating the scope of this field (Andrade & David, 2016; Braga, Maciel, & Carvalho, 2018; Esteves, Pereira, & Spink, 2019; Macambira, Bastos, & Rossoni, 2015; Neiva, Fussi, & Corradi, 2016; Santos, Maciel, & Sato, 2014).

Social networks can be defined as sets of actors represented by people, groups or corporations that establish connections with each other and effect processes of exchange. The interaction between the actors of the network happens through different types of bonds, such as kinship, friendship and work, amongst others. The links established must be stable enough to allow exchanges of material and immaterial resources such as money, products, information, affections, and ideas (Borgatti et al., 2009; Hanneman, 2001; Lemieux & Ouimet, 2012). Fialho (2015) explains that social networks involve symbolic language, cultural boundaries and power relations. Through the architecture of relationships they express social, political and economic interactions and allow us to know, think and conceptualize social reality.

Social network analysis (SNA) is a theoretical and methodological approach that uses as its basic principle the perspective that actors and their actions are interdependent and not autonomous units. Therefore, in order to understand their behavior, it is more important to analyze their relationships, the source of the opportunities and also constraints for action, as well as their isolated attributes. Thus, reticular data is analyzed from parameters such as: (1) density, which describes the general level of connection and connectivity between network members; (2) centrality, which identifies the actors occupying the most central positions in relations and their intermediation; and (3) cliques, identifying when at least three actors form connections forming a cohesive subgroup in the network (Scott, 2000; Wasserman & Faust, 1994).



Within organizations, social network analysis is used as a relevant approach and method for investigating intra- and inter-organizational relationships between actors (Loiola et al., 2013). Specifically, this can be the notion of informal organization, first evidenced by the School of Human Relations, which articulated the idea of the functioning of social networks in organizations (De Toni & Nonino, 2010). Informal organization can be understood as a network of relationships that are spontaneously constructed between workers without a direct association with formal structure and hierarchical relationships. Informal networks can have a strong influence on performance and task effectiveness, and are an important tool in resolving problems in management (Krackhardt & Hanson, 1993). In addition to the formal organization that has well-defined hierarchical structures, there is a structure of informal relationships between workers that influence work performance. This indicates the importance of understanding formal organizations and informal networks from an interactionist perspective (Mcevely, Soda, & Tortoriello, 2014). According to Morgan (1996, p.179), the formation of successful informal networks is based on the recognition of interdependence between subjects and the intermediation of mutual benefits, which influences the dynamics of informal organization and power relations in the organization.

Informal social networks may form different configurations depending on the transacted content. Krackhardt and Hanson (1993) indicate the existence of informal trust networks, highlighting information sharing and crisis support as characteristic elements of these connections. They also emphasize the advice network, which is important in recognizing the actors who provide technical information and problem solving at work, and the communication network, which maps the connections in which actors talk about issues from work. Kuipers (2009) analyzes in her study the friendship networks, based on exchanges of affection, affinity and sociability, which may even expand outside the workplace. Also there are trust networks, which are similar to friendship networks, but involve bonds of loyalty and respect. Several researches have addressed these themes in the environment of organizations (Brennecke & Rank, 2016; Gonçalves, Lebarcky, & Muylder, 2015; Lima et al., 2016; Loiola & Lagemann, 2013; Macambira, Bastos, & Rossoni, 2015).

Cross, Borgatti and Parker (2002) presented as a reference for research and intervention, five types of informal networks that are more focused on sharing information and knowledge: (1) communication network: communication network with continuous interactions on a particular theme, is important in mapping of subgroups; (2) information network: network with exchange of relevant information in carrying out the work; (3) Problem solving network: network with problem solving interactions (4) Knowledge network: a network that maps actors who are recognized for their knowledge and skills; (5) Access network: network with mapping of accessible actors to transfer knowledge in the organization. De Toni and Nonino (2010) based their research on this typology, associating the communication network with bonds of friendship and trust, and characterizing the information network in a broader way, which includes the other networks.

In organizations that involve hospitality such as hotels and restaurants, which work with services, the characteristics of the behavior of their professionals are decisive elements in their performance, especially regarding the intangible quality of the service offered (Guerrier, 2003). Specifically in the area of restaurants, studies point to the importance of the psychosocial environment in the work context.

Santiago (2012) showed that socio-professional relationships can generate discomfort among workers of a food producing unit, mainly due to the perception of exclusion in decision-making, poor communication and lack of incentive for professional development. Colares and Freitas (2007) highlight the lack of dialogue between bosses and subordinates. Often the daily routine consists of inadequate working conditions, stress and intense working hours, as well as repetitive tasks and actions (Colares & Freitas, 2007; Melo et al., 2016; Monteiro, 2009). Situations like these can affect relationships among workers, resulting in more fragile work collectives (Mendes, Costa, & Barros, 2003).



Taking these aspects into consideration, an investigation into the networks of relationships that make up the informal organization in this type of context becomes pertinent. Therefore, we chose to map the friendship and trust networks, as described by Kuipers (2009), as well as the learning networks. This last network is based on the knowledge network (Cross, Borgatti, & Parker, 2002) and seeks to identify actors with whom the worker learns. We chose to map these types of informal networks as they express both sociability and work aspects. The purpose is to access, through objective parameters provided by SNA, the informal organization, usually invisible in the environment of organizations (Cross, Borgatti, & Parker, 2002; De Toni & Nonino, 2010; Krackhardt & Hanson, 1993).

Thus, this article aims to analyze informal social networks that make up the informal organization of a restaurant, specifying the relational and structural aspects of networks of friendship, trust and learning established among its workers.

2 METHODS

2.1 Participants and locus

The research was conducted in a restaurant located in the city of Fortaleza (CE) with the participation of 24 workers, who were divided into three different sectors: Dining area (11), kitchen (10) and administrative (3). All restaurant workers, regardless of their role, were invited and agreed to participate in the survey. Following ethical guidelines, the anonymity of the participants was preserved and their names were replaced by nomenclatures S01 to S24. Table 1 presents the position of all employees and their respective sectors, ages and education.

Table 1 - Identification of participants by position and sector

Participant	Position	Sector	Age	Education
S01	General cook	Kitchen	35	Finished primary education
S02	Waiter	Dining area	26	Finished high School
S03	Head waiter	Dining area	45	Finished high School
S04	Dishwasher	Kitchen	53	Unfinished primary education
S05	General cook	Kitchen	46	Finished high School
S06	Storeroom and supplies keeper	Administrative	40	Finished high School
S07	Head chef	Kitchen	51	Finished primary education
S08	Cashier	Dining area	34	Finished high School
S09	Waitress	Dining area	37	Finished high School
S10	Cashier	Dining area	27	Finished high School
S11	Administrative assistant	Administrative	33	Unfinished higher education
S12	Waiter	Dining area	79	Finished primary education
S13	General services assistant	Kitchen	36	Unfinished high School
S14	Manager	Administrative	49	Finished high School
S15	Waiter	Dining area	62	Finished high School
S16	Waitress	Dining area	32	Unfinished primary education
S17	Waitress	Dining area	29	Unfinished primary education
S18	Dishwasher	Kitchen	48	Unfinished high School
S19	Cleaner	Kitchen	59	Unfinished primary education
S20	General cook	Kitchen	38	Finished primary education
S21	Kitchen assistant	Kitchen	46	Unfinished primary education



S22	Supervisor	Dining area	61	Finished high School
S23	Waiter	Dining area	39	Unfinished primary education
S24	General cook	Kitchen	32	Unfinished primary education

Participants were, on average, 43 years old and were mostly male (62.5%). As for education, most completed high school and only one participant had started higher education, but had not yet completed the course.

2.2 Data Collection Procedures and Instruments

Initially, visits were made to the restaurant in order to find out about the work environment, explain to the employees the research objectives and clarify any doubts.

For the data collection instrument, the recommendations by Lazega (2014) were suggested, which propose the use of a closed list with the names of all the participants who compose the interviewee's social network. This procedure was followed in this research. The co-workers were presented on 24 cards each containing the photo and the name of the restaurant worker. The use of photo cards were used in order to give more dynamism to data collection and reduce any difficulties in understanding. Given the variability of interpretations around the definitions of "friendship", "trust" and "learning", it was decided to formulate three questions involving everyday situations, so that all participants used the same criteria to answer them. Thus, the instrument presented three triggering questions in which the respondent would name the co-workers with whom she/he depended on in those particular situations.

Data collection took place individually, in the restaurant itself, with an average duration of 10 to 15 minutes. Before the collection, the participant was presented with and read the "Free and Informed Consent Form" and the research objectives were described again. Having confirmed the desire to participate in the research, each participant signed the form and responded to the instrument.

2.3 Data analysis

To trace the networks we used the software UCINET 6.0 and NetDraw 2.28 (Borgatti, Everett, & Freeman, 2002). These programs work from matrices that express the connections obtained from the generation of names and serve as the basis for the composition of social network diagrams (Alejandro & Norman, 2005). To analyze the structural and relational aspects of the networks, the parameters that were used were: size (expressed through the number of nodes and loops, including reciprocal loops), density, centrality (degree of entry and intermediation) (Hanneman, 2001) and clique formation, differentiating strong cliques, composed only of reciprocal loops, and weak cliques, which can be formed by non-reciprocal loops (Scott, 2000).

2.4 Ethical aspects

This work was developed in respect to the ethical principles that regulate studies with human beings. The research project was previously analyzed and approved by the Research Ethics Committee of the University of Fortaleza. In addition, the confidentiality and anonymity of the participants were safeguarded.



3 RESULTS

From the analysis of the social networks of friendship, trust and learning it was possible to observe the different connections between the nodes (actors) and the flow of bonds. It can be seen, as shown in Table 2, that out of the 24 nodes, there are 161 relationships in the friendship network and the density is 29.1%. The learning network shows 110 existing relationships and a density of 19.9%, and the trust network has 71 relationships and a density of 12.8%. It is noted that connections are more frequent when relational content is friendship and less when it is trust.

The results presented in table 2 also show the different flows of relationships. In the “reciprocal bonds” index, 74 out of 161 friendship network relationships are reciprocal (46%). In the learning network there are 46 reciprocal relationships among the 110 existing relationships (41.8%). The trust network, however, had the lowest index, 26 reciprocal links (35.6%). The data reinforce that there is greater reciprocity or cohesion between actors when the relational content is friendship and learning, while reciprocity is lower when it comes to trust.

Table 2 - Structural and Relational Characteristics of the Friendship, Trust and Learning Network

Social networks	Actors	Bonds	Density	Reciprocal bonds	Strong Cliques	Weak Cliques
Friendship	24	161	29.1%	74 – 46%	9	41
Trust	24	71	12.8%	26 – 35.6%	0	28
Learning	24	110	19.9%	46 – 41.8%	4	53

3.1 Analysis of Friendship Network

The friendship network had the highest density index among the three mapped networks (29%), which expresses good connectivity between workers (Figure 1). The amount of reciprocal links (46%) and strong cliques (9) reinforces the cohesive property of this network.

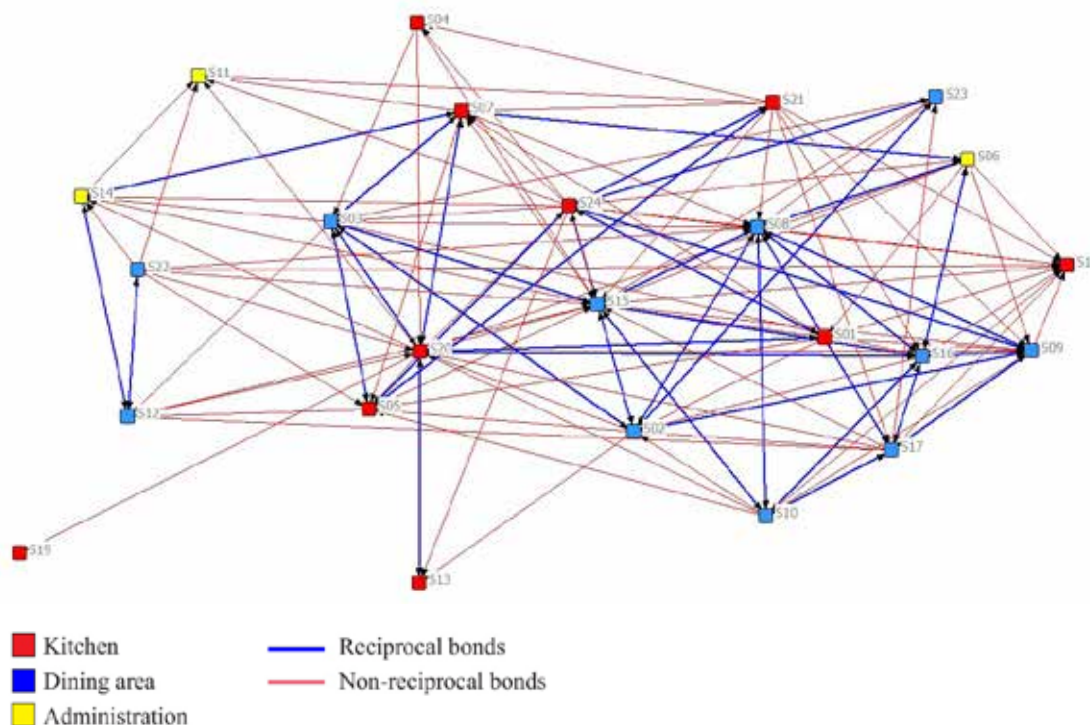


Figure 1. Friendship network diagram



Of the total connections of the friendship network, 47.8% involve workers from different sectors of the restaurant (kitchen, dining area and administration) and 52.2% connect workers from the same sector. Of the reciprocal subgroups (strong cliques), five involve workers from the same area (dining area or kitchen) and four are workers from different sectors (dining area, kitchen and administration). In general, strong cliques predominate among workers in the dining area or kitchen. These data show that the friendships of the actors are not restricted to the sector in which they operate, but expand throughout the restaurant, although there is a slight predominance of stronger bonds among workers in the same sector. In the strong cliques, there is a predominance of non-leading actors in the restaurant.

In the analysis of centrality (degree of entry), the most central actors were S15 (waiter), S08 (cashier), S20 (cook), S18 (dishwasher¹) and S09 (waiter), indicating that relationships are not concentrated in a single sector. Regarding the degree of intermediation, S20 (cook), S24 (cook) and S15 (waiter) stood out, being considered bridge actors. Actors S11 (administrative assistant), S19 (cleaner) and S23 (waiter) were considered “peripheral”, that is, with less power to intermediate communication between network nodes.

Considering the degree of entry and the bonds of friendship formed only among the kitchen workers, the actors that stood out were S05, S07, S20 and S24, all men and with the position of chef or cook. Among the less central, actors with low hierarchical roles were identified, such as cleaner, dishwasher, kitchen assistant and general services assistant. However, in the network formed by dining area workers, among the less central actors are S22 (supervisor) and S03 (head waiter), who occupy higher formal hierarchical positions, while the most central participant was S08 (cashier), followed by S15 and S16. (both waiters).

Data from the friendship network indicate that, in general, the centrality in the restaurant’s friendship network does not seem to be directly related to the role or formal hierarchical level of the actors.

3.2 Analysis of Trust Network

The trust network presented the lowest indices of density (12.8%) and reciprocal ties (35.6%) among the mapped networks. In addition, no strong cliques were identified, only reciprocal dyads, totaling 13, of which 11 involved dining area and kitchen workers. However, considering the definition of weak cliques, 28 subgroups were identified, even smaller than the friendship (41) and learning (53) networks. These data indicate that trust circulates in a more restrictive manner than friendship and learning among restaurant workers.



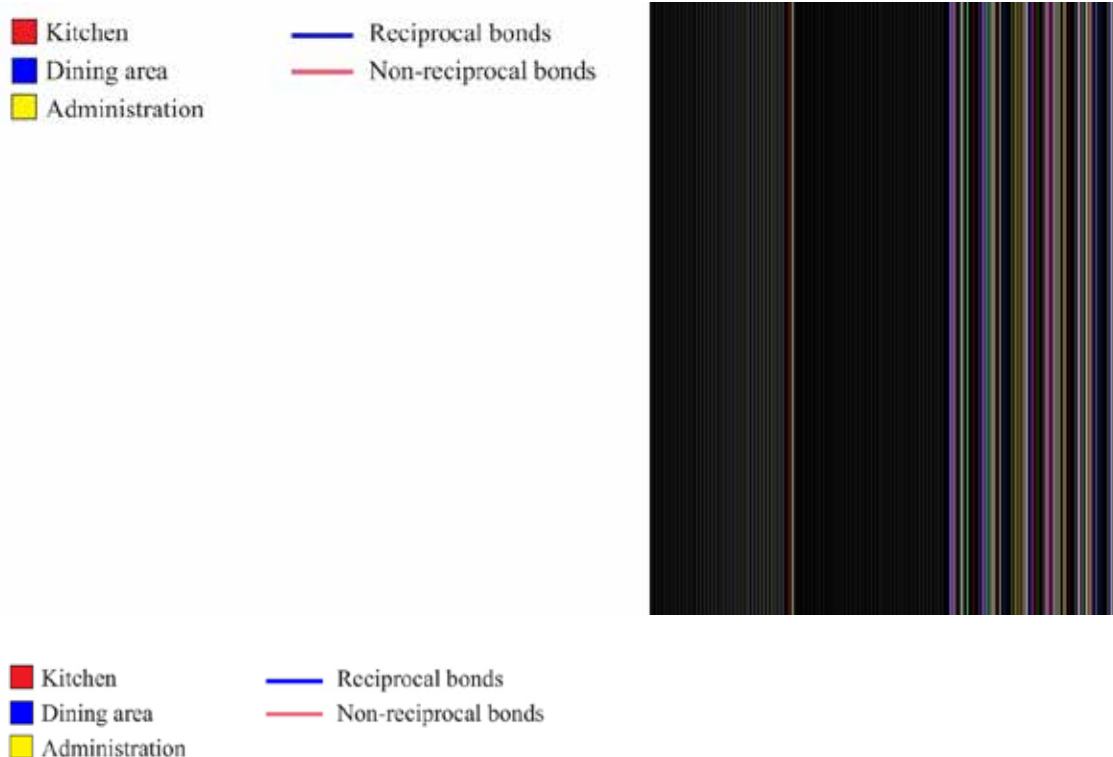


Figure 2. Trust network diagram.

Of the 71 bonds of trust formed, 60.5% involve workers from the same sector (20 from the kitchen, 22 from the dining area, and 1 from the administration) and 39.5% include workers from different sectors of the restaurant. The predominance of bonds of trust directed to colleagues in the same sector may be associated with the possibility of identification through the tasks performed and the sharing of the same daily work. However, connectivity indices both within sectors and across sectors without any single actor indicate the presence of trust in restaurant relationships in general.

In the trust network, the actors S24 (cook), S20 (cook) and S03 (head waiter), respectively, presented the highest degree of intermediation. S02 (waiter), S13 (general service assistant), S19 (cleaner), S23 (waiter) and S11 (administrative assistant) presented zero degree of intermediation.

The most central actors in the trust network were S20 (cook), S15 (waiter), S07 (head chef) and S03 (head waiter). Considering the bonds formed only among kitchen workers, actor S24 (cook) obtained the highest percentage of the indications made (centrality of entry). Among dining area workers, actors S17 and S08 (waitress and cashier, respectively) received the highest percentage of nominations.

3.3 Learning Network Analysis

The learning network had the second highest density (19.9%), the number of reciprocal ties (41.8%) and strong cliques (9) among the mapped networks, as shown in Figure 3.

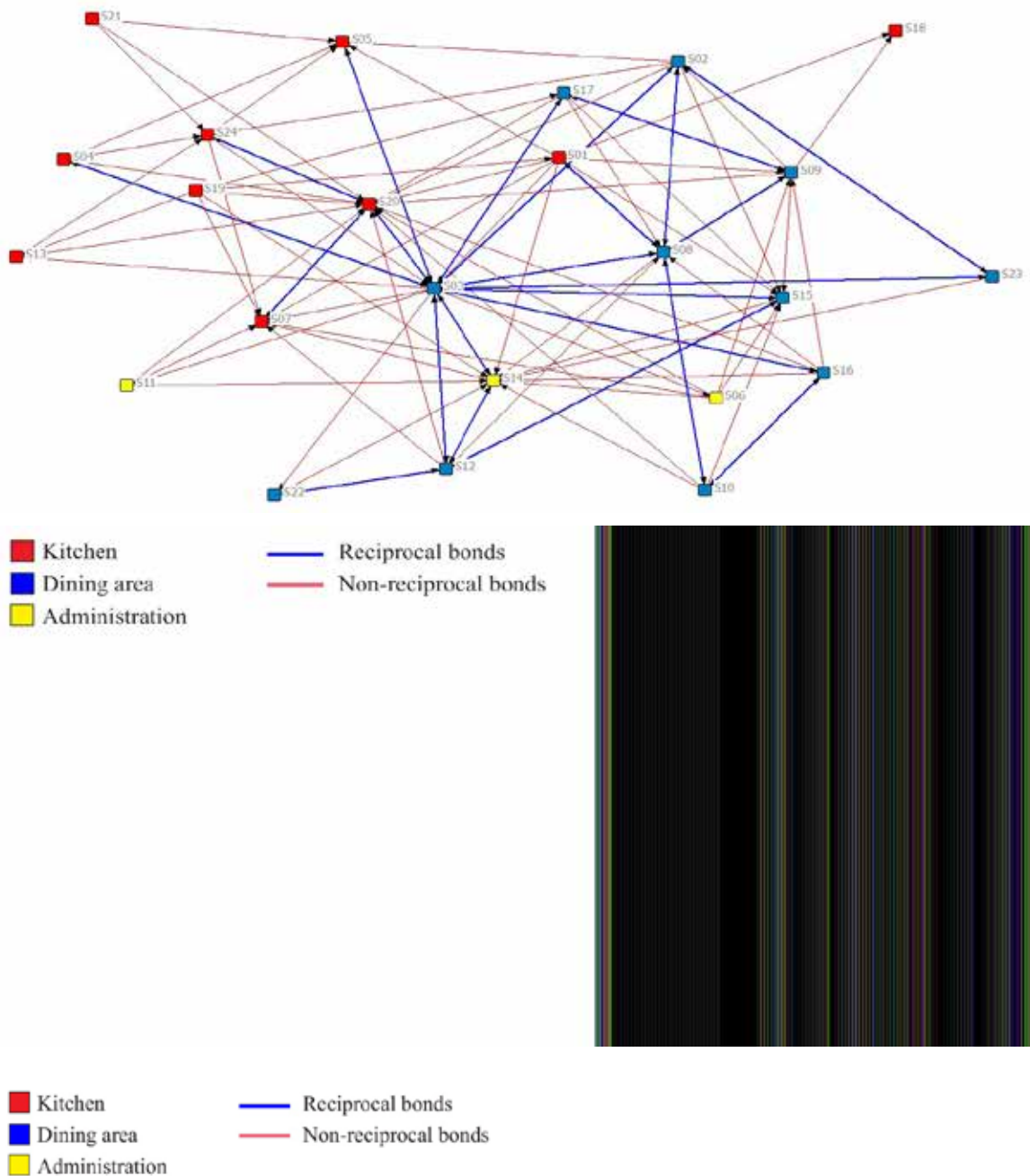


Figure 3. Diagram of the learning network.

Of the mapped learning bonds, 58.2% contemplate exchanges that happen between workers from the same restaurant sector (kitchen, dining area or administration) and 41.8% reflect bonds that unite workers from different sectors, indicating that, for the most part, learning processes take place among workers who have a certain proximity of function and activity, although they are also part of restaurant relations in general.

In the learning network, S03 (head waiter), S20 (cook) and S08 (cashier), respectively, presented a higher degree of intermediation. Actors S11 (administrative assistant), S19 (cleaner), S21 (kitchen assistant) and S22 (supervisor) stood out as peripheral, presenting zero degree of inter-

mediation. As for centrality, actors S20 (cook), S03 (head waiter), S14 (manager), S07 (chef), S08 (cashier) and S15 (waiter) had the most referrals in the learning network. It is estimated that these workers may favor interactions of new knowledge and skills in the restaurant or, on the other hand, may exploit a social relationship of power, as they are identified by co-workers as people with whom they learn. Taking into account the positions that actors S20, S03, S14 and S07 (cook, head waiter, manager and head chef respectively) occupy in the restaurant, it would be possible to assume that the high centrality indices of these actors are directly related to the hierarchical level of the positions. However, the ratings of actors S08 and S15 (cashier and waiter, both in the dining area sector) are noteworthy, since they do not have formal leadership functions in the workplace. This means that the hierarchical level of the worker alone may not justify their importance in the informal social network of learning at work, especially in the case of the actors mentioned, who were also considered more central in the friendship network.

The learning network had the highest number of weak cliques among the three mapped networks (53), uniting workers from all sectors. The four mapped strong cliques, which designate reciprocal triads, consisted of workers from the same area, the dining area, and the restaurant manager (in one of the cliques).

4 DISCUSSION

The friendship, trust and learning networks mapped in the restaurant align with Krackhardt and Hanson's (1993) proposition about the existence of informal networks in organizations. These relationships are capable of enhancing performance in the face of unforeseen events and tasks can be completed faster and more efficiently, which represent relevant aspects of informal organization.

Informal networks in organizations resemble the proposition about informal groups (Guerrier, 2003; Schermerhorn, Hunt, & Osborn, 1999), which arise spontaneously through friendship and relationships of mutual interest, but play an important role in providing support for more achievement, work efficiency and the possibility of greater satisfaction with the social environment. Thus, the identification of informal networks in the restaurant surveyed indicates the existence of informal groups and mutually supportive relationships among workers who benefit from established exchanges (Morgan, 1996).

The friendship network in the restaurant mapped workers' choices in regard to bonds of informal camaraderie that were established in the workplace, and was the network that had the most bonds. This corroborates with the idea that informality in relationships is a very characteristic element in the methods of working in Brazil (Motta & Caldas, 1997), confirming the importance of friendship in the workplace.

This higher density is in line with data from Gonçalves, Lebarcky and Muylder (2015), who identified greater connectivity in the friendship network, in relation to other types of networks, in groups and organizations. Friendship bonds were spread among workers throughout the restaurant, as were strong cliques. Although the concentration of relationships in the same group may be common, as which occurred in the kitchen sector, friendship network connectivity between different groups is a positive factor that can reduce vulnerability in the face of possible conflicts and uncertainties (Lima et al., 2016). These data differ from previous research (Colares & Freitas, 2007; Santiago, 2012) which identified problems in relationships and communication in food producing units.

In addition, attention is drawn to the size of the contrast in data between the friendship (161 bonds) and trust (71 bonds) networks, indicating that for the research participants a friendship relationship does not necessarily mean a trusting relationship.



The trust network mapped connections that expressed greater loyalty among the actors. The lower density and cohesion of the trust network corroborates with the data from the literature showing that these networks have a smaller number of bonds, especially compared to the number of bonds of other social networks, such as friendship and learning (Marinho da Silva, 2004). However, we should consider that trusting relationships are present in the restaurant and help to establish bonds that can alleviate the feeling of vulnerability and even act in favor of higher productivity, since trust may be associated with better interpersonal relationships with co-workers (Fisher & Novelli, 2008).

The learning network mapped the links where elements are exchanged that lead the worker to perform better in the restaurant, allowing for the identification of actors who are considered very good in their role and accessible for the transmission of knowledge.

Good connectivity indicates a greater probability of dissemination of information, knowledge and skills relevant to performing tasks and the proper functioning of the restaurant. The learning bonds identified are not restricted to workers of the same function or sector, indicating that these differences do not prevent people from seeking knowledge. These heterogeneous exchanges of experiences and information about work are potentially beneficial to the functioning of the organization, as they allow access to a more diversified knowledge (Zappa & Robins, 2015). Formally organized work teams that establish informal exchanges between employees are characteristics of contemporary work, where there is the search for new information and knowledge needed to optimize the work (Brennecke & Rank, 2016).

The broader flow of learning, represented by weak cliques, may be related to the same need for dynamism in meeting demands and assimilating innovations in the restaurant, which is typical of the service sector (Guerrier, 2003). Strong cliques, including relationships of mutual recognition and reciprocity, suggest a more constant learning routine among the dining area workers, not directly linked to friendship or trust, but associated with the work and achievement of specific activities in this industry.

4.1 Actors and centrality

Regarding the centrality of the workers in the networks, it was found that, in general, there was a tendency for the repetition of certain actors, both in intermediation and in the degree of entry. Regarding the centrality of intermediation, S20 (cook) stood out as an intermediary in the three networks, while S03 (head waiter) and S24 (cook) appeared in two of them. The male presence in the degree of intermediation is noteworthy, since only one woman (S08) stood out as intermediate. Regarding the position of peripheral actors, the female presence was more present, with three women (S11, S19 and S21) standing out. There was also a tendency for repetition of peripheral actors, since S11 and S19 appeared in this role in the three networks, while S13 appeared in two of them. Actors S11 and S13 are the newest employees in the restaurant, having been admitted just over a year ago (from the date of data collection). Such a fact may explain their peripheral positions. In addition, S11, as an administrative assistant, works in a room further from the restaurant routine, which may create less contact with other employees. This situation is in line with the idea that the workplace or the function performed can strengthen or impair the frequency of contacts (Kuipers, 2009), influencing the formation of networks.

In this sense, three aspects can be highlighted in the informal networks of the restaurant in relation to the more peripheral actors: there is a predominance of females, workers with less time working and who make up the administrative sector, far from the daily functioning of the dining area and kitchen. Similarly, there is a predominance of centrality between kitchen and dining area workers, crucial sectors in restaurant performance.



It is worth mentioning the variability of the positions, sectors and age group of the actors who stood out in the centrality, being that the friendship, trust and learning networks were shown to be independent of formal hierarchies. In the learning network, for example, it would be possible to assume the influence of the hierarchy of positions in the constitution of networks, where the higher the hierarchical position of an actor, the greater their influence on the learning of other employees. However, the fact that a cashier was singled out by other colleagues as a source of learning, while the employee who was the supervisor had low influence among the other actors, demonstrates that there is no direct relationship between the hierarchical level of the position and centrality in the learning network.

Moreover, it is noteworthy that the restaurant's general manager had a good index of centrality in the learning network, demonstrating that, if not a central actor in terms of friendship and trust, this person can be relevant in the transmission of knowledge and accessible to other workers. There is a meeting between the informal and the formal organization, generating a factor that favors the management process (Krackhardt & Hanson, 1993).

Actor S20 (cook) stood out in the three mapped networks. This indicates that this worker has an informal leadership role in the group, moving through the intermediation of immaterial content such as friendship, trust and learning and exerting influence, even though they did not occupy a position of formal authority. As Guerrier (2003) points out, informal leaders can exert a powerful influence on work groups even without assuming a formal position in the organization.

The identification of more and less central actors in the networks refers to Castells (1999) proposition about three types of workers: the active ones in the network, capable of making autonomous connections; the passives, who are part of the network but do not decide the connections; and the disconnected, isolated in their tasks, without connection with the rest of the group. It is clear that the ability to make connections gives the actor more centrality, removing him/her from the periphery of the network and giving them more autonomy and even informal power over other workers. In these terms, it can be seen that workers who interact more effectively in everyday life, whether through friendship, trust or learning, can be more active in the network and take more central positions in the informal organization of the restaurant.

5 FINAL CONSIDERATIONS

In general, it appears that informal networks are very active in the restaurant. Their formation and functioning stem from the work culture of the informal organization, but not necessarily having any direct association with formal positions and sectors. The analysis of the networks allowed for a better understanding of the relationships established between restaurant workers, as well as the intermediated contents, formation of informal groups, identification of actors who are leaders and mapping of information and learning flows that enhance the work, contributing to the understanding of this informal organization from this particular context.

No evidence of fragility was found in these networks, given the significant amount of connections, reciprocal links and cliques identified. These findings indicate that workers establish diversified exchanges and act collaboratively through existing bonds, which may contribute to a more effective performance in the researched restaurant.

Specificities were found in networks of certain sectors, these include: lower connectivity in the administrative area networks; a slight predominance of stronger bonds between workers in the same sector; and a prevalence of cohesive relationships and centrality in the dining area and kitchen. These data indicate the points of greater influence in aspects of the formal organization of the



restaurant, such as the physical structure of the sectors and the performance of positions and tasks, over the informal organization.

It is noted that the informal organization assumes a certain independence from the formal structure, but not completely, since the configuration of friendship, trust and learning networks are associated with the dynamics of the restaurant's operation and the relevance of the activities performed by the workers.

If we consider that informal social networks can enhance effectiveness but also create obstacles to organizational performance (Cross, Borgatti, & Parker, 2002; Krackhardt & Hanson, 1993), it is hoped that this research will contribute to the spread of the SNA method in this field, as it offers relevant tools for investigating informal organization and human phenomena at work. In addition, SNA can generate knowledge capable of supporting possible interventions in organizations, oriented both to the expansion of exchanges between workers and to the development of management processes.

Among the limitations that can be pointed out, it is noteworthy that the research did not aim to analyze the working conditions of employees, therefore, as much as the literature (Colares & Freitas, 2007; Melo et al., 2016; Monteiro, 2009) points out the relevance of this aspect, it was not possible to make any precise statements in regard to this element. Further research on the influence of networks in this work context, as well as their relationship with working conditions, including the associated use of the qualitative approach, is suggested as a way to aggregate data that may enrich the research results.

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1. Definition of research problem	X	X	X	X	X	X
2. Development of hypotheses or research questions (empirical studies)	X	X	X	X	X	X
3. Development of theoretical propositions (theoretical work)	X	X	X	X	X	X
4. Theoretical foundation / Literature review	X	X	X	X	X	X
5. Definition of methodological procedures	X	X	X	X	X	X
6. Data collection	X	X	X	X	X	
7. Statistical analysis	X	X	X			
8. Analysis and interpretation of data	X	X	X	X	X	X
9. Critical revision of the manuscript	X	X	X	X	X	
10. Manuscript writing	X	X	X			
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