Analysis of the social network of a Center for Psychosocial Attention for alcohol and other drugs*

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Abstract: Objective: to investigate the social networking of a Center for Psychosocial Attention for alcohol and other drugs (CAPS AD) from referrals and case receipts. Method: quantitative, descriptive, developed in a municipality of the State of Rio Grande do Sul, Brazil. Data was collected from August to December 2017, by means of a yarning circle, application of a questionnaire in a Likert Scale format, and construction of sociograms, reviewed by Social Networking Analysis; 13 professionals participated in the research. Results: there were 37 actors directly or indirectly involved in caring for people who use drugs. CAPS AD and the Family Health Strategy are some of the main services that refer and receive demands from this population. Conclusion: Decentralization of the network and connectivity among the actors are necessary, and ways of working together to build an integrated and cooperative system must be considered.

Descriptors: Mental Health; Mental Health Services; Delivery of Health Care; Social Networking; Substance-related Disorders

Resumo: Objetivo: investigar a rede social de um Centro de Atenção Psicosocial para álcool e outras drogas (CAPS AD) a partir dos encaminhamentos e recebimentos de casos. Método: quantitativo, descritivo, realizado em um município do Estado do Rio Grande do Sul, Brasil. A coleta de dados ocorreu de agosto a dezembro de 2017, por meio de roda de conversa, aplicação de questionário em formato de Escala Likert e construção de sociogramas, analisadas pela Análise de Redes Sociais; participaram do estudo 13 profissionais. Resultados: havia 37 atores

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envolvidos de forma direta ou indireta no cuidado às pessoas que usam drogas. O CAPS AD e a Estratégia Saúde da Família são alguns dos principais serviços que encaminham e recebem demandas dessa população. Conclusão: são necessárias a descentralização da rede e conectividade entre os atores, e pensar em formas de atuação conjunta que propiciem a construção de um sistema integrado e cooperativo.

Objetivo: Investigar la red social de un Centro de Atención Psicosocial para el alcohol y otras drogas (CAPS AD) a partir de las remisiones y recepciones de casos. Método: cuantitativo, descriptivo, realizado en un municipio del Estado de Rio Grande do Sul, Brasil. La recopilación de datos tuvo lugar de agosto a diciembre de 2017, mediante una ronda de conversación, la aplicación de un cuestionario en formato de escala Likert y la construcción de sociogramas, analizados por el Análisis de Redes Sociales; 13 profesionales participaron en el estudio. Resultados: había 37 actores involucrados directa o indirectamente en el cuidado de las personas que consumen drogas. CAPS AD y la Estrategia de Salud Familiar son algunos de los principales servicios que atienden y reciben las demandas de esta población. Conclusión: es necesario descentralizar la red y la conectividad entre los actores, y pensar en formas de actuar juntos para construir un sistema integrado y cooperativo.

Resumen: Objetivo: Investigar la red social de un Centro de Atención Psicosocial para el alcohol y otras drogas (CAPS AD) a partir de las remisiones y recepciones de casos. Método: cuantitativo, descriptivo, realizado en un municipio del Estado de Rio Grande do Sul, Brasil. La recopilación de datos tuvo lugar de agosto a diciembre de 2017, mediante una ronda de conversación, la aplicación de un cuestionario en formato de escala Likert y la construcción de sociogramas, analizados por el Análisis de Redes Sociales; 13 profesionales participaron en el estudio. Resultados: había 37 actores involucrados directa o indirectamente en el cuidado de las personas que consumen drogas. CAPS AD y la Estrategia de Salud Familiar son algunos de los principales servicios que atienden y reciben las demandas de esta población. Conclusión: es necesario descentralizar la red y la conectividad entre los actores, y pensar en formas de actuar juntos para construir un sistema integrado y cooperativo.

Descriptores: Saúde Mental; Serviços de Saúde Mental; Assistência à Saúde; Rede social; Transtornos relacionados ao uso de substâncias

Introduction

Debate on drugs is multidimensional, requiring new ways of operating in the services that assist these populations, expanding the approach to the user, considering his family, his networks. The issue also imposes challenges in ensuring that such services, when set up, do not crystallize into isolated points of attention. The transformations of mental health care model fostered by the theoretical accumulation of Brazilian public policies call for transforming paradigms, both in the field of mental health and about drug use and abuse.

Despite the extensive deinstitutionalization movements in the field of mental health, drug users are still surrounded by moralistic and stigmatizing values internalized in the Brazilian culture, which sees this user as someone who cannot live together in society. In view of this, the aim is to expand the movement in the spaces of the network and its powers through arrangements aimed at socio-cultural insertion and integral health care.
In this regard, health services are organized in networks of increasing complexity, interconnected by means of formal referral/counter-referral processes. Using reference and counter-reference tools represents an important tool for improving the integration of health services.\(^5\)

However, legitimate networking must take place in a committed way, through the establishment of exchanges of care, information, flexibility and joint actions among the actors. In addition to simple referrals, the network must articulate sectorial and intersectorial actions in the territory, effectively meeting social and health needs.\(^6\) Networking is therefore a challenge to services, in order to overcome these obstacles to their implementation.\(^7-8\)

In view of this, it is argued that the network of attention to people who use drugs should not be considered only in its structural aspect, involving services and professionals, but also according to the interactions established by them. Thus, it is necessary to go beyond the identification of services, seeking to understand what are the processes and relationships that constitute each other.\(^7-8\)

Furthermore, studies indicate that the networks of attention to drug users are marked by the centralization in specialized services, difficulties in articulation and communication, little interactivity with sociocultural schemes and assistance interventions focused on emergency and emergency situations. Such findings are in contrast to what is proposed by the Brazilian Psychiatric Reform, which values territoriality, decentralization and the production of well-being and autonomy.\(^9-10\)

In view of the above, it is understood the complexity of the work in this context, and the need to develop methodologies to assess the configuration of networks. The use of Social Networking Analysis (ARS) as a method can contribute significantly to the revelation of this context, showing that a network is not just the sum of relationships, but depends on the context and the position of the actors within it. Understanding these flows can provide valuable information for management decision making.\(^11\)
Thus, the use of this methodology is expanding in several fields, and ARS has unique characteristics. The measures used by ARS are diverse and should be applied in accordance with the purpose of the study and the characteristics of the network to be analysed.\textsuperscript{7}

Based on the previous statements, the following research question was formulated: "How is the social networking of a Centre for Psychosocial Attention for alcohol and other drugs (CAPS AD) composed from the referrals and receipt of cases?". Based on this interrogation, the aim was to investigate the social networking of a CAPS AD from the referral and receipt of cases.

**Method**

This is a quantitative, exploratory-descriptive study, carried out at CAPS AD of a medium-sized municipality on the western border of the State of Rio Grande do Sul, Brazil. The service investigated had approximately 672 open records, of which an average of 30 were classified as intensive treatment. It served about 50 to 60 users daily, in individual or group activities.

The multiprofessional team of the service was made up of 19 workers from various middle, technical and higher education categories: Social agents, Social Worker, Nurses, Physiotherapist, Psychiatrist, Nutritionist, Pedagogue, Psychologists, Physical Education Teacher, Occupational Therapist and Nursing Technicians. Besides these professionals, it had residents in mental and collective health and academics from different undergraduate courses in the health area. Data were collected in the period August to December 2017. The data collection had three stages, applied to the use of ARS in health systems research, as shown in Figure 1.\textsuperscript{12}

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**Figure 1**- Social networking analysis stages applied to health systems research
Stage 1 – Definition of the list of network members and actors:

Step 1: List of all stakeholders (interest groups) involved in the CAPS AD and attention network studied;

Step 2: Complement the list of actors with information collected through interviews with key informants.

Stage 2 – Definition of the relationship between the actors:

Step 1: Show the list of actors in a table;

Step 2: Interview with key informants to identify the relationship between actors;

Step 3: Indicate the existence or absence of a relationship between the actors. In each square of the table, a "0" is placed when there is no supply and no demand for information between two actors.

Stage 3 – Analysis of the system structure: measurement of network properties (measurements) with the help of Ucinet software version 6.0.

Source: adaptation of Blanchet and James, 2011.

In Stage 1 the technique of systematic observation was used, which lasted four weeks, with the aim of familiarizing with CAPS AD, covering its routines and flows, as well as approaching key informants of the research. Data from documents and archives in the service were also checked, such as: flowcharts, internal protocols and attendance sheets. The use of these sources was useful to explore the dynamics of the relationships established by CAPS AD.

Still in the first stage, a yarning circle took place with 13 professionals: a social worker, two social agents, two nurses, a nutritionist, three psychologists, a physical education teacher and three nursing technicians. This action aimed to find out who the other actors with whom the service established relational ties were, that is, what connections were made to resolve the demands of daily work related to drug users. Professionals who were covering leave or taking holidays during the data collection period were excluded from the study. The yarning circle lasted approximately 45 minutes and was recorded on audio and then transcribed to help analyze the data. It should be noted that the social agent’s function is to guide and refer individuals who are socially vulnerable to the health and social assistance services.

In stage 2, a questionnaire, in Likert Scale format, was applied in order to identify the relationship between the actors in the network. Five questions were prepared, with key content: sending reference, receiving reference, case coordination, joint programmes and consultancies.
Each question contained the following scoring correspondence: 0 - never; 1 - rarely; 2 - sometimes; 3 - frequently; and 4 - always. This type of instrument consists of a series of statements regarding a certain object. For each statement there is a scale from zero to 4 points.

At this stage, managers working in the municipality’s mental health network were included. Managers who were taking over the coordination of the service on an interim basis, or were covering leave or taking holidays during the data collection period were excluded. The scale was applied separately to managers (key informants) of each of the 37 services (called here network actors) indicated by CAPS AD workers during the first stage of data collection. The value of the measure is obtained by summing the values of the responses to the statements.

This research focuses on two aspects that identify the modes of relationship established between the actors, namely:

a) Sending reference: patients sent to other units in the network;

b) Reception reference: patients received from other units in the network.

With this data, the third stage was started, in which sociograms were constructed and the measurement of the properties (measures) of the network - Density and Centrality - was carried out, thus constituting the 3rd Stage.

The use of Density and Centrality metrics is emphasized here. The objective of Density is to measure the degree of connectivity within the network, representing the number of possible total connections that may exist. A network is considered dense when it has many relationships between pairs of actors; otherwise, it is a bit dense. The degree of centrality allows the actor to obtain the degree of influence over the local network.

For the composition of sociograms, a computer software called Ucinet was used. It is a graphic representation of the network, in which each actor is a point and the lines connecting them represent the relations between them.
In order to carry out this study, the ethical and legal aspects were respected, as set out in Resolution No. 466 of the December 12th, 2012, of the National Health Council, which regulates research involving human beings. The approval of the Research Ethics Committee of the Federal University of Rio Grande do Sul took place on July 27th, 2017 and was registered as number 2,189,159.

**Results**

The results showed 37 actors involved in caring for people who use drugs. It is possible to observe that this is a network with health mechanisms, social assistance, other sectors and community/social resources, of a generalist and specialized nature (mental health and alcohol and other drugs), and of different levels of attention/complexity and purposes. The representation also includes public and private services, philanthropic institutions and non-governmental organizations (NGOs), as shown in Figure 2.

**Figure 2** – Services that are part of the Care Network for people who use drugs. Uruguaiana/RS, Brazil, 2018

<table>
<thead>
<tr>
<th>RAPS Components</th>
</tr>
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<tbody>
<tr>
<td>Basic Health Care</td>
</tr>
<tr>
<td>Family Health Strategy (ESF)</td>
</tr>
<tr>
<td>Street Clinical Office (CnR)</td>
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<tr>
<td>Psycho-Social Strategical Attention</td>
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<tr>
<td>Center for Psychosocial Attention for alcohol and other drugs (CAPS AD)</td>
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<tr>
<td>CAPS II</td>
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<tr>
<td>Emergency and Urgent Care</td>
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<tr>
<td>Emergency Care Units (UPA)</td>
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<tr>
<td>Emergency Service (Hospital)</td>
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<tr>
<td>Mental Health Ambulatory</td>
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<tr>
<td>Hospitalar Care</td>
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<tr>
<td>Psychiatric Unit (Hospital)</td>
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<tr>
<td>Transitional Residential Care</td>
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<tr>
<td>Halfway House</td>
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<tr>
<td>Therapeutical Community</td>
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<tr>
<td>Psychosocial Rehabilitation Strategies</td>
</tr>
<tr>
<td>National Employment System (SINE)</td>
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<tr>
<td>Actors beyond RAPS - Intersectoral Resources</td>
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<tr>
<td>Health/ Education/ Justice/ Social Assistance</td>
</tr>
<tr>
<td>Serological Guidance and Support Centre (COAS)</td>
</tr>
<tr>
<td>Popular Pharmacy</td>
</tr>
<tr>
<td>Centre for the Administration of Injectable Medicines (CAMI)</td>
</tr>
<tr>
<td>Health Project Prevention and Aggravation of Non Communicable Diseases</td>
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</table>
The use of ARS identifies the relationships between the actors and from there establishes proximity or distances by means of geodetic distances. The sociogram presented below (Figure 1) shows this view graphically from the perspective of the Sending Reference.
In the network investigated, each of the services represented can send patients to the other 36 units of the network. This configuration results in a potential of 1,332 connections. The results indicate that the network had 374 connections for the reference of sending patients. Therefore, the average density of this network, dividing this value by the total potential of connections, was 28.1%, which describes a network of low density. On the other hand, when the average density was verified only among the actors that are part of the RAPS (11 units), a percentage of 53.6% was identified.
With regard to the degree of centrality of the network, it was identified that CAPS AD assumed the central role in the sending relations, making 71 connections with the other actors. Other devices that can be considered central in the sending of patients were: Social Assistance Reference Center (CRAS) (56), Guardianship Council (48), Uruguayan Support Group of HIV Prevention (GUAPA) (46) and Children and Adolescent Assistance Center of Uruguaiana (CACAU) (45). Actors of UNIPAMPA (Federal University of Pampa), Municipal Health Council and COMAD (Municipal Anti-drugs Council) have not made any connections with other network actors regarding the patient referral relationship, which, in the sociogram (Figure 1), is evidenced by the position occupied by these services, far from the centre.

The perspective of the analysis of Receiving Reference, in turn, presented a slightly smaller number than that of Sending, being possible to observe in Figure 2, below, a less intense dynamics of exchanges between the actors.

The total average density of the receiving network indicates that the reference of receiving patients had 300 connections; a value which, divided by the total potential of connections in the network mentioned above (1,332 connections), results in a network with an average density of 22.5%, which characterizes a network with lower density than the sending reference. With regard to average density, only among the 11 players that make up the RAPS, there was again a higher density than the general network, with 58.8%. Figure 2 describes the configuration of this network.
Regarding the degree of Centrality of the Reception Network, it was identified that the three actors with the highest number of connections regarding the reception of patients were: CAPS AD (115), ESF (Family Health Strategy) (50) and CRAS (Social Assistance Reference Center) (47). Schools, Sport Secretariat, ROMU (Municipal Civil Guard of Uruguaiana), FASE (Socio-Educational Attendance Foundation), Penitentiary and COMAD (Municipal Anti-Drug Council) did not establish connections in this mode of relationship.
Discussion

The complexity of the drug phenomenon reveals numerous needs related to precarious social perspectives, lack of housing opportunities, health, employment and personal/professional development; with life histories permeated by different types of violence, family histories with abusive use and drug addiction, among other socio-cultural and environmental risk factors. In view of this, the care of service users also requires interventions by means of multi-factorial strategies.

The results show that the services that make up RAPS establish a greater number of relationships among themselves compared to the rest of the network, which can be considered an expected pattern of links among actors. This connectivity can be evidenced in the sending (referral) and receiving relationship of users of the services, where the degree of density among the 11 actors of RAPS was higher than that of the network as a whole. However, when the total density of the network is analyzed, i.e., when only the existing links between the 37 actors are considered, an index of 28.1% and 22.5% was found in the sending and receiving user links, respectively.

The network created for drug users is known to have had its implementation challenged by anti-drug guidelines, where drug use was seen as a public security problem and not a health and care issue. Thus, the challenge and importance of articulation among RAPS actors to ensure the quality of care provided is emphasized here, since the networks that care can surround this population.

Effective care depends on actions that value articulation with different resources for the development of their practices. Therefore, it is understood that the process of caring for people who use drugs must be anchored in the perspective of forming partnerships with different sectors and services available in the territory, beyond the sectors that traditionally make up the RAPS, and engaging in dialogue with the community resources of the territory of origin of the people accessed.
In this sense, the network of care must be composed of plural points that seek to
demystify the hegemony of the health sector, through the appreciation of the complexities of
socio-cultural contexts and communities. And also by increasing the articulation and
participation of spaces of education, culture, citizenship, work, leisure, spirituality, and social
transformation.\textsuperscript{18} In this way, community resources become fundamental for the promotion,
prevention, and social reinsertion of drug users, being places and spaces where life is as it is,
where relationships and bonds are unveiled.\textsuperscript{13}

The existence of these different levels of relationships within the network is beneficial from
the point of view of decentralization and expansion of assistance. Routes between services are factors
that show a certain communicability between them, as well as a functioning that aims to guarantee
care focused on the demands of the person accessed in an integral way, in all its dimensions.

However, the focus on referral, reference and counter-reference systems can contribute to
the articulation and fluidity of the network and assistance completeness. For it is necessary to
invest in attention strategies based on co-responsibility, shared care and matrix support. Aiming
at overcoming fragmented assistance models and the transversalization of mental health care.\textsuperscript{19}

CAPS AD is one of the main services that refer demands related to people who use drugs,
reinforcing the finding that there is an integral demand from this public for the guarantee and
effectiveness of therapeutic projects. The fact that it constitutes a reference service does not
imply the realization of care in isolation; on the contrary, it is the role of this reference to
identify the different demands, seeking articulation with the other devices of the network.

Many users of the service are known to have different clinical health problems and social
vulnerabilities, requiring specific and constant care from other assistive mechanisms. However,
CAPS AD was the only service accessed by them. So, it is understood that this form of network
organization can generate overload to the service, besides impacting negatively on care, in a
concentration of demands that tends to limit the potentiality of the network.
In this way, CAPS AD should not be a centralizing, totalitarian service. Since guaranteeing the access of users to different points of the network is an integral part of the holistic and singular care and of the ideals of the Psychiatric Reform which aim at social insertion, extramural actions, articulation with the territory, respect for singularities, freedom and autonomy.\textsuperscript{20}

The Guardianship Council and CACAU were also among the services that carried out most referrals. This interface happens in many cases because of intrafamily issues which may, for example, temporarily prevent parents from remaining with their children. In other cases, these devices are also triggered by the exposure of children and adolescents to risk situations related to the clandestine flow of drugs in their communities.

This finding reinforces other findings on the implications of psychosocial care and institutionalization in meeting the needs of adolescents in situations of illicit drug use, as well as those of their. In these studies, the need to strengthen RAPS and its intersectorial articulation was highlighted, considering that the promotion and prevention actions related to the use of drugs aimed at adolescents and their families are still fragile. And care strategies are often emphasized in repression, combat and over-medicalization.\textsuperscript{14,21}

In the case of the Guardianship Council, it is important that this actor be able to offer a welcoming and listening space, and be able to understand the different social demands within the community, since it can be considered as one of the first “doors of entry” to meet demands related to drug use in the network.\textsuperscript{13} In this case, the Guardianship Council for the user becomes a space for guaranteeing human and social rights, which makes it possible to improve their quality of life and well-being and to seek alternatives to solve their problems, both in social and economic aspects, cultural, among others.\textsuperscript{22}

Draws attention to the expressiveness of GUAPA, which appeared as a relevant service in the relationship of sending within the network. This demonstrates some articulation between
community resources and the formal attention network, as an enriching element for the construction of possibilities of care, connected to the existential territory of the accessed subjects.

Therefore, it is understood that an expanded network, formed not only by health services, but also by individuals, equipment from the territory and organizations, will offer expanded assistance in order to promote the inclusion of multiple sectors and the integrality of actions. CRAS and CREAS (Specialized Social Assistance Reference Center) also appear as central devices in the references, reinforcing the relevance of the Single System of Social Assistance in the effective response to these demands.

It is considered necessary to look at the understanding of the issue not only as a problem in itself, or purely on an individual and biological level, but taking into account the role of social structures in the conformation of subjects and their social determinants, that is, as elements that compose the risk and protection factors involved in the problems associated with the use of alcohol and other drugs.

Basic care (AB) and Family Health Strategy (ESF) teams also emerge in referring and receiving cases. While the ESF is one of the main devices that favor case referrals, it also appears as the second service in the network that receives the most demands from other services, because it is inserted in the territory.

AB is responsible for providing the population with the necessary care for their most prevalent health problems, including preventive, curative, rehabilitation and health promotion measures, and should be resolving about 80% of these problems; above all, it is responsible for the continuity and completeness of care and coordination within the system itself, as well as being seen as an environment less likely to promote prejudice and.

However, studies point to the low resolution capacity of ESF units, not due to their potential, but related to structural and human resource problems, high demands and overload, contributing to strengthen the culture of referral. Thus, when these schemes find it difficult,
they refer cases to specialized services, establishing a relationship of dependency with them, at the same time reducing not only the scope of preventive, educational and health promotion interventions, but also the follow-up of cases that have already been discharged from hospital or CAPS, making it difficult to co-responsibility for care with partners in specialized areas.\textsuperscript{25}

Insufficient qualification of professionals at AB may result in care planning difficulties, as well as the reinforcement of reductionist and stigmatizing logic in care for those accessed. On the other hand, the training of these professionals, combined with shared responsibility among services, contributes to the construction of movements that break with the traditional, individual and specialized model of health care.\textsuperscript{26}

It is recognized that the demands of the users of the services are diverse and therefore require the cooperation of different services in order to carry out the care. This means that referral is necessary and vital in many cases, however, this practice should not be summarized as a transfer of care. Rather, it should invest in shared responsibility and communication between the services involved.\textsuperscript{15-17,25} In this way, it is considered that the organisation of the attention network should be integrated with a range of resources and operate in an articulated manner, valuing the importance of each service within the network.

As a limitation of this study, the scope of this research allows only partial responses to the phenomenon being evaluated, since a reality has been detailed and studied.

**Conclusion**

The investigation of the social network of a CAPS AD, based on the referrals and receipts of cases, pointed out the existence of relationships between important actors of the network. The importance of RAPS-related services, as well as the partnership with other services and sectors in this composition, is emphasized.
Analyzing the social network of CAPS AD makes it possible to extend care assistance and reduce the overload of services, the articulation being a fundamental point to visualize the potential of each service. It is important to point out that although CAPS AD is one of the main forwarders of the demands related to people who use drugs, the relationship of the places that meet this demand is fundamental.

It is suggested that new studies be developed using other methods of analysis, including qualitative ones, and carried out in other contexts, to explain the phenomena inherent in the daily life of services and the functioning of teams.

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