

## THE KNOWLEDGE NETWORK OF COMMUNITY HEALTH AGENTS

As redes de conhecimentos do agente comunitário de saúde

Las redes de conocimientos del agente comunitario de salud

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### How to cite this article:

Ramos DT, Riquinho DL, Silveira MR, Santos VCF, Broch D. The knowledge network of community health agents. Rev Fun Care Online. 2020 jan/dez; 12:46-53. DOI: <http://dx.doi.org/10.9789/2175-5361.rpcf.v12.6936>.

This research received financial support from the *Pró-Reitoria de Pesquisa (Propesq)* of the *Universidade Federal do Rio Grande do Sul (UFRGS)*.

### ABSTRACT

**Objective:** to analyze the knowledge networks built on the life experiences and work of the Community Health Agent (ACS) in health education actions in the Family Health Strategy of a District Management of Porto Alegre/RS. **Method:** research developed with 25 ACS, from August 2015 to February 2016, with focus groups and semi-structured interviews. The analysis took place through thematic categorization. **Results:** the first category involved the formal knowledge network: introductory course, training or none of the above; (In) training; and team meeting. And the second included networks of informal knowledge: life experience; and colleagues and reading. **Conclusions:** networks of formal and informal knowledge complement and enhance the meaning of health care through the meeting of scientific knowledge and knowledge from experiences and observations of everyday life and work.

**Descriptors:** Community health Workers, Primary health Care, Education, continuing.

### RESUMO

**Objetivo:** analisar as redes de conhecimentos construídas nas experiências de vida e no trabalho do Agente Comunitário de Saúde (ACS) nas ações de educação em saúde na Estratégia Saúde da Família de uma Gerência Distrital de Porto Alegre-RS. **Método:** pesquisa desenvolvida com 25 ACS, no período de agosto de 2015 a fevereiro de 2016, com realização de grupos focais e entrevistas semiestruturadas. A análise ocorreu por meio da categorização temática. **Resultados:** a primeira categoria envolveu a rede de conhecimento formal: curso introdutório, treinamentos ou nenhuma das opções anteriores; (in)capacitações; e reunião de equipe. E a segunda englobou redes de conhecimento informal: experiência de vida; e colegas e a leitura. **Conclusões:** as redes de conhecimento formal e informal

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complementam-se e potencializam o significado do cuidado em saúde por meio do encontro do conhecimento científico e do saber oriundo das vivências e observações do cotidiano de vida e trabalho.

**Descritores:** Agentes comunitários de saúde; Atenção primária à saúde; Educação continuada.

## RESUMÉN

**Objetivo:** analizar las redes de conocimientos construidas en las experiencias de vida y en el trabajo del Agente Comunitario de Salud (ACS) en las acciones de educación en salud en la Estrategia Salud de la Familia de una Gerencia Distrital de Porto Alegre/RS. **Método:** investigación desarrollada con 25 ACS, en el período de agosto de 2015 a febrero de 2016, con realización de grupos focales y entrevistas semiestructuradas. El análisis se produjo por medio de la categorización temática. **Resultados:** la primera categoría involucró la red de conocimiento formal: curso introductorio, entrenamientos o ninguna de las opciones anteriores; (In) capacitaciones; y reunión de equipo. Y la segunda englobó redes de conocimiento informal: experiencia de vida; y colegas y la lectura. **Conclusiones:** las redes de conocimiento formal e informal se complementan y potencian el significado del cuidado en salud a través del encuentro del conocimiento científico y del saber oriundo de las vivencias y observaciones del cotidiano de vida y trabajo.

**Descriptor:** Agentes comunitarios de salud; Atención primaria de salud; Educación continua.

## INTRODUCTION

The knowledge construction that health professionals share with population is a relevant topic for the healthcare practice offered in Primary Health Care (PHC). The work process in the Family Health Strategy (FHS), a model of healthcare adopted by PHC, focuses on the action of a multi-professional team, which has in its scope the development of actions to promote, protect and maintain health, including disease prevention, diagnosis, treatment, and rehabilitation. In this universe of attributions, the Community Health Worker (CHW) has as main attribution the mediation between the team, the families and the users.<sup>1,2</sup>

In this mediation, the CHW also brings together the knowledge (formal and informal) understood as biomedical and common sense, converging both to the quality of life and a backdrop of the guarantee of citizens' rights.<sup>1</sup> The CHW works to bring the population and the healthcare team, democratizing the existing knowledge about the health process and diseases in several segments of healthcare, aiming to subsidize the organization of the teams from the local reality.<sup>3,4</sup>

The CHW's performance together with the population served by the teams reflects the technical language for those that make sense in the ordinary man's everyday life, not because it is less valuable, but to be shared by people who do not identify themselves by academic certifications.<sup>5</sup> Still, it seeks to legitimize actions of the healthcare team through understanding and acceptance by the population, and thus reinforcing the relationships between these actors and facilitating dialogue and the exchange of knowledge and expertise.<sup>2</sup> But this process is closely linked to the identity constitution of these subjects, which is beyond the prerogatives of its office listed in the official documents.<sup>3</sup>

The CHW's production, through a multi-professional team that has its identity formation in the academic canons, is a dialogic process related to the political, organizational, relational and situational context produced in a singular way in the different territories that the professionals are inserted. The essence of the dialogue lies in the humility of recognizing the other as a bearer of knowledge and the experiences derived from their reality.<sup>6</sup> The CHW's know-how is a bet on ensuring that local knowledge is recognized and considered in health practices, so that it is indisputable that the knowledge that these actors hold is a determining factor in the greater or lesser success of actions in the different priority areas of PHC.<sup>4,7</sup>

In everyday life, the CHWs use the knowledge acquired by the profession and (re)signifies it based on their own knowledge and community common sense in which they are inserted, making it appropriate and introduced in different situations.<sup>2</sup> Based on the formation and performance of the CHW, the importance of understanding how their formation in the health field occurs, what are the approximations between formal and informal knowledge and how this knowledge is activated when accompanying the families and intervening in the living conditions of the community. In this perspective, it is understood that CHW's performance in the field of health, mediating the individual of the local culture and the scientific-technical individual of health, creating knowledge networks that make sense for their work. Knowledge networks can be defined as spaces for the exchange of information and/or experiences between people and professionals in different areas, helping to understand the processes of interaction and knowledge generation.<sup>8</sup>

A network represents the idea of a web formed of nodes, which configure the present elements and the links through the connections between the nodes. In nature, as in society, networks are dynamic, because of the change in behavior, elements, and interactions between them. More than knowing the parts of this network, it is necessary to understand its training dynamics and to understand the inter-simultaneous relations and their results.<sup>9</sup> In this case, where the knowledge of the CHW is generated from and how it works.

Given the aforesaid context, the objective of this study was to analyze the knowledge networks built in the life experiences and the work of the Community Health Work in the health education actions in the FHS of a District Management of *Porto Alegre* city, *Rio Grande do Sul* State.

## METHOD

This is a descriptive study with a qualitative approach.<sup>10</sup> It was performed in an assistant teaching district linked to the *Universidade Federal do Rio Grande do Sul (UFRGS)*. The study population was the CHWs from the 28 FHS teams presented on the territory and the participants were one agent from each team. The inclusion criterion was to be part of the functional framework of the service for at least three months, regardless of the employment relationship. On the other hand, the exclusion criterion was to be absent from work during the period of data collection.

Data generation occurred from August 2015 to February 2016 through a focus group and semi-structured interviews.<sup>11,12</sup> There were three focus groups, with three meetings each group, totaling nine meetings. Nine CHWs participated in the first focal group; in the second, nine CHWs started, and two participants were lost; in the third, started ten, and there was a loss, totaling 25 participants. With those, the interviews were realized in their workplaces after prior appointment.

The interviews focused on the life trajectory and the relationship with work, the work process, and knowledge networks in and for work. In this study, the data obtained from the focus groups and semi-structured interviews were used, especially with respect to the knowledge networks and the acquired expertise and practices.

The Focus Groups (FGs) and the interviews were recorded and then transcribed in full. To ensure the anonymity of the participants, the interviews were identified by the letter A, followed by an Arabic number. The numerical classification occurred randomly, from 1 to 25. The software *Nvivo 10.0* was used to organize the material. The treatment and analysis took place through thematic categorization.<sup>10</sup>

Regarding the characterization of the research subjects, the average age was 45 years old. The majority of participants were female, 20 women. The self-declaration of race/color had the same amount of whites and blacks (11, respectively) and three browns. With respect of schooling, 16 of the participants had completed high school and/or technical training; five had incomplete higher education; three had completed higher education; and one indicated to have completed elementary education. The average duration of the profession as CHW was two years (minimum time of eight months and maximum of 19 years).

The main social and health problems of the territory reported during the three FGs were as follows: the increase of the elderly population, increase of the violence, difficulty of access and accessibility, pregnancy in adolescence and drug trafficking.

The research project was submitted to the Human Research Ethics Committees from *UFRGS* and approved by the No. 1.009.554 and the Municipal Health Department of *Porto Alegre* by the No. 1.147.148.

## RESULTS AND DISCUSSION

The study proposes a reflection on the knowledge transmitted by the CHW in the actions of health education. Through a mapping of networks built in life and work experiences, two categories emerged, with three subcategories in the first and two in the second. The first, formal knowledge network: introductory course, training or none of the above; (In)capacitation; and team meeting. The second included networks of informal knowledge: life experience; and colleagues and reading.

## Formal and informal knowledge network

On the one hand, formal knowledge networks consist of specialized organizations working together for a common purpose, sharing knowledge bases and developing solutions for decision makers.<sup>8</sup> Their most common form is through developed and applied training organizations.

People who participate in this sharing often do not identify with the methods applied and how knowledge is transferred. The training, to a large extent, is inefficient, especially since some of the participants remain inattentive, thinking about the work that remains to be done, and the other is relieved to move away from it. The author adds that half of the participants already know what is going to be said and that the other half will need to know more about everything that has been addressed.<sup>14</sup>

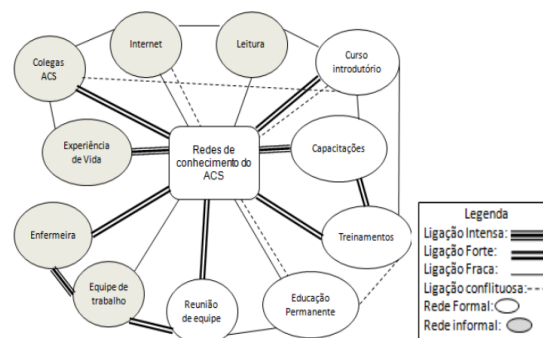
On the other hand, the informal network shares knowledge through the exchange of ideas or the request for help to solve a given problem, occurring naturally and spontaneously.<sup>8</sup> In this sharing, there is a greater visibility of participants' motivation for the retention of disseminated knowledge; another benefit is the greater social interaction of people, promoting an exchange of information and support between them.<sup>14</sup>

Both networks of knowledge converge; they are interrelated and one complements the other because of the deficiency and the interactions that are required to perform the CHW work. In interviews and in the focus group, it was evidenced the necessity of joining these networks of knowledge to carry out the work, as reported:

*Much of life I bring to work and form the work I take to life. (A 06)*

**Figure 1** presents a synthesis of the elements that the CHWs cited as references to compose the knowledge networks used in the health guidelines and that will be discussed throughout the article. From the reports, it was possible to observe the type of connection, its intensity and the different elements with which it was established.

**Figure 1** - Synthesis of the networks woven in the life and work experiences of the ACS.



Source: Ramos, 2016.

## Formal knowledge network: introductory course, training or none of the above options

In relation to the initial training for the development of CHW work, one-third of the research participants reported having received an initial course. Among these, more than half reported greater satisfaction with their training, which included an introductory course prior to the beginning of service activities.

Despite the recognition of the period and the offer of tools of “how to do, be and wait”, the need to apply the theory according to the presented reality was signaled:

*My initial course was quite long. It was a great deal of community agent talking about various issues and various forms of work. Obviously, in practice, things are kind of different, isn't it? You have a notion theoretically, but in practice, you will apply theory according to your reality, isn't it? (A 16)*

This marked difference between what the course prepares theoretically and the practice adapted to the daily work, which presupposes the development of competences. It involves working theoretically, in order to enable the professional to recognize the social reality and its needs, based on a shared construction, stimulating the reflection of knowledge, knowing how to be and do.<sup>15</sup>

Consistent with this, the competence developed by the CHW must be based on the four pillars of education: learning to know, combining a general culture; learning to do, the competence that makes the person capable of facing numerous situations and working as a team; learning to live together, developing the understanding of the other and the perception of interdependencies; These skills seem to be essential to the work of the CHW, which, in addition to receiving the initial knowledge, will need support in the search for new knowledge to face the everyday problems.

The presence of disjointed form of training work was verbalized by three participants:

*When I joined, I did some training, but I think they were not worth it, things were not well explained, they were very basic things. (A 01)*

By stating that the training was insufficient, the CHWs illustrate that a lot of information was available in a short time and that some important issues were covered superficially, not accounting for the complexity found. There is a challenge in preparing professionals adapted to the needs of the *Sistema Único de Saúde (SUS)* [Unified Health System], which implies profound changes in the organization of their training, such as, for example, alternative education programs that are more suitable to the organization of primary care, necessarily, by linking between education and work.<sup>1</sup>

The offer of course focused on initial formation was denied by the majority of CHWs, who stated that they did not participate in the first stage of the training course, starting their practices in the service without capacitation.

It is noted that the process of formation or qualification of the CHW is still unstructured, fragmented and, in most cases, insufficient for the agent to develop the skills necessary for the proper performance of its role. Some authors believe that the conclusion of the technical course is decisive for the consolidation of the activities of the health agents; if the training was actually completed in agreement with the Ministry of Health (MH), the results in the actions directed to the community would be of a higher quality.<sup>16</sup> The conclusion and the incentive to the professionalization of the CHW could promote a positive change in the profile of this agent. In this way, health agents would perform their activities with more ownership and efficiency, by increasing their schooling.<sup>17</sup>

It is important to question how much the courses prepare or teach the CHWs. This is because, in the reports, difficulties were perceived in relation to the accomplishment of the initial formation, its conclusion and its distance with respect to the experience of the everyday work.

## (In)Capacitation: absences to carry out the work of CHW

Even with limitations, the CHW reports emphasized the importance of training in daily life:

*The capacitation guides us in practice as a community agent. (A 18)*

The topics considered as most addressed in training were dengue, tuberculosis, women's health, violence and Human Immunodeficiency Virus (HIV). Focusing especially on the programmatic actions oriented by the MH, the need for continuity in the educational process stems from the importance of capacitation and training in transforming professional practices and the organization of work, in order to allow its structuring from problematization of this process and its capacity to accommodate and care for the various dimensions and health needs of people and community.<sup>18</sup>

For knowledge to become an individual wealth it must be developed; otherwise, it becomes a cluster of information with no value. The process of developing formal knowledge is fundamental, and knowledge networks must have tools and procedures that contribute to the formalization of this knowledge.<sup>9</sup>

When asked about participation in the choice of themes for the training meetings, the CHWs were unanimous in considering that the themes were already defined. They reinforce that, in most cases, educational processes take place in a verticalized, nationally standardized, and mandatory character, at irregular periodicity and not reaching all workers:

*The management usually sends and then, unfortunately, not everyone can go, isn't it? There you go drawing, who did not go in one, goes in the other. (A 14)*

The fact that they do not discuss or know how to deal with problems identified in their daily work can distress the



CHW, harming them in the monitoring and orientation of families under their responsibility (Queiroz and Silva, Oliveira, 2014). For the authors, this absence in the monitoring and participation of the propositions of pedagogical processes, which do not allow meaningful learning, can lead to losses in the role assumed by this professional.

In view of frequent updates in the scientific and technological field in the health area, it is evident the constant need of Continuing Education, whose pedagogical concept is to add learning from the critical reflection of the work process and, through this reflection, structure the training of health professionals.<sup>19</sup> It is believed that Continuing Education is appropriate for dialogue and updates of workers. Difficulties with the implementation of new tools for entering records and feeding programs have been reported by CHWs, which need to be done through computers. In one interview, one participant reports that he had to buy a computer at home and that his children taught him how to use the equipment:

*You have to fill in the e-SUS reports, you have to do the production, but you did not have a course to work with computers or anything, I bought a computer for my house, and my children teach me, [...]. And now it's like this, they do not give conditions, but still demand from you!* (A 22)

It is noticeable that the internet and computing are important tools for improving knowledge and for producing data. Nevertheless, if these instruments are not properly used or with adequately capacitation, they become an obstacle, damaging the assistance care and quality in care.

### **Team meeting: Space used for Continuing Education**

Another form of knowledge built by the formal network was team meetings. It has been reported that, in this space, the actions of continuing education can materialize:

*Here we make continuing education, two hours of continuing education and two hours of meetings, every Thursday, there are meetings.* (A 22)

In the light of continuing education, health workers' qualification processes should take into account as reference the needs of people and populations, sectorial management and social control, in order to transform the practices of work organization itself, with a social determinants of health, also considering the subjectivities in the health and disease process, with the purpose to fill the gaps in the work process of CHWs.<sup>1</sup>

It is necessary to know that to teach is not transferring knowledge, but create the possibilities for its own production or its own construction. Therefore, the learning process should be based on practical experience, allowing critical reflection and coping with real situations, discussing the problems with the team and stimulating the active participation of the CHWs. In this perspective, the theory will be integrated

with the practice, from a continuing education perspective as a learning model, using the space and time of the team meetings to carry it out.<sup>20</sup>

In listening to the CHWs, it was noticed that the production of knowledge in the meeting with the health team, in most cases, occurs vertically, with the mere transmission of knowledge.

*The difficulty is because I have no information, you cannot count on a team.* (A 01)

*Anyway, in any situation I need, I go straight to the nurse, and she directs, isn't it? Then, pass it to me.* (A 20)

From these experiences, the CHW reinterprets the speeches, aiming to manage their daily actions through what makes sense, especially the speeches from the doctors and nurses, and apply it in the meeting with the community.

It was noted in the interviewees' reports that there are moments of the team meeting in which biomedical knowledge circulates, with its apparatus of scientific technical knowledge, together with the knowledge of the CHW regarding the particularities of families and territory, especially when there are some complex situation that demands the involvement of all.

*Look, everything that happens to the patients we try to report to the team in a meeting, so everyone can try to find a solution [...] meeting is for that, to report things, to report what comes from outside and the cases we have when they are very serious...* (A 02)

Health work can take two sides: it may be centered on a prescriptive act that validates a model centered on biomedical knowledge or it may be in the form of relationships established in the living work that produces a care that generates autonomy for the cared people.<sup>21</sup>

### **Informal knowledge network: life experience**

In seeking to know the knowledge and practices acquired from life experiences and how these are triggered in the actions of education and health for the well-being of the users, it was noted the benefit of these experiences in the work. Starting from the experiences and challenges faced, the subject constructs their critical reflection, being possible to interpret what happens in the world. These experiments are part of the learning process and are some of the main mechanisms for knowledge acquisition.<sup>13</sup>

In this context, the problematization of reality constitutes a starting point for the learning process, both for awakening the desire for knowledge and for enabling the appropriation of new ideas and concepts by the subject.<sup>22</sup> It is considered that learning is not the abandonment of previous ideas, but a starting point for the elaboration of relations with new knowledge, since critical reflection based on previous experiences would also be a source of encouragement for autonomy and decision-making.

Considering the lived social context and established relationships, CHWs go beyond the symptoms or presence of a certain illness; they relate it and explain it from life situations:

*You see a lot. Because we live there and you attend those people, you know those people, you know more where the problem is, the focus of that problem. As I said, often the person comes to the health post, looks for help because of depression, the doctor does not know the reason for the person's depression; we are there and we know. (A 04)*

The links that CHW makes with the community lead to the obtaining of certain information and knowledge about the persons to whom they alone have access, differently from the doctors and nurses, who interact with the patients in the office space or in the health unit.<sup>23</sup> There is, in this interaction, an exchange of knowledge and information that places the CHW as a privileged informant, and other professionals in the health team, depending on how mediation happens, with academic and technical knowledge versus life experiences.

To reach the objectives proposed by the services and to approach effectively to the population, the translator role of CHW between biomedical knowledge and common sense has been reported, by means of the approximation between the technical languages and those employed by the users. This peculiar way of being understood legitimizes CHW actions and brings them closer to users. Such interaction allows a bridge between these actors to be established, facilitating dialogue, as well as the exchange of knowledge and expertise.<sup>23</sup>

CHW's field of action builds on the knowledge acquires in living with the team's professionals, on in-service education programs and on the knowledge it brings with them from life experiences. The CHW tends to use their knowledge and practices from their experiences and share them with the community.<sup>6</sup>

A situation reported by one of the CHW was related to breastfeeding; due to her daughter's successful experience in nourishing her grandson for six months exclusively with breast milk, she attributed her healthy growth to such an experience. From this, he shared with the community the importance of breastfeeding:

*One of the things I hit the most with moms and moms is the importance of breastfeeding [...] then, I try to show moms the importance of breastfeeding, which is not just about economics, but the quality of health for her children. (A 05)*

It is observed how many personal values permeate the actions performed, and this approximation is sometimes based on cultural formation and can influence many aspects of people's lives, interfering strongly in health.<sup>2</sup> Such influence can occur positively or negatively, depending on the signs of health and illness present in the imaginary of users, constantly reinterpreted, as well as the health team. Only two CHWs reported that their life experiences at one time hampered them in working within the community due to different cultures and values:

*In the beginning, it was very difficult, because I come from a family of father, mother, brother and dog. So I came into a house, had two sisters, and the two had daughters with the same father, or a lot of young girls, 20 years old, with three, four children ... This was a really big shock to me, I was not accustomed to things like this, [...] for me it was very complicated. (A 24)*

Difficulties in dealing with differences are perceived, for sometimes they cause anguish and restlessness. Humanized care in health needs to be stripped of values and beliefs so that there is no judgment or influence on the way to care for a particular family or individual. The network of informal knowledge is a fundamental point for the work of the agent, and there is great influence of this type of knowledge at work, either positively or negatively. Life luggage and the issue of community link have been demonstrated in the CHWs' speeches. It was verified, however, that it was not always aware how much of these knowledge and values permeated the everyday work.

### Colleagues and reading: ways to build knowledge

Failure to complete an initial course for work was reported by most CHW, and half of them reported that their initial knowledge network was built together with their older colleagues, who trained and taught them about their activities.

*Actually, it was my colleagues who trained me, so at the beginning, when we came in, then it was our colleagues who empowered us because they already had experience. (A 05)*

There is appreciation for the teachings and welcome that the old colleagues provided. Due to the inherent characteristics of the work, the CHW initiates it without previous knowledge of the profession; without capacitation, they had to figure out how to do it. The exchanges of experiences between the CHW ensure that the knowledge of their colleagues are incorporated based on their own knowledge, making them appropriate and inserted in the various situations.

In counterpoint, it was said during interviews that there is a negative part in one colleague teaching the other:

*Colleagues teaching colleagues, for example, I've taught several who came in here. Teaching what I say is showing you how you do [...], but there are people who teach everything "crooked". I no longer think this way, I think I have to teach the right as they taught me [...]. (A 11)*

It is noticeable the difficulties in local management in identifying and resolving these approaches. When basics needs for work are not offered institutionally, there is scope for a re-creation, which can produce a deleterious effect to the operation and quality of the service.

The nurse was the professional appointed by half of the CHWs as a reference in the pursuit of knowledge, followed by doctors and nursing technicians. In relation to these professionals, the CHWs seek to resolve doubts and orientations for certain situations:

*I come here and: 'Look, nurse, I do not know about this, but I have a demand in the community that I need to give a return. What do I say to the patient?' (A 08)*

The nurse in the FHS develops the role of supervising, supporting, coordinating and evaluating the actions performed by the agents and also the important function of carrying out the activities towards the CHW's continuing education.<sup>1</sup> In order to do so, the nurse needs to face some challenges, for instance, recognize this professional as a knowledge bearer who elucidates various situations of the health-disease process of the population and modify the education proposals that reproduce the Flexnerian model.<sup>23</sup>

As CHW does not have a specific training and its education is heterogeneous, as it was observed in the characterization of the subjects in the present study, the work process can be a challenge. It has been observed that the CHW is not always given the supervision and the necessary backing by the team.

*You depend on another professional to explain: Ah! But now I do not have time, because I am doing other things more important. (A 05)*

In this sense, other forms of supplying knowledge needs, such as Internet search and reading

*I try to always be well informed, I always try to be reading, anything about health news I'm reading, I'm informing myself. (A 24)*

It was observed that the accomplishment of parallel researches in virtual sources, in different sites and blogs of Community Health Works, contributed as a tool of communication among them, seeking knowledge, clarification of daily doubts, sharing of laws and decrees and strengthening of the category.

## CONCLUSIONS

The informal and formal knowledge networks are activated by CHWs in their actions of health education. The formal network was identified as a potent strategy for the formative process, but with weaknesses in its format and periodicity. The research results pointed to the exhaustion of the pedagogical model based on the training with emphasis on the transfer of information and the non-consideration of the real situations lived in the work. The reported statements revealed the importance of the introductory course as a reference for an early work, embedded in a problematical approach, that values the experience and expertise of these workers who contributed to the modification of the AB scenario.

The life experience in the daily work of the CHW permeates their action in health, most of the time, unconsciously. The CHW shows solidarity in teaching the colleague, but also exposes the limits of this process when disconnected from the context where these teachings will be applied.

Conclusively, it was possible to perceive, through the reports that the networks of formal and informal knowledge complement and potentiate the meaning of health care in the meeting of scientific knowledge and expertise derived from the experiences and observations of everyday life and work.

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Received in: 26/07/2017

Required revisions: Did not have

Approved in: 11/09/2017

Published in: 10/01/2020

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**Disclosure: The authors claim to  
have no conflict of interest.**