

The Nurse's walk with the Community Health Agent: active search for the respiratory symptomatic of tuberculosis

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Abstract— The purpose of this study is to promote a dialectical construction on the active search of the respiratory symptomatic, with the community health agent as its protagonist, using problematization as a tool for transforming health education through effective participation of the nurse as assister of the process. This was a descriptive study with a qualitative approach, focusing on the Problematization of the Arch of Magueres, with the participation of 12 community health agent of the municipality of Belém. The results were analyzed in two axes, the first one related to the social determinants of health, and the second one on the active search of the respiratory symptomatic by the agent, both observed during the home visits. With the results, the thematic was debated in three categories: problematizing to understand the active search of the respiratory symptomatic; dialogue between user/ community health agent /Nurse (researcher); health education and health education as a transformation tool in the active search of the respiratory symptomatic from community health agent perspective. Thus, it can demonstrate to the agent that its work tool is in its comprehensiveness; and that through problematization the actions of promotion and prevention with high powers of resolution can emerge, especially in the active search of respiratory symptomatic.

Keywords— Tuberculosis, Community Health Agent, Nurses and Health Education.

I. INTRODUCTION

Tuberculosis (TB) is still a serious public health problem in developing countries, although it is potentially predictable and curable. It is a disease that is associated with conditions of poverty and social inequity, affecting in most cases young adults of working age. It is estimated that a person with untreated active TB can transmit the disease to up to fifteen people each year, perpetuating the chain of TB transmission in the community (P. G. O. Di. Pinheiro, 2011; WHO, 2011).

Thus, Primary Care (PA) is the main entrance door for the user to the Unified Health System, having as logic of action the Family Health Strategies (FHS), which focuses on prevention and health promotion. Thus, the issue of tuberculosis is a problem that can be solved in PA, since this level of attention, when structured, can positively interfere in the determinants of the disease, through early diagnosis, by intensifying the active search for Respiratory Symptoms (RS), which is defined as individuals with a cough for three weeks or more (Ministério da Saúde da Brasil, 2019).

In this primary care perspective, the main actor responsible for the active search for RS is the community health agent (CHA), since it has a fundamental and agglutinating role, by being the link and spokesperson of the community's needs and demands in relation to the possibilities of health service offerings. Because they live in their locality, they are familiar with their values, customs and languages, and can thus produce a blend between the use of biomedical technology/knowledge and local beliefs. Therefore, as translators, they build bridges between health services and the community, promptly identifying the community's problems, facilitating the work of disease prevention and health promotion (Nunes, Trad, Almeida, Homem, & Melo, 2002; Rogerio et al., 2015).

Thus, in order to be successful in health promotion and prevention actions, where the search for RS is included, since this is an action based on early detection, which has as its main objective to establish a health education that can impact on the collective. Thus, the CHA needs to adopt the role of health educator, since health education is a multifaceted field, for which different conceptions converge, both in the area of education and health, which mirror different world understandings, demarcated by different philosophical political positions about man and society (Lima, Santos, Gonçalves, Teixeira, & Medeiros, 2012).

Health education is a process of constant learning, because the more you teach, the more you learn. Since learning is constant and dynamic and also means a

sum of stimuli capable of altering or modifying thoughts and attitudes, it means engaging in strengthening the daily struggle to minimize harm to society through lack of knowledge. There is, therefore, a challenge in encouraging people to learn in their reality, because "passing on information to someone" does not mean that they will be acquiring this knowledge or changing their behavior for health, so they should be willing to learn daily (Bohn, Marzari, & Scherer, 2011; Peixoto HMC, Lopes VC, Ferreira TN, Rocha RG, Silva PLN, 2016).

Therefore, health education is not an easy task, mainly because the assistance model is still in the verticalized logic, in which only the knowledge of the professional prevails over the knowledge of the user, family and community. In "Pedagogy of the Oppressed," Freire highlights the need to overcome the unequal relationship between educator and educator, and proposes dialogue and mutual respect as indispensable tools for the establishment of dialogic relationships (Freire, 2013).

Thus, it is necessary to overcome the traditional model of information transfer, especially when dealing with a subject such as TB, which is still seen restricted to the biologist mount, treating only the disease.

Aiming at changing this paradigm, the Ministry of Health created a National Policy for Permanent Education, which emerged as a potential strategy for the realization of expanded reflection on the health-disease process and its role in the context of care, which may, on the one hand, arouse curiosity and the need to advance knowledge, and, on the other hand, stimulate the development of professional autonomy and critical and reflective capacity of analysis by health professionals, especially by the CHA that develop actions with the community (Ministério da Saúde Brasil, 2009).

To strengthen these actions developed in the community it is necessary the participation of the nurse, who has responsibility to supervise, coordinate and carry out activities of Permanent Health Education (PHE) of the CHA. Thus, continuing education is a strategic action for collective learning from practices and work, providing opportunities for dialogue and cooperation between professionals, services, management, care, training and social control, enhancing the confrontation and resolution of problems with quality (Barbosa, 2008; Lima et al., 2012).

However, the forms of training offered to CHA have aroused interest because this professional is required to face conflicts that appear daily due to his or her lack of skills related to the identification of health needs and social dynamics of the community. Therefore,

reviewing forms of training for CHA means reviewing pedagogical conceptions that understand practice as a mere application of knowledge, in a view dissociated between theory and practice, between thinking and doing, reproducing the fragmentation of the work process (Barbosa, 2008).

Therefore, for a change in this context is necessary the walk of the nurse with the CHA, so that he can visualize the difficulties experienced by this professional, so that he is developing actions according to problematization, using the dialectic process, through the exchange of knowledge between user, community, CHA and Nurse. Providing changes in behavior and social participation, an aspect of extreme relevance for the transformation of the health-disease process.

Faced with this panorama, this study aims to promote a dialectic construction on the active search for RS, with the CHA as the protagonist, so that it can glimpse the problematization as a transforming tool for health education, providing a more effective social participation in the control of TB.

II. METHOD

The study is a cutout of a post-graduation dissertation research of the Master's in Health, Environment and Society in the Amazon of the Federal University of Pará. Entitled "The Knowledge of the Community Health Agents of the Municipality of Belém about the active search for respiratory symptoms". The investigation followed the qualitative trajectory, adopting a descriptive approach study with a focus on the problematization. Based on the principle of Arco de Maguerez, inspired by Paulo Freire (Berbel & Sánchez Gamboa, 2011).

There were 12 CHA from the Municipality of Belém, through a random sample, and the choice was 3 CHA from each FHS distributed in 4 administrative districts of the Municipality. It is important to note that the Municipality of Belém is composed of 8 administrative districts, however the study reached through the technique of saturation in 4 districts. Thus, although the focus is on the CHA, it did not have as a disincentive to user and community participation, since we understand that the

work process of this professional, as well as of other FHS professionals, is inseparable from social participation.

The study took place in the second semester of 2016 and was conducted with the CHA who signed the informed consent form, the study was previously authorized by the Ethics Committee of the Institute of Science and Health of the Federal University of Pará under the protocol of opinion 1,844,738 and authorized by the Municipal Health Secretariat. This study respected the ethical principles according to resolution 466/12 of the National Health Council (Ministério da Saúde Brasil, 2012).

The data collection was performed in two moments, the first through the CHA monitoring during home visits, totaling 57 visits. Participatory observation was used with a focus on problematization, being recorded through a field diary, in addition to health education on the active search for TB RS, according to the reality found.

In the second moment, a semi-structured interview was carried out in a closed place with the presence of only the researcher and the participant, in order to maintain anonymity, the alphanumeric code was used, composed of the letter E of the interview and the sequential number. A previous script on the theme was adopted, recording the interview in audio and later carried out in literal transcriptions of the collected data. The technique of content analysis proposed by Bardin was used for the interpretation of the data (Bardin, 2016).

III. RESULTS AND DISCUSSION

The results were obtained along two axes. The first was related to the situational diagnosis, which converged on the social determinants, related to housing condition, number of inhabitants, family income, basic sanitation and personal habits (smoking, alcoholism and drugs), since these factors interfere with TB control, since this disease is directly linked to social inequities, thus needing to be assessed to verify which groups are vulnerable to the disease, with the aim of mapping these groups, so that there is planning to intensify the active RS search according to the risk group. Such information related to the social determinants of health were grouped according to the micro areas of scope of each FHS visited, where the study was developed, follows the chart below.

Socioeconomic and cultural aspects of the families visited, Belém, 2016.

FHS	Housing condition	Per capita Income	Basic sanitation	Other problems
O1	Most of the houses visited were made of wood, clustered together, with little ventilation in an average of three rooms. The average number of residents per house visited was 8, however it is worth mentioning that there were 23 residents.	Of 1-2 salaries, but some cases of families that survive only from social programs.	Precarious basic sanitation. No sewage system, no paving. But with a water supply and waste collection network.	It stands out high rate of smoker, ethylist and drug user. There was an intense drug traffic in the area, according to CHA.
O2	The houses were diversified, masonry, wood and mixed houses (half wood and half masonry). The average number of rooms was three with an average number of 6 per house, but without good ventilation and lighting, due to the cluster of houses.	From 1-2 salaries	Minimum basic sanitation, although the streets were paved, but there was no sewage system. Waste collection present and also water supply.	The intense drug trafficking was identified with the greatest problem, since in a single micro area there were 5 locations, according to CHA. As well as the number of drug users in the area, in addition to alcohol users and smokers.
O3	The houses were diverse, masonry house predominance. In what consists the quantity of rooms in average was 4 rooms with an average number of residents of 5 per house, with a good ventilation and lighting.	1 minimum salary.	All streets were paved, with sewage network, selective garbage collection and water supply.	Regarding habits, we identified alcohol consumption and smoking, according to the CHA there is drug traffic in the area, but it is not so intense.
O4	The houses were mostly made of wood, and on average 2 rooms, living around 5 people. Regarding ventilation and lighting they were not adequate.	Of 1-2 salaries	The aspect of the sanitation network was precarious, without the drainage of rainwater, and most of the streets and houses were flooded, inadequate garbage collection, since it had a lot of garbage points thrown in the streets.	The greatest problem was identified as intense drug trafficking and alcohol abuse, even due to the number of bars identified during home visits. In addition to high danger points, this made the visits impossible, since the CHA reported that there would be no way to enter these areas.

Source: Based on data obtained from the study, Belém, 2016.

In the second axis, we took into consideration the approach of the CHA in relation to the active search for RS, which was unsatisfactory because it occurs in a punctual, restrictive way to the only member of the family, without accompaniment of health education. Therefore, it can be assessed that it is not part of the work

routine of the CHA of the study. Thus, the following categories emerged from these results: Problematising to understand the active search for RS; User/Community/CHA/Nurse Dialog (researcher): health education and health education as a tool to transform the active search for RS from the perspective of the CHA.

Problematizing to understand the active RS search.

The problematization finds in Paulo Freire's formulations a sense of critical insertion in reality in order to remove from it the elements that will give meaning to learning as well as to take into account the personal implications and the interactions between the different subjects who learn and teach (Batista, Batista, Goldenberg, Seiffert, & Sonzogni, 2005).

In this sense, the first step according to the stages of the Arch of Maguerez is the observation of reality, which consists of the active participation of the subjects for an attentive look at reality, thus making a first reading in which the theme to be worked on is inserted or happening in real life. It is the moment in which the subjects involved can look closely at reality, choosing aspects that need to be developed, worked on, reviewed or improved (Prado, Velho, Espíndola, Sobrinho, & Backes, 2012).

Thus, at this stage, the observer (researcher) carried out an explanation according to socioeconomic and cultural factors that have a direct or indirect relationship with tuberculosis, as well as the approach of the community health agent to the active pursuit of RS. Factors that have an impact on tuberculosis control.

Thus, the social determinants observed corroborate with studies that affirm that the disease is closely linked to social ills. We highlight the inadequate housing, with a cluster of houses, due to the culture of family aggregation in the same land, which hinders the circulation of air, in addition to the fact that these houses generally had 3 rooms of wood, in which up to 23 people lived, the greater the number of people sharing the same space to sleep, the greater the risk of transmission of tuberculosis, with respect to the carrier bacillus (Baldan, 2017).

Thus, these conditions beckon to a TB problem, that the disease still impacts more negatively people in situations of social inequality of income and education, being more exposed to infection, because they live in areas without ventilation and with large agglomerations differently from those living in regions with good conditions. This population also experiences situations of delay in diagnosis, due to an inefficacy of the active search for RS (Hargreaves et al., 2011).

Regarding personal habits, tobacco use, alcohol use and drug use are considered risk factors for tuberculosis, because approximately 10% of all TB cases in the world can be attributed to alcohol consumption, whereas in relation to smoking, a study revealed that it not only increases the risk of pulmonary tuberculosis but also delays the diagnosis of the disease because coughing is

commonly attributed to smoking (Alcântara et al., 2012; Hargreaves et al., 2011). But in relation to drug use, in most of the micro areas visited there were drug trafficking sites, and drug users. Thus, the difficulty of the CHA in dealing with this group was perceived, making it an aggravating factor, since they remain the margin of prevention and health promotion measures.

Among the different models that explain TB, the theory of social determinants seems to make more sense, since there is not only one single factor that determines it, but multiple factors, from living conditions to opportunities for access to health services (Hargreaves et al., 2011). Therefore, it is understood that the active search for RS is essential, especially for the CHA, because it is the professional who lives directly with the community, thus knowing the existing particularities.

However, despite all the risk factors for TB, it was clear that the CHA of the study do not work from the perspective of vulnerability groups, as well as the active search for RS is not included in the routine of these professionals or when it is included in a timely manner, since in the observation during the 57 home visits only one CHA conducted an approach based on the active search for RS, but it was a restrictive search, since the approach was individual and did not cover the family as a whole, without any type of health education focused on the subject. Such observation can be evidenced with the following statement:

(...) The specific time to make the active search is when the Secretary of Health determines, usually is once a year lasting 1 to 2 days (...) The active search of the RS is not part of my Daily Life routine, only when the user reports cough (E8).

This lack of active search in the process of CHA work may have a relationship with the model and periodicity of training, because he observed that this professional follows the biomedical model focused on the identification of diseases, it is understood the importance of early identification of RS. However, it is necessary to broaden the debate on the subject, so that it can transcend the scope of symptomatology and treatment of the disease, to the field of prevention and health promotion, through health education in order to strengthen the network of knowledge about the disease, allowing social participation. This type of training based on the mechanistic model, which was observed, is confirmed with the following statements:

I have already received tuberculosis training, but very little, two years ago last training, I found it very weak, because the right thing is that every Friday had some kind of training, since this day was destined for that, however it is not happening (...)

(E9). (...) they talked about tuberculosis, what are the symptoms and the medications too and that they take (E2).

Thus, the rupture of this assistance model still in force is necessary for one that can meet the needs of the population, and one of the models that has proven to be a way to break this paradigm is the PHE, because it allowed the development of critical and reflective thinking of the problems that emerge from the population and its work process, and as TB is still a disease of social nature, it is necessary to carry out planning that can dialogue with the various factors that surround this disease.

Dialogue between user, community, community health agent, nurse (researcher): health education

Following the stages of the Arch of Maguerez, the second stage is the identification of key points, on this stage we raise the following important points, social determinants, difficulty of the approach of the CHA in the search RS, knowledge of the population on the subject and PHE. The theorization, third stage, consists in the in-depth investigation of the key points defined (Prado et al., 2012). At this stage, we carried out in-depth readings of articles and dissertations that had discussions based on the active search for RS, the importance of CHA as a protagonist of this process and PHE as a tool for transforming actions in the control of TB.

The fourth stage is focused on the elaboration of actions capable of transforming the observed context, this stage was thought based on the first home visit carried out in the study, and in the course of the others, adaptations were made to contemplate the needs of each family. The fifth stage is the application to reality, thus health education was applied in each home visit, always taking into account the context of social determinants and the population's knowledge on the subject.

The mechanism used to implement health education was exclusively dialogue. The technique of dialogue is present in the PHE, since it must be based on significant learning, incorporating the dialogue to learn and do to the daily routine and collectively problematizing and producing solutions to problems in a continuous way,

in order to face the great challenge of producing transformations in health institutions in order to bring them closer to concepts of integral attention, humanized and with equity (Ceccim, 2005).

Therefore, the first step in building this dialogue was through a presentation mediated by CHA, since to establish a dialogue it is necessary to have a bond of trust. Thus, the approach to the subject did not occur directly, but during the home visit, when the user was more receptive. Then we asked if there was anyone in the family with a cough? This seemingly simple question, but it is essential for identifying RS, since the concept of RS is every individual with a cough within three weeks or more. However, a cough lasting at least one week as a presumptive symptom of TB should be valued in basic health unit users located in areas of high prevalence of this disease, as already described in the literature (Bastos et al., 2007).

Therefore, although there are a number of advertisements that highlight the symptoms of TB, the information they pass on through the audiovisual media is not able to clarify the symptoms of TB because most residents could not identify the symptoms of the disease and some claimed the fever as the main symptom. This lack of knowledge reflects the need for the FHS team to work with the PHE in order to better clarify the population. Given this lack of knowledge, it was established that the main symptom of TB is a cough of three weeks or more, and if someone has this symptom, they should look for the CHA or FHS to find out.

In relation to transmission, some myths still prevail, such as the sharing of objects, especially cutlery, some cited the kiss as a form of propagation, few would refer to the simple fact of breathing, coughing and sneezing as a mode of transmission. Thus, knowledge/disknowledge about the disease tends to be a hindrance in the daily life of the majority of the population, as they often carry a baggage of knowledge filled with taboos and erroneous information about the disease (Sá et al., 2007). In this way, we work with the demystification of the popular concepts that prevail in relation to TB transmission.

However, as far as the social determinants are concerned, health education was guided by actions that improved air circulation and environmental lighting, explaining that these factors increase the risk of transmission of the bacillus. However, in order to improve these determinants, it is not only health actions that are needed, but also intersectoral actions capable of changing the reality experienced by the low-income population. Thus, it was emphasized that TB is a curable disease, that

the treatment is offered free of charge by the Unified Health System and that we need to count on social participation for the early identification of RS, in order to form a network for dissemination of information.

Therefore, it is not enough just to inform, it is necessary to listen to the understanding of the population about the subject, so the feedback was positive from the population, because at the end of each visit the user was able to describe the symptomatology of the disease, as well as the way of transmission. Some users also stated that they would discuss the topic during Sunday lunch, when the whole family is gathered and also talk with the neighborhood, thus strengthening the sharing of knowledge, disseminating the network of supporters for TB control.

During the health education approach we identified two RS, who were involved with alcohol and drug abuse, which corroborates with studies that point out these habits as risk factors (Alcântara et al., 2012). Thus, needing to receive special attention from the CHA, intensifying the search for this group. However, this intensification of vulnerable groups is not part of the planning of the practice developed by the CHA of the study. Specifically, in the case involving drug use, therefore, the lack of preparation of the CHA in dealing with this audience was observed, since the approach is limited because of the associated stigma and fear of entering the trafficking zone.

Thus, it was necessary to encourage the CHA to enter this region, guiding it to use flexibility in its approach to the drug user. At first there was some resistance from the user in establishing a dialogue, but confidence was achieved when we made it clear that we were not there to make value judgments about his current condition. Thus, in view of this bond, he reported precious information to identify him as RS, since he had a clinical picture compatible with coughing for more than three weeks, besides being ex-convict for 2 months.

Based on this information, it was explained that the prison population is vulnerable to acquiring TB and we advised on the importance of its attendance at the FHS. In order to perform the sputum examination, besides passing the case to the FHS nurse, we guided the need for a continuous follow-up of the CHA in this case (B. N. da Silva, Temoteo, Vêras, & Silva, 2019).

In this way, in face of this form of approach, in which problematization was used, having the focus on dialogue, we tried to demonstrate to the CHA the importance of adopting the active search for RS in the home visit. It is known that the nurse is the main responsible for training the CHA, however the way to

teach this professional is still based on the traditional model, in which are only passed the technical information. Some consequences of this pedagogy are the passivity and lack of criticism, the distance between theory and practice and the lack of "problematization" of reality, which have repercussions on both individual and social levels (Queiroz, Silva, & Oliveira, 2014).

Thus, we adopt the logic of doing it together, allowing a greater resolution of the problems identified, in addition to promoting the empowerment of the CHA on the theme so that it can glimpse its role in the process related to the active search for RS.

Health education as a tool to transform the active search for Respiratory Symptoms in the perspective of the Community Health Agent

The PHE starts from the assumption of learning-work, contributing to the qualification and knowledge of professionals to the changes in assistance and educational practices in the process of work in health (J. A. M. da Silva & Peduzzi, 2011). This way of educating in practice has a more forceful effect than the technique of passing on information, making it clear in the following sentence of the deponent:

Like this, how did we see in the area that person said he was passing by the cutlery, the glass and the kiss, and that it's nothing like that, but how did you (researcher) say it's by the air, when person coughs and sneezes, right? (E4).

Thus, we realize that the traditional model of education does not impact positively on the actions provided by the CHA, because it becomes mechanical, without the preparation to make a reflection of the situation of the community in which it operates. This traditional model of training of health professionals, especially the CHA, does not privilege education from problems of daily life of services, being centered on interventions performed in isolation, based on the biomedical model of care (Pagani & de Andrade, 2012).

In this way, the health education developed in this study, provided a different view of the CHA, and there is an understanding of the importance of the RS problematizing approach to better know its clientele, since it allows to enter into different issues. We highlight the testimonial:

In that house, I did not know that that boy had already had tuberculosis (...)

And that he had gone to Marajó to perform the treatment (E5).

The above statement demonstrates that there is still immigration of TB cases to other locations, because this disease has a negative connotation, presenting social stigmas, causing isolation of the user. However, the CHA needs to be a supporter of this user in order to strengthen the link between the user and the FHS, so that he can be accompanied in his home. However, there are flaws in the learning process of this professional and the health team, providing the ignorance of some factors relevant to addressing TB.

In this sense, the health education model should be based on meaningful learning by professionals, through the experiences of the FHS and according to the needs of services and population (Coriolano, Lima, Queiroga, Ruiz-Moreno, & Lima, 2012).

Since the educational practice must be articulated to the work environment, so that the interventions can be resolute, according to the socio-economic conditions of each user, family and community. And this situation can be emphasized according to the speech of the deponent:

It's going into the area and trying to identify, like we did now. Because if it wasn't for you (researcher) I wouldn't have known he was RS, because I didn't know he was out of prison and that he had a cough.

Therefore, health education based on the PHE concept has to configure a behavior change in the working process so that participants can reflect on the problem and which mechanisms can be used to solve it. Emphasis is also placed on the E5 statement, in which it was perceived that from the dialogue developed during the home visit, that the CHA had no knowledge about the risk factors that the user presented for TB. Thus, these factors together with the symptoms were possible to classify him as SR. The importance of the search was emphasized, since in the field of three visits, we identified an RS.

In this way, the PHE must be based on meaningful learning, incorporating dialogue, learning-by-doing, according to daily routine, and collectively problematizing and reproducing, in a continuous way, the solutions to the problems, aiming to face the great challenge of producing transformations in health institutions (Ceccim, 2005).

This context of the importance of learning-by-doing was what motivated us to develop the action together with the CHA, so that it could adopt the active search of RS, so that it could visualize the problem from its reality, since it is necessary to wake it up for possible changes in the actions provided. When it is allowed to do together it can configure a critical, reflective and philosophical thinking of reality, providing possible changes in the actions before the community. This reconfiguration of the practice of work is highlighted with the testimonial:

Sure, I will. Because you (researcher) went and approached, you checked the cases, then I saw how you make an approach to active search for the RS, and now for sure I will be more attentive (...) now I will arrive, I will ask if there is any case of cough in the family, if the cough is more than three weeks old, if you have weight loss, fever. Now it will be part of my home visit, because in this short period that you went to the area with me, you soon identified an RS, now I don't know in the other houses, you can have it, right? So, now I'm going to these other houses to check.

The nurse plays an essential role in the FHS and contributes to its consolidation as a public health policy. When considering the importance of PHE for the reorganization and quality of health practices, it is necessary to question the educational action developed by the nurse, in which he is assigned the role of contributing, participating and carrying out PHE activities with the whole health team (Barros, Queiroz, & Melo, 2010; Paulino, Bezerra, Branquinho, & Paranaguá, 2012).

However, there is a distance to the achievement of health education actions when it comes mainly to TB control. Thus, to break this paradigm it is necessary that the nurse can demonstrate in practice the RS approach to the CHA, since the techniques used in traditional lectures, i.e., only the transfer of information, in which there is no interaction between peers, and does not enable the learning of doing together. Thus, it is necessary to reconstruct the meaning of educational techniques, for a participative and effective model, in which peers assume the protagonism of the entire educational process, but for this transformation significant learning is essential. We emphasize with the following testimony:

It was very important, I liked it very much. From now on I will adopt this approach that I learned from you in the home view, because I thought it was feasible. Sometimes we go to the patient's house, then he reports a cough, but we don't get very deep into this symptom, how long? How did you say it? When we talk about the cough, it's just a little flu, it's a virus, but we don't try to investigate further. If it's more than weeks old, for us to better guide the families (E6).

IV. CONCLUSION

The study made possible a dialectic discussion about the active search for RS with the concern of making an approach focused on problems, following the thought of Paulo Freire, where the author served as inspiration for the Arch of Magueréz, which has a well-defined process through the stages, thus served as a model for the practice of doing together, involving all actors of the process, so that each can contribute to building the understanding of the importance of the active search for RS.

It is believed that this study was able to break the paradigm of health education in traditional ways, since the action was developed through the needs of the user/family/community, demonstrating in a comprehensive way for the CHA, that its work tool is in its area of coverage, and that through the problematization is that emerges the actions of promotion and prevention with high resoluteness, especially when it comes to the active search for the RS. However, it should be noted that the search cannot be left to these professionals alone, requiring planning of the multiprofessional team.

The relevance of PHE based on health promotion is highlighted, and it needs to be part of the routine of primary care, since this policy enables change in the work process, reflecting positively on the actions developed in the community. This study made it possible for the CHA to reflect on its conduct in the face of the active search for RS, glimpsing the importance of its role in TB control. Thus, it concluded the importance of walking as a nurse with CHA tied to the user/family/community, fostering social participation as multipliers of knowledge for an effective active search for RS and TB control.

REFERENCES

- [1] Alcântara, C. C. S. de, Kritski, A. L., Ferreira, V. G., Façanha, M. C., Pontes, R. S., Mota, R. S., & Leitão, T. do M. J. S. (2012). Fatores associados à tuberculose pulmonar em pacientes que procuraram serviços de saúde de referência para tuberculose. *Jornal Brasileiro de Pneumologia*, 38(5), 622–629. <https://doi.org/10.1590/S1806-37132012000500012>
- [2] Baldan, S. santiago. (2017). *Determinantes Sociais De Saúde Relacionados À Epidemiologia Da Tuberculose*: (Universidade de Franca). Retrieved from [https://repositorio.ufms.br:8443/jspui/bitstream/123456789/3140/1/Determinantes sociais de saúde relacionados à epidemiologia da tuberculose subsídios para reorientar os serviços de saúde.pdf](https://repositorio.ufms.br:8443/jspui/bitstream/123456789/3140/1/Determinantes%20sociais%20de%20sa%C3%BAde%20relacionados%20%C3%A0%20epidemiologia%20da%20tuberculose%20subs%C3%ADdios%20para%20reorientar%20os%20servi%C3%A7os%20de%20sa%C3%BAde.pdf)
- [3] Barbosa, V. B. de A. (2008). *Educação permanente na estratégia saúde da família: uma proposta a ser construída* (Universidade Estadual Paulista). Retrieved from https://repositorio.unesp.br/bitstream/handle/11449/101964/barbosa_vba_me_botfm.pdf?sequence=1&isAllowed=y
- [4] Bardin, L. (2016). *Análise de Conteúdo* (70th ed.; A. Pinheiro, Ed.). São Paulo.
- [5] Barros, S. D. de O. L., Queiroz, J. C. de, & Melo, R. M. de. (2010). Cuidando e humanizando: entraves nesta prática. *Rev Enferm UERJ*, 18(4), 598–603.
- [6] Bastos, L. G. V., Fonseca, L. S., Mello, F. C. Q., Ruffino-Netto, A., Golub, J. E., Golub, J. L., & Conde, M. B. (2007). Prevalence of pulmonary tuberculosis among respiratory symptomatic subjects in an out-patient primary health unit. *Int J Tuberc Lung Dis*, 11(2), 156–160. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/17263285>
- [7] Batista, N. A., Batista, S. H., Goldenberg, P., Seiffert, O., & Sonzogno, M. C. (2005). O enfoque problematizador na formação de profissionais da saúde. *Revista de Saude Publica*, 39(2), 231–237. <https://doi.org/10.1590/s0034-89102005000200014>
- [8] Berbel, N. A. N., & Sánchez Gamboa, S. A. (2011). A metodologia da problematização com o Arco de Magueréz: uma perspectiva teórica e epistemológica. *Filosofia e Educação*, 3(2), 264–287. <https://doi.org/10.20396/rfe.v3i2.8635462>
- [9] Bohn, C. L. Z., Marzari, C., & Scherer, C. G. (2011). O Paradigma da aprendizagem no contexto da educação popular e saúde. *XVI Seminário Interinstitucional de Ensino, Pesquisa e Extensão. XVI Mostra de Iniciação Científica. IX Mostra de Extensão[Internet]*. Rio Grande Do Sul: Universidade de Cruz Alta, 1(3), 1–4. Retrieved from [https://home.unicruz.edu.br/seminario/anais/anais-2011/humanas/O PARADIGMA DA APRENDIZAGEM NO CONTEXTO DA EDUCAÇÃŒo POPULAR E SAÃSDE.pdf](https://home.unicruz.edu.br/seminario/anais/anais-2011/humanas/O%20PARADIGMA%20DA%20APRENDIZAGEM%20NO%20CONTEXTO%20DA%20EDUCA%C3%A7%C3%A3o%20POPULAR%20E%20SA%C3%ADDE.pdf)
- [10] Brasil, Ministério da Saúde da. (2019). *Manual de recomendações para o Controle da Tuberculose no Brasil* (2nd ed.). Retrieved from https://www.telelab.aids.gov.br/index.php/biblioteca-telelab/item/download/172_d411f1f5deeb01f23d9a556619ae965c9
- [11] Brasil, Ministério da Saúde. (2012). Resolução Nº 466, de 12 de dezembro de 2012. Retrieved September 14, 2019, from Diário Oficial da União DOU website:

- <https://conselho.saude.gov.br/resolucoes/2012/Reso466.pdf>
- [12] Brasil, Ministério da Saúde. (2009). *Política Nacional de Educação Permanente em Saúde*. Retrieved from <http://portal.anvisa.gov.br/documents/33856/396770/Política+Nacional+de+Educação+Permanente+em+Saúde/c92db117-e170-45e7-9984-8a7cdb111faa>
- [13] Ceccim, R. B. (2005). Educação Permanente em Saúde: desafio ambicioso e necessário. *Interface - Comunicação, Saúde, Educação*, 9(16), 161–168. <https://doi.org/10.1590/s1414-32832005000100013>
- [14] Coriolano, M. W. de L., Lima, M. de M., Queiroga, B. A. M. de, Ruiz-Moreno, L., & Lima, L. S. de. (2012). Educação permanente com agentes comunitários de saúde: uma proposta de cuidado com crianças asmáticas. *Trabalho, Educação e Saúde*, 10(1), 37–59. <https://doi.org/10.1590/s1981-77462012000100003>
- [15] Freire, P. (2013). *Pedagogia do oprimido* (54th ed.). Rio de Janeiro: Paz e Terra.
- [16] Hargreaves, J. R., Boccia, D., Evans, C. A., Adato, M., Petticrew, M., & Porter, J. D. H. (2011). The social determinants of tuberculosis: from evidence to action. *American Journal of Public Health*, 101(4), 654–662. <https://doi.org/10.2105/AJPH.2010.199505>
- [17] Lima, C. A. B., Santos, A. L. P. dos, Gonçalves, A. M., Teixeira, E., & Medeiros, H. P. (2012). Representações sociais sobre educação em saúde de agentes comunitários: pistas para educação permanente. *Cogitare Enfermagem*, 17(1). <https://doi.org/10.5380/ce.v17i1.26369>
- [18] Nunes, M. de O., Trad, L. B., Almeida, B. de A., Homem, C. R., & Melo, M. C. I. d. C. (2002). Community-based health workers: building the identity of this hybrid, polyphonic character. *Cadernos de Saúde Pública / Ministério Da Saúde, Fundação Oswaldo Cruz, Escola Nacional de Saúde Pública*, 18(6), 1639–1646. <https://doi.org/10.1590/S0102-311X2002000600018>
- [19] Pagani, R., & de Andrade, L. O. M. (2012). Preceptorial de Território, Novas Práticas e Saberes na Estratégia de Educação Permanente em Saúde da Família: O estudo do caso de Sobral, CE. *Saude e Sociedade*, 21(SUPPL. 1), 94–106. <https://doi.org/10.1590/S0104-12902012000500008>
- [20] Paulino, V. C. P., Bezerra, A. L. Q., Branquinho, N. C. da S. S., & Paranaguá, T. T. de B. (2012). Ações de educação permanente no contexto da estratégia saúde da família. *Revista Enfermagem*, 20(3), 368–373.
- [21] Peixoto HMC, Lopes VC, Ferreira TN, Rocha RG, Silva PLN. (2016). Percepção do agente comunitário de saúde sobre educação em saúde em uma unidade básica. *Revista de Enfermagem Do Centro-Oeste Mineiro*, 5(3), 1784–1793. <https://doi.org/10.19175/recom.v5i3.912>
- [22] Pinheiro, P. G. O. Di. (2011). *Busca de casos de tuberculose e o retardo ao diagnóstico da tuberculose: percepção dos gestores de saúde do município de João Pessoa* (Universidade Federal da Paraíba). Retrieved from <https://repositorio.ufpb.br/jspui/bitstream/tede/5185/1/arquivototal.pdf>
- [23] Prado, M. L. do, Velho, M. B., Espíndola, D. S., Sobrinho, S. H., & Backes, V. M. S. (2012). Arco de Charles Maguerez: refletindo estratégias de metodologia ativa na formação de profissionais de saúde. *Escola Anna Nery*, 16(1), 172–177. <https://doi.org/10.1590/s1414-81452012000100023>
- [24] Queiroz, D. M. de, Silva, M. R. F. da, & Oliveira, L. C. de. (2014). Educação Permanente com Agentes Comunitários de Saúde: Potencialidades de uma formação norteada pelo referencial da Educação Popular e Saúde. *Interface: Communication, Health, Education*, 18, 1199–1210. <https://doi.org/10.1590/1807-57622013.0303>
- [25] Rogerio, W. P., do Prado, T. N., de Souza, F. M., Pinheiro, J. dos S., Rodrigues, P. M., Sant’anna, A. P. do N., ... Maciel, E. L. N. (2015). Prevalência e fatores associados à infecção pelo Mycobacterium tuberculosis entre agentes comunitários de saúde no Brasil, usando-se a prova tuberculínica. *Cadernos de Saude Publica*, 31(10), 2199–2210. <https://doi.org/10.1590/0102-311X00152414>
- [26] Sá, L. D. de, Souza, K. M. J. de, Nunes, M. das G., Palha, P. F., Nogueira, J. de A., & Villa, T. C. S. (2007). Tratamento da tuberculose em unidades de saúde da família: histórias de abandono. *Texto & Contexto - Enfermagem*, 16(4), 712–718. <https://doi.org/10.1590/s0104-07072007000400016>
- [27] Silva, B. N. da, Temoteo, R. C. D. A., Vêras, G. C. B., & Silva, C. R. D. V. (2019). Fatores predisponentes de tuberculose em indivíduos privados de liberdade: revisão integrativa. *Arquivos de Ciências Da Saúde*, 26(1), 67. <https://doi.org/10.17696/2318-3691.26.1.2019.1051>
- [28] Silva, J. A. M. da, & Peduzzi, M. (2011). Educação no trabalho na atenção primária à saúde: Interfaces entre a educação permanente em saúde e o agir comunicativo. *Saude e Sociedade*, 20(4), 1018–1032. <https://doi.org/10.1590/S0104-12902011000400018>
- [29] WHO, W. H. O. (2011). *Global tuberculosis control: WHO report 2011*. Retrieved from <http://www.ijmr.org.in/article.asp?issn=0971-5916;year=2012;volume=136;issue=4;spage=681;epage=683;aulast=Behera>