UFSM

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REVISTA DE ENFERMAGEM DA UFSM

ISSN 2179-7692
Open access

Rev. Enferm. UFSM, v. 12, e43, p. 1-17, 2022 - https://doi.org/10.5902/2179769268715
Submission: 12/02/2021 - Acceptance: 6/22/2022 - Publication: 9/06/2022

Original article

Educational actions for people with hypertension and diabetes: the work of the Community Health Agent*

Ações educativas às pessoas com hipertensão e diabetes: trabalho do Agente Comunitário de Saúde rural

Acciones educativas para personas con hipertensión y diabetes: trabajo del Agente Comunitario de Salud en zonas rurales

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***Extracted from the dissertation "*Trabalho de agentes comunitários de saúde em ações educativas a pessoas com hipertensão e diabetes que vivem no campo*," Graduate Program in Nursing, Federal University of Santa Maria, 2020.**

Abstract

Objective: to describe the educational actions developed by community health agents (CHAs) in the care of people with hypertension and diabetes mellitus living in the countryside. **Method:** this was a qualitative study developed with 16 CHAs who worked in nine rural health units of a municipality in southern Brazil from June to August 2019. The semi-structured interview was used as a data collection instrument, and data analysis was grounded on content analysis. **Results:** the narratives revealed that the CHAs are promoters of educational actions, such as home visits, groups, round-table discussions, lectures, and waiting rooms; nonetheless, these activities are performed together with other professionals and are directed at specific groups. **Conclusion:** the CHAs need to reflect on how their educational practices are being developed to establish spaces for discussions that impact chronic conditionalities.

Descriptors: Community Health Workers; Chronic Disease; Health Education; Rural Population; Patient Care Team

Resumo

Objetivo: descrever as ações educativas desenvolvidas pelos Agentes Comunitários de Saúde (ACS) no cuidado às pessoas com Hipertensão Arterial e Diabetes *mellitus* que vivem no campo. **Método:** estudo qualitativo desenvolvido com 16 ACS que atuavam em nove unidades de saúde rurais de um município do Sul do Brasil, nos meses de junho a agosto de 2019. Utilizou-se a entrevista semiestruturada como instrumento de coleta de dados. A análise dos dados foi fundamentada pela análise de conteúdo. **Resultados:** as narrativas revelaram que os ACS são promotores de ações educativas, como: visita domiciliária, grupos, rodas de conversa, palestras e sala de espera; todavia, essas atividades são realizadas junto a outros profissionais e estão direcionadas a grupos específicos. **Conclusão:** os ACS precisam refletir sobre a forma como suas práticas educativas estão sendo desenvolvidas, a fim de estabelecer espaços de discussões que tenham impacto nas condicionalidades crônicas.
Descritores: Agentes Comunitários de Saúde; Doença Crônica; Educação em Saúde; População Rural; Equipe de Assistência ao Paciente

Resumen

Objetivo: describir las acciones educativas que los Agentes Comunitarios de Salud (ACS) han llevado a cabo para atender a personas con Hipertensión Arterial y Diabetes *mellitus*, que viven en el campo. **Método:** estudio cualitativo con 16 ACS que trabajaron en nueve unidades de salud rurales de un municipio del sur de Brasil, durante los meses de junio a agosto de 2019. Se realizó una entrevista semiestructurada para la recogida de datos. El análisis de los datos se basó en el análisis de contenido. **Resultados:** las narraciones revelan que los ACS son promotores de actividades educativas, como: visitas domiciliarias, grupos, rutas de conversación, palestras y sala de espera; por otra parte, estas actividades se realizan junto a otros profesionales y se dirigen a grupos específicos. **Conclusión:** los ACS necesitan reflexionar sobre cómo se desarrollan sus prácticas educativas, para establecer espacios de discusión que incidan en las condiciones crónicas.
Descriptores: Agentes Comunitarios de Salud; Enfermedad Crónica; Educación en Salud; Población Rural; Grupo de Atención al Paciente

Introduction

The object of this study is the educational actions of community health agents (CHAs) regarding the care of people with arterial hypertension (AH) and diabetes mellitus (DM) who live in the countryside. The CHAs are part of the primary health care (PHC) team, and their main function is to integrate the primary health care (PHC) services with the community, mediating the communication process.[1]

From this perspective, the work of the CHA aims to provide information to the population through health education activities in their homes and communities. This educational care values cultural issues and integrates popular knowledge and scientific knowledge about health, including technical explanations related to diseases and treatments, the families' understanding of the reality in which they live, and identifying weaknesses and potentialities in their territory.[2]

Moreover, educational actions help disseminate issues of community interest and are an effective strategy in health promotion and disease prevention. These actions advocate thematic axes guided by the National Agenda for Priorities in Health Research, published in 2018 by the Ministry of Health, which defined the studies related to the evaluation of the supply of health actions and services of the BH in the face of the population's needs as priorities; these actions include those with people with chronic non-communicable diseases (NCDs).[3]

In fact, cardiovascular diseases are the leading causes of mortality in the world. They are part of the group of NCDs with the most significant impact and caused 17.9 million deaths in 2016, representing 31% of all deaths. It is estimated that 82% of these deaths occurred in low- and middle-income countries and 37% were caused by cardiovascular diseases, including AH.[4] What is more, DM is among the top ten global causes of death, showing a sharp growth of 70% since the 2000s and being responsible for the largest increase in male deaths with over 80% in the last two decades.[5]

The modifiable risk factors for developing these chronic pathologies include smoking, alcohol consumption, inadequate diet, overweight, and (the lack of) physical inactivity. In addition, the diagnosis of AH, DM, and dyslipidemias are referred to as chronic diseases that concomitantly become risk factors for developing and worsening other illnesses.[6] Hence, this theme is highly relevant to the extent that it promotes to managers and other health professionals the possibility of identifying the educational actions carried out by CHAs with people with AH and DM.

Armed with this knowledge and after consulting the Latin American and Caribbean Literature on Health Sciences (LILACS), Nursing Database (BDENF), and US National Library of Medicine (PUBMED) databases, we observed a gap in the academic production of this area, especially regarding the actions developed by CHAs aimed at people with chronic diseases, primarily those with AH and DM. As for the theme found during the searches, research has covered the forms of monitoring and screening used by CHAs to identify people with NCDs.[7–9] A Brazilian study dealt with the knowledge and actions of CHAs related to NCDs; nevertheless, the target audience was the elderly population.[10] One survey conducted in Cape Town in 2018 assessed the training and knowledge of DM and AH in 150 CHAs,[11] and the authors identified a deficit in CHAs' knowledge about AH and DM, which was particularly due to the absence of

standardized training on the subject.

Given these perspectives, this study sought to answer the following research question: how are the educational actions of CHAs developed in caring for people with AH and DM living in the countryside? The general objective was to describe the educational actions developed by CHAs in caring for people with AH and DM living in the countryside.

Method

This is a descriptive study with a qualitative approach; descriptive studies allow one to know the characteristics of a certain population or phenomenon and describe the work of CHAs in promoting educational activities for people with AH and DM living in the countryside.[12] Qualitative research favors the representation of the meanings experienced in the reality of these people and does not attribute the values, assumptions, or meanings of the researchers.[13]

This study was conducted in nine health units located in the rural area of a municipality in southern Brazil, which had a small team of health professionals to meet the needs and demands of the area. The participants were the CHAs living in rural areas delimited by the Community Health Agents Strategy (CHAS). The exclusion criteria consisted of CHAs on vacation, on leave, or on sick leave during the data collection period.

In this municipality, 79 CHAs were working, 21 in rural areas. Among the 21 CHAs who met the eligibility criteria, four were on sick leave and one refused to participate; therefore, 16 CHAs were included in the study. Data collection occurred from June to August 2019. The initial contact with the participants, inviting them to schedule the interview and define the preferred location, occurred in person at their workplaces and through telephone contact. The CHAs chose to conduct them in the health unit to which they were linked in rural areas (8) or in a room provided by the Health Department in a central health unit (8), which was accepted by the researcher.

The interviews were conducted by the main researcher, who is a nurse working in the primary care strategy and has experience in research and teaching, consisting of two stages: the first one with data referring to the demographic characteristics (age, gender, marital status, ethnicity, religion, level of education, and time working in the service) of the participants, and the second one covering questions regarding the work activities of the CHAs.

The questions consisted of the educational actions and in which moments in their daily work they were carried out to people with AH and DM, participatory activities in training and continuing education courses on chronic diseases, the use of information materials in carrying out educational activities, and the challenges and potentialities of carrying out these actions in rural areas. The interviews were done individually with the CHAs and lasted an average of 50 minutes; all interviews were recorded on an MP3 Player® digital recorder.

Content analysis was used and characterized by three chronological stages: pre-analysis, exploration of the material, and treatment of the results, including inference and interpretation.[14] The pre-analysis consisted of transcribing the interviews and floating reading of the texts, and the files were transferred to the NVivo®11 software (free version) in the second stage. This software was chosen as it helped organize and analyze the participants' speeches, enabling clippings and choice of the registration units. The statements were then selected and coded to give meaning to the CHAs' speeches by elaborating analytical charts in an editable document format (Microsoft Word®). In the treatment of the results, it was possible to understand, from the CHAs' perspective, how the educational actions developed in the care for people with AH and DM living in the field occurred.

The study met the ethical recommendations of Resolutions No. 466/2012 and No. 510/2016 of the National Health Council. The Research Ethics Committee approved the project on May 23, 2019, under Opinion no. 3,343,665 and CAEE no. 13164819.9.0000.5346. All participants signed the informed consent form. To maintain the participants' anonymity, their names were replaced by the acronym "CHA," which identifies community health agents, followed by an ordinal numeral from 01 to 16, forming codes (CHA-01 to CHA-16).

Results

Among the 16 participating CHAs, 15 (93.7%) were female and one (6.2%) was male. Six (37.5%) were aged 30 to 39 years, four (25%) were aged 40 to 49 years, three (18.7%) were aged 50 to 59 years, two (12.5%) were aged 20 to 29 years, and one (6.2%) was aged 60 to 69 years.

As for education, the participants had eight or more years of education. The time that the CHAs had worked in the micro area of coverage ranged from three to 21 years, and they had, on average, 126 registered families. All CHAs were hired through civil service competitive exams.

As for ethnicity, 13 (81.2%) of the CHAs declared themselves white, two (12.5%) were black, and one (6.25%) had no declared race/color. When asked if they had any religious belief, 12 (75.0%) answered that they were catholic, one (6.2%) was an evangelical, one (6.2%) was a spiritist, and two (12.5%) were not adherents of any religion. As for marital status, nine (56.2%) reported being married, four were (25.0%) single, and three (18.7%) were divorced.

As for the educational practices carried out with people with AH and DM living in the countryside, the study participants mentioned that the activities were carried out every day in their territory and were a means of spreading safe information for disease prevention and health promotion.

> *We get together, talk, and have a round-table discussion* [...]*, a talk, a chat with some questions, and we answer* [the users' doubts]. (CHA-02)
> *We're going to do a health group. We're going to approach themes, like making soap at home, [making] seasoned salt for the whole family to use, work gymnastics. We're going to build together with people because I can determine that they need this. However, the user* [...] *suddenly wants something else.* (CHA-07)
> *We make posters on the food pyramid, smoking, hypertension, diabetes, breast cancer, prostate cancer, menopause, and various actions in the waiting room.*

When addressing how the educational activities are developed, the CHAs reported that the people they assist are seen from an integral perspective. They also identified the concern for the orientations making sense for the people receiving them.

> *I try to question them to see their reality, and based on what they tell me, I try to work on something that will improve their health conditions.* (CHA-03)
> *I make an analogy with a water pipe. When the pressure is high, it forces more, and it can then burst* [...] *or it is more relaxed when the pressure is low. This happened until I took some balloons* [to the health unit] *and put some super glue drops to simulate atherosclerosis. Then, when I filled up that part* [*of* the balloon], it *didn't fill up and it ruptured. So, they* [the users] *were very impressed with that.* (CHA-08)

During the educational activities in the field, eating habits and drinking *chimarrão* (a traditional southern-Brazilian beverage) are incorporated as a strategy to address health-related issues. The CHAs' observed that when these habits are part of everyday life, it is more difficult to encourage people to make changes in their lifestyles.

> *What* [...] *we have already done is get some of our neighbors together and drink some chimarrão, each one brings a piece of cake* [...] *and we talk about diabetics, hypertensives, orienting them. (CHA*-01)
> *Fifteen women participated* [in the group]*. Quite a lot for the first meeting. At*

> *the end, I held a get-together* (CHA-05)

In fact, behavioral changes must be part of the CHAs' educational actions, which can guide people who live in the countryside to cultivate their vegetable gardens and have healthier diets by taking advantage of daily food.

> *I guide* [them] *regarding nutrition and the integral reuse of food; we have even taken a course within the Hyperdia group, trying to use more of the day-to-day things. I guide people to have a vegetable garden, to have green seasoning. We got together in the group and made the seasoned salt, and I oriented it to be used as a seasoning in place of the regular seasoning and the commercial broth because it's natural; it has parsley from the garden, chives from the garden* [...] *all inside the salt.* (CHA-06)

The study participants also cited intersectoral articulation to strengthen health actions in rural areas. To achieve results, the CHAs stated that the activities with the chronically ill should be planned with health professionals and registered users. Thus, care becomes resolutive, continuous, and occurs according to information needs.

> *I really liked this idea of the HSP* [Health at School Program] *because I think we must build a concept of healthy living for these people to be* [more] *healthy at an older age because we find more* [cases of] *hypertension and diabetes in people over 40. So, you can see that it was something acquired during youth by lax habits. So, let's try to work more with this* [...] *to improve more at the end of life.* (CHA-03)
>
> *I have a partnership with EMATER* [Technical Assistance and Rural Extension Company] *and the rural workers, and last month we did a lecture about the self-esteem of the rural people. We work with handicrafts, painting on cloth and soap, encouraging women to use what they have at home. Bread, they exchange ideas with each other, recipes. They like to get together to talk, drink chimarrão, bake a different cake, and tell us the recipe, so this is very gratifying for me as a professional because I see that they are learning something.* (CHA-06)
>
> *Sometimes I stop* [doing] *the home visits to go after partnerships, and it has to be like that in the rural environment. I have already had a group of women rural workers; we had a course on cake* making, *handicrafts, guasqueiro (braids on rawhide) course, gardening course, tea courses with the Pastoral Health Ministry, and workshops also with EMATER, we spent a pleasant afternoon, sharing things and talking about health.* (CHA-07)

It should be noted that the participants of this study also signaled difficulties in implementing educational activities. The participants reported a lack of support from the health team because it is a rural area, interest in users' participation due to the distance, stimulation in the proposed health technologies, and permanent education and informative materials for the foundation of the activities.

> *I feel more lack of support* [...] *from nurses. Sometimes the nurse can't come to our area, but he gives us support* [...] *in the* [health] *unit, so I learn more, and I can take the knowledge to them* [the users]. (CHA-01)
> *I have difficulty* [carrying out educational activities] *because I don't have much material to orient.* (CHA-04)
> *We had hypertensive and diabetic groups, but it's a lot of resistance! We have the gymnastics* [group]*, but the distance is a little complicated for people from outside. There are times that I walk for an hour, I stop and think, an hour walk just to go* [to the group], [...] *then you can imagine, for example, a person that is old, tired, that has things to do inside the house, then walks for an hour to go there to talk* [...]. (CHA-14)

On the other hand, the CHAs also break the traditional paradigms and develop dynamic activities in the form of round-table discussions, workshops, and the health unit waiting room, thus provoking the community's interest in participating in educational activities. These CHAs mentioned that they count on the nurse's support to strengthen their accumulated experiences and add new knowledge.

> *We do lectures and round-table discussions, we meet in the church hall, and then we explain* [to the nursing team]: *do a quick test,* [check] *the* [blood] *pressure.* (CHA-15)
> *I did a waiting room about diabetes and hypertension with the nurse and the* [nursing] *technician; she made the salt and sugar spoons from the products she had there: stuffed cookies and snacks, so they* [the users] *found it very interesting.* (CHA-16)

Because of the importance that the introductory course can offer to prepare CHAs for their daily practice in the territory and to carry out educational activities, the participants were asked about the training they received to perform their function. The reports expressed gaps in the initial training and a lack of continuing education focused on chronic conditions, causing doubts and insecurity when performing actions aimed at people with hypertension and diabetes.

> *It's been seven and a half years that I have worked* [as a CHA] *and I don't remember attending any* [lecture] *about hypertension or diabetes. Or that there was a* [health] *professional that related the subject to the elderly and taught us* [to orient this public] *because I orient what I know.*
> *The work of the CHA is the most important, not because I am a CHA, but because it is cutting-edge work. This professional is experiencing the reality of the people because he is inside the house; it is different from the professional of the* [health] *unit that will evaluate the patient but doesn't know the reality. So, I think that if we had more lectures and things like this focused on the area where the CHAs work, the work would be quite different.* (CHA-06)
> *When we were appointed, we had training on how to fill the paper, fill out the sheets* [registration and follow-up forms] *on how our service would be. Now,*

> *last year* [in 2018]*, we had a more complete course, which showed* [...] *how the work with children is, the work with pregnant women, with the elderly, hypertensive patients; orientation* [...]. *So, there I was able to clarify our activities* [as CHA]. (CHA-01)
> *They taught me how to fill out the forms, then told me to go out and do the* [home visits] *with* [another CHA]*. And then I went out* [to do the home visits]*, I accompanied [another CHA*'s name] *for a month,* [...] *and she was explaining to me how* [the work of the CHA] *was. We really didn't have any training.* (CHA-02)

It is also worth mentioning that the challenges experienced by the CHAs who work in the countryside go beyond the specific actions of the professional categories due to the complexity and diversity of problems resulting in physical, biological, and/or emotional wear.

> *In the rural area, the* [biggest] *challenge is the roads; we can't go* [to do the home visits] *by bike*. *So, we work by car, by motorcycle* [...]. *The* [road] *conditions are precarious, we go out in the mud and the houses are far away, with more distant villages. [*Another difficulty is] that *we don't find people at home during the farming season because they are all picking tobacco.* (CHA-02)
> *You end up getting tired, dirty with mud, dirty with dust, and sooner or later it was a gnat that bit you* [...] *these are challenges that you don't expect and that come* [...] you *have to be careful on the road,* [and] *you don't have to be careful just on the highway, on the road in rural areas you have to be much more careful because there are livestock, capybara, and suddenly you can run it over, suddenly a herd of cattle is coming and I have to wait. These are challenges that if you compare with urban* areas*, where there is a traffic light for you to stop and enter another street, this doesn't exist in the countryside* [...] *it is a gate that you have to open.* (CHA-07)

The interviewees recognized that they are exposed in their work routine to dog bites, insect bites, the presence of animals, climatic factors such as the sun and rain, cold and heat, poor road conditions, and the absence of users in times of planting and harvesting rice, soybean, and tobacco; making it impossible to develop educational activities.

Discussion

Most participants in this study were women with a minimum age of 29 years and a maximum age of 65 years, married, Catholic, white, and who had eight or more years of education. A survey carried out in a municipality in the Zona da Mata Mineira (southeastern Brazil) also identified the predominance of women among the CHAs, aged between 24 and 73 years, married, white, and with complete high school education.[15] The predominance of women in the profession can be explained by the fact that the population shows resistance to

male CHAs. On the other hand, women are the majority in this profession due to their role as caregivers in society.[16] As for education, it is worth mentioning Brazilian Law no. 15.595/2018, which sought to fill the gaps left by previous legislation regarding the activities to be developed by these workers and the requirements to hold the position. Hence, one can mention the expansion of the level of education of this professional that, in Article 6, proposes that the worker must have completed high school, which is in line with the research results.

Regarding the activities developed in the CHAs' daily work, the participants mentioned that their work is marked by exchanging technical and popular knowledge and sharing information through specific educational actions, either individually or collectively. These are focused on guidance that makes sense to the people who receive them and emphasize disease prevention and health promotion for the population. An article that analyzed how educational actions are being developed in the HSP of the city of Francisco Morato (São Paulo State) states that the educational actions do not only guide people about measures to prevent and control health problems. They must be developed to stimulate knowledge and care for oneself, strengthening autonomy, solidarity, and community responsibility in the search for better living conditions, corroborating the findings of this study.[17]

Thus, the educational actions developed by the CHAs in caring for people with AH and DM were identified as home visits, living together groups, conversation circles, lectures, and activities in the waiting room. The CHAs' activities must be carried out by planning the work process based on the territory's needs, prioritizing the population with the greatest degree of vulnerability and epidemiological risk, and articulating with other members of the multi-professional health team when necessary.[18]

In this sense, during the implementation of these educational strategies, the CHAs must encourage lifestyle modifications, which include healthy eating, reduction of salt intake and consumption of alcoholic beverages and smoking, weight loss, increased consumption of some micronutrients (e.g., potassium and calcium) and practicing physical activity. Given the relevance of diet in the control of AH and DM and because it is directly related to psychosocial and cultural issues, the Brazilian guidelines and ministerial manuals indicate some instruments that can support educational actions in health, such as the Food Guide for the Brazilian Population and the Cardioprotective Diet, which contemplate the recommendations of the medical societies based on scientific evidence.[19–22]

Participants reported that among the potentialities for strengthening the implementation of educational activities, the reception and bond with users stand out, as well as the intersectoral relationship between health, education, and various social facilities. From this perspective, in order for the CHAs' work to be resolutive, different views, knowledge, and actions are necessary. The support of a multidisciplinary team that assumes the task of caring for the user is fundamental, relying on interventions focused on social issues and not only on health.

It was also possible to identify that the educational activities are planned together with the health professionals and the registered patients. Thus, the care becomes resolutive, continuous, and seeks to meet users' information needs. It is understood that the health team must be co-responsible in the planning and execution of educational actions. Nevertheless, it is pivotal to highlight the importance of nurses in collaborating in this process, since their specific attributions include planning, managing, and evaluating the actions developed by CHAs and other team members.[18] In this context, nurses develop a critical role as supervisors and educators of CHAs to generate new competencies and skills for the work, strengthening the experiences already lived and providing new knowledge to CHAs.

From the analysis of the CHAs' reports, gaps were identified in implementing educational actions on AH and DM, such as the scarcity of informative materials and training focused on chronic diseases and the lack of support from the health team during the activities. A study carried out in Porto Alegre, (Rio Grande do Sul State) identified that the lack of materials and resources interferes negatively in the sense that, even if the CHAs are interested in developing health education activities with specific groups, they are unable to do so because there is no material that provides a basis for these actions.[23] Additionally, the lack of stimulation from users due to the distance of the rural properties and the places where the proposed actions take place were also mentioned, as well as the lack of dynamic and interactive activities. Thus, it is necessary to survey and implement popular health education strategies that are interactive and awaken the interest of the target audience (e.g., active teaching methods).

Indeed, active methods encourage users' participation in constructing new knowledge, motivating them to act as protagonists and, consequently, breaking with the vertical education of information receivers and low effectiveness. In this sense, these methods are

understood as important strategies for the qualification of the CHAs' work, in addition to enabling greater adherence of the community to the planned actions since they stimulate the construction of new knowledge in a critical, interactive, and reflective way, in which the people involved participate and commit to their learning.[24]

The CHAs with less professional experience also emphasized that they were inserted into the workplace without any training or introductory course and were trained by other coworkers. Considering Ordinance no. 243/2015 and Law nº 15.595/2018, in order to perform their functions, the CHAs must have completed the initial training course, which has a minimum workload of 40 hours. In addition, the CHAs need to have a series of knowledge, skills, and abilities to be able to perform their duties in the best way possible and must be trained in the following topics: public health policies and the organization of the Unified Health System (SUS), specific legislation, forms of communication and their applicability at work, interview techniques, skills and attributions, work ethics, individual and territorial registration, home visits, health promotion and prevention, and mapping and dynamics of social organization.[25]

For this, the Ministry of Health defined guidelines for training CHAs in lines of care, suggesting that the initial training should be gradual and permanent and carried out by states and municipalities in partnership with the SUS Technical Schools, considering the work context of the CHAs. Notably, this training is the responsibility of public managers. It does not need to be linked specifically to a professional, and all professionals in the health team should be jointly responsible for monitoring and reorientating actions. However, historically nurses have taken a central role.[25]

The considerations evidenced from the statements of the participants refer to doubts related to the care given to people with AH and DM and insecurity during the execution of the educational actions. In another study, the main weaknesses pointed out by the CHAs coincide with the findings of this study and indicate individual limitations such as nervousness, shyness, insecurity, lack of preparation and time for the organization of actions, and lack of interest from the community in participating in educational activities.[26] We also identified gaps in continuing education focused on chronic conditionalities since the CHAs emphasized the search for information on the subject in various sources, such as coworkers, books, booklets, and the Internet. A study conducted in a rural area in the countryside of Minas Gerais State

corroborates our findings, revealing a lack of knowledge of CHAs on some topics and pointing to the need for training and offering courses that provide subsidies for their improvement.[27]

Therefore, it is understood that the search for this information must come from reliable sources and that health education depends on the congruence of several factors. Among them, it is possible to highlight the incentive of the municipal management to qualify the CHAs and provide adequate materials for conducting quality educational activities, which sometimes does not happen according to the results identified. On the other hand, it is understood that there must also be a "re-signification of the posture of the CHAs themselves to recognize that they have responsibility when health education is not performed, not only, therefore, blaming others when these actions do not happen.[24:85]

When dealing with health policies aimed at CHAs, it is necessary to reflect on the performance of their duties, which can cause physical, biological, and/or emotional stress due to the difficulties encountered in their daily work. As a good portion of the participants mentioned these stresses, it is relevant to think about the municipal management's investment in the focus on psychological support for the CHAs' health as a way to prevent possible illnesses or difficulties in the mental health field among these professionals.

The interviewees also recognized that they are exposed in their work routine to difficulties related to the distance and access to properties, poor road conditions, dog bites, insect bites, and weather conditions, among other aggravating factors that hinder their insertion in households and affect their productivity. These data corroborate the findings of another study with predominantly rural areas, demonstrating that the difficulties encountered during the work of CHAs are not exclusive to this region.[28]

In turn, a survey conducted in an urban region of Rio Grande do Norte State also showed similar results and that work would be less stressful for these professionals if the municipal management provided appropriate clothing, shoes, and accessories such as caps/hats and sunscreen. In this aspect, the Ministry of Health establishes the basic equipment for CHAs' work: uniforms, identification badges, primary care information system forms, scales, stopwatches, thermometers, measuring tapes, and educational material.[29]

According to the regulation of Law No. 13,467 of July 13, 2017, which amends the Consolidation of Labor Laws and Regulatory Standard 6, which provides for personal protective equipment (PPE), the use of free PPE is recommended for workers as a prevention

to the risks they are exposed to. At the same time, Regulatory Standard 21 reaffirms the need for sun protection in outdoor activities to protect workers against excessive insolation, heat, cold, humidity, and inconvenient winds.

Moreover, it is believed that some strategies can provide an adequate environment and, consecutively, more satisfied health professionals. Some possibilities include the recognition of the category by the government and management, investments in health education to improve their actions, financial investments, acquisition of basic inputs to develop their work, and favorable means for social relations and productivity with a team with good communication and co-responsible for implementing educational actions in the community.

Meanwhile, the limitations of this research are related to the study's *locus*, since the participants' displacement and weather conditions for conducting the interviews were major barriers. In addition, it is worth mentioning that some interviews had to be rescheduled due to the lack of public transportation because bridges were blocked due to the flooding of the river.

Still, there is a limit to the discussion of the results as no research has been identified that dealt with educational activities and AH and DM in an integrated way. Lastly, our findings are expected to contribute to new discussions and reflections among health teams, communities, and municipal managers about the importance of recognizing the educational practices that CHAs develop with people with diabetes and hypertension who live in the countryside, aiming to strengthen PHC practices. It also contributes to highlighting the need for continuing education for CHAs concerning this theme.

Conclusion

The educational actions identified and carried out by the community health agents were home visits, socializing groups, round-table discussions, lectures, and activities in the waiting room. Despite this, some participants showed little knowledge about the care for people with hypertension and diabetes, affecting the development of their educational activities. In this sense, they felt empowered when these activities were developed with the health team or in partnership with other distinct sectors.

The participants' reports also showed that there are numerous difficulties

encountered in their daily work, especially the lack of continuing education focused on chronic conditionalities and the introductory course, information materials to support educational activities, and the minimum conditions to perform the work in the field, making their work much more challenging. Additionally, the absenteeism of users in participating in collective activities generates dissatisfaction with the health worker, who often does not continue the activities.

Finally, the participants' speeches contain key elements to support local managers and health care professionals to encourage the development of educational actions, considering the particularities of the rural context, in order to establish spaces for discussions that impact chronic conditionalities.

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10.5327/Z1679443520190315

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Chief Scientific Editor: Cristiane Cardoso de Paula

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How to cite this article

Rampelotto GF, Schimith MD, Corcini LMCS, Garcia RP, Perlini NMOG. Educational actions for people with hypertension and diabetes: the work of the Community Health Agent. Rev. Enferm. UFSM. 2022 [Accessed at: Year Month Day]; vol.12. e43: 1-17. DOI: https://doi.org/10.5902/2179769268715