

Evaluation of research in primary health care scenarios: production, dissemination and use of results

Avaliação das pesquisas nos cenários da atenção primária à saúde: produção, disseminação e utilização dos resultados

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Abstract

The article discusses the implications of health research in Primary Health Care (PHC). It analyses how the knowledge produced by the scientific investigation impacts the PHC services routine, emphasizing results production, dissemination, and use processes. Therefore, a participatory research of case study type, anchored in the constructivist theory, was carried out. PHC health professionals, managers and technicians of the Health Secretariat of the State of Ceará, Brazil, and the Municipal Health Secretariat of Fortaleza participated in the study. The hermeneutic-dialectical circle technique was used to collect information, and the empirical material analysis was based on critical hermeneutics. In the results, aspects related to the choice of research topics, relevance of investigations, and the use of the results for well-informed decision-making are discussed. To overcome the obstacles found in the production, dissemination, and use of the research results, we suggest a research priority agenda be developed at the municipal level, from which the problems of PHC would be listed, prioritized, and investigated based on a participatory methodology, capable of engaging all those involved.

Keywords: Research; Health Research Policy; Health Research Agenda; Knowledge Management for Health Research; Health Research Evaluation.

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Resumo

O artigo discorre acerca das implicações da pesquisa em saúde nos cenários da atenção primária à saúde (APS). Analisa o modo como o conhecimento produzido pela investigação científica repercute no cotidiano dos serviços da APS, dando ênfase aos processos de produção, disseminação e utilização dos resultados. Para tanto, realizou-se um estudo avaliativo participativo do tipo estudo de caso, ancorado na teoria construtivista. Participaram da pesquisa profissionais de saúde da APS e gestores e técnicos da Secretaria da Saúde do Estado do Ceará e da Secretaria Municipal de Saúde de Fortaleza. Para a coleta das informações, utilizouse a técnica do círculo hermenêutico-dialético e a análise do material empírico tomou como base a hermenêutica crítica. Nos resultados, são discutidos aspectos relacionados à escolha dos temas de pesquisa, à relevância das investigações e à utilização dos resultados para a tomada de decisão informada. Para superar os obstáculos encontrados para produção, disseminação e utilização dos resultados das pesquisas, sugere-se a elaboração de uma agenda de prioridades em pesquisa, em âmbito municipal, a partir da qual os problemas da APS seriam elencados, priorizados e investigados a partir de uma metodologia participativa, capaz de envolver todos os implicados.

Palavras-chave: Pesquisa; Política de Pesquisa em Saúde; Agenda de Pesquisa em Saúde; Gestão do Conhecimento para a Pesquisa em Saúde; Avaliação da Pesquisa em Saúde.

Introduction

In Brazil, the construction of participatory processes in health has been democratizing the decision-making both in the context of services management as in health research, which resulted in the National Health Policy (PNS) and the National Policy of Science, Technology and Innovation in Health (PNCTIS), as well as in the elaboration of the National Agenda of Research Priorities in Health (ANPPS). As a result of these policies, the government funding for research on human training and development has increased. The Brazilian scientific production grew due to such investments (Packer, 2015; Vargas; Britto, 2016).

However, despite all the knowledge produced, the funding of such research, and the involvement of researchers, there is a gap between the production and use of results from investigations carried out in public health services. Face this reality, the relevance of these searches yielding results that are not used is questioned since, according to Patton (1997), the merit of an assessment is equivalent to its use. As every scientific research also proposes to evaluate the context studied, the research shall contribute in some way to the improvement of health care.

The Brazilian public health system has the Primary Health Care (PHC) as one of its components, which corresponds to the first level of attention of the Brazilian National Health System (SUS). Responsible for the coordination and organization of care, this level of attention is able to resolve most health problems of the population. Through the Family Health Strategy (FHS), the PHC is instituted and effected in the community (Paim, 2012; Starfield, 2002).

Nonetheless, due to its insertion in complex and diverse scenarios, permeated by political, economic, and social interests, some of the potential of PHC may be minimized, what has brought questions about its credibility to ordering and coordinating health services and actions (Arantes; Shimizu; Merchamann, 2016).

In the literature, the main challenges of PHC refer to insufficient funding, professional training in disharmony with the care model required, precariousness of the professional link to institutions, and the misalignment of intersectoral actions. There are

still weaknesses in planning and social participation (Arantes; Shimizu; Merchan-Hamann, 2016).

Thus, investment in strategies that strengthen the services and work processes of PHC and that contribute to the decision-making tends to improve the health status and reduce costs. Research is, therefore, highlighted as a strategy that may contribute to the identification of problems and proposal of relevant solutions, able to lead to the improvement of help actions and services (Lau et al., 2016).

In fact, the resolution of social and health problems of a given population requires that the main guidelines of the actions are based on scientific evidence. The study Establishing Leads for Community Development (ELECT) devised, along with specialists (managers, workers and researchers) and SUS users, a list of the main obstacles to the strengthening of PHC, consequently raising priority research themes for this area in the State of São Paulo. Thus, the investigation aimed at defining an agenda of research priorities with high potential to strengthen the PHC, in order to promote health and the social development of communities. It should be recalled that there is already a national agenda; however, it does not address issues specific to the PHC (Orlandin et al., 2017).

Considering the research as an important resource for generating information to enlighten the decision-making environment can lead to applicable knowledge, able to promote improvements in PHC services. To do so, however, it is necessary to strengthen the link between academia and health services, bringing together researchers committed to the priority themes and managers sensible to the embodiment of study results in the formulation of health policies and interventions, particularly in SUS health services.

On the exposed, we wonder: do the subjects involved perceive the research in health as a strategic tool for decision-making, transformation and innovation in the PHC? What are the challenges for the incorporation of research results into the health services practices?

Thus, this research uses the participatory evaluation, considering that this approach can

become a learning instrument for local actors involved (Almeida; Tanaka, 2016), as it provides subsidies for changes and transformations from the information generated by the participation of the subjects involved. This also promotes the training of those involved in the evaluation, increasing their potential of analysis and self-analysis to become subjects in the process of change.

Therefore, this article aims at analyzing the implications of health research in the PHC context, i.e., how the knowledge produced by scientific research affects the routine of PHC services, emphasizing the processes of production, dissemination, and use of the results.

Method

This is a participatory evaluation research of the case study type (Yin, 2015). Among the different existing paths to conduct a research with qualitative approach, the participatory method was chosen due to the possibility of involving the various interested parties by establishing a horizontal relationship between them and the researchers, producing jointly a scientific knowledge (Almeida; Tanaka, 2016).

The investigation was conducted in the PHC of Fortaleza/CE. The care model that has been implemented in the city is operationalized from the concept of health conditions, based on the proposal of Health Care Networks. Based on the understanding of PHC as the first level of attention, it focuses the resolution function of primary care on the most common health problems, from which the care is performed and coordinated in all points of attention (Fortaleza, 2014). According to a consultation to the National Register of Health Establishments (Brasil, 2017), the primary health services network in the city has 112 health centers/basic units, called Primary Health Care Units. As informed by the website of the Department of Primary Care of the Ministry of Health, the estimated population coverage by the FHS in Fortaleza in March 2018 was 47.38%, with 361 family health teams.¹

1 BRASIL. Ministério da Saúde. *Cadastro Nacional de Estabelecimentos de Saúde*. Brasília, DF, [s.d.]. Disponível em: <<http://bit.ly/2Aa1GFc>>. Acesso em: 16 maio 2017.

Were included as participants: two technicians of the Center for Science, Technology, and Innovation in Health (Nucit), linked to the Coordination of Management in Permanent Health Education (Cgeps) of the Health Secretariat of the State of Ceará (Sesa); seven technicians of the Coordination of the Management of Health Education and Work (Cogtes), linked to the Municipal Health Secretariat (SMS) of Fortaleza; six regional articulators of PHC; six representatives of health professionals of the Municipal Health Council of Fortaleza. Therefore, the study included a total of 21 participants.

The Cgeps, through the Nucit, and the Cogtes are responsible for the conduct of the research policy in the State and municipal networks, respectively, acting as co-participating institutions, whose technicians are in charge of judging the social relevance of the research and promoting discussion between managers, workers, and researchers, aimed at favoring the incorporation of research results into SUS actions and services and providing subsidies for the decision-making. The regional articulators of PHC assist municipal public administrators in identifying problems and formulating strategies for the development of this area, and the organization of the work process in PHC units is the main activity. Selected health professionals make up the FHS and represent the workers in the Municipal Health Council. As selection criterion for the research, all participants had to be in the job position or function for at least one year. Those who were on vacation or license in the period of information collection were excluded.

To obtain the information, an open interview was used, starting from a triggering theme: "Comment on the incorporation of scientific knowledge produced by research into your work practice." Thus, the first interviews did not have a previously structured script. However, as the interlocutions were performed they were analyzed, which allowed the identification of other, more in-depth questions on the topic which were incorporated into the previous inquiries, producing new questions for the following interviews. In fact, the interviews became more structured with each step, allowing a rapprochement with the "hermeneutic-dialectic circle" technique, founded by Guba and Lincoln (2011).

The syntheses of information extracted from interviews were presented to the research participants so that they had access to all the information and could enjoy the opportunity to modify them until their credibility was affirmed from a collective discussion about the analyses produced by the reports. This step of validation and synthesis of empirical material was carried out through the group technique and had the participation of most interviewees and researchers.

Interviews and focus groups were conducted at the participants' workplaces from June to September 2015. Reports were recorded in an electronic sound device after participants' authorization and, then, transcribed verbatim, being codified and identified by the letters ST, MT, MM, and HP, representing state technician (Nucit), municipal technician (Cogtes), municipal manager (regional articulator of PHC), and health professional, respectively.

The analytic trajectory of the empirical material was based on critical hermeneutics, as suggest by Minayo (2013) and Assis and Jorge (2010), thus following the systematic ordering, classification, and final analysis of the information.

This study is a highlight of the research called *Evaluation of health and nursing research: plural viewpoints about the contribution to policies, organization of services, and care on the interface with care production in primary attention*, which received a favorable opinion by the Committee of Ethics on Research with Human Beings of the Ceará State University.

In summary, the ethical principles were respected, in accordance with determinations of Resolution no. 466 of December 12, 2012, of the National Health Council regarding research with human beings (Brasil, 2013).

Results and discussions

Knowledge production

Currently, two perspectives of science are confronted on a daily basis in the management of public health policies and the academia. On the one hand, the science produced for innovation and technology - which, though contributing to the improvement of the quality of life of the population,

does not have the overcoming of inequalities as a fighting flag. On the other hand, there is the political action as the foremost purpose of scientific production; in this context, research shall contribute to social transformation, reducing inequalities.

Face the discourses of health professionals, a severe distortion between is observed between what a research is expected to offer - subsidies for change and improvement of health practices, implementation of new technologies, formulation of policies, reduction of social inequalities, ultimately, identifying and dealing with health issues of the population - and what it, in fact, provides - titles to the researcher and prestige before the scientific community.

The statement that *Some research is for people to do their final paper* (HP) reflects the reality of Brazilian universities, usually estrange from an ethical and professional commitment that would have potential to transform the health system and its practices, resulting in improved quality of life and health of the population. It should be noted that the university is aimed at ensuring that research will contribute to the social, economic, and cultural development of a society and, thus, enable the improvement of living conditions of a given population (Delgado-Bravo et al., 2014).

However, the commodification of knowledge has given new purpose and social function to public universities, which went on to fit the business logic and eventually replace quality for productivity (Rodriguez; Martins, 2005). In such logic, universities have come to occupy a place of scientific production. The PHC manager perceives research from this perspective. According to him, *what is spent on science and technology in Brazil, and what is generated in patents, product registrations, for example, is minimal, so this is a structural problem* (MM).

The idea that the product of science is the invention or technological innovation and that we must invent and innovate more for the progress of the country is propagated, since *in Brazil, the researcher works within the state of art, within a theoretical and conceptual vision, when, in fact, what we need is for applied research* (GM). Nonetheless, it is known that the problems of Brazil still have a

social character. Social inequality is not a result of lack of investment in technology, which suggests that directing the scientific production towards technological innovation would not solve the health problems of the Brazilian population.

Furthermore, a study conducted by Silva and Caetano (2011) points out that, from the R\$ 409.7 million invested by the Ministry of Health in health research and development between 2003 and 2005, R\$ 233.9 million were invested in applied research (57.1%), R\$ 79.6 million in experimental development (19.4%), and only R\$ 15 million (3.7%) in basic research. Thus, one can see that, although the overall amount of investment in health research in Brazil is still scarce, most of the resources are aimed at applied research, followed by experimental development research, being both able to generate products and technological innovations.

Anyway, in addition to the contribution of applied and experimental research to the development of technologies and innovation, basic research also has a strong interaction with the field of health innovations (Vargas; Britto, 2016).

There is no denying the fact that the research infrastructure in Brazil contributed greatly to the increased number of scientific publications and the internationalization of science. On the other hand, the same system ... *values publication and not the application, thus, the more the researcher publishes the more the MEC [Ministry of Education] recognizes that researcher as a great research worker* (ST).

According to Iriart et al. (2015), scientific productivity corresponds to 35% of the evaluation of graduate programs in public health, mainly based on quantitative criteria - which, in turn, drives the researchers to increase production without, however, considering the quality of what is being done. Thus, the authors emphasize how damaging is this frantic race for the publication, making it increasingly difficult to obtain research funding for areas that score less.

In this scenario, one can observe a production of knowledge geared towards publication. Aimed at generating the largest possible number of publications, research have their results "chopped." The scientific production has been gradually turning into a productive force of capitalism,

accentuating inequalities when, in fact, it should reduce them, which has a negative reflection on the living conditions and health of the most vulnerable populations (Ferreira; Rigotto, 2014).

Much has been discussed and published about the ethical commitment and responsibility of the researcher face the resources offered by the government for research funding (Carvalho et al., 2016; Celino et al., 2013; Santos et al., 2010). However, little has been argued about the ethical responsibility of these researchers (including graduate students) in developing their research in priority areas and in committing themselves to topics that are relevant for the society, as what has been observed are *very repetitive themes, subjects that have already been researched in a very similar way by other researchers (ST) and rarely one can see innovative research that is relevant for the health system (MT)*.

One must consider that the choice of research themes is not free of personal interests of each researcher, due to research lines with which they are already used to work (Bourdieu, 2004). In this perspective, Celino et al. (2013) warn that scientifically produced knowledge relies too much on the interests of the own researcher, whose intent is not always to contribute to the solving of priority health problems of the population.

In an attempt to align the development of research to priority themes for population health, the ANPPS was implemented, aimed at inducing the scientific production in the health area by emphasizing priority themes, guiding the funding in the context of SUS and serving as a guideline for technological and scientific funding agencies. Its preparation in a participatory manner, with the collaboration researchers, managers, health workers and users, enabled the representation of health needs, with the greatest possible proximity, by the sub-agenda themes (Brasil, 2008).

One may notice that financed research is guided by ANPPS themes; however, in Ceará, there is no agenda that considers the epidemiological and cultural characteristics of the State. Thus, *what there is are decontextualized research, motivated by a personal curiosity of the researcher (MT)*. Even the Research Program for SUS: Shared Management in Health (PPSUS), whose priority themes shall be

listed through a participatory workshop, do not count with the participation of the Board of Health but only of with researchers and technicians of the State Secretariat of Health (Carvalho et al., 2016).

Given this context, the first step of research development is already compromised and, possibly, its results will not be used because, according to the ideas of Patton (1997), the interest in the research results is a necessary condition for their use. However, considering the lack of interest of managers and society on the themes researched, any kind of impact on health practices becomes impossible. A greater interaction between academia and health services would result in better-targeted research, as the research problems emerge from the everyday of health services to which the results could be incorporated.

The shortage of funding to municipal investigations is no obstacle to the creation of an agenda that lists the research priorities, which shall be built collectively, with the participation of managers, researchers, and health advisers, and discussed in health conferences to serve as a consultative instrument for researchers in the development of their research projects.

Dissemination of the findings

One of the tasks of the health system defined at the Brazilian Constitution would be “to increment, in the area of practice, the scientific and technological development” (Brasil, 1988, item V, article 200), as well as stimulating the transfer between the universities and research institutes and the health services and national companies (Law no. 8,080 of September 19, 1990) (Brasil, 1990). To this end, it is necessary to rely on a range of key elements in the process of producing, communicating, and using research results. Among them, the commitment to build knowledge in priority areas and mainstreaming the results stands out, as well as the will of the manager in using such research.

Numerous obstacles must be overcome to develop a research project whose theme is of interest not only to researchers but also to managers, health workers, and users, being able to reflect in the PHC services. Once the challenges of knowledge production are

overcome, the socialization of results is the next step for that research to provide the internalization of knowledge and influence its use.

Regarding the dissemination of research results, health professionals realize the importance of a space for the presentation and discussion of these investigations: *if it [the research] was conducted in the region, it should be presented to regional councils in a plenary session, and to the technical secretariat, which could deliver an opinion to the Municipal Council (HP).*

Traditional forms of research results dissemination among scientists are not suitable, therefore, innovative strategies are required to promote access to the results and recommendations for the health system (Angulo-Tuesta; Santos; Natalizi, 2016). In this context, local and regional health councils are priority spaces for the participation of the population in the PHC, being able to mobilize managers, workers, and users. They are, thus, ideal places for the socialization of research results.

Researchers must have the ethical commitment to democratize the results of their research, but one needs to consider that such action must be supported by the management. However, in the words of the health professional, this is a weak link within the research process, in which:

the management itself does not give a constructive space for these details to be discussed within the health planning ... if we only could discuss their results [of research] within the health plans, then they would be able to produce effects in the system structure. (HP)

As a co-participating institution in research conducted in PHC services, the Cogtes is the body responsible for facilitating the dissemination of results. For two years, it held forums to present research performed in the PHC. On these occasions, managers, workers, and researchers were invited to participate, *but the participation of managers was minimal (MT) and, today, due to the low sensitivity of the management to research, the forum does not happen anymore (MT).*

To Guimarães (2004), the socialization of research results to managers shall consider the

different meanings the researchers' language may raise. For the author, the translation of scientific responses into knowledge useful for managers is established by a process of cognitive apprehension of scientific knowledge. This does not mean that *research reports should speak the language of the manager (MT)* but that they should mainly be able to elucidate strategies for the decision-making in health services: *the important thing is that relevant results are obtained and, from such results, they [the managers] can infer what is the proper thing to do (ST).*

The strengthening of the national system of health research requires efforts so that results are disseminated, in a way that those involved have access to them and can operationalize their use from the reflections, since *knowing the results of a research, we could work to implement the strategies listed ... otherwise, there is no way to do it (MM).* Thus, it becomes clear that is not possible for research to foster the PHC services without a broad dissemination of its findings. *If we do not discuss the results and did not take positions from the discussions, we cannot change this model of health that is in place (HP).*

Use of the knowledge

Though the health research has advanced in Brazil, some components of the research system, such as the incorporation of research results and the evaluation of their impacts, are poorly structured and developed, not only by public institutions and agencies but also by the researchers themselves (Angulo-Tuesta; Santos; Natalizi, 2016).

As explains the PUNCTIS, the State should act as a regulator of research streams from its production to the incorporation of results. From this prerogative, the Ministry of Health, through the Department of Science and Technology (Decit) of the Secretariat of Science, Technology and Strategic Inputs (Sctie), promoted the decentralization of research funding by creating of PPSUS, with the purpose of funding research that meets the regional needs and reducing inequalities, favoring the approximation of local health, science, and technology systems and promoting equity (Brasil, 2008). The expectation

of PPSUS is that the scientific production generated contributes to the promotion of knowledge and improvement of health actions and policies in the local, regional, and national contexts.

The program involves partnerships between the federal, through the Ministry of Health, and State spheres, by the Research Support Foundations (FAP). In Ceará, the executor of this program has been the Ceará Foundation of Support to Scientific and Technological Development (Funcap), along with the Sesa, being operated by the Nucit.

Although the program represents an advance in the research development, considering the peculiarities of each region, its realization presents weaknesses that hinder the incorporation of results into the health services. Challenges appear as soon as in the organization phase of the workshop on health research priorities, which counts only with the participation of Sesa researchers and technicians, as representatives of the workers claim that *the council was never invited to participate* (HP) when, in fact, both the Health Council and the managers should have broad participation, as established by the PNCTIS.

According to the ST, one of the reasons for not using the results of research financed by the PPSUS is *exactly because the themes are disconnected from the priorities of the Secretariat*, a problem that, in turn, could be overcome in the priority selection step if the Secretariat could count on the effective participation of managers and Health Council since, as stated by Patton (1997), only with the broad participation of those involved one may wish for the use of results.

Another crucial point concerns the socialization of findings, which happens in the seminary for research presentation - when researchers present the results of their research that, in turn, is evaluated by external experts. This format makes their applicability difficult because *it does not involve the secretariat, it involves people from outside ... experts who do not always know the local reality* (ST). In addition, the managers, key players in the process of research incorporation, do not come to the seminar: *few decision-makers end up participating, almost none actually* (ST).

It is worth mentioning that, as much as the theme chosen is of interest to managers and findings are

disseminated in various ways, it is still possible that research results are not incorporated. As the partnership between researcher and manager is a crucial element for the use of scientific knowledge, we emphasize the need for creating communication channels (Weiss, 1988) and that managers have their receptive capacity expanded through training favoring the interface between academia and management (Hanney et al., 2003).

According to the Nucit technician, *the expectation is to approach managers of people who are developing such research, to try to make this research more applicable in practice* (ST). This is considered an important strategy for the incorporation of research; however, the same technician who assumes this strategy also considers that *the council has not yet awoken for this area [of research]* (ST), although the statement of the health workers' representative is that *there is a line of discussion within the council itself about science and technology, which, in turn, are also discussed in health conferences* (HP). Considering the Health Council represents users and workers who experience the routine of health services and, therefore, know the problems surrounding it, one can infer that the participation of this institute is a *sine qua non* condition for the development of research themes that impact the PHC reality.

As for the role played by the city, it must connect the research system to health services. Thus, the challenge of Cogtes is to translate the knowledge produced into interventions that improve the PHC performance. However, there is no systematization of investigations conducted in the city and *the research results do not reach the coordination* (MT), so that the function of Cogtes is reduce merely to the bureaucratization of the science investigation process, without contributing to the dissemination and use of knowledge.

Researcher's commitment in devolving research results is mainly required through their presentation in the scenarios where it was conducted and report delivery to the Cogtes, as written in the letter of consent the investigator receives from the coordination, *only that they forget this issue and we do not have a tool, a mean to get in contact with these people, so to demand this devolution* (MT).

Considering such communication failure, the creation of a communication and information system able to associate the needs of PHC to research centers and universities is recommended, thus strengthening the partnership between the latter and managers so to make the appropriation of knowledge possible.

Responsibility for the use of results, it should be noted, is not only of the researcher since, as highlights Brousselle (2009), this work must be developed between researchers and managers. Nonetheless, in the managers' standpoint, *researches developed in the PHC are on a theoretical level, with a scientific language that is difficult to understand* (MM). They also argue that *the management needs research with practical application because, in the day to day, one cannot be analyzing possibilities, probabilities, new paths ... a product more or less complete must arise so it can be applied* (MM).

However, Brousselle (2009) points out the researcher does not necessarily need to expose in their research reports all strategies and tools that the manager should use to implement a policy or introduce changes in the organization of health services. Manager should also understand at least the terms and concepts related to their area of expertise, to apply the results. Thus, both must be aware that scientific research does not offer definitive and universally applicable answers, but are able to elucidate concepts that enable an in-depth knowledge about a reality (Souza; Contandriopoulos, 2004).

Trying to solve this problem, some factors that may determine the use of scientific knowledge should be listed, based on availability (involving managers in the definition of priority themes), accessibility (using a clear writing and promoting a broad dissemination, not restricted to academia), and validity (research should have its methodological and epistemological aspects clearly and explicitly described) (Souza; Contandriopoulos, 2004). Hence, the research should draw attention to certain situations and generate a line of thinking for decision-making.

We should also emphasize that, in addition to production, dissemination and use of research, the evaluation is also an essential tool to support the management due to its ability to improve the quality of decision-making. Evaluation research shall be able to guide appropriate decisions and

enable the implementation of results, considering it involves all interested parties (Tanaka; Tamaki, 2012). Nevertheless, the use of evaluation in the management of health services is still incipient.

Final considerations

Given the above, one can observe a mismatch between the world of academia - centered on scientific production - and the world of health services policies - organized by general norms, protocols, and manuals, which are unable to reach the specificities of subjects and territories. Universities and PHC services work in isolation; thus, the construction of scientific knowledge seems to obey only the academic logic, making it impossible for the incorporation of its findings. On the other hand, managers are little involved in the process of producing and using knowledge, considering the weaknesses found in Cogtes and Nucit.

The preparation of a research priority agenda in municipal context arises as a strategy to approach academia, health services, and management, from which the PHC problems would be listed, prioritized, and researched based on a participatory methodology, able to include all those involved.

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Authors' contribution

Morais and Jorge conceived and planned the research and analyzed and interpreted the data. Bezerra and de Paula significantly contributed with writing and content's critical review. Brillhante participated in the content's critical review and approval of the final version of the manuscript.

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