

The Potential of Permanent Education in Qualifying Tuberculosis Care

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Abstract

The National Policy for Permanent Education in Health represents a milestone for the formation and improvement of work in health in Brazil. It is a strategy of the Unified Health System (SUS) that seeks to promote the transformation of practices in the sector. The aim of this study was to understand how permanent health education (PHE) and its concepts are perceived by primary health care (PHC) professionals, involved in the treatment of tuberculosis (TB) and identify the possible barriers to their general understanding and use in the qualification process of municipal assistance. This was a survey-derived descriptive epidemiological study with a quantitative approach, with the application of an instrument to assess the degree of agreement, using the Likert Scale with PHC professionals. The data were analyzed statistically by the XLSTAT® software. To achieve independence between the questions and the variables evaluated, the Chi-square test was performed. The statements showed distorted perceptions of PHE. The most relevant data denote difficulty in relating professional practice to the teaching process, this is also reflected in actions to deal with neglected diseases; among which is TB. In this context, for PHE to be an instrument of critical analysis of knowledge concerning the local reality, and be effectively applied in an objective way, it needs to be thought-out and adapted; especially when the focus is on diseases historically relegated to the background.

Keywords: Tuberculosis, Health Services, Primary Health Care, Continuing Education.

INTRODUCTION

Primary Health Care (PHC), as a gateway to assistance, must necessarily have a highly adaptable dynamic, for the continuous and systematic evolution of the model. The challenges are great, and are observed in article 200 of the Magna Carta (the Brazilian Constitution of 1988) when establishing that the Unified Health System (SUS) is responsible, in addition to other duties, under the terms of the law, to order the training of human resources in the area of health¹.

Thus, it is in this context, tuberculosis (TB) can be understood as an infectious disease through which the profile of public health actions may be traced, acting as a marker of the

trajectory of PHC's operational successes and failures, clarifying that a movement beyond the biomedical model for the resolution of neglected diseases is fundamental^{2,3}.

This fact was historically observable almost 200 years ago, when Friedrich Engels in the work, *The situation of the working class in England*, wrote concerning TB and its relation to the poor sanitary conditions of the working class in Victorian England, at a time when TB was the determining cause of early deaths and morbidity among Saxon workers. However, at the beginning of the 21st century the same sanitary and health problems were present in social contexts similar to those

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described by Engels, where he reported that some types of factory work and a polluted environment, had particularly harmful consequences. The most common effects of breathing in these spaces were bloody mucus, wheezing and panting, chest pains, coughing, insomnia, all asthma symptoms and, in the worst cases, pulmonary TB⁴.

The pathophysiology of TB is a classic model of infectious disease, with a slow and progressive course and in addition to pharmacological resources, it needs a stable management structure for the health services that will encounter these cases, with attentive and prepared professionals, working in multidisciplinary teams, supported by adequate information systems^{2,5}. It is also recognized that the gaps presented in the management and effective patient care processes are immediately results in deleterious effects for the community and for SUS itself. This observation is striking, especially when neglected diseases such as TB depend in part on Permanent Health Education (PHE) processes, and failures are observed at all levels of care provided to this social group⁶.

PHE is based on meaningful learning and the possibility of improving work practices elaborated from the problems faced in reality, and it takes into account the knowledge and experiences that people already have on the topic⁷. In this sense, understanding PHE and its most relevant aspects in PHC allows for drawing a diagnostic line of what needs to be done as ground zero to initiate truly innovative actions in the care process supported by the constant dialogue between the subjects⁶.

Several paths can be taken to achieve the goal of quality PHE and geared to the needs of workers, none of which are absolute. However, there are clear guidelines as to its effective implementation, guided by the Organizational Public Action Contract for Health-Teaching whose guidelines were published together by the Ministries of Health and Education, in the Interministerial Ordinance No. 1.127 of August 4, 2015. This is a provision of the National Health Education

Policy offered to SUS actors (managers, workers and users) and the Higher Education of the health field workers (managers, teachers and students) to promote a participatory processes of constructing trainings and professional development in SUS and for SUS⁸.

Thus, it is emphasized that Distance Learning (DL) optimizes the resources of PHE, constituting a collectively constructed viable tool for the needs imposed by the work routine⁹.

In the counterpoint of the justification TB is cited, which is a neglected disease laden with social stigmas because its bearer receives an exclusionary treatment, and is preceded by social prejudice that prevents the complete care from being fully exercised; which is stated in the secondary plane of the actions inserted in the management for life agreement.

Thus, the present study sought to analyze how PHE and its concepts advocated by SUS are perceived by PHC professionals involved in the treatment of TB, and what are the possible barriers to their broad understanding and use in the process of evaluating care within the municipality.

METHODOLOGICAL PROCEDURES

This was a survey-derived descriptive epidemiological study with a quantitative approach¹⁰. PHC in the context studied is offered to the community in two main modalities: Open Unit (OU) with or without the Community Health Agents Program, and Family Health Strategy (FHS) units.

This study took place in the city of Foz do Iguaçu, in the state of Paraná. The city has 28 health units, 13 of which are OUs and 15 were FHS centers where TB diagnosis and treatment actions take place. Of these, 25 units were included in the study, the others were excluded because their professional components had

already answered the instrument in other units that they worked at. The research participants were health professionals with higher education, belonging to the staff, who attended patients with TB, in PHC, in the year 2016.

Exclusion criteria included professionals who were on vacation, on medical or special leave, appointed in a management position or those who were not involved in TB care. The sample's n was estimated considering an error (ϵ) of 5%, a confidence interval (Z) of 95%, a sample proportion (P) of 10% in the population of 170 professionals (N) working in PHC, through the formula:

$$n = \frac{z_{\alpha}^2 * N * P * (1 - P)}{\epsilon^2 * (N - 1) + z_{\alpha}^2 * (1 - P)}$$

With these values, 77 public servants would be needed; this number was distributed according to the proportions of professionals from each Health District (HD) in Foz do Iguaçu (Table 1).

To guide this study, an instrument using the Likert Scale was used, this greatly allowed the interviewees to indicate their degree of agreement or disagreement, in view of the statements that were being measured. These statements allow for the expression of clear answers, without ambiguities to help participants understand the theme. Through the Likert scale, and given a set of instructions, the observed subjects were asked to conduct themselves among several options, obtaining the one that most closely matches their attitude or opinion, but in an objective way¹¹. The purpose of the instrument's self-application was:

- to observe the profile of the study population;
- to offer preparation and training with TB;
- to understand/know about PHE as a TB learning strategy and;
- observe the structure's existence, availability/adhesion to PHE activities in distance learning.

For the construction of the study, procedural steps were followed for the proper qualification

of the study's problem, the questionnaire and the support of a discussion of the evidence found. Among these steps was the elaboration of an integrative literature review (ILR) to obtain a synthesis of the state of knowledge related to the theme, with the following constructive question: "How is PHE offered to health professionals in several countries and, what are the teaching and learning methodologies that are powerful, innovative and most frequently used?"

For the elaboration of the ILR, the Web of Science platform was decided upon as it is a large web space responsible for the dissemination of numerous publications in the area of human sciences. This platform provides access to full content via an agreement with the Coordination for the Improvement of Higher Education Personnel¹². The criteria for searching PHE publications for ILR were: articles published in Portuguese, Spanish and English within the platform, from 2005 to 2016, that addressed the theme and were available electronically, in full.

The ILR guided the construction of the statements used in the questionnaire and only after this step did the process begin of constructing the instrument and the semantic structure involved in the linguistic base of the sentences in order that they would clearly meet the study's objectives, while avoiding duplicity and duality in the answers. Thus, the declarations of the study were structured and grouped in the form of statements, allowing the respondent to agree or disagree according to the Likert scale, with the four levels of disagreement/agreement proposed for each question: whether they strongly agreed (FA), whether they were inclined to agree (IA), whether they were inclined to disagree (ID) or if they strongly disagreed (FD).

Subsequently, the instrument was submitted to evaluation by three specialists possessing doctorates with experience in the health field. The first, with experience in validating research instruments and TB research, the second, with experience in technological tools and in TB, and the third, with experience in TB. They were asked to evaluate the organization, objectivity, clarity

of language, practical relevance and theoretical dimensions. The evaluation of the content's validity by specialists improved the instrument before its test¹³. From the experts' evaluation, the questions were reviewed, and the questionnaire was submitted to a pilot test, and the observations noted were considered for the research. The purpose of this phase was to verify the feasibility of the proposed method, as well as its adequacy for the study's objectives. This phase was carried out in July 2016.

The interviews with health professionals took place in August and September 2016 with the 84 professionals who agreed to participate in the study; with 7 additional individuals than indicated for the sample's n. However, it was decided to include them due to the relevance of the study. This activity took place in the health units of the five HDs in the municipality, seeking to ensure that professionals from all districts could be involved.

The data were entered and stored in the Excel® 2010 software. For the analysis, descriptive statistics were applied, considering a 95% confidence interval for the 18 statements related to the proposed objectives, seeking to demonstrate the existence of an association between the data for each of the stated goals. In cases where the theoretical count was less than 5 respondents, the Chi-square test was performed and when the independence of these data could not be attested, the Monte Carlo method was applied, which is validated by extrapolating the quantified information. The XLSTAT® software used in Windows XP® environment was used to legitimize the proposed structural model. In all stages, the same parameters were adopted for validation, and the variables used as a model for measuring the data were obtained by the statements of the self-applied quantitative instrument. The research was approved by the Research Ethics Committee of the Western State University of Paraná, according to protocol No. 1.556.059 of June 23, 2016, and in compliance with Resolution 466/12 of the National Health Council¹⁴.

Table 1- Sample calculation of public servants working in Primary Health Care in the city of Foz do Iguaçu, in 2016.

| Health District (HD) | *Regional N | **Regional P | Sample N (ε=5%) |
|----------------------|-------------|--------------|-----------------|
| North | 40 | 24% | 18 |
| Northeast | 27 | 16% | 12 |
| West | 27 | 16% | 12 |
| East | 52 | 31% | 24 |
| South | 24 | 14% | 11 |
| Total N= | 170 | Total N= | 77 |

Note: n is the sample per HD in the municipality of Foz do Iguaçu and according to error (ε), *Regional N= Number of public servants working in PHC per HD in Foz do Iguaçu, **Regional P= Proportion of public servants per HD, Total N= Total number of public servants, Total n= Number of public servants needing to be sampled per HD.

RESULTS

Of the 84 health professionals who agreed to participate in the study, 32% are nurses, 25% doctors, 22.7% dentists, 6% social workers, 3.7% pharmacists, 3.6% nutritionists and 7% corresponded to other upper level health professionals involved in the care of TB patients (speech therapists and physiotherapists). The predominant age group was composed of professionals that were 37 years old or more. Of the total, 69% are female.

Regarding the provision of TB preparation and training for all PHC professionals by the city's management, it was observed that there was a statistically significant difference (p=0.017) between the responses of professionals in statements 1 and 5. In the first, the highest frequency of responses occurred in the variable "strongly agree" (41%) among nurses, "inclined to disagree" (100%) prevailed among nutritionists and "strongly disagree" (50%) had a

greater frequency among other evaluated professionals. In statement 5, the highest frequency of responses occurred in the variable “strongly agree” (48%) among

nurses, “inclined to disagree” (67%) among nutritionists and the variable “strongly disagree” (60%) had a greater frequency among social workers (Table 2).

Table 2- Descriptive analysis regarding the relationship of responses between health professionals and their areas of activity, regarding the provision of TB preparation and training in Primary Health Care by the city’s management. Foz do Iguaçu, 2016 (n=84)

| PROFESSIONALS | | NUR | | MD | | DD | | SW | | PM | | NUT | | Others | | p-value |
|---|----|-----|----|----|----|----|----|----|----|----|----|-----|-----|--------|----|---------|
| Statements | V | N | % | N | % | N | % | N | % | N | % | N | % | N | % | |
| 1: The teaching and learning activities offered by management aiming at improving the professionals involved in TB control (diagnosis, treatment, discharge, signs and symptoms), are sufficient to promote the quality of care provided. | SA | 11 | 41 | 3 | 14 | 3 | 16 | 0 | 0 | 1 | 33 | 0 | 0 | 0 | 0 | 0.017 |
| | SD | 2 | 7 | 4 | 19 | 4 | 21 | 2 | 40 | 1 | 33 | 0 | 0 | 3 | 50 | |
| | IA | 10 | 37 | 7 | 33 | 3 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | ID | 4 | 15 | 7 | 33 | 9 | 47 | 3 | 60 | 1 | 33 | 3 | 100 | 3 | 50 | |
| 2: Management offers sufficient training linked to the daily needs of the health professional. | SA | 5 | 19 | 4 | 19 | 1 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.169 |
| | SD | 4 | 15 | 4 | 19 | 6 | 32 | 3 | 60 | 1 | 33 | 0 | 0 | 4 | 67 | |
| | IA | 10 | 37 | 5 | 24 | 3 | 16 | 0 | 0 | 1 | 33 | 0 | 0 | 0 | 0 | |
| | ID | 8 | 30 | 8 | 38 | 9 | 47 | 2 | 40 | 1 | 33 | 3 | 100 | 2 | 33 | |
| 3: Training enhances the improvement of professional practice in assisting people with TB. (This analysis could be valuable in the description of the results.) | SA | 18 | 67 | 10 | 48 | 9 | 47 | 2 | 40 | 0 | 0 | 3 | 100 | 4 | 67 | 0.051 |
| | SD | 0 | 0 | 0 | 0 | 3 | 16 | 2 | 40 | 1 | 33 | 0 | 0 | 1 | 17 | |
| | IA | 8 | 30 | 9 | 43 | 3 | 16 | 1 | 20 | 2 | 67 | 0 | 0 | 1 | 17 | |
| | ID | 1 | 4 | 2 | 10 | 4 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4: The training offered has a satisfactory workload to promote the qualification of professional practice. | SA | 9 | 33 | 3 | 14 | 1 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.225 |
| | SD | 1 | 4 | 3 | 14 | 6 | 32 | 2 | 40 | 1 | 33 | 0 | 0 | 2 | 33 | |
| | IA | 6 | 22 | 5 | 24 | 6 | 3 | 1 | 2 | 1 | 3 | 1 | 3 | 0 | 0 | |
| | ID | 11 | 41 | 10 | 48 | 6 | 3 | 2 | 4 | 1 | 3 | 2 | 6 | 4 | 4 | |
| 5: The provision of quality care to patients with TB is directly related to the provision of regular training for SUS professionals working in PHC. (This analysis could be valuable in the description of the results.) | SA | 13 | 48 | 7 | 33 | 5 | 26 | 0 | 0 | 1 | 33 | 1 | 33 | 3 | 50 | 0.017 |
| | SD | 0 | 0 | 1 | 5 | 2 | 11 | 3 | 60 | 1 | 33 | 0 | 0 | 0 | 0 | |
| | IA | 9 | 33 | 7 | 33 | 8 | 42 | 2 | 40 | 1 | 33 | 0 | 0 | 2 | 33 | |
| | ID | 5 | 19 | 6 | 29 | 4 | 21 | 0 | 0 | 0 | 0 | 2 | 67 | 1 | 17 | |
| 6: The training offered by management for professionals is directly related to health promotion actions in SUS. (This analysis could be valuable in the description of the results.) | SA | 9 | 33 | 5 | 24 | 2 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.068 |
| | SD | 0 | 0 | 1 | 5 | 2 | 11 | 2 | 40 | 1 | 33 | 1 | 33 | 1 | 17 | |
| | IA | 14 | 52 | 6 | 29 | 6 | 32 | 2 | 40 | 1 | 33 | 2 | 67 | 3 | 50 | |
| | ID | 4 | 15 | 9 | 43 | 9 | 47 | 1 | 20 | 1 | 33 | 0 | 0 | 2 | 33 | |

V: Variables, N: No. of Participants, NUR: Nurses, MD: Doctors, DD: Dentists, SW: Social Workers, PM: Pharmacists, NUT: Nutritionists, SA: Strongly Agree, SD: Strongly Disagree, IA: Inclined to Agree, ID: Inclined to Disagree, PS: Probability of Significance.

Nurses and doctors showed lower percentages in response to the answer concerning their inclination to disagree with the statement “PHE is widely known by professionals working in PHC”. It is noteworthy that, with the exception of pharmacists, the other professionals responded

more often “inclined to disagree”, when asked if “management understands that PHE is linked to the professional’s performance needs in order to promote comprehensive care”. However, there was no statistically significant difference for the variables analyzed in Table 3.

Table 3- Analysis concerning the relationship of responses regarding the understanding and/or knowledge of professionals in relation to Permanent Health Education as a teaching-learning strategy to qualify assistance in tuberculosis. Foz do Iguaçu, 2016 (n=84).

| PROFESSIONALS | | NUR | | MD | | DD | | SW | | PM | | NUT | | Others | | PS |
|---|----|-----|----|----|----|----|----|----|----|----|-----|-----|-----|--------|----|---------|
| Statements | V | N | % | N | % | N | % | N | % | N | % | N | % | N | % | p-value |
| 7: PHE is widely known by the professional working in PHC | SA | 5 | 19 | 5 | 24 | 3 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.253 |
| | SD | 1 | 4 | 5 | 24 | 5 | 26 | 2 | 40 | 1 | 33 | 0 | 0 | 1 | 17 | |
| | IA | 12 | 44 | 5 | 24 | 2 | 11 | 0 | 0 | 0 | 0 | 1 | 33 | 3 | 50 | |
| | ID | 9 | 33 | 6 | 29 | 9 | 47 | 3 | 60 | 2 | 67 | 2 | 67 | 2 | 33 | |
| 8: Management understands that PHE is linked to the professional's performance needs in order to promote comprehensive care | SA | 4 | 15 | 5 | 24 | 3 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.848 |
| | SD | 3 | 11 | 4 | 19 | 4 | 21 | 1 | 20 | 1 | 33 | 0 | 0 | 1 | 17 | |
| | IA | 8 | 30 | 6 | 29 | 3 | 16 | 0 | 0 | 1 | 33 | 1 | 33 | 3 | 50 | |
| | ID | 12 | 44 | 6 | 29 | 9 | 47 | 4 | 80 | 1 | 33 | 2 | 67 | 2 | 33 | |
| 9: The PHC professional clearly understands the role of PHE for strengthening the SUS | SA | 15 | 56 | 5 | 24 | 4 | 21 | 0 | 0 | 0 | 0 | 1 | 33 | 2 | 33 | 0.209 |
| | SD | 1 | 4 | 2 | 10 | 1 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | IA | 7 | 26 | 10 | 48 | 7 | 37 | 3 | 60 | 0 | 0 | 0 | 0 | 2 | 33 | |
| | ID | 4 | 15 | 4 | 19 | 7 | 37 | 2 | 40 | 2 | 100 | 2 | 67 | 2 | 33 | |
| 10: Stimulation of PE is essential for the continuous organization of the care-giving procedures for patients with TB | SA | 24 | 89 | 10 | 48 | 11 | 58 | 4 | 80 | 1 | 33 | 3 | 100 | 5 | 83 | 0.074 |
| | SD | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | IA | 3 | 11 | 8 | 38 | 6 | 32 | 0 | 0 | 2 | 67 | 0 | 0 | 1 | 17 | |
| | ID | 0 | 0 | 3 | 14 | 2 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11: PE is valued by the professional working in SUS, as it contributes to health actions for the care of TB patients | SA | 14 | 52 | 6 | 29 | 4 | 21 | 1 | 20 | 1 | 33 | 1 | 33 | 5 | 83 | 0.079 |
| | SD | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | IA | 10 | 37 | 7 | 33 | 9 | 47 | 3 | 60 | 2 | 67 | 1 | 33 | 0 | 0 | |
| | ID | 3 | 11 | 8 | 38 | 6 | 32 | 0 | 0 | 0 | 0 | 1 | 33 | 1 | 17 | |
| 12: Distance Learning (DL) modalities are known to the PHC professional | SA | 2 | 7 | 6 | 29 | 2 | 11 | 0 | 0 | 1 | 33 | 1 | 33 | 0 | 0 | 0.622 |
| | SD | 3 | 11 | 3 | 14 | 2 | 11 | 1 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | IA | 12 | 44 | 7 | 33 | 6 | 32 | 2 | 40 | 0 | 0 | 0 | 0 | 2 | 33 | |
| | ID | 10 | 37 | 5 | 24 | 9 | 47 | 2 | 40 | 2 | 67 | 2 | 67 | 4 | 67 | |
| 13: Distance Learning allows teams working in care to make the PHC work process more efficient | SA | 12 | 44 | 9 | 43 | 9 | 47 | 1 | 20 | 2 | 67 | 2 | 67 | 3 | 50 | 0.799 |
| | SD | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | IA | 12 | 44 | 9 | 43 | 5 | 26 | 3 | 60 | 1 | 33 | 0 | 0 | 3 | 50 | |
| | ID | 3 | 11 | 3 | 14 | 5 | 26 | 1 | 20 | 0 | 0 | 1 | 33 | 0 | 0 | |

V: Variables; N: No. of Participants; NUR: Nurses; MD: Doctors; DD: Dentists; SW: Social Workers; PM: Pharmacists; NUT: Nutritionists; SA: Strongly Agree; SD: Strongly Disagree; IA: Inclined to Agree; ID: Inclined to Disagree; PS: Probability of Significance. Probabilidade de Significância.

Also, the existence of structure, availability and/or adherence of professionals to participate in PHE activities in a distance learning environment was verified and the answers were statistically different, except for one statement (Table 4).

When asked about “The use of information technologies (collaboration platforms via the Internet), such as: Virtual learning environments

(VLE), for distance learning, are familiar to the professional working in PHC”, nurses showed a greater frequency in answering “inclined to agree” (48%); physicians tended to answer “completely agree” (43%), while dentists (58%), pharmacists and nutritionists (67%) demonstrated a greater frequency of responding with the variable “inclined to disagree” ($p>0.038$).

Tabela 4- Descriptive analysis concerning the relationship of responses between health professionals and their areas of activity, regarding the existence of structure, availability and/or adhesion of professionals to participate in Permanent Health Education activities in a distance learning environment. Foz do Iguacu, 2016 (n=84)

| PROFESSIONALS | | NUR | | MD | | DD | | SW | | PM | | NUT | | Others | | PS |
|---|----|-----|----|----|----|----|----|----|----|----|----|-----|-----|--------|----|---------|
| Statements | V | N | % | N | % | N | % | N | % | N | % | N | % | N | % | p-value |
| 14: The PHC unit in which it operates has computers to perform distance learning activities in the workplace. | SA | 13 | 48 | 8 | 38 | 6 | 32 | 0 | 0 | 0 | 0 | 1 | 33 | 2 | 33 | 0.166 |
| | SD | 3 | 11 | 1 | 5 | 5 | 26 | 3 | 60 | 2 | 67 | 2 | 67 | 1 | 17 | |
| | IA | 4 | 15 | 7 | 33 | 5 | 26 | 1 | 20 | 1 | 33 | 0 | 0 | 2 | 33 | |
| | ID | 7 | 26 | 5 | 24 | 3 | 16 | 1 | 20 | 0 | 0 | 0 | 0 | 1 | 17 | |
| 15: Internet access is available in my workplace, home or on mobile devices (smart phones). | SA | 11 | 41 | 11 | 52 | 12 | 63 | 1 | 20 | 0 | 0 | 1 | 33 | 3 | 50 | 0.076 |
| | SD | 5 | 19 | 1 | 5 | 3 | 16 | 0 | 0 | 2 | 67 | 0 | 0 | 1 | 17 | |
| | IA | 5 | 19 | 3 | 14 | 2 | 11 | 3 | 60 | 1 | 33 | 0 | 0 | 2 | 33 | |
| | ID | 6 | 22 | 6 | 29 | 2 | 11 | 1 | 20 | 0 | 0 | 2 | 67 | 0 | 0 | |
| 16: The use of information technologies (collaboration platforms via the Internet), such as: Virtual learning environments (VLE), for distance learning, are familiar to the professional working in PHC. | SA | 3 | 11 | 9 | 43 | 2 | 11 | 0 | 0 | 1 | 33 | 1 | 33 | 2 | 33 | 0.038 |
| | SD | 4 | 15 | 2 | 10 | 3 | 16 | 2 | 40 | 0 | 0 | 0 | 0 | 2 | 33 | |
| | IA | 13 | 48 | 2 | 10 | 3 | 16 | 2 | 40 | 0 | 0 | 0 | 0 | 1 | 17 | |
| | ID | 7 | 26 | 8 | 38 | 11 | 58 | 1 | 20 | 2 | 67 | 2 | 67 | 1 | 17 | |
| 17: The internet is easy to master for the PHC professional. | SA | 4 | 15 | 8 | 38 | 6 | 32 | 0 | 0 | 1 | 33 | 1 | 33 | 2 | 33 | 0.528 |
| | SD | 0 | 0 | 2 | 10 | 3 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | IA | 15 | 56 | 4 | 19 | 6 | 32 | 2 | 40 | 1 | 33 | 1 | 33 | 2 | 33 | |
| | ID | 8 | 30 | 7 | 33 | 4 | 21 | 3 | 60 | 1 | 33 | 1 | 33 | 2 | 33 | |
| 18: PHE in a distance learning mode, facilitates the professional's adherence to courses and training, but they need a time to be present. | SA | 11 | 41 | 7 | 33 | 10 | 53 | 1 | 20 | 2 | 67 | 3 | 100 | 5 | 83 | 0.308 |
| | SD | 0 | 0 | 0 | 0 | 2 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | IA | 13 | 48 | 9 | 43 | 6 | 32 | 3 | 60 | 1 | 33 | 0 | 0 | 1 | 17 | |
| | ID | 3 | 11 | 5 | 24 | 1 | 5 | 1 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | |

V: Variables, N: No. of Participants, NUR: Nurses, MD: Doctors, DD: Dentists, SW: Social Workers, PM: Pharmacists, NUT: Nutritionists, SA: Strongly Agree, SD: Strongly Disagree, IA: Inclined to Agree, ID: Inclined to Disagree, PS: Probability of Significance.

DISCUSSION

The data that guided the construction of perception indicators regarding PHE in TB care for health professionals allow us to observe that the answers show different and indefinite opinions on the theme. This observation is discussed by Gomes and collaborators¹⁵ when reporting that the PHE articulated in problematizing practices for real learning should strengthen the production of responses in environments rich with exchanges of experiences that generate new questions about being and acting in the world. It is evident that the perception of training provided for PHE, whatever it may be, was not adequately and assertively exposed to all PHC actors in this study.

The development of human resources should contribute in a fundamental way to the rise of quality goals in health care, through tools that methodologically allow the development of processes with innovative potential in the field of health education and PHE^{16,17}. This fact was negatively exposed when the interviewees were unable to give an objective opinion on what is offered as a resource for PHE and what the concept is. Thus, the data, despite not showing statistical significance in the statements related to the provision of PHE, reveal the management's difficulty, as a promoter of actions for the qualification of focused TB care, in promoting critical reflection on the work process of PHC teams. This isolated phenomenon is already indicative of the impoverishment of PHE.

However, PHE as a guiding tool for qualified TB care needs to be inserted in a context of the Health Care Network (HCN). Moreover, when observing the data obtained from the statement that links the stimulus to learning with good clinical practice, again the interviewed professionals were not clear about PHE goals. This fact contradicts Mendes'¹⁸ statement when he says that "health professionals

must be permanently educated to develop the criticality of their actions". Thus, the concern with the lack of assertiveness of PHE actions for the municipality is raised, mainly to what is linked to TB.

The full understanding of PHE as a tool that promotes the improvement of care for TB patients should be obvious to the professionals who were subjected to the study who should have produced a great amount of agreement to the statements. However, when the management processes do not foster real meaning for the actors involved in the daily practice, the focus of meaningful learning becomes lost. This warning was voice by Mendes¹⁸ when he explains that approaches in education for health professionals must be based on the meaningful work activities, in the case of this study, actions to control TB.

When looking at the categories of professionals working in PHC, the trajectory of nursing is aligned with the understanding of PHE practices in SUS, contributing to a better understanding of the organization process of the HCN. This condition was clear to Backes and collaborators¹⁹ when they observed that nursing takes care of the human being in the most diverse dimensions of care needed, and, in essence, transits in all phases of this care, giving them a view of the general context. This demonstrates the activity of the nursing professional in the SUS and in the HCN; however, this study did not indicate precisely how deep the role of nursing is, only its breadth of action.

It is necessary, therefore, that the management promotes the development of skills and capacities for the improvement of the processes, because good techniques only do not enable the individual to act in health in the SUS, but rather the dynamic of constantly renewing the ways of the HCN is the real challenge¹⁸.

Thus, the proposal of this study was to seek the professionals' understanding for the statements that dealt with the modalities of PHE, to find in the raw data answers about what happened in terms of strategies linked to PHE. However, with the panorama identified, it becomes necessary to seek more judicious answers about methodological approaches to health education, as well as their andragogical development and results²⁰. In this sense, Sá and collaborators²¹ affirm that the reduced presence of or nonexistence of management processes focused on TB, in the spaces where FHS or OU exercise, even if existing in the managers' discourse, is not clearly focused on PHE or the working procedures and governance, which hinder the effective advancement in the fight against TB.

Not inserting PHE and its modalities in the process of governing and of professional performance for good care practice in the municipality at the time of this study, was demonstrated by the results revealing that the management is unable to interact with the daily needs of practicing professionals; who considered that management does not even understand the meaning of PHE. Another fact is the lack of training and preparation for practice, which reveals the gap between the need for PHE and its effective execution, in addition to adapting these needs to the local environment, and the PHC guidelines for TB control²².

According to the understanding of Batista and Gonçalves²¹, it is clear and indispensable that the various public servants (managers, professionals and educational institutions) articulate objectives for the training of health professionals for the SUS with the intention of changing the current condition of the services, especially referring to quality assistance provided to the user. This would allow the professional to reorganize their activities in favor of the community and critically reflect upon this practice. Therefore, although there are always irreducible or immutable personal opinions, there will be a more homogeneous group of work with more precise actions in public health, with

concerns directed to the real desires and needs of the individual and his/her community.

This condition of not appreciating PHE emerges from a managerial model looking at individual processes that do not perceive the collective, this fact was expressed by Mendes¹⁸ when he was observing PHE, that a change in the structure of the organization is necessary. The organizations must imperatively place PHE as a primary investment by providing resources and educational and methodological means to achieve concrete goals, appreciating the educational moment as part of the work. This fact was present in all the statements of this study. It was expected that the direct questions could be clearly answered, which did not happen due to the simple fact that the professionals did not have contact with this regular practice and, therefore, did not understand its purpose.

Thus, the ways of the management as an entity should reduce local political-administrative barriers when seeking to follow what is recommended by SUS by promoting the PHE incentive that can be obtained with the insertion academy through the Public Action Organizational Contract (COAPS) stimulus policies already observed in the National Policy for Permanent Health Education (PNEPS). Such an attitude has the great potential to increase the rescue of actions that were not offered in PHE, and to adapt local management to what is determined as a qualifying action in education. This condition was described by Frenk and collaborators²⁴ when discussing the qualification of assistance as a tool for improving care. They analyzed three generations of reform in the training systems of health professionals. The current trend is education integrated into health care systems, "health-education systems". This observation fits as a parameter on the needs of what should be reorganized in the local PHE systems, as the lack of continuing education systems produces barriers to be overcome by management.

The PHE strengthens the SUS and, in this context, nursing professionals constantly revisit their practices while directing the criticism of

the actions, making them perhaps the most involved professional class present in the SUS, comprehending it in a broad way²⁵.

Nevertheless, it is warned that despite all the directions that concern those who desire work processes to be constructed really in line with SUS, they end up understanding that it is possible to distort these directions. This fact was already pointed out by Mancina²⁶ when emphasizing that PNEPS can be devoid of its origin with partisan political actions and segmented by actions of dominant sectors that prevent the process of reflective freedom from developing; which is necessary for the PNEPS to acquire its main characteristic, enabling the professional to develop conditions to face neglected diseases in favor of the collective.

It has already been said that the great challenge for the HCN is not the attention time that the professional develops in the network, but the tools that allow the proper encouragement of their actions, especially in PHC and in effective actions for neglected diseases. Observations that leads to questions about the training of professionals and their academic trajectory, as well as how the innovative curriculum is focused on SUS, tend to lead to further actions with different characteristics of professionals in the healthcare network for a long time. This note finds in Mendes¹⁶ discourse a strong ally when the author discusses PHE.

Health care activities in SUS are offered in a usual way in line with traditional teaching characteristics, with themes often focused on subjects that do not promote reflection or improvement of the professional's actual activity,

CONCLUSION

This study sought to analyze how PHE and its theories advocated by SUS are perceived by PHC professionals involved in the treatment of TB. However, the psychometrically qualified data showed that PHE and its theory of continuing

which are usually short term in the form of workshops which do not give a clear and objective meaning for the promotion of good care¹⁸.

It is emphatically insisted that the subjects observed in the study do not have the power to distinguish the characteristics of distance learning and PHE and their theoretical dimensions, as they did not have a homogeneous opinion on the topic; even of what is necessary for its effective promotion. This finding is confirmed by Fernandes²⁷ when stating that distance learning has a real contribution yet to be manifested; however, the face-to-face moment is the first condition to establish a connection, establish the success of the objectives and avoid the feeling of isolation in distance learning.

Nevertheless, there is a counterpoint to justify the difficulty of implementing PHE processes. Referring to a statement by Pinheiro and Silva Junior²⁸, the practices that evaluate programs and projects are excessively standardized. This may result in damage to other local characteristics that must be taken into account for the effective movements of change toward building a SUS strengthened in all its axes.

This study sought to cover the perception of what PHE is, by exposing the limitations of a management system with severe operational restrictions, with truncated infrastructure and low operability, producing a bias detectable by the instrument which reflects upon the result of the collection. Objectively, it can be stated that without clear managerial intentions, it is not possible to achieve action goals for the population or for health-promoting agents.

education for the service are not properly inserted; to the point that professionals do not understand its importance in improving the work process.

PHE is one of the propositional axes that allow the professional to develop an expanded

listening capacity. This concept makes PHC the work process something absolutely dynamic and the need for technical and pedagogical support must permeate actions when dealing with neglected diseases, such as TB; a fact that is not presently occurring. Therefore, understanding that completing the actions requires the constant presence of PHE as a professional training principle, will favor a significant reduction in the use of the term “negligence”.

The theme of PHE, its relevance and transformative application for PHC and neglected diseases is inexhaustible. The innumerable

derivations of this theme need a real and insistent deepening of the perfecting processes of the SUS, its participants and all its framework of directive proposals emphasized and regulated by the Ministry of Health.

In this sense, the present study was limited to observing only professionals with higher education and, therefore, cross-sectional studies that deepen the debate on PHE within PHC among all the professional categories involved, investigating the educational and training processes at the local level, are necessary to amplify the understanding of this theme.

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