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Domestic Cooking Skills in Primary Health Care in the municipality of São Paulo: Challenges and needs from the perspective of health care professionals

Habilidades Culinárias Domésticas na Atenção Primária à Saúde do município de São Paulo: desafios e necessidades na ótica de profissionais de saúde

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ABSTRACT

Objective
The objective of this study was to understand the main needs, difficulties and opportunities for implementation of Domestic Cooking Skills in Primary Health Care, in accordance with the Dietary Guidelines for the Brazilian Population, from the perspective of healthcare personnel.

Methods
This qualitative research was conducted between June 2020 and November 2021 involving two focus groups. The first group consisted of female Primary Health Care professionals with a complete higher education (n=6) while the second group comprised individuals with high school and technical education (n=5) working in the Municipality of São Paulo. The mean age was 42 years old (SD=8), and with 11 years old (SD=10) of experience in Primary Health Care. We developed a semi-structured script of triggering questions and conducted discussions using the funnel technique. Interviews were recorded and transcribed. Thematic Analysis was employed for data analysis and our findings were compiled in a conceptual model.

Results
This study revealed that the difficulties in implementing Domestic Cooking Skills in Primary Health Care are related to the Culinary Transition, combined with reductionist health practices, and identified the need for professional qualification. An opportunity identified is the centralization of Domestic Cooking Skills activities in Community Health Workers and prioritization of the agenda of Domestic Cooking Skills actions, in a scenario where professionals report that, for managers, the quantity of care provided seems to be more important than quality. These aspects provided the basis for building the conceptual model.

Conclusion
There is a need for raising awareness and providing professional training regarding Domestic Cooking Skills, especially among Community Health Workers. In addition, it is important that managers prioritize this agenda over targets and figures that do not reflect the quality and comprehensiveness of Primary Health Care. A conceptual model is presented, encompassing all professional categories, with a focus on Community Health Workers as key professionals for implementing Domestic Cooking Skills actions in Primary Health Care.

Keywords: Brazil. Cooking. Focus groups. Health personnel. Primary health care. Qualitative research.

RESUMO

Objetivo
Buscou-se compreender as principais necessidades, dificuldades e oportunidades para implementação das Habilidades Culinárias Domésticas na Atenção Primária à Saúde, de acordo com o Guia Alimentar para a População Brasileira, na perspectiva de profissionais de saúde.

Métodos
Trata-se de pesquisa qualitativa realizada entre junho de 2020 e novembro de 2021 por meio de dois grupos focais com profissionais do sexo feminino da Atenção Primária à Saúde com ensino superior completo (n=6) e com ensino médio e técnico (n=5) atuantes no Município de São Paulo. A média de idade foi de 42 (DP=8) anos, com 11 anos (DP=10) de atuação na Atenção Primária à Saúde. Desenvolvemos um roteiro semiestruturado de perguntas disparadoras e conduzimos as discussões por meio da técnica de funil. Gravamos e transcrevemos as entrevistas. Usamos a Análise Temática para análise de dados e compilamos nossas descobertas em um modelo conceitual.

Resultados
Este estudo revelou que as dificuldades para a implantação das Habilidades Culinárias Domésticas na Atenção Primária à Saúde estão relacionadas à Transição Culinária, aliada a práticas reducionistas em saúde e identificou-se necessidade de qualificação profissional. Como oportunidade tem-se a centralização de atividades de Habilidades Culinárias Domésticas nos Agentes Comunitários de Saúde e priorização da agenda de ações de Habilidades Culinárias Domésticas em um cenário em que profissionais reportam que, para os gestores, a quantidade de atendimentos realizados parece ser mais importante do que a qualidade. Esses aspectos deram bases para a construção do modelo conceitual.

Conclusão
Conclui-se que há necessidade de sensibilização e qualificação profissional sobre a temática das Habilidades Culinárias Domésticas, principalmente dos Agentes Comunitários de Saúde. Além disso, é importante que os gestores priorizem essa agenda em detrimento de metas e números que não refletem a qualidade e a integralidade da Atenção Primária à Saúde. Apresenta-se modelo conceitual que envolve todas as categorias profissionais, com foco no Agente Comunitário de Saúde compreendido enquanto profissional-chave para a implementação das ações de Habilidades Culinárias Domésticas na Atenção Primária à Saúde.

Palavras-chave: *Brasil. Culinária. Grupos focais. Profissionais de saúde. Atenção primária à Saúde. Pesquisa qualitativa.*

INTRODUCTION

Domestic Cooking Skills (DCS) are a set of practices and skills, still under discussion in the scientific literature, utilized for cooking at home. These skills, along with other determinants such as culture, gender, time and personal relationships between individuals, are associated with the preparation of home-cooked meals [1].

The definition proposed by Teixeira et al. [2], and adopted as a construct definition in this research, encompasses Domestic Cooking Skills as a broad range of aspects. These include selecting and purchasing ingredients, planning, combining, preparing food from scratch (using fresh, minimally processed and culinary ingredients) and organizing stages related to home cooking. This definition supports and complements the concept of culinary skills pointed out in the Dietary Guidelines for

the Brazilian Population [3], which is an important document providing accessible information for health personnel and users of the *Sistema Único de Saúde* (SUS, Brazilian Unified Health System). This conceptualization differs from propositions made by other actors in that it emphasizes the need for meal providers in domestic environments to engage in activities that are parallel to and disassociated from food preparation [2]. Furthermore, if the meal provider lacks the ability to plan and organize a meal, he or she may opt to purchase convenience products that requires a minimal effort to select and consume, thus saving time and energy [4]. Therefore, the concept of a category of cooking skills at the household level may prove more useful for understanding the practice of preparing home-cooked meals, as they are broader range of skills used solely in the cooking process.

Monteiro et al. [5] described a positive association between the consumption of Ultra-Processed Food (UPF) and the incidence of Chronic Non-Communicable Diseases (NCDs), which account for 74% of all deaths registered in Brazil [6]. In this regard, DCS are a component of a larger dietary framework, that could contribute to the prevention of NCDs. Improving the diet has the potential to prevent one in every five deaths globally [7]. In addition, the devaluation of home cooking practices is associated with the weakening of commensality [8], culinary transition [9] and promotes the medicalization of food [10]. It is worth mentioning that cooking and eating at home are closely intertwined with sustainability and environmental health [11], enabling the recognition of counter-hegemonic food systems and the rejection of the technological arsenal sold by advanced capitalism, which encompasses massive use of transgenic seeds and pesticides [12,13].

Therefore, it is salutary to systemize food and nutrition actions, such as Food and Nutrition Education initiatives and Permanent Health Education actions, to promote adequate and healthy eating habits in the Primary Health Care (PHC) scenario, as an effort to guarantee the human right to adequate food and food sovereignty for individuals and communities [10,14]. The discussion on the topic of Cooking Skills as a strategy for promoting health and reducing the incidence of NCDs has been addressed in the scientific literature around the world. For example, Tani et al.'s study [15] conducted in Japan explored the association between a low level of cooking skills and unhealthy dietary behaviors. In the Norwegian context, a study [16] investigated the impact of food skills on food security and dietary diversity among asylum seekers living in reception centers, demonstrating an association between these skills and the adequacy of dietary diversity. In Kansas, Alnaim et al. [17] demonstrated that combined interventions involving nutrition education and hands-on cooking skills represent feasible approaches for improving attitudes and behaviors related to vegetable consumption among families with low-income status. In the US context, an evaluative study [18] was developed in Detroit to assess the effectiveness of a community-tailored, food agency-based cooking program on cooking confidence. In India, Ali and colleagues [19] assessed the improvement of participants' knowledge and self-efficacy by conducting hands-on sessions on participatory cooking demonstrations focusing on nutrition concepts and basic cooking skills. Da Costa Pelonha et al. [20] showed that overweight and obesity were associated with lower cooking skills among the undergraduates studied. In addition to the aforementioned studies, Oliveira et al. [21] evaluated 73 dietary guidelines from different countries and observed that some guidelines recognize cooking skills for health promotion and the Promotion of Adequate and Healthy Eating, with the Brazilian guideline being the first to encourage culinary practices. However, the authors pointed out the lack of practical strategies for the development and implementation of these skills. In this sense, Teixeira proposed in 2022 the new concept of DCS aforementioned and created [14], in the Brazilian context, an instrument to measure the DCS of health professionals involved with the Promotion of Adequate and Healthy Eating in PHC, since these are key individuals with a relevant multiplier potential of these skills among users of the SUS. Added to this are the guidelines present in the Matrix

for Organization of Care in Food and Nutrition in Primary Health Care regarding the importance of encouraging and guiding the development of culinary skills of SUS users, highlighting the importance of actions focused on children and providers historically exempt from food care, such as men [22]. Given this context, the objective of this work is to understand the main needs, difficulties and opportunities for implementation Domestic Cooking Skills in Primary Health Care, in accordance with the Dietary Guidelines for the Brazilian Population, from the perspective of health personnel.

METHODS

Ethical Considerations

This study is part of a research titled "Instrument for measuring home cooking skills in primary health care" [14]. The main objective of the primary study was to develop and validate an instrument to measure DCS among health professionals working in PHC. This project was submitted for consideration by the Research Ethics Committee of the Municipal Health Department of São Paulo, based on the terms of the 466/12 Resolution (approval registration nº 4.289.743), and by the Research Ethics Committee of the Faculty of Public Health (approval registration nº 4.285.955).

Study Design and Sampling

The methodological framework of the abovementioned study was psychometrics. The main outcome of the research was the reporting of an instrument titled EHAPS (Primary Health Care Domestic Culinary Skills Scale). The EHAPS is a Likert-type scale, with response options regarding the frequency of actions centered on DCS attributes, with 29 items. The score on the scale is calculated by summing the scores corresponding to the options "never" = 0, "rarely" = 1, "sometimes" = 2, "frequently" = 3 and "always" = 4. Four score ranges are proposed with the following status: low DCS (0 to 29 points); moderately low DCS (30 to 58 points); moderately high DCS (59 to 87 points) and high DCS (88 to 116). The interpretation of the final score is accompanied by instructional messages aimed at encouraging the development of DCS. A total of 472 professionals working in PHC in the city of São Paulo participated in the process of construct validity and scale reliability. More details can be accessed in the conducted by Teixeira et al. [14].

We conducted qualitative research between June 2020 and November 2021. Data generation was carried out through focus groups with PHC professionals working in the Municipality of São Paulo, such as nurses, nursing technicians, nutritionists, physicians and community health workers. Considering that participants must be competent to position themselves on the topics of interest, it is convenient to consult key informants who comprehend the particularities of the phenomenon under study [23]. For this reason, the inclusion criteria were as follows: 1) professionals with EHAPS score 88 points (high level of DCS) from the original EHAPS database; 2) signing the Free and Clarified Consent Term.

We recruited 11 participants and organized them into two focus groups with homogeneous socioeconomic characteristics (education level and financial income), according to the participants' education level, aiming a comfortable atmosphere for exchanging experiences and sharing impressions about the central topic of discussion in both groups. Sex, gender and race or ethnicity data were collected only for the description of the sample and were not incorporated into the design. Scientific literature recommends group size of six to fifteen members per group [23,24].

Data Collection

Given the ongoing COVID-19 pandemic, it was necessary to adapt the focus groups to virtual environment. We created online meeting rooms [24], through Google Meet® and Zoom® platforms at a pre-established time, prioritizing participants' schedules, to ensure focus and less communication noise. Participants were submitted to a 2-hour encounter, which achieved saturation. We developed a semi-structured script of triggering questions (Chart 1).

Chart 1 – Semi-structured Script of Triggering Questions for the Conduction of Focus Groups. São Paulo, Brazil, 2021.

Questions order	Item
1	What is the relationship between Domestic Cooking Skills and health, in your opinion? Probes: What do you think are the purposes of promoting culinary practices in PHC?
2	The Dietary Guidelines for the Brazilian Population suggests that "*if you are a worker whose job involves health promotion, try to include cooking in the topics of your meetings or conversations with the population*". Do you believe you possess the skills and knowledge necessary to guide you through culinary practices? How could this improve? Probes: What are your impressions of your own role in guiding and conducting education actions to promote DCS in PHC?
3	Do you think it is necessary for you and your co-workers to receive qualification on this topic? Are there any specific topics that you have greater difficulty and consider important in training?
4	In your opinion, what would be the ideal formats for health professional qualification courses about domestic cooking skills that fits your reality? For example, videos, booklets, courses, workshops, podcasts. Probes: What types of pedagogical tools do you consider relevant for health professional qualification courses about domestic cooking skills?
5	Let's talk about practice: do you guide DCS actions? How? Which other co-workers guide the DCSs in your unit? What actions do they take?
6	In your perception, how important is for your co-workers to do education actions to promote DCS? Tell me a little more about it. How do you think this could improve? Probes: What do you believe is necessary for health professionals to start to value and carry out educational actions to promote DCS in Primary Health Care?
7	Since we are talking about professional resources, let's now talk about the other resources: physical, financial, time, management... In your Primary Health Care Center, what do you have and what is missing to implement DCS actions? Probes: Which resources do you consider essential for promoting education actions regarding DCS? Does your PHC Center have these features?
8	Taking into account the resources available to you presently, what additional measures do you think you could implement to advocate for DCS? Probes: What other guidelines or education actions to promote DCS could be carried out? Where could these actions take place?
9	Now let's talk about the people you attend... What are your perceptions about their DCS? What makes you think that?
10	And what do you do when you realize that their (people you attend) DCS are low? Probes: How do you handle situations that need culinary guidance?
11	Finally, based on your perception, we will list: The main existing actions regarding DCS; The main professionals involved in these actions; The main difficulties and/or obstacles to the implementation of counseling and education actions to promote DCS in your PHC Center; The main opportunities and/or possibilities for the implementation of these actions; The professional training formats that best adapt to your reality; Is there anything else you would like to add about what was discussed?

Two pre-tests were conducted with six participants from the same database with similar socioeconomic characteristics. The aim was to improve and adapt the questions. Participants were informed about the objectives of the study, basic rules and the role of the moderator, who had extensive experience in conducting focus groups. Discussions were conducted based on the adapted script, using the funnel technique (from broader to more specific topics) to encourage immediate participation from all participants. The interviews were recorded, and six reporters registered expressions and other non-verbal behaviors. The discussions were transcribed in fully. We reported the details on the conducting of the focus groups in the COREQ (COnsolidated criteria for REporting Qualitative research) checklist (25) (Chart 2).

Chart 2 – Consolidated Criteria for Reporting Qualitative Research (COREQ) Checklist (Tong et al., 2007) [25]. São Paulo, Brazil, 2021.

Item number / Item	Guide questions/description	Answers for the research study
	Domain 1: Research team and reflexivity	
Personal Characteristics		
1. Interviewer	Which author/s conducted the interview or focus group?	Collaborating researcher external to the research.
2. Credentials	What were the researcher's credentials? e.g., PhD, MD.	PhD, MSc, BSc.
3. Occupation	What was their occupation at the time of the study?	Academic teacher and researcher.
4. Gender	Was the researcher male or female?	Female.
5. Experience and training	What experience or training did the researcher have?	Previous experience in conducting qualitative research and mediating focus groups.
Relationship with participants		
6. Relationship established	Was a relationship established prior to study commencement?	Yes, the focus group participants participated in a previous survey for instrument validation, without direct contact with the researcher.
7. Participant knowledge of the interviewer	What did the participants know about the researcher? e.g., personal goals, reasons for doing the research.	The participants knew nothing about the researcher.
8. Interviewer characteristics	What characteristics were reported about the interviewer/facilitator? e.g., bias, assumptions, reasons and interests in the research topic.	No researcher characteristics were reported.
	Domain 2: study design	
Theoretical framework		
9. Methodological orientation and Theory	What methodological orientation was stated to underpin the study? e.g., grounded theory, discourse analysis, ethnography, phenomenology, content analysis.	Thematic Analysis, according to Braun and Clarke (2006).
Participant selection		
10. Sampling	How were participants selected? e.g., purposive, convenience, consecutive, snowball.	Convenience; participants with EHAPS scores ≥88 points were selected.
11. Method of approach	How were participants approached? e.g., face-to-face, telephone, mail, email	Email and contact via WhatsApp messages.
12. Sample size	How many participants were in the study?	11.
13. Non-participation	How many people refused to participate or dropped out? Reasons?	None.
Setting		
14. Setting of data collection	Where was the data collected? e.g., home, clinic, workplace	Participants were in physical environments of their choice and data were collected by video calls using Google Meet® and Zoom®.
15. Presence of non-participants	Was anyone else present besides the participants and researchers?	No.
16. Description of sample	What are the important characteristics of the sample? e.g., demographic data, date	Participants of all ages, regions of the city of São Paulo and of different professions.
Data collection		
17. Interview guide	Were questions, prompts, guides provided by the authors? Was it pilot tested?	The semi-structured script of questions was pre-tested at the beginning of the research and was not provided to the participants.
18. Repeat interviews	Were repeat interviews carried out? If yes, how many?	No, the answers were extracted until data saturation.
19. Audio/visual recording	Did the research use audio or visual recording to collect the data?	Digital video and audio recording.
20. Field notes	Were field notes made during and/or after the interview or focus group?	Notes were taken during and after the focus groups by reporting researchers.
21. Duration	What was the duration of the interviews or focus group?	The focus groups had an average duration of 2 hours.
22. Data saturation	Was data saturation discussed?	Yes.
23. Transcripts returned	Were transcripts returned to participants for comment and/or correction?	No.
	Domain 3: analysis and findings	
Data analysis		
24. Number of data coders	How many data coders coded the data?	Two.
25. Description of the coding tree	Did authors provide a description of the coding tree?	Yes.
26. Derivation of themes	Were themes identified in advance or derived from the data?	Themes were derived from the data.
27. Software	What software, if applicable, was used to manage the data?	Yes, Canva®.
28. Participant checking	Did participants provide feedback on the findings?	No.

Chart 2 – Consolidated Criteria for Reporting Qualitative Research (COREQ) Checklist (Tong et al., 2007) [25]. São Paulo, Brazil, 2021.

Item number / Item	Guide questions/description	Answers for the research study
Reporting		
29. Quotations presented	Were participant quotations presented to illustrate the themes / findings? Was each quotation identified? e.g., with participant number	Yes.
30. Data and findings consistent	Was there consistency between the data presented and the findings?	Yes.
31. Clarity of major themes	Were major themes clearly presented in the findings?	Yes.
32. Clarity of minor themes	Is there a description of diverse cases or discussion of minor themes?	Yes.

Data Analysis

This stage used the Thematic Analysis (TA) technique, proposed by Braun and Clarke [26] *apud* Souza [27], which is a specific type of content analysis. The TA is a qualitative analysis methodology employed to identify, analyze, interpret and report data patterns contained in the database. It involves six well-defined steps: (i) familiarization with data (deep immersion through repeated readings by JSPC, the author who had more contact with the study); (ii) generating initial codes; (iii) searching for themes (two authors discussed the initial codes and combined them into broader themes, pre-establishing possible relationships between the themes); (iv) reviewing the themes (themes were refined and illustrated with representative quotes); (v) defining and naming themes; (vi) producing the report [26,27]. All data was produced and analyzed in Portuguese, with quotes selected to illustrate themes in the results section, were later translated to English.

After conducting all the TA stages, we sought to identify the most relevant terms regarding the topic addressed in participants' speeches from both groups. Finally, we compiled and illustrated our findings in a conceptual model, using the graphic design tool Canva®.

RESULTS

Participants' Characteristics and Sampling

Participants referred themselves as cisgender women (n=11; 100%) from a list that included options such as cisgender woman, transgender woman, cisgender man, transgender man, rather not answer and other (specify). Race or ethnicity was self-reported by the participants form a list including white (n=7; 64%), yellow, brown (n=3; 27%), black (n=1; 9%), indigenous, rather not answer and other (specify). The mean age was 42 (SD=8) years old, with 11 years (SD=10) of experience in Primary Health Care. This demographics data was collected only for the description of the sample and was not part of the design.

The first group, composed of health professionals with complete higher education (n=6), had an adequate sample size. The second group, composed of health professionals with high school and technical education, had a lower number of participants (n=5). This can be attributed to the difficulty of recruitment in the context of the COVID-19 pandemic, given that participants with lower education level indicated to have low level of digital skills and reported difficulties connecting to the internet.

Thematic Analysis

Through Thematic Analysis, we developed four themes, presented in Chart 3.

The themes encompass the perspectives of both health professionals with complete higher education and those with secondary and technical education revealing visible differences according to the perspective from which they are observed. In summary, professionals with high school and/or technical education tend to focus their approach of DCS in the family and teamwork contexts. The five most cited words by this group were "food" (69); "family" (39); "group" (37); "team" (35); "eat" (32). Conversely, the higher education group, considering approach, is guided in the individual and the performance of specific professionals. The five most cited words were "unit" (42); "feeding" (40); "person" (37); "nutritionist" (36); "professionals" (34).

Chart 3 – Description of the Themes that Generated Through the Thematic Analysis. São Paulo, Brazil, 2021.

Theme	Initial Codes
Challenges and impacts of the Culinary Transition	Devaluation of domestic cooking skills Family traditions and Food culture Ultra-processed food consumption Non communicable diseases
Reductionism X Integrality of Health Care	Nutritionism Health Care fragmentation and hierarchy
Overcoming barriers and limitations through professional qualification	Domestic Cooking Skills limitations Permanent Health Education Training topics Training formats
Management: raising awareness for prioritization	Resources scarcity Managers' engagement COVID-19 pandemic Community Health Workers' empowerment

Challenges and Impacts of The Culinary Transition

Professionals from both groups establish connections between the lack of DCS and food monotony among the individuals they assist. They identify an increase in the consumption of ready-to-eat meals and UPF to the detriment of culinary preparations made at home. They also highlight the negative impact on food traditions and affective relationships established between the subjects through food: "(...) *nobody cooks anymore; everyone just unpacks products* (...). *So* (...), *it's very easy to buy industrialized products today* (...). *People* (...) *living in the northeast of Brazil used to make tapioca [tapioca is an edible starch, extracted from the roots of cassava, used as ingredient of sweet and savory dishes], the starch, but here [in São Paulo] they buy the packet version of tapioca, ready to eat* (...)" (L. Dietitian).

Moreover, these professionals correlate the lack of culinary skills and poor-quality diet and with the increased incidence of NCDs: "(...) *This issue (the lack of culinary skills) and what they eat is frequently linked to their health condition* (...), *various comorbidities* (...) *obesity, for example, dyslipidemia, hypertension, diabetes, huh.* (...) *most of the comorbidities we deal with in Primary Health Care Centers are linked to food* (...), *there's no way to exclude it*" (L. Family and Community Physician).

Finally, professionals with high school and/or technical education share their perceptions regarding the limited access to healthy foods, such as vegetables, fruits and legumes in nearby markets in specific regions of the territory: "(...) *in my micro [area],* (...) *I find it easy to buy fruits like oranges and bananas. However, people only have access to pear and apple when a fruit truck passes by. As for other foods considered healthy, the small markets we have here do not offer them, and the supermarket, where there is a larger variety of food, is a little distant*" (M.P. Community Health Worker).

Reductionism X Integrality of Health Care

Although both groups recognize cooking and eating as complex phenomena composed of psychological, social and cultural factors, and acknowledge the significance of eating in relation to affection and family, these professionals do not appear to address the topic in all its complexity during their health care practices, they often rely on reductionist approaches "(...) *we talk a lot about general guidance, like: oh, okay, you must have carbohydrates, the meal has to be colorful... but not, specifically, about culinary skills*" (V. Family and Community Physician).

The dialogue among professionals with high school and technical education highlights the social vulnerabilities experienced by the individuals they assist. This emphasis was particularly evident in the speeches of Community Health Workers, who are frontline health workers who provide informal counseling and possess deep understanding of the communities they serve. Thus, these professionals are able to appropriate and bring, vividly, in their speeches the social intermediaries that most impact people's daily lives: "(...) *when I visit people's homes, I observe what they own, because it's no use saying: 'look, you have to do this, you have to do that', if the person can't afford to accomplish those recommendations*' (...). *Then, depending on what I observe, I reach an agreement with the family*" (M.P. Community Health Worker).

The hierarchy of care is also observed in their oratory: *"Well, at the PHC Center, we do it like this: we call [the] nursing assistant, then during a process of checking BP [blood pressure] or blood glucose, they start the conversation with the patient and start to provide food counseling. If it is not successful, we talk to the nurse, because then the nurse has a different approach* (...). *And if it still doesn't work, then the way is to call [a] health team meeting*" (M.P. Community Health Worker).

The Community Health Workers also reinforce that they are part of a professional category formed by and for the community, which means that these professionals are part of the population living in the territory they serve. In this sense, they emphasize the urgency of valuing and including this category in health team meetings and professional qualification actions, so that they can express their contributions and receive guidance for better attending the community: "(...) *the CHW [Community Health Workers] come from the community, they basically have the same knowledge that the community has. So, it's no use putting the guy inside the primary health care unit with* (...) *no guidance on what he's going to do*" [M. Pharmacy Technician].

Overcoming barriers and limitations through professional qualification

This theme highlights the importance of professional qualification regarding the use of DCS as an important strategy for promoting adequate and healthy eating habits and overcoming barriers and limitations associated with counseling on cooking practices.

Professionals from both groups expressed their own limitations regarding DCS and reported difficulty in addressing these skills in their encounters with the community: "(...) *it is very difficult for us to pass on something that we cannot, [that] we do not know. Therefore, first, we have to be qualified* (...) *to be able to guide (cooking practices)*" (M. Nurse).

The groups suggested qualification themes such as: purchasing, planning and organization; food pre-preparation steps; cooking safety measures; combinations of ingredients and adequacy in the proportion of recipes; hygiene practices; use of non-conventional food plants; seasonings and reuse of leftovers. However we observed, that professionals still prioritize reductionist themes for adequate and healthy eating guidance their discourses. These include the need to know more about functional foods, like foods or ingredients that produce beneficial effects on health, in addition to

its basic nutritional functions. Regarding the format of qualification activities, higher education professionals exemplify remote learning options, such as videoconferences and the availability of digital consultation materials (booklets, podcasts and videos), and face-to-face activities (at their workplace), such as theoretical-practical workshops and lectures. They highlighted the importance to implement actions that can integrate theory and practice, a step considered essential for the learning process: "(...) *maybe with parts of physical demonstration, because it would be very boring to participate in a course to develop skills, which is such a palpable thing, without actually being able to practice, right?*" (L. Family and Community Physician).

Management: Raising awareness for prioritization

Participants emphasize the necessity of engaging and expanding dialogue with PHC Center managers regarding professional qualification. This theme reveals the prioritization of achieving goals and intensifying the number of attendances in PHC Centers by managers, to the detriment of the quality of health care services. This context was exacerbated during the COVID-19 pandemic: "(...) *it was an outburst,* (...) *in the day-to-day experience [during the COVID-19 pandemic] I* (...) *no longer do activities I used to do. Let me put it this way: it is like a firefighter putting out a fire... Not just me, but all the professionals* (...) *in primary health care*" (M. Nurse).

Health professionals reported scarcity of financial, structural and human resources to implement activities involving culinary practices at work in PHC; however, they stated that these limitations could be circumvented with community support. They emphasized that managers lack engagement and commitment to implement these actions. "(...) *so, back there we had a lot of qualification courses. For some time now, it seems that they just want numbers, not quality of life, qualified people*" (L. Nursing assistant).

The category of high school and technical education professionals reinforces this perception and understands that they should be empowered and included in health team meetings by their managers. "*Our leadership lacks* (...) *engagement* (...) *so that* (...) *permanent health education actions improve* (...)*, that they come back at least* (...) *to improve our education* (...)*, to improve what we are going to pass along to individuals we serve*" (Ax. Community Health Worker).

Conceptual Model

We synthesized our findings in a conceptual model that presents the paths for the implementation of Domestic Cooking Skills in PHC (Figure 1).

These paths permeate spheres of decision on public policies, regulations and resource allocation which could engage local managers in providing ongoing health education actions regarding the development of DCS. These actions could take place at schools, community gardens, churches, street markets and PHC Centers. Moreover, these spaces could host food and nutrition education programs for the development of DCS aimed at the community, through consultations with health professionals and Community Health Workers, who deeply understand the limitations and potentials of the territory. Thus, these professionals play a crucial role to link the community to the public health system.

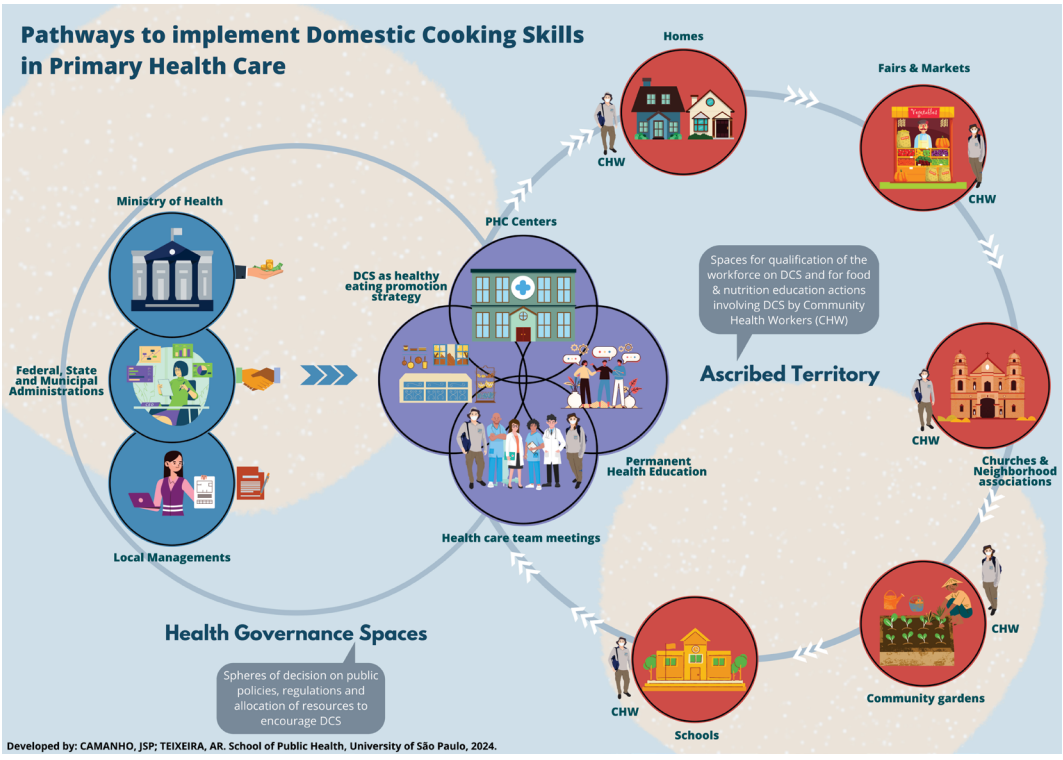

Figure 1 – Paths for the implementation of Domestic Cooking Skills in Primary Health Care.
Note: CHW: Community Health Workers; DCS: Domestic Cooking Skills; PHC: Primary Health Care.

DISCUSSION

Our results show that difficulties regarding the implementation of Domestic Cooking Skills in Primary Health Care are linked to the Culinary Transition process, combined with reductionist health counseling. There is a clear need for raising awareness and professional training on this subject, as well as engaging PHC managers. These perceptions were reported by participants of all education levels, especially by Community Health Workers, whose actions should be considered essential for promoting adequate and healthy eating habits and ensuring food security.

The Culinary Transition encompasses a series of transformations regarding dietary patterns and cooking skills [9], with an evident increase in UPF consumption [6]. Recent systematic review and meta-analysis studies [28,29] have highlighted positive association between UPF consumption and increased cardio metabolic risk, overweight and obesity, cardiovascular and cerebrovascular disease, depression and all-cause mortality.

Participants in this study perceived and pointed out these negative health outcomes in their discussions , aligning with recent findings on food consumption and prevalence of NCDs in Brazil. According to consumption data from 787.567 individual's, registered in the Brazilian Food and Nutrition Surveillance System (SISVAN) in 2019, the Brazilian diet was composed of hamburgers and/or sausages (37%), sweetened beverages (54%), instant noodles, packaged snacks or crackers (33%), stuffed cookies, sweets or treats (35%). Data from 12.776.938 adults attending PHC in Brazil, in the same year, revealed a 63% prevalence of overweight and 28,5% obesity [6].

It important to note that the globalization of diets directly affects food sovereignty, by devaluing culture, knowledge, food traditions [30,31] and preserves hegemonic food systems, based on commodities production. These complex food systems disadvantage ethical, fair and

sustainable food production initiatives and intensify inequities in access to adequate and healthy food, resulting in food deserts [13] and food swamps [32], areas with little availability of fresh/minimally processed food for commercialization and areas where establishments selling ultra-processed foods predominate, respectively. Changes in culinary practices and lack of Domestic Cooking Skills are also part of these systems and operate in their maintenance [30,31]. The participants in this research reported experiencing these scenarios.

Therefore, strategies to promote adequate and healthy eating habits employed by professionals in PHC must encompass not only the encouragement of DCS, but also the concept of Culinary Autonomy. Oliveira defines this concept as the ability to think, decide and act, to cook meals at home, using mostly fresh and minimally processed foods, under the influence of interpersonal relationships, the environment, cultural values, access to opportunities and guarantee of rights [33].

Thus, it is crucial to contextualize healthy eating in a broad and complex framework composed of factors that go beyond individual choices, as the power of choice may not be feasible in vulnerable regions of the territory. In this context, the rescue of Domestic Cooking Skills and culinary traditions, orchestrate an important movement that aims to stop the advanced capitalism, the participation of ultra-processed foods in the Brazilian diet and promoting Culinary Autonomy.

It is also important to consider individuals within their biological, psychological, social and cultural singularities aiming health care production. However, we observed that reductionism counseling prevails to the detriment of an expanded view of care, violating the principles of the Brazilian Unified Health System [34]. The PHC Centers no longer seem as cohesive centers of care, reinforcing segmentation and hierarchy within services, in which professionals with complete higher education, especially physicians, are considered more competent and important for care, while technical professionals, such as Community Health Workers, are marginalized [35].

Regarding culinary practices and food consumption, reductionism translates into Nutritionism, wich focuses on nutrients without considering the interaction, or the quality of food and how various combinations can constitute different traditional dietary patterns [36,37]. Our results show that Nutritionism is present in PHC and corroborates health practices that make sociocultural and geographic determinants and affective practices, represented through food, invisible. These patterns are represented by the demand for professional training topics that address the function of nutrients in food, such as functional foods, which contradicts cultural traditions and popular knowledge, as well as the autonomy of food choices through culinary practices [38].

In this sense, the role of the Community Health Worker emerges as a crucial agent for change. Originating from the community itself, these professionals seamlessly navigate between community settings and health governance spaces, facilitating dialogue between these spheres [34]. Therefore, the inclusion of this category in health team meetings may represent a catalyst for more significant and effective actions for the communities they serve. It seems essential that these professionals feel confident provide counseling and enable actions that involve the use of domestic cooking skills. However professional training, should not be restricted to Community Health Workers, being essential to all professionals working in PHC, to overcome barriers and limitations related on cooking practices counseling.

Participants highlighted the importance of qualification activities extending beyond dialogic exposure, as the development of DCS require practical implementation. The Food and Nutritional Education Reference Framework for Public Policies [39] encompasses the importance of educational actions targeting health professionals, especially those working in PHC. Likewise, the sixth guideline

of the *Política Nacional de Alimentação e Nutrição* (PNAN, National Food and Nutrition Policy in Brazil) [40] highlights PHE as a strategic practice for professional qualification aimed at the promotion of adequate and healthy eating habits. Additionally, the 13th National Health Conference (NHC) in Brazil advocated for permanent Health Education as a form of relating scientific and popular knowledge, aiming for clearer dialogues, connected to the reality of the community served [41–43].

For professional qualification actions to take place, it is essential to sensitize managers working in PHC. The fourth guideline of the PNAN points out the role of managers in the formation of partnerships and inter-institutional articulations, aimed at strengthening and converging the policy with the Health and Sovereignty and Food and Nutrition Security Plans in Brazil [40,44].

Finally, it is important to contextualize this work in space-time, given the increasing Food Insecurity (FI) in Brazilian households. The COVID-19 pandemic has not only exposed but also exacerbated existing inequities in this context. According to data from the research coordinated by the Food for Justice: Power, Politics and Food Inequalities in a Bio economy group, as a result of the pandemic, there was a reduction of more than 85% in the consumption of healthy foods in those households with some degree of FI [45–46]. Uggioni et al. [47] showed that lack of cooking skills, unemployment, social vulnerability, and lack of access to basic sanitation during COVID-19 pandemic were barriers to home cooking, suggesting public policies should focus on food and nutrition programs and actions for the development of these skills to promote healthy eating and encourage self-care. Thus, the COVID-19 pandemic does not only precipitated health, political and economic crisis, but also a food security and sovereignty crisis. In this context, the professionals' statements reinforced the worsening of demands made by PHC Center managers regarding the increase in the number of services provided, to the detriment of the quality of the service, reinforcing the importance of valuing and prioritizing the quality of care and in professional qualification.

Therefore, valuing and prioritizing the agenda of Domestic Cooking Skills to promote healthy food, to the detriment of the quantitative logic based on goals and numbers that do not reflect the quality and comprehensiveness of health care, is essential to preserve, or at least protect, the human and constitutional right to food for the Brazilian population, which is continuously violated on a daily basis.

CONCLUSION

This study showed that the main difficulties for the implementation of Domestic Cooking Skills in PHC in the city of São Paulo are attributed to reductionist counseling in association with Culinary Transition. This transition process perpetuates hegemonic food systems that intensify inequities in access to adequate and healthy eating habits. Professionals working in PHC recognize their own limitations regarding the appropriation of DCS. The appreciation of actions involving the utilization of these skills still seems embryonic, lacking moments of permanent education and qualification of the workforce, especially Community Health Workers, often subjugated and devalued in terms of their potential as health promoters. Permanent health education rooted in the concept of culinary autonomy is essential for the integrality of care to be achieved. It is recommended to provide themes and training formats that favor meaningful learning and sensitization of health professionals working in PHC Centers. It is important engage the managers in the agenda of DCS, in alignment with the principles and guidelines of public health policies, which must be sustained in contexts of economic and health crisis, such as the COVID-19 pandemic, with the aim of mitigating minimize inequities related to adequate and healthy food, recognized as a constitutional and universal right.

This study is subject to limitations, as it only includes participants from the city of São Paulo. Therefore, we recommend the production of further studies on this subject with professionals in other regions of the country, in order to support the construction of a national protocol for the implementation of Domestic Cooking Skills in PHC. Furthermore, we propose conducting focus groups with managers and individuals assisted in PHC Centers for better comprehension of their perceptions and expectations on this subject, enabling the planning of interventions that are more effective.

This study aims to contribute to the development of an EPS protocol focusing on PAAS actions and guidelines in PHC through HCD, by elucidating these skills as precious tools that can be used by health professionals during their interactions with the population, considering the main needs, difficulties and opportunities for their development in the city of São Paulo.

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