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Original Article

Medicinal Plants in Primary Health Care: knowledge, attitudes and practices among rural healthcare workers in Brazil

Plantas Medicinais na Atenção Primária: desafios e perspectivas sob o olhar de trabalhadores da saúde

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ABSTRACT

Objective: To investigate health professionals' knowledge, attitudes, and practices regarding the use of medicinal plants in Primary Health Care (PHC). **Methods**: This exploratory qualitative study employed cartography as a methodological framework and involved 15 semi-structured interviews with health workers from a rural Family Health Strategy team in Patrimônio da Penha, Espírito Santo, Brazil. An interview guide was used to assess participants' knowledge and acceptance of medicinal plant use, considering the principles established by the National Policy on Integrative and Complementary Practices and the National Policy on Medicinal Plants and Herbal Medicines. Analytical categories were developed from the themes that emerged from participants' narratives. **Results**: Challenges related to work organization and management continue to hinder the integration of medicinal plants into Primary Health Care. Participants demonstrated a broad understanding of health and expressed positive attitudes toward the use of medicinal plants. However, they reported experiencing fragmented and disease-centered work processes, which contribute to these practices being perceived as parallel to established clinical protocols. Dialogue circles emerged as a valuable strategy for strengthening community engagement, fostering active listening, enhancing communication skills, and promoting knowledge exchange. **Conclusion**: Although health workers recognize and accept the use of medicinal plants, important challenges remain regarding professional training, work organization, and the institutionalization of these practices within the Brazilian Unified Health System (SUS). Strengthening collective spaces for dialogue and continuing professional education may contribute to a broader and more effective integration of medicinal plants into health care practices.

KEYWORDS: Medicinal Plants. Comprehensive Health Care. Primary Health Care.

RESUMO

Objetivo: Identificar o conhecimento, as atitudes e a atuação dos profissionais em relação ao uso de plantas medicinais na Atenção Primária à Saúde. **Métodos**: Trata-se de uma pesquisa exploratória de abordagem qualitativa que utilizou a cartografia como aporte metodológico e realizou 15 entrevistas semiestruturadas com trabalhadores de uma equipe rural da Estratégia Saúde da Família de Patrimônio da Penha, Espírito Santo. Um roteiro foi utilizado para analisar o perfil de conhecimento e a aceitabilidade dos trabalhadores quanto ao uso de plantas medicinais, considerando os preceitos das Políticas Nacionais de Práticas Integrativas e Complementares e de Plantas Medicinais e Fitoterápicos. A partir dos temas polarizados nas falas, foram definidas categorias analíticas para conduzir as reflexões. **Resultados**: Os desafios relacionados à gestão do trabalho ainda dificultam a incorporação das plantas medicinais na Atenção Primária à Saúde. Os trabalhadores apresentaram uma concepção ampliada de saúde e demonstraram aceitabilidade em relação ao uso dessas práticas. Entretanto, vivenciam processos de trabalho fragmentados e centrados na doença, o que contribui para que as plantas medicinais sejam percebidas como práticas paralelas aos protocolos instituídos. As rodas de conversa foram apontadas como estratégia para ampliar a articulação comunitária, o exercício da escuta, a habilidade comunicativa e a troca de conhecimentos. **Conclusão**: Embora exista reconhecimento e aceitação do uso de plantas medicinais pelos trabalhadores da saúde, persistem desafios relacionados à formação profissional, à gestão do trabalho e à institucionalização dessas práticas no SUS. O fortalecimento de espaços coletivos de diálogo e educação permanente pode contribuir para ampliar sua integração ao cuidado em saúde.

PALAVRAS-CHAVE**:** Plantas Medicinais. Prática Integral de Cuidados de Saúde. Atenção Primária à Saúde.

INTRODUCTION

Within the context of Primary Health Care (PHC), the use of medicinal plants brings together traditional knowledge and community-based care practices, while also serving as a strategy to diversify therapeutic approaches, strengthen health promotion initiatives, and foster closer relationships between health services and local communities.[1,2] However, the recognition and appreciation of these practices depend on managerial support, professional training, the engagement of health workers, and continuous dialogue with the community,[3] highlighting the importance of understanding how medicinal plants are perceived and incorporated into the daily routine of Family Health Strategy (FHS) teams.

Supported by the National Policy on Integrative and Complementary Practices (PNPIC)[4] and the National Policy on Medicinal Plants and Herbal Medicines (PNPMF),[5] the incorporation of medicinal plants into health services requires more than regulatory guidelines. To become embedded in the everyday practices of health teams, it is essential to promote knowledge exchange and create institutional conditions that ensure community engagement, thereby strengthening their legitimacy, sustainability, and rootedness within local territories. This process represents the contemporary renewal of ancestral knowledge systems that connect different conceptions of health and multiple forms of care, requiring the integration of symbolic dimensions with practical action and reaffirming health as a social, collective, and public concern.

Studies involving health professionals have identified several challenges related to the institutionalization of medicinal plants and herbal medicines within health services. These include limited knowledge, concerns about adverse effects, the need for adequate professional training and continuing education for the prescription and recommendation of medicinal plants, as well as insufficient institutional and financial support.[6–9] Regarding the use of medicinal plants in PHC, this level of care has considerable potential to promote access in articulation with traditional and community knowledge. However, such integration depends on investments in professional education to ensure safe and effective use. Furthermore, many PHC workers remain unfamiliar with cultivation practices, dosage recommendations, and potential adverse effects associated with medicinal plants.[10]

Many of the challenges described above are associated with the lack of federal financial support for municipalities to implement Integrative and Complementary Practices (ICPs) and medicinal plant initiatives. Although the PNPIC challenges the dominance of biomedical, technocratic, and hospital-centered models of care, it remains largely a normative framework. Similarly, the PNPMF formally recognizes and regulates the use of medicinal plants within the Brazilian Unified Health System (SUS), yet its effective implementation depends on sustained investments in professional development, guaranteed access to medicinal plants and herbal

medicines, and institutional and financial support for municipalities. Consequently, governmental actions are urgently needed to ensure that these policies effectively transform models of care, democratize the right to comprehensive health care, and strengthen traditional knowledge systems within local territories.[11–13]

Conversely, the chronic underfunding of the SUS has been intensified by Constitutional Amendment No. 95 and by the implementation of the PHC financing program known as Previne Brasil (Ordinance No. 2,979, November 12, 2019). Furthermore, the introduction of the third version of the National Primary Care Policy (PNAB) and the Health Services Portfolio has reinforced individualized approaches to care that are often disconnected from the principles of comprehensiveness, universality, and equity. By minimizing the importance of territory-based approaches, multidisciplinary work, and community engagement, these reforms contribute to the fragmentation of care practices and reinforce processes associated with the medicalization of everyday life.[14,15]

From this perspective, the aim of the present study was to investigate health workers' knowledge, attitudes, and practices regarding the use of medicinal plants in Primary Health Care in the district of Patrimônio da Penha, located in the municipality of Divino de São Lourenço, Espírito Santo, Brazil. This research seeks to critically examine the topic, explore health professionals' perceptions and practices regarding the National Policy on Integrative and Complementary Practices (PNPIC) and the National Policy on Medicinal Plants and Herbal Medicines (PNPMF) at the local level, and contribute to the community-based development of these practices. In doing so, it aims to strengthen comprehensive care while valuing professional experience and promoting interactions among teaching, health services, and the community.

Medicinal plants should be recognized not only as resources for comprehensive health care but also as mechanisms for building social networks capable of strengthening community ties, expanding social participation, and fostering individual autonomy in health care processes. Analyzing workers' perceptions, knowledge, and challenges may support the development of training and capacity-building strategies, while also identifying alternatives for enhancing dialogue with communities through spaces dedicated to the exchange of experiences and the appreciation of local practices. Such initiatives may contribute to the consolidation of health care services that are responsive to the needs and specificities of the population. In this sense, the present study contributes to broader reflections on the articulation between public policies, professional practices, and community knowledge systems, demonstrating how these connections can transform health care into a more collective, participatory, and socially meaningful process.

METHODOLOGICAL APPROACH

This study adopted a socio-analytic approach grounded in Institutional Analysis in Collective Health,[16] a methodological perspective that seeks to interrogate institutionalized meanings and bring their contradictions to light in order to foster the emergence of new meanings and practices. To this end, the study was based on collective analytical processes[17] that encourage the critical examination of experiences and enable the displacement of established positions and institutional arrangements. To operationalize this approach, cartography was employed as a methodological tool, as it allows researchers to follow and record the clues that guide the investigative process, while also examining the effects of research on the object of study, the researcher, and the resulting knowledge.[18,19]

In practice, cartography was used to map health professionals' knowledge, practices, and perceptions regarding the use of medicinal plants in Primary Health Care (PHC), taking into account both institutional and everyday dimensions. The study adopted a qualitative design with voluntary response sampling and included all members of the Family Health Strategy (FHS) team working within the selected territory. Eligible participants were professionals actively working in the FHS during the data collection period who voluntarily agreed to participate in the study. Individuals who were not working during this period or who were unable to participate due to medical leave or prolonged absence were excluded. Among the professionals invited to participate, only one worker declined the invitation.

The primary instrument used to collect narratives was a semi-structured interview developed around thematic axes addressing professional practices, institutional barriers, and perceptions regarding the use of medicinal plants. Cartography functioned as a collective social analysis device, allowing interview data to be integrated with field observations, records of interactions, and reflections produced by the researcher, who was also a member of the FHS team and actively involved in its daily activities. This position enabled deep immersion in the field and facilitated a nuanced understanding of professional practices, institutional relationships, and the meanings produced by health workers.

The use of a cartographic approach involved identifying patterns, contradictions, and emerging meanings within participants' narratives, linking individual responses to their broader institutional context. Consequently, data interpretation extended beyond thematic coding and incorporated the social dynamics and relationships operating within the Family Health Strategy. This methodological strategy ensured that the analysis remained collective, reflexive, and context-sensitive, enabling the study to raise relevant questions concerning professional

practices and institutional culture while remaining aligned with the principles of Institutional Analysis.

Study Setting

The study was conducted in a district located within a rural municipality with fewer than five thousand inhabitants. Because participants reported frequent turnover among Family Health Strategy professionals during the interviews, the municipality was not anonymized. The district of Patrimônio da Penha is located within the buffer zone of the Caparaó National Park (PARNA Caparaó),[20] a central element in the discursive construction of the territory's cultural identity.[21]

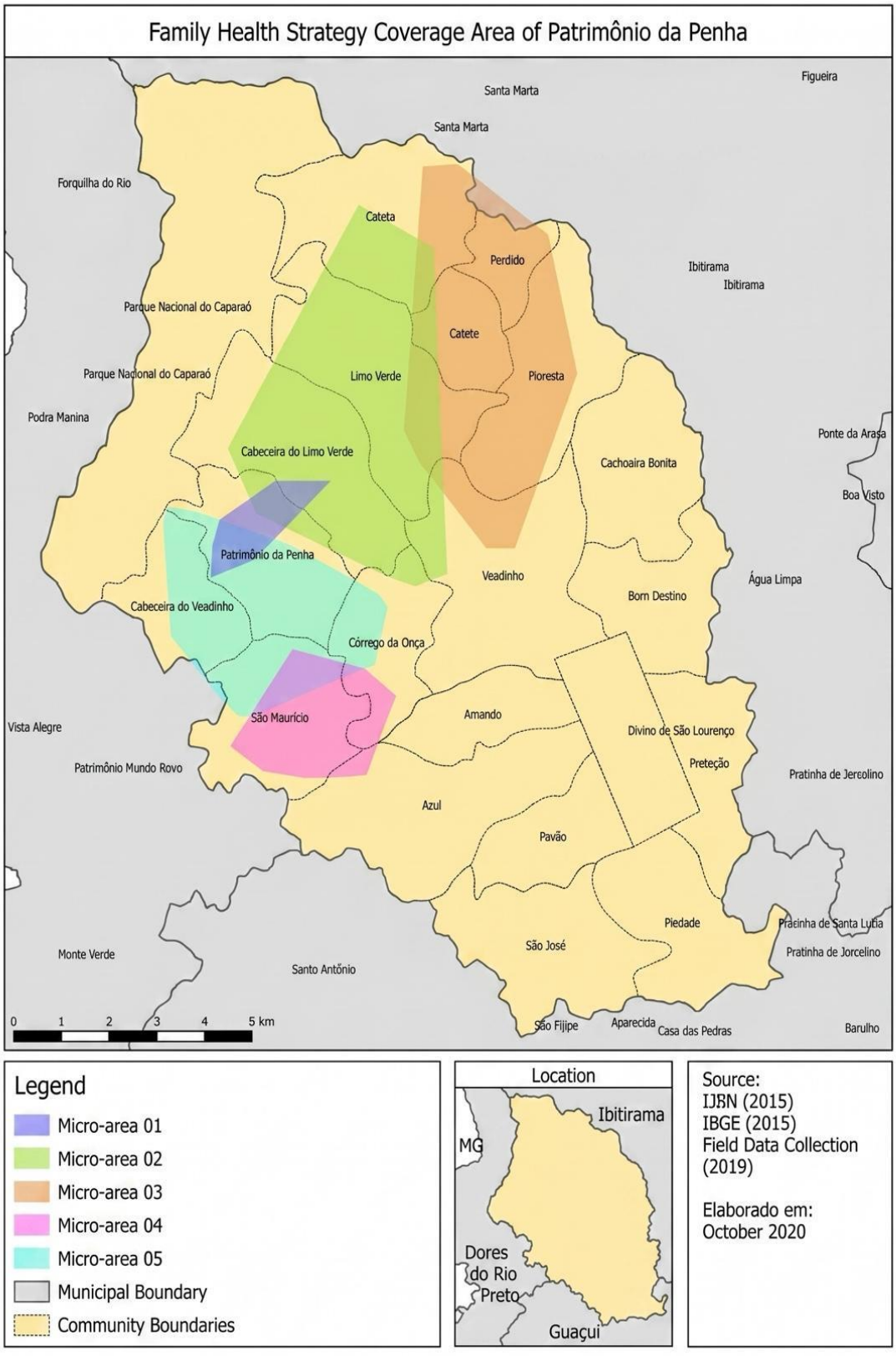
The region attracts tourists and visitors due to its rich biodiversity and abundant water resources.[22] However, native vegetation has been extensively altered by deforestation,[23,24] approximately 68% of households are served by inadequate sanitation systems, and the municipality ranks among the three lowest Human Development Index (HDI) scores in the state of Espírito Santo. A distinctive characteristic of the village is the presence of residents who chose to settle permanently in the area during the 1990s, introducing new customs and lifestyles that contributed to the formation of an alternative community.

The territory is home to a variety of therapists who offer practices such as homeopathy, Traditional Chinese Medicine, Ayurveda, yoga, Reiki, massage therapy, art therapy, biodanza, circle dancing, meditation, and the use of medicinal plants. In addition, the religious dimension of medicinal plant use is present through the Santo Daime church. This spiritual doctrine incorporates the ritual use of Ayahuasca, a psychoactive plant infusion prepared from the vine *Banisteriopsis caapi* (Jagube) and the leaves of the shrub *Psychotria viridis* (Chacrona).

The Primary Health Care Unit (PHCU) where the Patrimônio da Penha Family Health Strategy team operates is located on the district's main road, approximately 13 kilometers from the municipal center of Divino de São Lourenço, accessible via an unpaved road. Its catchment area encompasses the localities of Baixada do Limo Verde, Jacutinga 1, Jacutinga 2, Córrego do Carvalho, Cachoeira do Granito, Ponte do Peroba, Patrimônio da Penha, Córrego do Veadinho, Córrego do Barracão, Córrego Santo Expedito, Cachoeira Alta, Córrego do Uru, Córrego da Onça, Córrego Forquilha, Córrego do Anízio, Portal do Céu, Córrego da Floresta, São Maurício, Serra Azul, Córrego Azul, Córrego da Onça, and Córrego São Maurício.

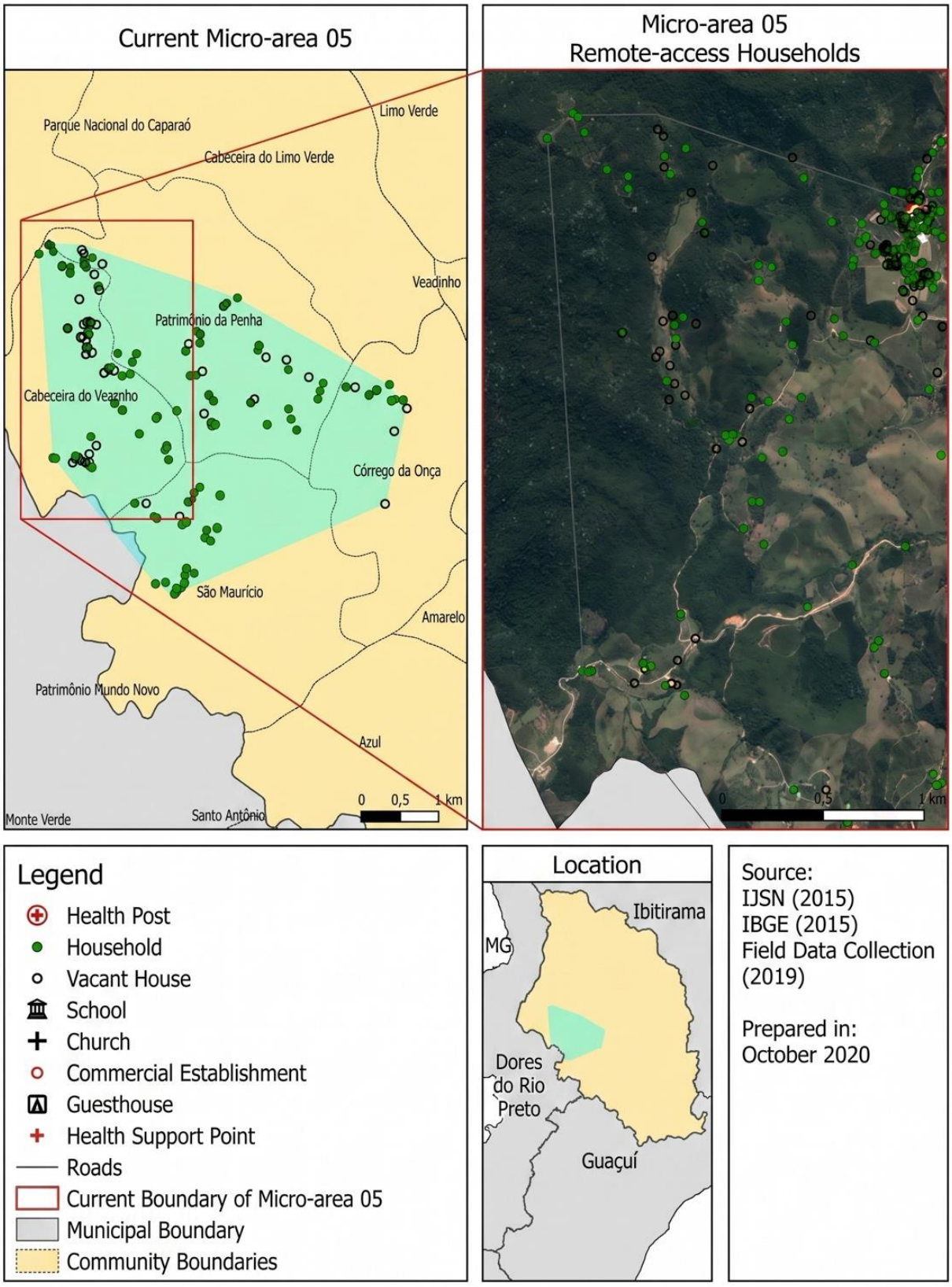
To improve the organization of work processes, a new territorialization process was carried out within the community. Localities were grouped according to the geographic location of households and the areas of responsibility assigned to each Community Health Worker (CHW), resulting in five micro-areas, as illustrated in Figures 1 and 2.

Figure 1 – Territorial coverage area of the Family Health Strategy team in Patrimônio da Penha, Espírito Santo, Brazil (2019)



Source: Adapted from IJSN (2015), IBGE (2015) and field data collection (2019)

Figure 2 – Representative map of Micro-area 05 showing remote-access households and geographical barriers affecting access to health services in Patrimônio da Penha, Espírito Santo State, Brazil (2019)



Source for both figures: Adapted from IJSN (2015), IBGE (2015) and field data collection (2019)

Following the reorganization process, the territory covered by the Family Health Strategy (FHS) included the village of Patrimônio da Penha and four additional micro-areas (Limo Verde, Córrego Floresta, São Maurício, and Córrego Azul/Portal do Céu), serving approximately 1,772 registered users. The area is predominantly rural, covers an extensive geographic territory, is located far from the state capital, and faces significant challenges related to the organization and continuity of health care work processes.

To establish a dialogue with the territory and understand the meanings and significance attributed to the use of medicinal plants and herbal medicines in Primary Health Care (PHC), 15 semi-structured interviews were conducted with health workers from the Patrimônio da Penha Family Health Strategy team, located in the municipality of Divino de São Lourenço, Espírito Santo, Brazil, between September 2018 and October 2019. The interviews aimed to examine health workers' knowledge and acceptance of medicinal plants, identify the resources and alternative therapeutic approaches incorporated into their professional practices, and explore their understanding of the National Policy on Integrative and Complementary Practices (PNPIC) and the National Policy on Medicinal Plants and Herbal Medicines (PNPMF). Each interview began with a discussion of the concept of health and subsequently explored participants' reflections on the use of medicinal plants and herbal medicines within PHC.

Each narrative was treated as an individual unit of analysis, preserving the integrity of participants' testimonies. Initially, the interviews were subjected to open coding, which enabled the identification of keywords, recurrent ideas, and practices related to the use of medicinal plants. Subsequently, the narratives were organized into analytical categories based on the themes that emerged from participants' accounts. These categories informed the development of analytical devices for examining professional practices, enabling the identification of patterns, relationships, and gaps in the use of medicinal plants within the Family Health Strategy, as well as reflections on the strengths and limitations associated with the incorporation of these practices into Primary Health Care.

Following participants' informed consent through the signing of a Free and Informed Consent Form (FICF), all interviews were audio-recorded, generating nearly 14 hours of material. The recordings were subsequently transcribed verbatim, and the accuracy of the transcriptions was verified by the principal researcher prior to qualitative analysis. Participants were identified as T1 to T15 and are characterized in Table 1.

Table 1 – General characteristics of the health workers interviewed in the Patrimônio da Penha Family Health Strategy team, 2019

Identification	Sex	Age	Professional category	Time working in PHC	Type of employment selection process	Interview duration
T1	F	29	Speech Therapist	5 years	Public selection process	1 h 22 min
T2	F	33	Community Health Worker (CHW)	14 years	Public selection process	1 h 07 min
T3	M	35	PHC Coordinator	2 years	Appointed position	52 min
T4	F	35	Community Health Worker (CHW)	14 years	Public selection process	1 h 13 min
T5	M	33	Social Worker	5.5 years	Public selection process	53 min
T6	M	21	Community Health Worker (CHW)	2 months	Public selection process	27 min
T7	F	31	Oral Health Assistant	2 years	Public selection process	54 min
T8	F	30	Psychologist	1 year	Public selection process	56 min
T9	M	26	Nurse	1 year	Public selection process	32 min
T10	F	33	Nurse	9 years	Public selection process	1 h 18 min
T11	M	41	Community Health Worker (CHW)	14 years	Public selection process	42 min
T12	F	33	Receptionist	13 years	Civil service examination	53 min
T13	M	25	Physician	6 months	Public selection process	34 min
T14	M	42	Nursing Technician	13 years	Public selection process	28 min
T15	F	50	General Services Assistant	8 years	Civil service examination	29 min

Source: Prepared by the authors

After reading the transcripts, the following analytical thematic axes were defined based on the principal themes emerging from participants' narratives: Working dynamics within a rural health territory; Defining a concept of health: a continuous and unfinished process; The role of bonding in care practices; Challenges in the institutionalization of medicinal plants and herbal medicines in Primary Health Care; and Expanded Clinical Practice and Popular Education as pathways for strengthening collective perspectives of care**.**

The study was approved by the Research Ethics Committee of the Center for Human and Natural Sciences of the Federal University of Espírito Santo (opinion n.º 4.454.173; CAAE: 18046118.9.0000.5542).

RESULTS

Working dynamics within a rural health territory

In this study, rurality was understood as the expression of a distinctive way of life, characterized by specific social dynamics that involve different temporalities, relationships with space, and care practices that differ from those commonly found in urban settings. In the municipality of Divino de São Lourenço, most of the population (61.5%) resides in rural areas.

Within this context, the historical difficulties in accessing health services before the implementation of the Family Health Strategy (FHS) in the village of Patrimônio da Penha become particularly relevant, as illustrated by the following statement:

> "When I attended a postgraduate program in Primary Health Care, we often discussed the importance of adapting to the culture of the community. In Patrimônio da Penha, the use of medicinal plants has always been deeply rooted in local culture. We are talking about a community that historically faced considerable barriers to accessing health services. It was a much more isolated community." (T10)

The limited access described by the participant can be partly attributed to the poor condition of local roads. Household and territorial registration data indicate that unpaved roads remain the predominant means of access to residences, significantly affecting population mobility and the operation of health services. This reality is particularly evident in the work of Community Health Workers (CHWs), who travel throughout the territory conducting home visits, as well as in users' access to the Family Health Strategy unit. Consequently, weekly outreach visits by physicians and nursing technicians are organized in support points distributed across each micro-area.

The territorialization process revealed both the strengths and the challenges of the territory with regard to improving the quality of health services and, consequently, the population's quality of life. The mapping process showed that achieving full coverage of home visits remains difficult due to the extensive geographic area covered by Community Health Workers. The territory is crossed by unpaved roads that are highly vulnerable to weather conditions and receive infrequent maintenance.

Furthermore, many households are located in hard-to-reach areas, either within densely forested regions or at high altitudes, as illustrated in Figure 2. In this context, the work of Community Health Workers becomes particularly important because home visits frequently reveal the use of home gardens and traditional homemade preparations, highlighting the integration of popular knowledge and care practices, as expressed in the following account:

> "Many times, we arrive at a household and the person has already treated themselves with boldo tea, lemon balm, cotton leaf, or another medicinal plant. They show us their gardens and explain how they

> learned these practices from older family members. This is part of their way of caring for themselves, and we need to respect that." (T11)

These territorial characteristics directly influence the team's approach, requiring the adaptation of protocols and care pathways in order to ensure comprehensive care for the community. Consequently, the challenge of achieving comprehensiveness becomes even greater, as it requires articulating territorial organization with everyday planning while incorporating environmental, cultural, social, historical, and community-based dimensions, including local knowledge and popular practices. Only through such integration can a shared health territory be effectively established.

Defining Health as a continuous and ongoing process

When participants were asked about their understanding of health, a broad consensus emerged around an expanded concept of health, generally articulated in relation to social conditions, cultural contexts, and political circumstances.

> "Health means being well in a comprehensive sense. It is very difficult to be completely healthy all the time, isn't it? There is always something that can be improved. So, it becomes a continuous process. Health is related even to the environment where you live and the water you drink. Some things are under your control, while others are not, because they depend on political decisions." (T2)

> "It includes physical and biopsychosocial health. It is a whole. A healthy person is physically and emotionally well. Being healthy depends on where a person lives and the issues they face. It is all part of a broader social context." (T9)

> "Many people think health is simply scheduling appointments for others here at the health center. But appointments are usually for people who are already ill. Health is also about follow-up and guidance so that people can feel well and remain healthy." (T6)

These statements demonstrate that, for health workers, health is not merely the absence of disease but rather a socially situated and culturally mediated process. Although medicinal plants were not explicitly mentioned in these initial definitions, participants expressed openness toward practices connected to territory, culture, and comprehensive care, where medicinal plants function as a link between health, environment, and ways of life. Understanding health as a continuous process therefore also implies recognizing the natural and cultural resources that sustain this broader perspective.

The incorporation of medicinal plants into Primary Health Care (PHC) requires an effective expansion of the concept of health and of the health system itself, as these practices extend beyond conventional biomedical care, individual treatment, and disease-centered approaches. Participants' accounts suggest that medicinal plant use involves specific forms of knowledge and

practice that may contribute to the development of new strategies for health promotion and recovery within the Brazilian Unified Health System (SUS). Cultivation practices, in particular, illustrate how care extends beyond the body and becomes embedded in relationships with the land, expressing alternative temporalities and ways of experiencing health:

> "Whenever I can, and sometimes simply to rest my mind, I go work with the soil. I go to the garden or to the fields. I plant things because I enjoy it. Planting becomes a form of therapy. Once you plant something, you have to take care of it. If you clear the land, you have to harvest what grows. In the garden, when peanuts are ripe, I have to pull them up before they sprout again. When I pull them up, the weeds come out too, and the soil becomes clean. Then, because the soil is clean, I feel compelled to sow lettuce seeds. When the seeds sprout, I feel compelled to water them. They grow, and what happens is therapy both for my mind and for the land. You spend time alone, away from distractions, and the soil becomes productive again. If you look closely, one thing helps the other." (T15)

> "It is a slow treatment; it is not like pharmaceutical medicine. You cannot stop using it. The results do not come overnight. You cannot expect to wake up cured the next day because that will not happen. It is a different way of healing. It is certainly slower than pharmaceutical drugs, and it requires patience, but it works. At least it worked for me." (T7)

> "I think health is also about being able to choose how to care for yourself. If someone prefers to drink fennel tea or use a guaco syrup, that is also health. Health is not only about having access to medicines at the pharmacy; it is also about having the right to use practices that are part of our culture." (T2)

Some participants also highlighted that they live within the community itself, a condition that contributes to the development of relationships and care practices with the families among whom they live and share everyday experiences. More broadly, medicinal plants repeatedly revealed alternative ways of caring. They represent the visibility of living memory, the presence of ancestry in contemporary life, and, within the public sphere of SUS, a way of recognizing the community itself as an integral component of health care. In this sense, health extends beyond the biological body and becomes rooted in territorial belonging and everyday practices, including the cultivation and use of medicinal plants, which reaffirm the collective and community-based dimensions of care.

The Family Health Strategy is the primary mechanism for reorganizing Primary Health Care in Brazil. Its territorial approach places the family at the center of care, considering its physical, social, and cultural environment. To achieve this objective, health workers must have access to a diverse range of technological and relational resources.[25] Among these, the ability to incorporate relational technologies that support an Expanded and Shared Clinical Practice is particularly important.[26] Such an approach emphasizes listening, critical reflection on routine practices, engagement with subjective social issues, and work carried out with families and

communities. In this context, cultural competence is essential because it recognizes needs that may remain invisible due to ethnic, racial, or other social characteristics.[27] It also acknowledges that health guidance and educational activities should be aligned with the sociocultural realities of service users.[28]

> "This community has a different social structure and different cultural practices that do not always fit with the standard follow-up procedures of the Family Health Strategy. If you start confronting these differences directly, everything becomes much more difficult." (T4)

Participant T4's statement illustrates that achieving comprehensiveness requires recognizing local particularities and developing strategies capable of addressing cultural asymmetries within the community. This process is fundamentally based on the construction and strengthening of bonds. By expanding the understanding of the health–disease process to include biological, psychological, social, cultural, and philosophical dimensions, health services move closer to achieving comprehensive care. However, the current hegemonic model tends to reduce the caring dimension of health work by fragmenting care networks into protocols and procedures and by imposing a culture of immediacy, as illustrated by the following statement:

> "Public service work is exhausting. One professional often performs tasks that should be divided among two or three people. It is not that professionals are inadequate; everyone is simply overloaded. There is very little space in our schedules to develop other activities. The workload becomes overwhelming, and there is no time left for anything beyond the basics." (T2)

Health as a continuous and relational process

Participants consistently expressed an expanded understanding of health that extended beyond the absence of disease. Health was described as a dynamic process influenced by social conditions, environmental factors, emotional well-being and political determinants.

> "Health means being well in a comprehensive way. It is difficult to be completely healthy all the time; there is always something that can improve. Health is related to the environment where you live, even the water you drink. Some things are within your control, others depend on political decisions." (T2)

> "Health includes physical and psychosocial dimensions. A healthy person is physically and emotionally well. It depends on where people live and the circumstances they face. It is all part of a broader social context." (T9)

Participants frequently associated medicinal plants with broader notions of care, autonomy and connection to place. Using medicinal plants was understood not only as a therapeutic intervention but also as a practice linked to cultural identity, everyday life and relationships with

nature. One participant described cultivation itself as a therapeutic activity:

> “Whenever I can, I go to the land, to the garden or the fields. Planting becomes therapy. One thing leads to another: you plant, you care for it, you harvest it. It benefits both your mind and the land.” (T15)

Another participant emphasized the importance of autonomy in choosing culturally meaningful forms of care:

> “Health is also about being able to choose how to care for yourself. If someone prefers to drink fennel tea or prepare a guaco syrup, that is also health. It is not only about having medicine available in a pharmacy; it is about having the right to use what belongs to our culture.” (T2)

These accounts indicate that medicinal plants occupy both symbolic and practical space within broader understandings of health, reinforcing connections among environment, culture, community and personal autonomy.

Trust-based relationships as a foundation for care

The importance of trust-based relationships emerged as a central theme across all interviews. Participants identified three interconnected dimensions of bonding: relationships among health professionals, relationships between professionals and community members, and professionals’ relationships with their employment conditions.

High staff turnover was repeatedly identified as a major barrier to continuity of care and community trust. Participants frequently associated workforce instability with temporary employment contracts and recurrent changes in local administrations. Such conditions were perceived as limiting the continuity of professional-community relationships and weakening the longitudinal character of Primary Health Care. Several participants argued that more stable employment arrangements could strengthen team cohesion, improve retention of professionals and support the development of stronger bonds with the community.

> “Every time a professional leaves and another arrives, the bond is broken. Building trust again takes time because people need to believe that you are there to help them and support their health.” (T1)

Participants linked workforce instability to temporary employment arrangements and local political dynamics, particularly in small municipalities.

> “I think professionals do not stay because of political issues. In small towns everyone knows everyone. Public service examinations would help stabilize teams and strengthen relationships with the community.” (T10)

Community Health Workers were frequently described as key actors in sustaining continuity of care. Their close relationships with families enabled them to mediate relationships between communities and health services while fostering trust and long-term engagement.

Challenges to the institutionalization of medicinal plants in phc

Although participants generally supported the inclusion of medicinal plants within the Brazilian Unified Health System (SUS), implementation remained limited. Medicinal plants were often perceived as complementary to conventional biomedical interventions rather than fully integrated components of routine care. Several participants emphasized the need for professional education:

> "Without health education for professionals, we will not make much progress. First, we need to raise awareness among professionals who remain strongly attached to medications and diagnostic tests." (T3)

A major finding was the discrepancy between favorable attitudes toward medicinal plants and limited knowledge. Most participants were unfamiliar with the National Policy on Integrative and Complementary Health Practices (PNPIC) and demonstrated confusion regarding distinctions among medicinal plants, herbal medicine and homeopathy. Only one participant correctly differentiated medicinal plants from phytotherapeutic products.

The participants frequently attributed these limitations to gaps in professional training and continuing education. Although supportive of medicinal plant use, many reported that the topic had received little or no attention during their undergraduate education.

The findings suggest that institutionalization depends not only on policy endorsement but also on educational processes capable of legitimizing different forms of knowledge and supporting healthcare workers in integrating these practices into everyday care.

Dialogue, expanded clinical practice and popular health education

Participants repeatedly emphasized the importance of dialogue, teamwork and collective learning. Fragmented work processes were described as obstacles to comprehensive care, while case discussions, interdisciplinary meetings and educational activities were viewed as opportunities to strengthen collaboration.

> "We need more case discussions and more health education. If we do not discuss and share experiences, nothing changes. Patients end up belonging to one professional rather than to the health unit as a whole." (T5)

Several participants suggested that medicinal plants could serve as a catalyst for greater

collaboration among team members.

> “Perhaps medicinal plants could encourage us to share knowledge. We would need to discuss cases together, decide when these resources might be appropriate and learn from one another. These practices could bring the team closer together.” (T10)

Dialogue circles were identified as particularly promising strategies. Participants viewed these collective spaces as opportunities to strengthen communication skills, listening practices and exchanges between health professionals and community members.

> “Sometimes what is needed is simply taking time to listen to what the community has to say. Dialogue circles could create those opportunities, but they need to happen regularly.” (T2)

These findings highlight the potential contribution of Popular Health Education approaches to the development of more participatory and culturally responsive forms of PHC.

DISCUSSION

This study demonstrates that healthcare workers generally hold positive attitudes toward medicinal plants and recognize their cultural significance within rural communities. However, translating this acceptance into institutional practice remains challenging. Similar to previous Brazilian studies, participants identified insufficient training, limited knowledge of public policies and lack of institutional support as major barriers to implementation.

The findings also reveal tensions between biomedical models of care and broader understandings of health. Although participants frequently adopted holistic perspectives that encompassing environmental, cultural and social dimensions, everyday work processes remained strongly shaped by disease- centered approaches, productivity demands and fragmented service organization. This tension underscores the persistent gap between policy aspirations for comprehensive care and the realities of PHC.

Participants' narratives also suggest tensions between community-based care practices and the predominance of biomedical approaches. The widespread expectation of rapid therapeutic responses, combined with heavy workloads and service pressures, may contribute to the marginalization of practices such as medicinal plant use, which often require longer-term engagement and changes in everyday health behaviors. These findings resonate with broader discussions regarding medicalization and the challenges of sustaining health promotion strategies within contemporary health systems.

The rural context provides a further layer of complexity. Geographic isolation, workforce instability and limited infrastructure hinder continuity of care. Nevertheless, local communities

preserve rich traditions of medicinal plant use and possess extensive experiential knowledge regarding cultivation, preparation and therapeutic application. Rather than constituting competing systems of care, these practices may represent valuable resources for culturally responsive health promotion and community engagement.

The prominence of dialogue throughout participants' narratives deserves particular attention. The recurrent emphasis on listening, collective reflection and knowledge exchange suggests that the integration of medicinal plants is not solely a technical challenge but also a relational and organizational one. Dialogue circles, interdisciplinary meetings and Popular Health Education initiatives may create conditions to bridge institutional knowledge and community experience, strengthening both professional practice and social participation.

Ultimately, medicinal plants appear not only as therapeutic resources but also as vehicles for expanding clinical practice, strengthening social bonds and fostering more democratic forms of health care. Their integration into PHC may contribute to the development of approaches that are simultaneously evidence-informed, culturally responsive and community-oriented.

CONCLUSIONS

Healthcare workers in this rural Brazilian setting broadly accepted the use of medicinal plants and recognized their relevance within community health practices. Nevertheless, implementation remains constrained by limited professional training, insufficient institutional support, fragmented work processes and the predominance of biomedical models of care.

Strengthening the integration of medicinal plants into PHC requires sustained investment in workforce education, supportive public policies and organizational strategies that promote dialogue among professionals and communities. Approaches grounded in Popular Health Education and collective reflection may help bridge formal health services and traditional knowledge systems, fostering more comprehensive and culturally responsive models of care.

By recognizing medicinal plants as both therapeutic and social resources, PHC services may strengthen community participation, promote health autonomy and contribute to more equitable and context-sensitive health systems.

REFERENCES

1. Cock NROS, Carletto AF, Soares GB, Silva FH. Plantas medicinais e cuidado em saúde na comunidade: roda de conversa como instrumento de gestão compartilhada. Rev Ed Popul [Internet]. 2024 [cited 2025 Aug 19];23(1):351-66. Available from: https://seer.ufu.br/index.php/reveducpop/article/view/71528

2. Silva RMKA, Santos BS, Silva MM, Rondon MFH, Holanda EF. Implantação de uma horta com plantas medicinais em uma estratégia de saúde da família. Saud Colet [Internet]. 2024 [cited 2025 Aug 19];14(91):13359-68. Available from: https://revistasaudecoletiva.com.br/index.php/saudecoletiva/article/view/3169
3. Rodrigues ML. New and old challenges for knowledge on medicinal plants and phytotherapy in the Family Health Strategy after the COVID-19 pandemic. Horiz Antropol [Internet]. 2024;30(69):e690409. DOI: https://doi.org/10.1590/1806-9983e690409
4. Brazil. Ministry of Health. Política nacional de práticas integrativas e complementares no SUS: atitude de ampliação de acesso [Internet]. Brasília: Ministry of Health; 2014 [cited 2025 Aug 19]. Available from: https://bvsms.saude.gov.br/bvs/publicacoes/politica_nacional_praticas_integrativas_complementares.pdf
5. Brazil. Ministry of Health. National Policy on Medicinal Plants and Herbal Medicines. Brasília: Ministry of Health; 2006 [cited 2025 Aug 19]. Available from: https://bvsms.saude.gov.br/bvs/publicacoes/politica_nacional_fitoterapicos.pdf
6. Aguiar J, Kanan LA, Masiero AV. Práticas integrativas e complementares na atenção básica em saúde: um estudo bibliométrico da produção brasileira. Saude Debate [Internet]. 2019 Oct [cited 2025 Aug 19];43(123):1205-18. Available from: https://doi.org/10.1590/0103-1104201912318
7. Figueredo CA. A implementação da fitoterapia no SUS de João Pessoa-PB [thesis on the Internet]. Rio de Janeiro: Escola Nacional de Saúde Pública Sergio Arouca; 2013 [cited 2023 Feb 19]. Available from: https://www.arca.fiocruz.br/bitstream/handle/icict/22870/ve_Climerio_Figueredo_ENSP_2013.pdf?sequence=1&isAllowed=y
8. Nascimento Júnior BJ, Tínel LO, Silva ES, Rodrigues LA, Freitas TON, Nunes XP et al. Avaliação do conhecimento e percepção dos profissionais da estratégia de saúde da família sobre o uso de plantas medicinais e fitoterapia em Petrolina-PE, Brasil. Rev Bras Plantas Med [Internet]. 2016 Mar [cited 2025 Aug 19];18(1):57-66. Available from: https://doi.org/10.1590/1983-084X/15_031
9. Rosa C, Câmara SG, Béria JU. Representações e intenção de uso da fitoterapia na atenção básica à saúde. Cien Saude Colet [Internet]. 2011 Jan [cited 2025 Aug 19];16(1):311-8. Available from: https://doi.org/10.1590/S1413-81232011000100033
10. Thiago SDCS, Tesser CD. Percepção de médicos e enfermeiros da Estratégia de Saúde da Família sobre terapias complementares. Rev Saude Publica [Internet]. 2011 Apr [cited 2025 Aug 19];45(2):249-57. Available from: https://doi.org/10.1590/S0034-89102011005000002
11. Veiga Junior VF. Estudo do consumo de plantas medicinais na Região Centro-Norte do Estado do Rio de Janeiro: aceitação pelos profissionais de saúde e modo de uso pela população. Rev Bras Farmacogn [Internet]. 2008 Jun [cited 2025 Aug 19];18(2):308-13. Available from: https://doi.org/10.1590/S0102-695X2008000200027
12. Patrício KP, Minato ACDS, Brolio AF, Lopes MA, Barros GRD, Moraes V et al. O uso de plantas medicinais na atenção primária à saúde: revisão integrativa. Cien Saude Colet [Internet]. 2022 Feb [cited 2025 Aug 19];27(2):677-86. Available from: https://doi.org/10.1590/1413-81232022272.46312020
13. Silva CMDC, Meneghim MDC, Pereira AC, Mialhe FL. Educação em saúde: uma reflexão histórica de suas práticas. Cien Saude Colet [Internet]. 2010 Aug [cited 2025 Aug 19];15(5):2539-50. Available from: https://doi.org/10.1590/S1413-81232010000500028

14. Giovanella L, Franco CM, Almeida PF. Política Nacional de Atenção Básica: para onde vamos? Cien Saude Colet [Internet]. 2020 [cited 2025 Aug 19];25(4):1475-82. Available from: https://doi.org/10.1590/1413-81232020254.01842020

15. Morosini MVGC, Fonseca AF, Baptista TWF. Previne Brasil, Agência de Desenvolvimento da Atenção Primária e Carteira de Serviços: radicalização da política de privatização da atenção básica? Cad Saude Publica [Internet]. 2020 [cited 2025 Aug 19];36(9). Available from: https://doi.org/10.1590/0102-311X00040220

16. L'Abbate S, Mourão LC, Pezzato LM, editors. Análise institucional & saúde coletiva. São Paulo: Hucitec; 2013.

17. Guimarães CF, Silva RAN. Devires e intensidades do coletivo na Saúde Coletiva. Physis [Internet]. 2016 Jul [cited 2025 Aug 19];26(3):939-59. Available from: https://doi.org/10.1590/S0103-73312016000300012

18. Passos E, Kastrup V, Escóssia L, editors. Pistas do método da cartografia: pesquisa-intervenção e produção de subjetividade. Porto Alegre: Sulina; 2009.

19. Rodrigues HBC. René Lourau na UERJ - análise institucional e práticas de pesquisa - apresentação. Mnemosine [Internet]. 2007 Dec [cited 2024 Jan 26];3(2). Available from: https://www.e-publicacoes.uerj.br/mnemosine/article/view/41317

20. Massini VS, Bedim BP, Fonseca-Filho RE. O turismo em Patrimônio da Penha (ES) e suas interfaces com o Parque Nacional do Caparaó. RBEcotur [Internet]. 2014 Nov [cited 2024 Jan 25];7(4). Available from: https://periodicos.unifesp.br/index.php/ecoturismo/article/view/6354

21. Gobbo SDA, Garcia RF, Amaral AAD, Eugenio FC, Alvarez CRDS, Laporti Luppi AS. Uso da terra no entorno do PARNA-Caparaó: preocupação com incêndios florestais. Floresta Ambient [Internet]. 2016 [cited 2024 Jan 25];23(3):350-61. Available from: https://doi.org/10.1590/2179-8087.110114

22. Carvalho LJ, Cerqueira FC, Moreira LL, Gardiman Junior BS. Caracterização morfométrica da microbacia hidrográfica do Ribeirão Santa Marta, Ibitirama-ES. Ifes Cienc [Internet]. 2023 [cited 2024 Jan 25];9(1):1-15. Available from: https://doi.org/10.36524/ric.v9i1.1844

23. Zornosa-Torres C, Augusto-Alves G, Lyra ML, Silva Júnior JCD, Garcia PCA, Leite F et al. Anurans of the Caparaó National Park and surroundings, southeast Brazil. Biota Neotrop [Internet]. 2020 [cited 2024 Jan 25];20(3). Available from: https://doi.org/10.1590/1676-0611-BN-2019-0882

24. Branco AFVC, Lima PVPSL, Medeiros Filho ESD, Costa BMG, Pereira TP. Avaliação da perda da biodiversidade na Mata Atlântica. Cienc Florest [Internet]. 2021 [cited 2024 Jan 25];31(4):1885-909. Available from: https://doi.org/10.5902/1980509853310

25. Oliveira VFD. A Estratégia Saúde da Família no estado de São Paulo: mecanismos e determinantes de difusão da política pública. Rev Sociol Polit [Internet]. 2023 [cited 2025 Aug 19];31. Available from: https://doi.org/10.1590/1678-98732331e009

26. Starfield B. Primary care: balancing health needs, services, and technology. 1st ed. Brasília: UNESCO, Ministério da Saúde; 2002.

27. Brazil. Ministry of Health. Secretariat of Health Care. Política Nacional de Humanização - PNH [Internet]. Brasília: Ministry of Health; 2013 [cited 2023 Nov 7]. Available from: http://bvsms.saude.gov.br/bvs/publicacoes/humanizasus_2004.pdf

28. Acioli S. Radicalizar as práticas de Educação Popular e Saúde. Interface (Botucatu) [Internet]. 2021 [cited 2025 Aug 19];25. Available from: https://doi.org/10.1590/Interface.200536

29. Pedrosa JIS. A Política Nacional de Educação Popular em Saúde em debate: (re)conhecendo saberes e lutas para a produção da saúde coletiva. Interface (Botucatu) [Internet]. 2021 [cited 2025 Aug 19];25. Available from: https://doi.org/10.1590/Interface.200190

30. Cecilio LCO, Carapinheiro G, Andreazza R, editors. Os mapas do cuidado: o agir leigo na saúde. São Paulo: Hucitec; FAPESP; 2014.

31. Merhy EE. Clínica comum: itinerários de uma formação em saúde. São Paulo: Hucitec; 2021.

32. Danilevicz VM. Semeaduras: uma cartografia na atenção primária em saúde. Psicol Soc [Internet]. 2020 [cited 2025 Aug 19];32. Available from: https://doi.org/10.1590/1807-0310/2020v32218672

33. Merhy EE. Health: the cartography of living labor. São Paulo: Hucitec; 2021.

34. Roza MMR, Barros MEB, Guedes CR, Santos Filho SB. A experiência de um processo de formação articulando humanização e apoio institucional no trabalho em saúde. Interface (Botucatu) [Internet]. 2014 [cited 2025 Aug 19];18(Suppl. 1):1041-52. Available from: https://doi.org/10.1590/1807-57622013.0199

35. Brazil. Ministry of Health. Política nacional de educação popular em saúde no SUS (PNEPS-SUS). Brasília: Ministry of Health; 2013.

36. Silva PHB, Barros LCN, Barros NF, Teixeira RAG, Oliveira ESF. Formação profissional em Práticas Integrativas e Complementares: o sentido atribuído por trabalhadores da Atenção Primária à Saúde. Cien Saude Colet [Internet]. 2021 Feb [cited 2025 Aug 19];26(2):399-408. Available from: https://doi.org/10.1590/1413-81232021262.40732020

37. Cock NROS, Vicente CR, Silva FH. Horta terapêutica e saúde bucal: desafios na utilização de plantas medicinais na promoção da saúde. Physis [Internet]. 2020 [cited 2025 Aug 19];30(4). Available from: https://doi.org/10.1590/S0103-73312020300419

38. Leme PAT, Bastos RA, Turato ER, Meneghim MDC. A clínica do dentista na Estratégia Saúde da Família: entre a inovação e o conservadorismo. Physis [Internet]. 2019 [cited 2025 Aug 19];29(1). Available from: https://doi.org/10.1590/S0103-73312019290111

39. Fonsêca GS, Junqueira SR, Botazzo C, Carvalho YM, Araujo ME, et al. A clínica do corpo sem boca. Saude Soc [Internet]. 2016 Dec [cited 2023 Jan 26];25(4):1039-49. Available from: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0104-12902016000401039&lng=pt&tlng=pt

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