LIFESTYLE MEDICINE IN THE PRACTICE OF HEALTH PROFESSIONALS IN RIVERINE FAMILY HEALTH

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Highlights: (1) Lifestyle Medicine pillars vary according to professional roles in the riverside PHC. (2) Social ties, sleep, and stress emerge as central axes in Lifestyle Medicine care. (3) Gaps in alcohol and drug management highlight the need for Lifestyle Medicine training.

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ABSTRACT

This study aims to analyze how Riverside Primary Health Care Unit professionals apply the principles of Lifestyle Medicine in their daily practice. A cross-sectional exploratory study was conducted, using a qualitative approach. The sampled participants were selected from the staff of the Health Unit. They consisted of 16 professionals from the Riverside Family Health Unit, including community health agents, nursing technicians, and higher-level professionals, who participated in four focus groups. Data were collected using a semi-structured interview guide with open-ended questions, applied during focus group meetings. Data analysis was conducted using the IRaMuTeQ software to perform Content Analysis, following the Reinert Method. In the discourse, the speeches and knowledge applied in the work of health professionals were identified, varying according to their role in the Riverside Health Care Center's health team. The discourse of higher-level professionals focuses on technical issues, while nursing techniques and community health agents focus on user engagement approaches. In the discourse, themes such as sleep, stress, and social connections are strongly related, as well as healthy eating and physical activity. Approaching sensitive topics such as alcohol and toxic Substances seems to be challenging, indicating potential gaps in knowledge or difficulties in structuring effective interventions in this area. Primary care teams need to broaden their understanding of existing management methodologies for self-care education, going beyond professional technical knowledge, and considering the health determinants that interact with individual, familial, and community knowledge.

Keywords: Lifestyle Medicine, health promotion assessment, primary health care, rural community.

INTRODUCTION

Lifestyle Medicine (LM) is an evidence-based clinical approach oriented toward the promotion of healthy living. It plays an important role in medical education and in primary care practice by indicating key competencies required of health professionals. The effective adoption of Lifestyle Medicine principles depends on the active engagement of both professionals and

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users, demanding team-based action plans tailored to the specific circumstances of each context[1].

The value of maintaining close ties between health services and the population is supported by the Principle of Efficiency in Public Administration and has been reinforced since the establishment of the Family Health Program in 1994. Primary Care, through Basic Health Units (BHU), serves as the main point of first contact and coordination within the Health Care Network (RAS), organizing and integrating the services available to users[2].

Limited access to health education, combined with broader social determinants, represents a significant challenge to individual autonomy and self-care. From the perspective of the Dahlgren and Whitehead Model, understanding and assessing the health activities carried out within the Riverside Family Health Strategy is essential for identifying how multiple determinants operate in these communities and how primary care can strengthen their capacity for care, particularly among socially vulnerable populations[3].

Reports from the World Health Organization indicate that Noncommunicable Diseases (NCDs) are the leading cause of death among individuals aged 30 to 70, directly affecting life expectancy and quality of life worldwide. Cardiovascular diseases, cancer, diabetes, and chronic respiratory illnesses underscore the need for preventive and health-promoting approaches[4,5].

In this context, examining healthy lifestyles within Primary Health Care (PHC) can support the development of actions aimed at reinforcing healthy practices and preventing the onset of chronic conditions. This requires a broad concept of healthy living that is both accessible and effective for at-risk populations[6].

The Strategic Action Plan for Confronting Chronic Noncommunicable Diseases and Conditions in Brazil 2021–2030, developed by the Ministry of Health (the Dant Plan), highlights the role of PHC in meeting national health goals. Among its measures are the training of health professionals for early identification of NCD risk factors and the implementation of both individual and collective initiatives within team territories[7].

A comprehensive understanding of NCDs requires consideration of the social determinants of health, including living, working, and aging conditions. These determinants

often hinder healthy choices, increasing health expenditures and aggravating chronic diseases. Within this scenario, the principles of Lifestyle Medicine gain relevance and urgency[8].

As described by Lianov and Johnson, Lifestyle Medicine is an evidence-based clinical approach that encourages the adoption of healthy habits[1]. The field has expanded rapidly as it recognizes the role of lifestyle in managing and reversing chronic diseases[9]. It is well established that personal habits and behaviors are strongly associated with the emergence and course of such conditions. LM seeks to provide a foundation for primary health care[9], grounded in principles such as regular physical activity, balanced diet, weight management, smoking cessation, stress management, moderate alcohol consumption, maintenance of healthy relationships, and adequate sleep[1,10,11]. Its focus lies especially in the application of these strategies to prevent and manage chronic diseases such as heart disease, diabetes, obesity, and cancer[10].

In 2014, the Brazilian Unified Health System created the Riverside Family Health Teams (RFHT) to operate within Primary Health Care across municipalities in the Legal Amazon and the Pantanal region of Mato Grosso do Sul[12]. These teams are linked to Basic Health Units (BHU) located in areas accessible primarily by river transport. Adequate vessels are essential for their activities, given the dispersed distribution of the population[12].

The RFHT are composed of multidisciplinary professionals, including general practitioners or family physicians, nurses, nursing assistants or technicians, community health workers, and, depending on the team type, oral health professionals and microscopists[12]. These teams are responsible for promoting user autonomy within the Unified Health System (SUS) through health promotion and prevention actions, aiming to reduce demand for high-complexity services. A current challenge is integrating the principles of Lifestyle Medicine into everyday Primary Health Care practices, adapting them to local needs.

A study conducted in the state of Amazonas on primary care in rural and riverside areas of the Amazon region indicates that, particularly over the last three years, coverage has expanded in most municipalities analyzed. The implementation of Family Health teams in rural, fluvial, and riverside communities has contributed to increasing access to health services for a large portion of this population, although coverage remains insufficient for many residents[13].

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The present study was carried out in Barcarena, Pará, in the Ilha das Onças region, which is characterized by high social vulnerability according to the Social Vulnerability Index (SVI) of the Institute for Applied Economic Research (IPEA)[14]. The IPEA report Dynamics of Violence in the Brazilian Territory: Pará shows that between 2018 and 2020, 101 of the 144 municipalities in the state recorded average homicide rates higher than the national average of 24.3 per 100,000 inhabitants. Barcarena recorded a rate of 48.7 during the period, indicating the significant presence of lethal violence in the region[15].

Although geographically close to Belém, access to the island "Ilha das Onças" is exclusively by small river vessels. There is no public transportation for residents except for boats used to transport children to school. The community lacks public security facilities and urgent health care units. Local income is derived mainly from açaí extraction, an activity both hazardous and seasonal, and from social benefits. The Riverside BHU serving the community operates next to the local primary school, and both depend on diesel generators during working hours, constituting the only public services available on the island.

According to the lead researcher, who also serves as a physician in the RFHT, the health team faces multiple challenges, particularly community health workers who interact daily with residents. These include transportation constraints that limit social interaction among families and neighbors; poor internet connectivity; limited availability of healthy foods for local purchase; and difficulties in establishing spaces for dialogue focused on health education and on offering alternatives to support healthy living. Together, these issues represent social determinants of health for the population of Ilha das Onças.

Considering this context, the study seeks to draw on the accounts of the Riverside BHU health team to address the following guiding question: How do PHC professionals in a riverside BHU perceive and disseminate the pillars of Lifestyle Medicine among basic care users?

Accordingly, the aim of this research is to analyze how professionals in a riverside BHU apply Lifestyle Medicine principles in their daily practice. In addition, the study examines their perceptions of user needs and identifies gaps in this dialogue, exploring more suitable ways to address them through continuing health education.

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The relevance of this study lies in its methodological capacity to understand the demand for improved practices related to the application of Lifestyle Medicine principles among riverside communities, particularly through the guidance and support provided by the Riverside Family Health team.

METHOD

A cross-sectional exploratory study was conducted using a qualitative approach. To collect data, Focus Group sessions were held with four groups of healthcare professionals from the unit. Data analysis was performed using the IRaMuTeQ software to apply Content Analysis, following Reinert's Method.

The study was conducted at the Riverside Primary Healthcare Unit (BHU Ribeirinha) located in the micro-area Furo do Nazário, on Ilha das Onças, part of the municipality of Barcarena and neighboring Belém do Pará. The assigned population includes the residents of the island, totaling 799 families and approximately 2,378 users, according to the unit's registration data. The territory assigned to the unit is divided into 12 micro-areas, each overseen by a Community Health Agent (CHA).

The healthcare team consists of 3 nursing technicians, 1 physician, 2 nurses, 1 nutritionist, 2 dentists, 5 administrative assistants, 4 gatekeepers, 12 CHAs, 1 boat operator, and 1 general services employee. Staff travel is carried out via river transport, averaging 25 minutes. CHAs use rowing canoes provided by the municipality or privately owned motorboats for their activities.

The research was approved by the Research Ethics Committee (CEP) of CESUPA, Belém – Pará – Brazil, under CAAE No. 65001722.2.0000.5169 and Opinion No. 5.771.416/2024, on 11/22/2022. A Free and Informed Consent Form (FICF) was used due to the direct contact with participants.

A total of 19 out of the 32 unit staff members were invited to participate, including 11 CHAs, 2 nurses, 2 dentists, 1 nutritionist, and 3 nursing technicians, as they are directly involved in patient care and follow-up. The unit's physician served as the moderator during the

focus group sessions. Of the invited participants, 16 agreed to take part in the study, representing a participation rate of 84.21% (16/19) relative to the intended participant pool. Table 1 presents the characteristics of each focus group participant, allowing greater understanding of their knowledge levels regarding the regulations they follow.

Table 1 – Focus Groups, Roles, and Participant Codes

Focus Group	Role	Years Since Graduation	Years of Experience in Primary Care
Group 1	Higher-level Professional – Nurse	16	15
Group 1	Higher-level Professional – Nutricionist	6	5
Group 1	Higher-level Professional – Odontologist	21	20
Group 2	Community Health Agent	-	11
Group 2	Community Health Agent	-	18
Group 2	Community Health Agent	-	3
Group 2	Community Health Agent	-	11
Group 2	Community Health Agent	-	21
Group 2	Community Health Agent	-	3
Group 2	Community Health Agent	-	3
Group 3	Nursing Technician	31	13
Group 3	Nursing Technician	15	12
Group 3	Nursing Technician	26	26
Group 4	Community Health Agent	-	3
Group 4	Community Health Agent	-	17
Group 4	Community Health Agent	-	21

Source: Research Data

The unit's staff members were organized into three categories, considering criteria such as educational level and the nature of their work inside or outside the unit. Four Focus Group meetings were conducted with the following categories: the first category included three higher-level professionals (a nurse, a nutritionist, and a dentist); the second included 10 Community Health Agents; and the third included three technical-level professionals (all nursing technicians).

Before each meeting, a formal explanation of the procedures was provided, detailing expectations and guiding participants on how to engage actively in discussions. All conversations were recorded in audio and video, following a predefined semi-structured interview guide with open-ended questions addressing each principle of Lifestyle Medicine,

including diet, physical activity, sleep, stress control, sBHUtance use, and social interaction. Recordings were later transcribed, and the textual corpus was prepared for content analysis.

Data collection occurred in May 2023, using the same script for all groups. Group 1 consisted of higher-level professionals, Group 3 of nursing technicians, and Groups 2 and 4 were composed of CHAs, with the number of participants based on their availability and methodological considerations for effective focus groups.

The groups of Community Health Agents (CHA) play a relevant role, as they contribute to ensuring that the team engaged in promoting lifestyle changes addresses community needs in a sensitive and effective manner. Studies indicate that CHAs adopt a multifaceted educational approach, including home visits, active listening, and personalized actions, strengthening community bonds and promoting self-care[16], especially in vulnerable settings such as riverside communities.

The ideal size for a focus group, ranges from six to eight participants, excluding researchers. However, focus groups may be successful with at least three and up to fourteen participants[17]. Random selection is not always the most suitable strategy.

It is essential to assess whether each participant can contribute meaningfully and feel comfortable expressing their views[18]. For this reason, the groups were organized according to professional roles to avoid dominance or overshadowing of certain perspectives.

A focus group session lasting 90 to 110 minutes is considered appropriate[19]. The meetings lasted 72, 158, 73, and 100 minutes, proportional to the number of participants in each session.

In this research context, the ideas presented were considered saturated within each focus group session. Focus Groups leverage the human tendency to form opinions and attitudes during social interaction. The moderator, who was also the researcher, sought to create an environment that encouraged participants to express a variety of perceptions and viewpoints. The goal was not to reach consensus[20]. Qualitative research aims to interpret events within their natural settings and to understand meaning based on participants' perspectives. It deals with non-numerical data to explore the views, experiences, or opinions of the study population[21].

The data collected were transcribed and analyzed using methodological tools from Content Analysis, applicable to diverse types of discourse. The interpretative process oscillates between objectivity and subjectivity, leading to "critical unveiling", which is the primary focus of Content Analysis[22].

Initially, a thematic and frequency-based technique was applied, as it is particularly useful in early stages of material examination. The Reinert Method proposes a Descending Hierarchical Classification (DHC) of the textual corpus. The goal of DHC is to obtain classes of text segments that share similar vocabulary and differ from segments belonging to other classes[23].

For sequence analysis, IRaMuTeQ 0.7 was used, a free open-source software anchored in the R statistical environment. It enables different types of textual data analysis, from simple to multivariate. IRaMuTeQ organizes vocabulary distribution, such as in Similarity Analysis, allowing various graphical representations, including word clouds[24].

Also, IRaMuTeQ generates a DHC following Reinert's proposal. This analysis is based on lexical proximity and the idea that words used in similar contexts belong to the same lexical world and are part of specific representational systems. Text segments are classified according to their vocabulary, and sets of terms are partitioned based on word stem frequency[23].

The textual corpus consisted of the consolidated transcript of all four focus group sessions. The analyses used four variables: Theme, Focus Group Meeting, Role in the BHU, and Participant. To comply with IRaMuTeQ requirements, the following coding was applied: research participants (subj_1 to subj_16), themes (theme_1 to theme_9), focus group meetings (group_1 to group_4), and roles (func_1 to func_3). The themes discussed were: (1) Healthy Eating, (2) Healthy Lifestyle, (3) Physical Activity and Exercise, (4) Sleep, (5) Stress, (6) Alcohol and Toxic Substance Use, (7) Social Connections, (8) Topics for Health Managers, and (9) Health Education.

Before analysis, the corpus was pre-processed in IRaMuTeQ to remove informal vocabulary and jargon. The final corpus included active forms such as verbs, nouns, and adjectives, along with non-recognized forms, which may not have been correctly lemmatized

due to dictionary limitations. Adverbs were excluded, as their heavy use in local dialects hindered contextual interpretation.

The corpus was subjected to three analyses in IRaMuTeQ: (i) Specificities Analysis, (ii) Reinert Method and Correspondence Factor Analysis (CFA), and (iii) Similarity Analysis. Additionally, a word cloud was generated to complement understanding of the most recurring terms in the corpus.

RESULTS AND DISCUSSION

The analysis of the textual corpus, composed of 135 texts, revealed a total of 33,083 occurrences and 2,180 distinct forms. Of these, 903 are hapax, meaning words that appear only once in the corpus, representing 2.73% of the occurrences and 41.42% of the forms. The analysis identified 947 text segments, of which 896 (94.61%) were used by IRaMuTeQ. In addition, 1,922 active forms and 247 supplementary forms were identified.

The specificity analysis was applied to the variable function, which allowed identifying the terms most frequently present in the speech of each group (higher-level professionals, community health workers, and nursing technicians). The main words in the discourse of each function are presented in Table 2.

Table 2 – Most frequent forms in the discourse of each professional role

| Frequency	High Level Func_1	CHA Func_2	Nursing Technicians Func_3
1st	Sleep	Area	See
2nd	Use	Guidance	Then
3rd	More	Only	Low
4th	Issue	CHA	Believe
5th	Drug	Talk	Role
6th	Physical	Mother	Life
7th	Stimulate	When	Guide
8th	Duty	Child	Wake uo
9th	Important	Ask	Want
10th	Necessary	Create	Island

Source: Research Data

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When examining the results of the specificity analyses in greater depth, the absence of overlap in the most prevalent terms used by participants across the examined functions becomes evident. This observation highlights differences in the scores derived from the hypergeometric law for each list of forms generated in relation to the functions, suggesting that the discourses associated with each group are notably distinct, despite being produced through the same research instrument and sharing a common context, while occupying different responsibilities in patient health care.

In riverside practice, it can be observed that lifestyle medicine (LM) requires mediation carried out by community health agents and other health professionals, using accessible language and feasible practices adapted to the community's available resources.

Figure 1 - Lexical distance between health professionals' discourse according to their role.
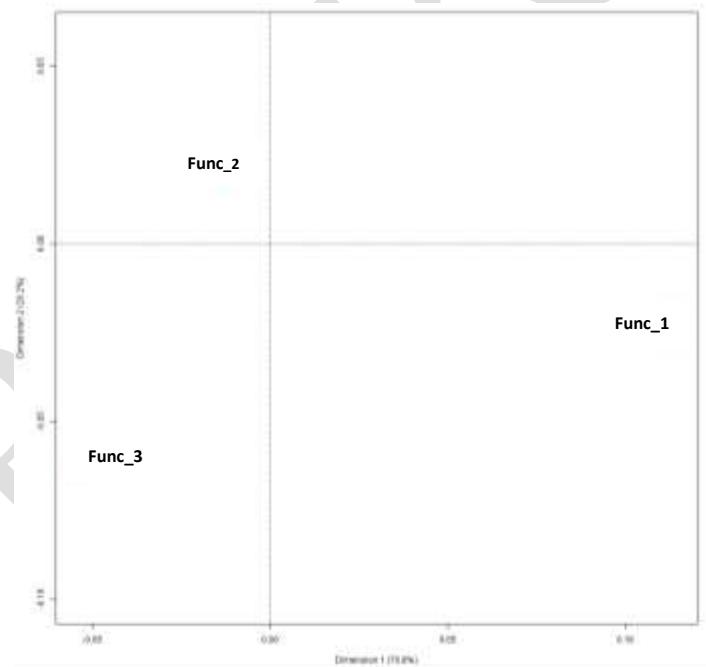
Source: Data Research - IRaMuTeQ

This distance can be observed in the Correspondence Factor Analysis (Figure 1) based on the variable function. The discourse of higher-level professionals (Func_1) reveals a more

technical approach to the topics, directly mentioning specific aspects such as 'sleep', 'drugs', and 'physical activity'. It also emphasizes the relevance of these themes and the ways to address them, using terms such as 'should', 'important', 'necessary', and 'encourage', as illustrated by: "...when the individual already has the habit established, when they are already a drug user, it is **necessary** for the work to be more specialized, and we cannot meet this patient's needs" (subj_01).

On the other hand, the statements of community health workers (Func_2) show greater emphasis on the manner of approaching the issue, the person who is the subject of the approach, and the object of that approach, through the use of terms such as 'guidance', 'talk', 'ask', 'mother', and 'child'. The use of the word 'create' demonstrates an inventive attitude toward changing reality, with expectations of improving the living conditions of riverside populations, as in: "...I was paying attention to what you were **talking** about the suspended garden; it is a great way for us to try to **create** (literally 'criar' in Portuguese), in other communities, a healthier habit" (subj_05); "nowadays no one worries about **raising** (in Portuguese 'criar') a chicken, **raising** a pig, planting any fruit" (subj_03); and "so they can look more affectionately at the island community, because in the city they **build** (also means 'criar' in Portuguese) squares, sports courts, gyms, and here on the islands we have no public spaces to encourage people to practice sports" (subj_09).

Finally, in the discourse of nursing technicians (Func_3), terms related to modes of action are also present, such as 'guide', as in: "...since it is a riverside area, I would **guide** them to walk because there is space and land available, and swimming because of the proximity to the river; in addition, I would recommend small exercises at home, like stretching" (subj_11).

The term 'see' reflects numerous lived experiences related to the investigated themes, as illustrated in the segments: "...when they go, they get stressed because they want it to be quick, and it's not possible; there are many patients, and it cannot be done quickly, so I already **see** their stress while waiting for care" (subj_13), or "... I **saw** that she made an effort to follow what was explained to her; she realized it was truly a better lifestyle for her" (subj_12).

The term 'low', for the nursing technicians, carries a predominantly negative connotation in most of its occurrences, as in 'low weight', 'low resistance' etc. The term

'believe' is associated with a pattern of avoiding definitive statements, instead emphasizing the individuality of these assertions: "... it causes many diseases, and even if you say 'drink socially' drinking socially still means you are ingesting alcohol. So, I **believe** that, from the perspective of a healthy life, it must be removed entirely." (suj_12)

Meanwhile, 'to wake up' is linked to the theme of sleep and is mainly associated with the idea that island residents wake up early, although some statements from CHAs indicate that the arrival of cell phone signal has partly changed this reality: "... **sleep** is essential. I went through a very difficult period at home; we didn't know that a family member was not able to sleep, and the **cellphone** was the reason for the lack of **sleep**" (suj_16). This illustrates the impact of technological resources on the lifestyle of the riverside population of Ilha das Onças.

These findings reinforce the role of the ESFR team in adapting the pillars of Lifestyle Medicine (LM) to the riverside context, as proposed by Lianov and Johnson, who argue that personalized strategies are necessary to achieve sustainable lifestyle changes[1].

The results of the Descending Hierarchical Classification (DHC) of active forms identified six word classes, named as follows: Class 1 – Health Education; Class 2 – Stress; Class 3 – Social Connections and Sleep; Class 4 – Alcohol and Toxic Substances; Class 5 – Physical Activity and Exercise; and Class 6 – Diet/Nutrition.

According to the representation in Figure 2, Class 3 was the most representative, with 192 (21.4%) text segments, followed by Class 1 with 181 segments (20.2%), Class 5 with 168 segments (18.8%), Class 2 with 137 segments (15.3%), Class 6 with 110 segments (12.3%), and, lastly, Class 4 with 108 segments (12.1%).

In the dendrogram, it is observed that the process of text (re)grouping occurs across four levels, culminating in six final classes. The proximity of the classes in relation to the branching points indicates the lexical affinity among them[25]. The closer the categories are to the bifurcations, the greater the perceived lexical affinity.

Figure 2 - Dendrogram – Descending Hierarchical Classification.
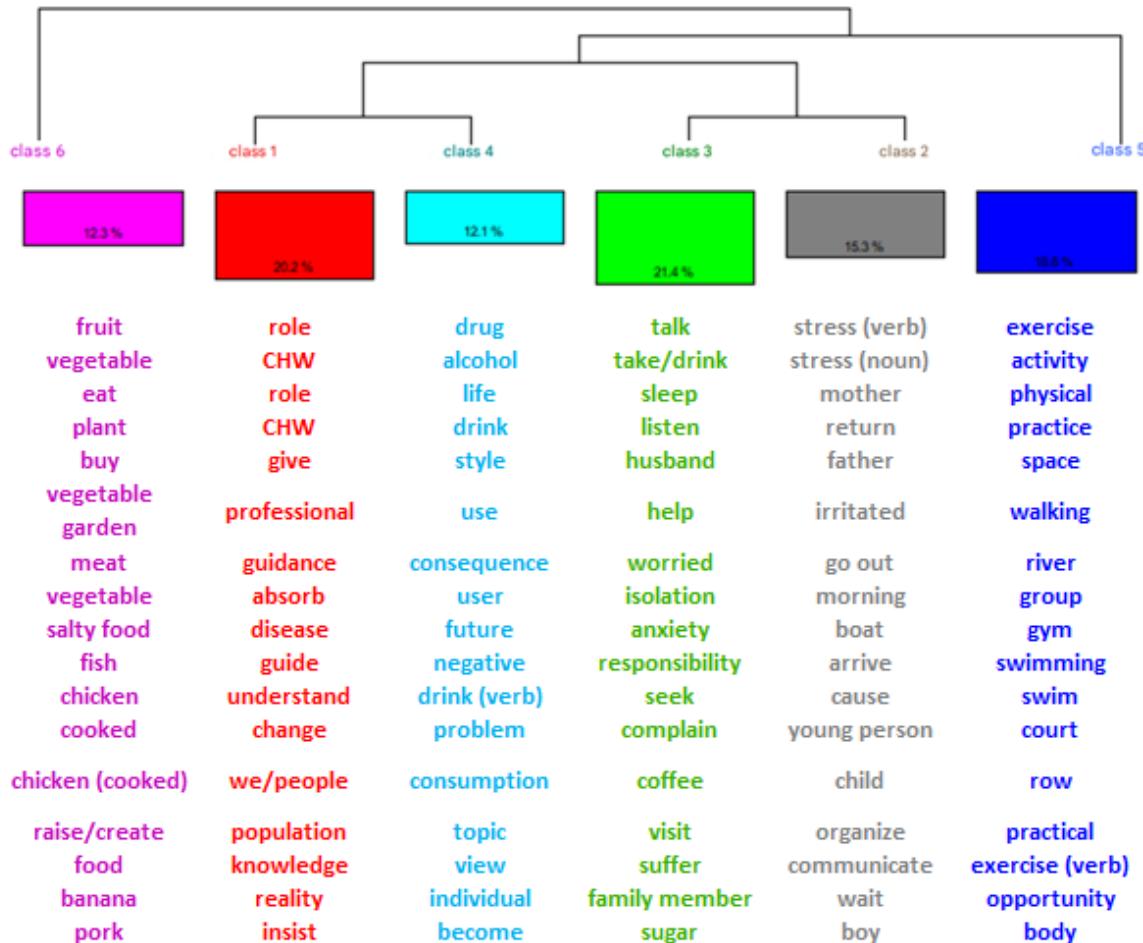
Source: Reseach Data - IRaMuTeQ

The Correspondence Factor Analysis (CFA) revealed five factors explaining 25.98%, 24.08%, 20.14%, 15.62%, and 14.18% of the model, respectively. The two main factors, which together account for 50.06% of the model, are represented on the X and Y axes of the Cartesian plane in Figure 3.

On the X-axis, which accounts for 25.98% of the distribution of the textual corpus, Class 6 (negative X-axis) and Class 5 (positive X-axis) occupy distinct quadrants, although both are positioned on the negative side of the Y-axis, which corresponds to 24.08% of the distribution

of the textual corpus. Classes 1 (Health Education), 2 (Stress), 3 (Social Connections and Sleep), and 4 (Alcohol and Toxic Substances) predominantly occupy central positions.

Additionally, Classes 1, 2, and 4 are mainly located on the positive side of the Y-axis. Some words are positioned at the intersection of the X and Y axes, represented by Classes 1 and 2.

Figure 3 – Correspondence Factor Analysis – CFA
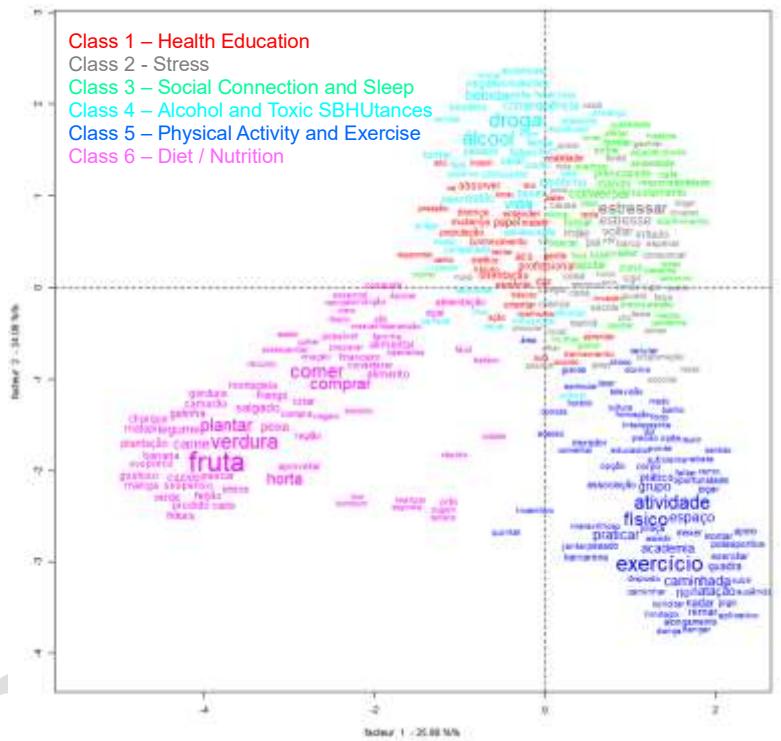

Source: Research Data - IRaMuTeQ

The combination of the X and Y axes provides a two-dimensional perspective that differentiates the textual corpus into three distinct lexical domains. The first, located in the lower-right quadrant, is characterized by a positive X-axis and negative Y-axis, revealing World 1 – Physical Activity and Exercise, represented by Class 5. The second, situated in the lower-left quadrant, is defined by negative X and Y axes, outlining World 2 – Food, exemplified by Class 6.

Finally, the third lexical world, central along the X-axis and positive along the Y-axis, is predominantly concentrated in the transition between the upper quadrants, encompassing Classes 1 – Health Education, 2 – Stress, 3 – Social Connections and Sleep, and 4 – Alcohol and Toxic Substances.

The Correspondence Factor Analysis (CFA) of the variable Theme is represented on the X and Y axes of the Cartesian plane in Figure 4, highlighting the distance between the nine themes present in the textual corpus.

Figure 3 - Distância entre os temas de acordo com os discursos dos profissionais de saúde
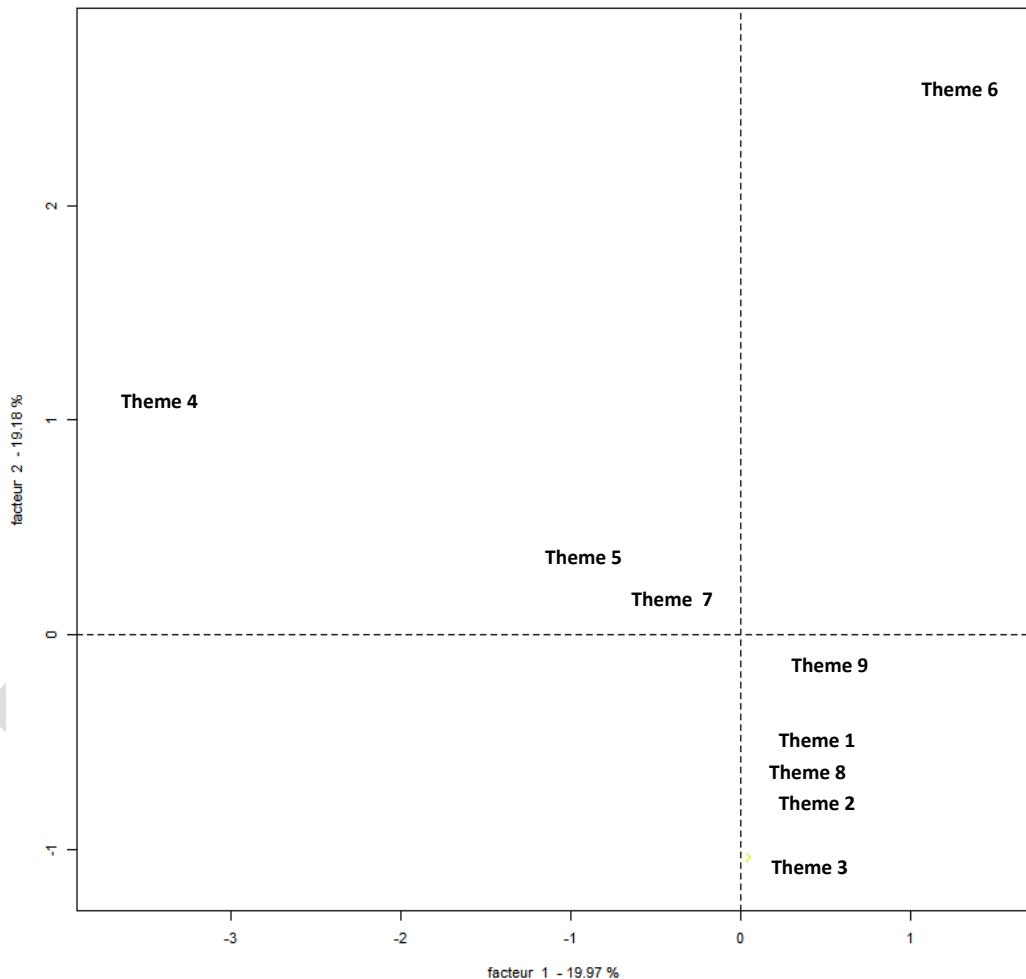
Source: Research Data – IRaMuTeQ

Three aspects are emphasized in this distribution. First, Themes 4 (Sleep) and 5 (Stress), although located in the upper-left quadrant (negative X-axis and positive Y-axis), display a gap between them, while Theme 7 (Social Connections), also within this quadrant, is positioned closer to Theme 5.

These findings support the idea of a reciprocal relationship between stress and sleep. One study demonstrated that individuals deprived of sleep show 60% greater activity in the amygdala, the brain region responsible for regulating fear and aggression in response to environmental stimuli[26]. Similarly, stress is one of the main contributors to insomnia, alongside factors such as genetic influences, family history of insomnia, female gender, and environmental stress[27].

This relationship is reinforced by reflections from two professionals, based on statements such as: "... in addition, I observe that most of them [community residents] also have impaired sleep due to concerns for various reasons. Men complain more about the fear of assaults and theft of their boats, whereas women complain more about family-related worries, such as their children going out to sell açaí [in the markets of Belém]" (subj_02); "... older adults are very worried about their children, and these are issues beyond our capacity to resolve, meaning that interrupting sleep will not help with the problem, and will only cause harm to their health" (subj_02); and "many women cannot sleep due to concerns about their children, one of these reasons being drug use, which has increased on the island and affects mental health and sleep" (subj_01).

However, the connection between sleep and stress was not broadly observed in the participants' statements. This indicates that, despite being supported by numerous studies, the perception of the relationship between stress and sleep still requires further development among the professionals of the primary care unit analyzed.

Theme 7 (Social Connection), positioned near Theme 5 (Stress) and subsequently Theme 4 (Sleep), is consistent with the literature, as social relationships strongly influence an individual's emotional well-being and contribute to long-term positive effects on physical and mental health, reducing mortality risk[28]. Furthermore, a study with 479,054 men and women in

the United Kingdom showed that social isolation appears to remain an independent risk factor for mortality following an acute myocardial infarction or stroke[28].

Among the participants, the most recurrent words were 'family' and 'conversation', indicating that, for the professionals, family contact is the primary form of social connection for community residents.

Proximity between professionals and patients also emerged in statements such as: "... some patients come to talk to us in such a distressed state that the consultation does not even happen; the person cries a lot and vents about their experiences, and that helps" (subj_03); "I see that older adults on the island are very needy, even with us; sometimes they arrive wanting to talk, it is a simple evaluation, and they want to talk for a long time" (subj_12); "... sometimes we realize they are not there for a consultation, they just want to talk, to vent; many people are not patient enough to truly listen, they are physically present but not truly hearing the other's distress" (subj_02); and "... everyone is going in different directions, doing their own work, and for those who need a little attention to talk or vent about some worry, finding an opportunity to talk is a way to avoid reaching a state of isolation and discouragement" (subj_14).

The lack of social connections therefore appears related to feelings of stress and depression. Most evidence-based interventions come from tertiary efforts directed at the most severely affected individuals. However, within public health interventions, tertiary efforts are the costliest and least effective; therefore, greater attention should be dedicated to primary and secondary prevention[28].

In the United States, for example, the Department of Health and Human Services, considering the implications of social isolation and loneliness for public health, recommended establishing a national resource center dedicated to gathering evidence, training, and best practices on social isolation and loneliness, including among older adults and at-risk populations[30]. The richness of the statements shows that professionals are attentive to this issue in their daily interactions with patients, but consistent initiatives involving managers, professionals, and the community still need to be strengthened.

Next, Theme 6 (Alcohol and Toxic Substances) appears isolated in the upper-left quadrant (positive X-axis and positive Y-axis), with no proximity to the other themes. One

hypothesis for this lexical distance is the lack of knowledge about the topic or the professionals' limited or unstructured approach to it.

Addressing alcoholism, excessive food consumption, or the use of toxic substances is challenging for various reasons. The literature shows that unhealthy repetitive habits are sustained by a trigger–behavior–reward mechanism[31]; that is, something triggers the need to consume food or substances, consumption occurs, and momentary satisfaction follows.

Additionally, addressing users or their families about these issues can generate tension in the relationship with health professionals, as seen in the statement: "... if we address it directly, they think we are creating conflict; we have many problems with drugs here on the island, it is already a widespread issue in my area, and there are children using drugs, I know because I have seen it" (subj_15). This is consistent with the Dahlgren & Whitehead Model, which highlights how social determinants interfere with the implementation of health practices[3].

According to Rosenstock and Neves, professionals working in Primary Care have a unique ability to catalyze significant change through direct interaction with the communities they serve[32]. Notably, nurses on the team, due to their close relationships with community members, can identify issues related to psychoactive substance use more deeply. Through knowledge of the patient's history and consumption patterns, these professionals can provide individualized support and foster initial awareness, forming the basis for relevant care interventions.

Statements regarding alcohol and other toxic substances also pointed to possible ways of addressing dependency more effectively: "... this is what we need to focus on, helping parents understand that they need to talk to adolescents about drug use, because raising awareness among adults about the dangers of drug use is more difficult" (subj_01); and "... it is necessary to promote awareness sessions about drugs because many parents have no access to these discussions; that is, they cannot educate about something they do not know, which is why educational talks are needed on the island" (subj_03).

Lastly, in the lower-right quadrant (positive X-axis and negative Y-axis), the remaining themes are concentrated. Themes 9 (Health Education), 8 (Agendas for Health Managers), and 2 (Healthy Lifestyle) indicate not only experiences and perceptions but also reflect expectations

for actions within the Healthy Lifestyle context. They are most closely connected, within the same quadrant, to Themes 1 (Healthy Eating) and 3 (Physical Activity and Exercise).

Thus, both the potential agenda for municipal health managers and the learning needs identified by the professionals revolve around the themes of Healthy Eating and Physical Activity and Exercise. This is reflected in statements such as: "... I would bring up the issue of building an outdoor gym or public squares, as these do not exist on our island" (subj_07); "... one option is to create a public square, a sports court, and hire a physical education professional to work with us" (subj_14); and "... the government is the easiest means to achieve healthy eating because it can provide financial support to help communities with community gardens" (subj_10).

For the similarity analysis, only words with a minimum frequency of 20 occurrences were considered. This threshold was established to ensure a coherent interpretation of the resulting graph.

Figure 5 highlights the maximum tree centered on the term '*gente*'. In the context of the analysis, this term does not refer to 'people' in the literal sense, but rather to the colloquial expression *'a gente'* which in Brazilian Portuguese functions as a first-person plural pronoun 'we'. Its prominence reflects the intrinsic role of health professionals in guiding and educating patients on Lifestyle Medicine. This use appears in excerpts such as: "…we have to provide guidance according to what **we** are able to offer, based on our knowledge" (subj_03); "…açaí, banana, and mango, all of these **we** see as good for them" (subj_12); "…sometimes when **we** point things out and contrast them with families' real eating habits, many mothers become aware" (subj_14).

This central branch is connected to another significant segment built around the term *'pessoa'* (literally 'person' or 'people'), which, in contrast to *"a gente,"* denotes the individual who receives or is responsible for carrying out the recommendations offered by health professionals. This is evident in excerpts such as: "…**people** are not used to drinking water, so we have to encourage them to drink more" (subj_01); "…the **person** listens, and I position myself carefully, so he doesn't think I want to boss him around" (subj_14).

Figure 5 – Similarity Analysis (terms in Portuguese)
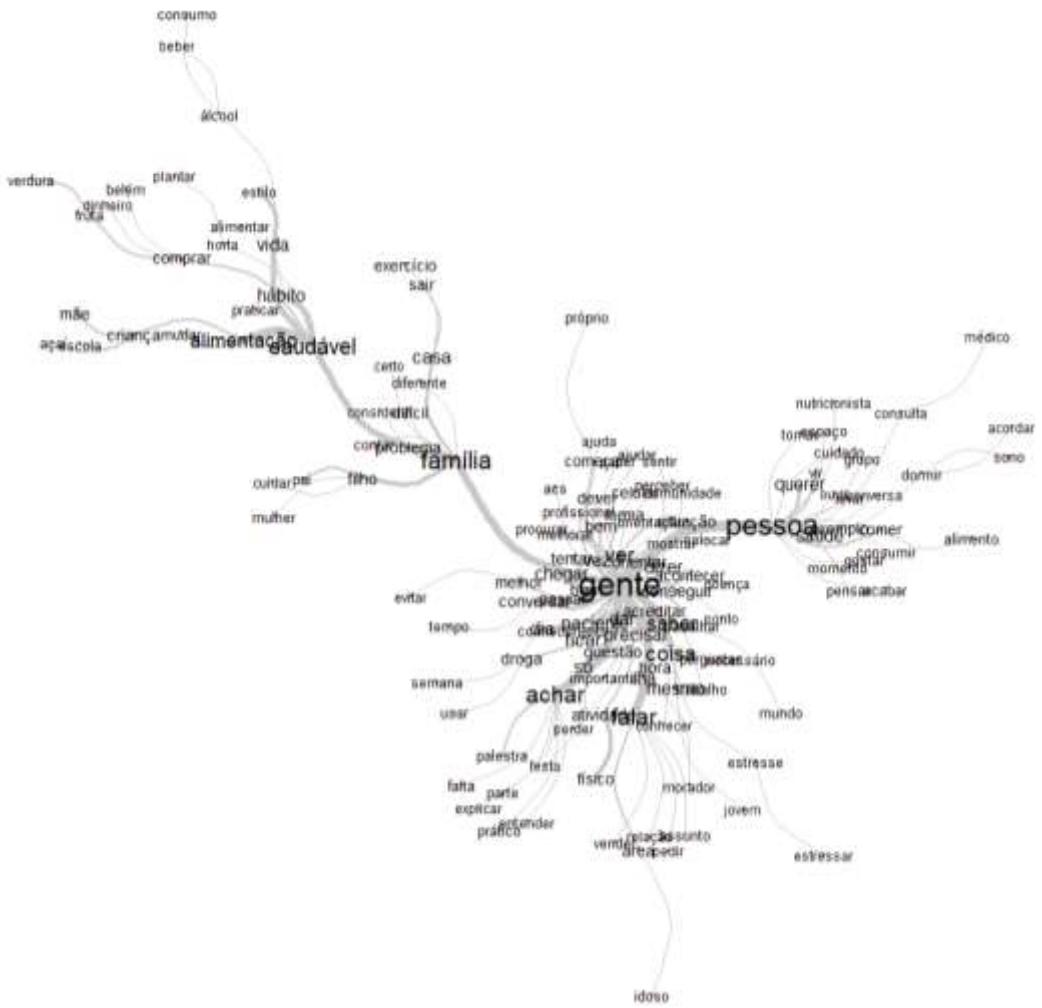
Fonte: Dados da Pesquisa - IRaMuTeQ

The term *'família'('family')* also forms the nucleus of an important branch, associating with words such as 'home', 'father', 'child', 'woman', among others. Family bonds, and their intensity, appear as a key pillar in the professionals' discourse. Reinforcing this idea, 'family' is linked to a secondary branch centered on 'healthy', which connects to terms such as 'diet', 'habit', 'practice', 'lifestyle', 'life', 'alcohol', among others.

In this context of healthy habits, traditional riverside populations experiencing nutritional transition have incorporated undesirable practices like those observed in urban centers: increased consumption of processed foods, reduced physical activity, lower intake of

fruits and fiber, and higher consumption of salt, saturated fats, and simple sugars. These changes contribute to a rising incidence of NCDs[33]. A study conducted in Pará shows that the shift in the population's dietary pattern has negatively affected health, particularly due to increased consumption of ultra-processed foods. Adults aged 18 years and older now consume five or more groups of ultra-processed products, often replacing traditional regional foods. Such findings reflect a nutritional transition associated with alarming impacts on morbidity from chronic noncommunicable diseases in populations of the Brazilian Legal Amazon[34].

Finally, the similarity analysis mapped the message conveyed during the focus group meetings, highlighting key elements and the strength of their connections, contributing to a broader understanding of the textual corpus.

A word cloud was generated (Figure 6), excluding adverbs and the terms *'gente'* and *'pessoa',* which appeared with strong prominence in the graph. Their treatment was addressed earlier.

The most frequent term in the word cloud is *'família'* ('family'), possibly indicating that the central focus of habit change is located within the family sphere. As highlighted by Pereira, Dias, and Markus, modifying habits such as smoking is intrinsically linked to the interaction between the patient, the professional team, and family support. This perspective reinforces the argument that a similar dynamic applies to other pillars of Lifestyle Medicine.

Among lifestyle-related themes, the most prominent in the professionals' discourse was 'diet', often paired with 'healthy'*,* as illustrated in: "…there are times when the water floods everything, so we would need to make a raised garden bed, and from there they could begin adopting a **healthy diet**" (subj_04).

The growing consumption of ultra-processed foods in riverside communities' compromises Lifestyle Medicine pillars such as healthy eating. Although this transition is silent, it is expanding. Nevertheless, it can be addressed through community-based actions that promote traditional dietary practices.

Figure 6 – Word cloud generated from participants' discourse (terms in Portuguese).
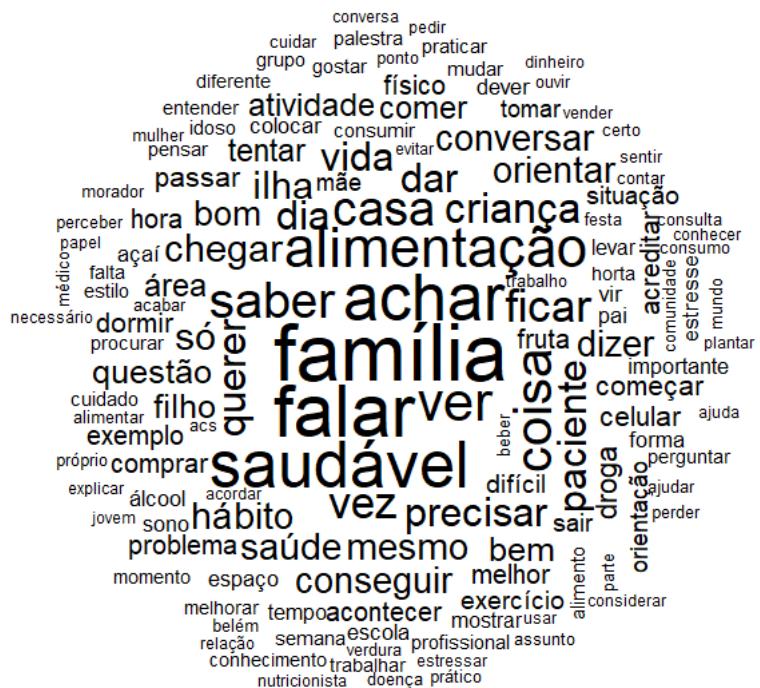
Source: Research Data - IRaMuTeQ

Regarding the forms 'talk', 'say', 'tell', and 'guide', these refer to the work process carried out with families, based on the transmission of information, as illustrated in: "…our role in the health area is to **talk** about the harms that alcohol causes in the long term" (subj_12); "we always try to **tell** them that it is not good, and they **say** they went to the doctor and the nutritionist and complain that very restrictive diets are prescribed" (subj_05); "…we **talked** at a patient's house, during a meeting, about making a raised garden bed" (subj_04); "…we have to give **guidance**, according to what we are able to provide, based on our knowledge" (subj_03), among other examples.

The forms 'begin' and 'manage to' express the desire for outcomes to be achieved. For example: "…they must **begin** to understand that they need to start a healthy diet, try, and then they will **manage** to do it" (subj_04). Training the team to support lifestyle changes among riverside users within their family and community context is highly challenging.

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FINAL CONSIDERATIONS

Based on the analyzed results, several conclusions can be drawn that offer meaningful insights into how health professionals' approach and perceive the themes related to Lifestyle Medicine. It is observed that higher-level professionals tend to adopt a more technical stance, focusing on the pillars of Lifestyle Medicine in a structured manner, whereas community health agents and nursing technicians emphasize relational aspects that are closely adapted to the daily life of the community. This technical approach suggests a perspective more oriented towards clinical and scientific dimensions. A recent study indicates that physicians working in remote areas often adopt practices centered on punctual and clinical care, with limited integration with the territory and the sociocultural context of the population, highlighting the need for specific training and strategies for professional integration within Primary Health Care teams[36].

In contrast, community health agents demonstrate an approach centered on interpersonal interactions, emphasizing terms such as 'guidance', 'talk', 'ask', 'mother', and 'child'. The appearance of the term 'create' suggests an inventive attitude oriented toward promoting positive changes in living conditions within the community.

The Correspondence Factor Analysis (CFA) revealed five factors, with particular emphasis on Classes 5 (Physical Activity and Exercise) and 6 (Nutrition). This indicates a stronger association of these themes within the discourse of professionals, reflecting the importance attributed to physical activity and healthy eating in the studied context.

The similarity analysis highlighted terms such as 'people', 'person', and 'family', underscoring the relevance of interaction between health professionals and patients, as well as the role of guidance and education. It also revealed strong associations among terms related to healthy habits, family, and lifestyle. However, sensitive topics such as "Alcohol and Toxic Substances" appear to pose challenges, suggesting potential gaps in knowledge or difficulties in structuring effective interventions in this area. The word cloud emphasized family and healthy eating, reinforcing the need for a holistic approach to promoting behavior change among the riverside population.

Thus, it is understood that Primary Health Care teams need to expand their understanding of existing self-care education methodologies, moving beyond technical-

professional knowledge and considering the social determinants of health that interact with individual, family, and community knowledge.

For these professionals, the development of interactive educational activities, workshops, and group consultations, including health education through discussion circles, and home visits grounded in dialogical approaches is recommended. Such strategies allow for the recognition of users' unique needs, the promotion of self-care, and the construction of feasible action plans adapted to each user's reality. The experience of Community Health Agents (CHAs), who work directly within the territories, may be strengthened through specific training on the pillars of Lifestyle Medicine, using accessible language, visual educational tools, and local experiences as pedagogical resources.

Furthermore, managers and professionals should reinforce actions aimed at raising awareness and improving the management of sensitive themes, such as the use of alcohol and other Substances, by promoting qualified listening strategies and continuous dialogue with the territories. This approach supports a deeper understanding of local dynamics, rhythms, and forms of organization[37], fostering collective engagement and contributing to the development of a health awareness that recognizes health as a social right and an expression of citizenship.

In this way, the team can support behavior change and self-care by identifying problems, prioritizing actions, establishing goals, creating joint care plans, monitoring progress, and recognizing users' challenges as well as the limitations of the health team in providing comprehensive support.

Given the presented evidence, it is recommended that future research deepen the understanding of the limits and potentials of applying the pillars of Lifestyle Medicine in riverside and other vulnerable contexts, particularly considering the diversity of contexts and professional profiles within health teams. Comparative investigations across different regions of the Brazilian Legal Amazon, as well as longitudinal studies assessing the impact of educational actions on self-care and everyday practices of the population, may offer relevant contributions for improving public policies.

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