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Original Article

Teachers' health literacy and oral health education in public schools: a mixed-methods study

Literacia em saúde de professores e a educação em saúde bucal em escolas públicas: um estudo de métodos mistos

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Resumo

Introdução: A literacia em saúde (LS) integra a informação sobre saúde e a sua aplicação em contextos de vida, por meio de escolhas conscientes que conduzem a comportamentos saudáveis. Não está claro de que forma a LS dos professores contribui para a criação de um ambiente educativo que promova a saúde bucal nas comunidades escolares. **Objetivo:** Foi

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conduzido um estudo de métodos mistos para compreender a relação entre a literacia em saúde (LS) de professores e os processos pedagógicos desenvolvidos no contexto da educação em saúde bucal em escolas públicas. **Método:** Na fase quantitativa, investigaram-se os níveis de LS e de literacia em saúde bucal (LSB) de 181 professores da educação infantil e do ensino fundamental. Na fase qualitativa, realizaram-se 12 entrevistas com professores de nove escolas sobre práticas pedagógicas, abrangendo os enfoques curativo/biomédico, preventivo e de promoção da saúde. Para integrar os dados, elaborou-se uma matriz baseada no modelo socioecológico. **Resultado:** A média geral da LS foi de 2,91 (escala de 0 a 4). A dimensão Prevenção de Doenças apresentou a média mais elevada (3,04), enquanto a dimensão Promoção da Saúde registrou a mais baixa (2,73). Identificaram-se dificuldades no gerenciamento de informações sobre saúde mental e na divulgação de informações pela mídia, além de barreiras financeiras ao acesso à consulta odontológica. As práticas educativas relatadas abrangeram os três enfoques, manifestando-se nos níveis individual, escolar e comunitário, bem como nas políticas públicas, que coexistem e se complementam na educação em saúde bucal no ambiente escolar. **Conclusão:** Os níveis de LS e de LSB dos professores se refletem na natureza, no escopo e na profundidade das práticas educativas implementadas. Os achados sublinham a importância da formação de professores e da colaboração entre os serviços de educação e de saúde, como política pública.

Descritores: Literacia para a saúde; professores escolares; educação em saúde; promoção da saúde escolar.

Abstract

Introduction: Health literacy (HL) integrates health information and its application in real-life contexts through conscious choices that lead to healthy behaviors. It is not clear how

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teachers' HL fosters an educational environment that promotes oral health within school communities. **Objective:** This mixed-methods study examined the relationship between teachers' HL and pedagogical processes in oral health education in public schools. **Method:** In the quantitative phase, we examined the HL and Oral Health Literacy (OHL) levels of 181 early childhood and elementary school teachers. In the qualitative phase, twelve teachers from nine schools were interviewed about their pedagogical practices, focusing on curative/biomedical, preventive, and health-promotion approaches. To integrate the data, the researchers developed a matrix based on the socioecological model. **Result:** The overall mean of HL was 2.91 (0-4 scale). The Disease Prevention dimension had the highest mean (3.04), while Health Promotion had the lowest (2.73). The difficulties included managing mental health information and media-conveyed information, as well as financial barriers to dental consultations. The reported educational practices encompassed the biomedical, preventive, and health-promotion approaches, operating at the individual, school, community, and public policy levels, and coexisting and complementing one another in oral health education within the school environment. **Conclusion:** Teachers' HL and OHL levels are reflected in the nature, scope, and depth of the educational practices they implement. The findings highlight the importance of continuous teacher training and closer collaboration between education and health services, as public policy.

Descriptors: Health literacy; school teachers; health education; school health services.

INTRODUCTION

Health literacy (HL) is the ability of people to access, process, and understand health information and apply it in their life contexts through conscious choices that result in healthy behaviors[1,2]. The World Health Organization (WHO) considers it one of the pillars

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for achieving sustainable development and health equity[3]. The most recent definitions in this field associate HL with social determinants, health outcomes, and health promotion, framing health as a process between being healthy and being sick, without a dichotomy between the two[4-7].

People with low HL have difficulty understanding verbal and written information from health professionals, seeking care for their health needs, and following treatment recommendations[7-10]. In this sense, HL also plays an important role in increasing social and individual well-being by shaping how health services are used, thereby altering outcomes and the social determinants of health[8]. In oral health, Oral Health Literacy (OHL) refers to the capacity of individuals or groups to understand and manage health information, thereby motivating integration with oral health care[11].

In the school context, teachers' HL also informs pedagogical content and, more directly, pedagogical actions in oral health, leading to actions aimed at self-knowledge, self-esteem, and understanding the relationships between oral and general health[12,13]. Its influence on student learning is recognized, as is its influence on teachers' levels of education[14]. Teachers with higher HL are more likely to adopt and promote healthy behaviors, serving as role models for students[15]. Thus, teachers' professional development strengthens HL, enabling them to integrate this knowledge into their pedagogical practices[16-19].

Continuous teacher education aims to understand students' health realities and seek support to develop strategies to improve living and health conditions at all levels. In this direction, it implies investigating and distinguishing the broad approaches of health promotion, prevention, and curative/biomedical care, which are based on behavioral control and lifestyle change[20]. However, scientific literature still does not clearly show how teachers' knowledge and actions in schools can foster an educational environment that not only

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supports students' oral health and well-being but also provides pathways for teachers to serve as agents of change and health promotion in their practical activities and school communities.

Because issues related to HL and OHL in the school environment are multidimensional, it is necessary to consider various contexts to understand how different levels of influence (individual, interpersonal, institutional, community, and political)[21,22] affect the development of health education in schools. The socioecological model highlights the importance of considering not only individual factors but also the social and environmental contexts that influence health practices. The socioecological approach focuses on a positive, collective view of health, understood as biopsychosocial and environmental well-being[23].

Thus, the objective was to understand the relationship between teachers' HL and the pedagogical processes employed in oral health education. It was operationalized by integrating quantitative data, which estimated the degree of HL and OHL of teachers, with qualitative data, through which pedagogical processes in the context of oral health education were analyzed, in the curative/biomedical, preventive, and health promotion approaches, to understand how these are impacted by the HL and OHL of teachers, from the perspective of the socioecological model.

METHOD

The Human Research Ethics Committee of the Federal University of Santa Catarina approved this research under opinion No. 5,277,317. All participants received the Informed Consent Form and consented to participate in the study.

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This is a mixed-methods study in a sequential, explanatory format with two distinct interactive phases[24]. Quantitative and qualitative data were integrated and synthesized through connection-based analyses generally guided by a theoretical framework[24,25].

The study included public school teachers from a medium-sized municipality (up to 70,000 inhabitants) in southern Brazil, in the state of Santa Catarina. All teachers with permanent admission (tenured) or temporary admission with at least 12 months of work and active in the classroom during data collection in Early Childhood Education and Elementary Education (from 1st to 5th grade) from 23 Early Childhood Education Centers, 10 Municipal Education Centers, six Basic Education Schools, and five assistance daycares were invited.

Data collection was carried out between May and December 2023. Initially, the form was shared with participants via an access link (Google Forms) sent to the institutional email addresses of the research locations. However, other forms of disclosure were used: a messaging app, teacher meetings, and a printed invitation with a QR Code, and all participants had previously understood and expressed consent to participate, either online or by signing a physical form.

The questionnaire consisted of two instruments validated in the literature for evaluating HL: the Health Literacy Europe Survey (HLS-EU-Q16)[26] and the Health Literacy in Dentistry Scale (HeLD-14)[27]. The HLS-EU-Q16 has 16 questions (items) divided into three dimensions: Health Care, Disease Prevention, and Health Promotion. The Health Care dimension includes seven questions (01-07); the Disease Prevention dimension includes five questions (08-12); and the Health Promotion dimension includes three questions (13-16). The HeLD-14 comprises 14 questions (items), organized into sequential pairs across

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seven dimensions: Receptivity, Understanding, Support, Economic Barriers, Access, Communication, and Utilization[27].

Scores are assigned based on the responses to each item, using a Likert scale from 0 to 4, according to the degree of difficulty assigned to each question/item: don't know/no answer (0), very difficult (1), difficult (2), easy (3), and very easy (4). Higher values indicate higher HL and OHL degrees.

Sociodemographic information (sex, age, and academic background) and professional information (time of operation, group/class in which they work, type of institution, role, type of employment relationship, participation in continuing education, and development of projects in the health area) were also collected.

Quantitative data (automatically generated from Google Forms or typed by the main researcher) were organized and audited in an Excel spreadsheet. Stata 14.1 was used for descriptive statistics, presented as frequencies (n and %), means, and confidence intervals. The analysis included participants' characteristics, total means for the two instruments and their dimensions, and sociodemographic and educational activity data.

In the qualitative phase, the sample was intentional and non-probabilistic. Inclusion criteria included participation in the previous quantitative phase and representation from each educational level, including early childhood and elementary education institutions. Participants who expressed interest in sharing their experience reports through individual interviews provided their e-mail addresses on the form, which the researchers used to contact them a few days later.

After confirming acceptance, the researchers scheduled in-depth face-to-face interviews at the schools during teachers' working hours and class breaks. Twelve teachers from nine schools participated in the qualitative phase of the study. Two authors (dentists)

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experienced in qualitative methodologies conducted the interviews. They followed a script developed specifically for the study (Supplementary file 2), with questions aimed at uncovering, in depth, the relationship between pedagogical practice and teachers' HL and OHL from the perspective of the socioecological model[23].

A cell phone served as the audio recorder. An external transcription application transcribed the content in full in Microsoft Word®. The texts were analyzed using the Bardin Content Analysis framework. Initially, excerpts were organized in the same text processor and classified into previously defined analysis categories, seeking indicative elements of the pedagogical processes developed in the context of oral health education, considering curative/biomedical, preventive, and health promotion approaches.

Subsequently, during the integration phase, the results were classified according to the levels of the socioecological model[28,29]. The model highlights both interpersonal and intrapersonal aspects as well as the environment of actions and policies aimed at the community of interest. Through quantitative and qualitative analyses, the questionnaire interpretations were integrated with responses regarding teachers' health education practices and the socioecological model. Thus, integration proceeded in a continuous movement between theory and data, guided by the study objective.

For the mixed-methods phase of the research, representative content areas were identified in the two data sets and aligned with the theoretical foundation of the socioecological model[21,22]. From this, indicators for analysis were established to understand teachers' HL and OHL and their relationship to the pedagogical processes employed in oral health education. To present the results, an indicator matrix (joint display) was developed from compiled responses on teachers' HL and OHL, including literacy approaches and qualitative data on the socioecological model levels covered by the study.

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RESULT

The results provide a comprehensive overview of HL and OHL levels among public school teachers in a municipality in Southern Brazil, as well as their health promotion practices in the school environment.

In the quantitative phase, 181 of the 517 invited teachers responded to the questionnaire (35.6% response rate). The estimates were calculated from a sample fraction of 35%, with correction for a finite population and a 95% CI based on the t-distribution. For the HLS-EU-Q16, the margin of error for the total score was ±0.05. For the HeLD-14, the margin of error for the total score was ±0.07. In both instruments, the margins of error were small relative to the scale (1–4), indicating adequate precision for describing the population of 517 participants.

In this stage, the study sample was predominantly female (98.9%), with a mean age of 41 years (SD = 8.6 years), ranging from 22 to 62 years. A degree in Pedagogy was the most frequent (93.9%), followed by Languages/Literature (12.7%). A high percentage of participants had a specialization (85.6%), and the majority reported more than 11 years of teaching experience. Early childhood education was the most common field (75.1%), mainly in municipal public institutions (61.9%). Most were homeroom teachers (86.2%) with permanent employment (70.2%). Notably, 79% of teachers reported participating in health-related training courses offered by their employing institution, and 91.2% developed health-related projects, indicating knowledge and practical applicability gained through continuing education (Supplementary file 1).

Table 1 presents the mean HL scores by item and dimension. Teachers demonstrated a good ability to follow medical and pharmaceutical instructions (items 4 and 7), suggesting

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strong treatment adherence. They also demonstrated a strong understanding of the need for health screenings and the reasons for specific recommendations (items 8 and 10), reflecting a solid preventive foundation. Conversely, managing information about mental health (item 16) and media information (item 15) showed lower means, indicating areas for strengthening, especially given the relevance of these topics in the contemporary educational environment. The overall mean of HL was 2.91. The Disease Prevention dimension had the highest mean (3.04), while Health Promotion had the lowest (2.73). Table 2 presents the mean values for each OHL item and dimension. The overall mean of OHL was high (3.55). Overall, all dimensions scored above 3.5 except the Economic Barriers dimension, which had the lowest mean (2.87), indicating that financial issues pose a significant challenge to access to dental care. In contrast, the Understanding dimension achieved the highest mean score (3.80), indicating that teachers feel confident in interpreting and completing dental forms.

Figure 1 presents integrated data from the quantitative and qualitative phases, categorized by the levels of the socioecological model. The matrix shows how scores on the HL and OHL questionnaires align with teachers' reported practical experiences.

At the individual level, the data indicate that teachers possess a solid knowledge base for managing their own health and oral health, which translates into educational practices that promote self-care and autonomy among students. At the interpersonal and institutional levels, as reflected in the school environment, high HL is evident in a school climate that values and integrates health promotion into the daily curriculum and addresses challenges by adapting pedagogical strategies. At the community and political levels, the difficulties identified in the quantitative phase, such as economic barriers and limited access to

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specialized information, are echoed in teachers' reports of the need for stronger public policy support and better integration with local health services.

DISCUSSION

This study explored the relationship between teachers' HL and OHL and pedagogical processes in oral health education, integrating quantitative and qualitative data through the lens of the socioecological model. The findings revealed that teachers generally have high levels of HL and OHL, which positively influence their educational practices, encompassing curative/biomedical, preventive, and health promotion approaches across different levels of influence.

The high prevalence of participation in continuing education and health projects among the investigated teachers corroborates the literature that highlights the importance of professional development in strengthening HL[16-19]. This continuous training empowers teachers to act as agents of change, integrating health knowledge into their pedagogical practices and promoting a healthy school environment[15,20].

At the individual level, the high scores in disease prevention and understanding of medical instructions reflect the teachers' ability to manage their own health and translate this knowledge to students. The qualitative data confirm this relationship, showing a focus on teaching self-care, hygiene, and healthy eating. This approach aligns with the concept of HL as the ability to apply health information to make informed choices and adopt healthy behaviors [1,2].

However, the lower scores in managing mental health information and evaluating media information indicate areas that need attention. In an increasingly digital context, critical media literacy is essential for teachers to guide students in navigating complex and often

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contradictory health information[30]. Furthermore, the growing demand for mental health support in schools underscores the need to incorporate this topic into teacher training programs.

Regarding OHL, the high overall mean suggests that teachers are well equipped to understand and manage oral health information[11]. The qualitative findings show how this translates into practices that go beyond brushing instruction and address interactions among oral and general health and self-esteem[12,13]. However, the Economic Barriers dimension had the lowest mean, reflecting the reality in many communities where financial constraints limit access to dental care. This finding is echoed in reports on socioeconomic vulnerabilities and highlights the importance of considering social determinants of health in access to health education[4-8].

Integrating data through the socioecological model emphasizes the multidimensional nature of health education in schools[21-23]. At the school level, teachers' high HL contributes to a health-promoting environment, but challenges remain in addressing misinformation. At the community level, coordination with local health services is crucial to mitigating economic barriers. Finally, at the political level, teachers recognize the importance of programs such as the Health at School Program but also point out the need for stronger public policies and improved infrastructure to support their work.

This study has some limitations. The response rate in the quantitative phase (35.6%) may introduce selection bias, and the intentional sampling in the qualitative phase may not represent all perspectives. The qualitative phase aimed to obtain detailed reports that could explain, contextualize, and deepen the quantitative findings, not to represent the full quantitative sample. Nevertheless, we acknowledge that the voluntary nature and small size of the qualitative sample limit the transferability of the findings and may have

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overrepresented teachers who were more motivated to participate. Additionally, the study was conducted in a specific Brazilian municipality, limiting the generalization of the findings. Future research could explore how specific HL and OHL interventions affect teachers' practices and student outcomes in diverse oral health education contexts.

CONCLUSION

The relationship between teachers' HL, OHL, and the pedagogical processes developed in oral health education is complex and multidimensional. In this study, teachers demonstrated good HL and high OHL, which were reflected in health-promoting practices that encouraged students' self-care and autonomy. However, lower scores related to mental health and media information, as well as economic barriers to dental care, indicate areas that require further attention and ongoing support. These findings highlight the importance of continuous teacher training, stronger public policies, and closer collaboration between education and health services. Viewed through the socioecological model, such strategies may help strengthen teachers' capacity to promote students' health and well-being.

AUTHORS' CONTRIBUTIONS

Darcle Cardoso: conceptualization, data curation, data analysis, research, methodology, project management, implementation and testing, writing of the original manuscript, proofreading and editing.

Andreia Morales Cascaes and Ana Lúcia Schaefer de Mello: conceptualization, data analysis, research, methodology, project management, supervision, writing of the original manuscript, proofreading and editing.

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Roselita Sebold, Marta Regina Farinelli, Manoela de Leon Nóbrega Reses, Ivonete Teresinha Schulter Buss Heidemann: data analysis, research, methodology, writing of the original manuscript, proofreading and editing.

All authors approved the final version of the manuscript and agreed to be responsible for all aspects of the work.

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DECLARATION ON THE USE OF ARTIFICIAL INTELLIGENCE

The artificial intelligence tool Grammarly was used only to check the article's English grammar and improve readability.

CONFLICTS OF INTERESTS

The authors declare there are no conflicts of interest related to this study.

DATA AVAILABILITY

Data can be accessed upon reasonable request to the main author.

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Table 1 – Mean and confidence intervals for the dimensions, questions, and scores of Health Literacy among basic education teachers. 2023 (n=181)

Dimensions / Questions – How difficult is to…	Mean	95% CI
Health Care	2.91	2.84 – 2.98
1. …find information on treatments of illnesses that concern you?	3.04	2.93 – 3.15
2. …find out where to get professional help when you are ill?	3.39	3.29 – 3.49
3. …understand what your doctor says to you?	3.25	3.15 – 3.35
4. …understand your doctor's or pharmacist's instructions on how to take a prescribed medicine?	3.56	3.48 – 3.64
5. …judge when you may need to get a second opinion from another doctor?	2.97	2.85 – 3.09
6. …use information the doctor gives you to make decisions about your illness?	3.09	2.98 – 3.20
7. Follow instructions from the doctor or pharmacist?	3.53	3.43 – 3.63
Disease Prevention	3.04	2.97 – 3.11
8. …find information on how to manage health problems like stress or depression?	2.97	2.85 – 3.09

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9. …understand health warnings about behavior such as smoking, low physical activity and drinking too much	3.62	3.54 – 3.70
10. …understand why you need health screenings?	2.58	2.45 – 2.71
11. …judge if the information on health risks in the media is reliable?	2.81	2.69 – 2.93
12. …decide how you can protect yourself from illness based on information in the media?	2.66	2.52 – 2.80
Health Promotion	2.73	2.65 – 2.81
13. …find out about activities that are good for your mental well-being?	3.12	3.00 – 3.24
14. …understand information in the media on how to get healthier?	3.01	2.90 – 3.12
15. …judge which everyday behavior is related to your health?	2.52	2.40 – 2.64
16. …understand advice on health from family members or friends?	2.54	2.42 – 2.66
Total Mean Score	2.91	2.86 – 2.96

Legend: CI = confidence interval

Table 2 – Mean and confidence intervals for the dimensions, questions, and final scores of Oral Health Literacy among basic education teachers. 2023 (n=181)

Dimensions / Questions - Are you able to…	Mean	95% CI
Receptivity	3.67	3.58 – 3.76
1. …make time for things good for dental health?	3.68	3.58 – 3.78
2. …pay attention to dental health needs?	3.83	3.76 – 3.90
Understanding	3.80	3.73 – 3.87
3. ...read dental information brochures?	3.76	3.67 – 3.85
4. ...read written dental information?	3.78	3.69 – 3.87

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Support	3.67	3.57 – 3.77
5. ...take support to a dental appointment?	3.61	3.49 – 3.73
6. ...ask for support to a dental appointment?	3.59	3.45 – 3.73
Economic Barriers	2.87	2.71 – 3.03
7. ...pay to see a dentist?	2.87	2.70 – 3.04
8. ...pay for dental medication?	2.64	2.46 – 2.82
Access	3.67	3.58 – 3.76
9. ...what to do to get dental appointment?	3.67	3.56 – 3.78
10. ...how to get dentist's appointment?	3.52	3.40 – 3.64
Communication	3.72	3.63 – 3.81
11. ...look for a second opinion?	3.64	3.53 – 3.75
12. Use information provided by the dentist to make decisions about your dental treatment?	3.74	3.64 – 3.84
Utilization	3.51	3.40 – 3.62
13. …follow dental instructions?	3.62	3.52 – 3.72
14. …use dentist advice?	3.30	3.16 – 3.44
Total Mean Score	3.55	3.48 – 3.62

Legend: CI = confidence interval

Figure 1 – Matrix of indicators for integrating Health Literacy and Oral Health Literacy in Oral Health Education.

Levels of the socioecological model	Indicators from the quantitative phase	Indicators from the qualitative phase	Synthesis of data integration

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Individual	- High score in the Disease Prevention dimension (mean: 3.04). - Good ability to understand medical/pharmaceutical instructions (mean: 3.56 and 3.53). - High score in Understanding in OHL (mean: 3.80).	- Focus on teaching self-care, hygiene habits, and healthy eating. - Recognition of the importance of self-esteem and body awareness. - Use of pedagogical resources to make health information accessible.	Teachers' high health literacy translates into pedagogical practices that empower students to engage in self-care, with an emphasis on prevention and understanding of health information.
School (Interpersonal and Institutional)	- High participation in continuing education in health (79%). - High engagement in health projects (91.2%). - Lower score in judging media information (mean: 2.58 and 2.52).	- Integration of health themes across disciplines. - Creation of a school environment that promotes health (e.g., healthy snacks). - Need for strategies to address misinformation and complex topics (mental health).	The school acts as an environment that facilitates health promotion, driven by teachers' continuing education. However, there is a need to develop skills to critically evaluate health information from the media.
Community	- High score in finding a dentist nearby (mean: 3.67). - Lower score in Economic Barriers (mean: 2.87).	- Articulation with local health services (Basic Health Units). - Identification of the	While teachers recognize the importance of community resources, economic barriers limit access to dental care, requiring

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		community's socioeconomic vulnerabilities as barriers to oral health. - Involvement of families in health education actions.	school-community integration strategies to mitigate these inequalities.
Public Policies	- Higher scores in understanding the need for health screenings (mean: 3.62). - Lower scores in paying for dental treatment (mean: 2.64).	- Dependence on public policies (e.g., Health at School Program) to carry out specific actions. - Demand for better infrastructure and resources for health promotion in schools. - Health rights recognition and the State's role in providing it.	Teachers understand the importance of preventive policies but point out structural and financial gaps that hinder the effective implementation of health promotion actions, calling for stronger public policies.

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Participant characteristics and distribution according to health literacy and oral health literacy. 2022-2023 (n=181).

Variables	N (%)	Health literacy Mean (95% CI)	Oral health literacy Mean (95% CI)
Sex			
Female	179 (98.9)	2.92 (2.86 – 2.98)	3.55 (3.48 – 3.62)
Male	2 (1.1)	2.68 (1.70 – 3.67)	3.32 (3.11 – 3.53)
Degree in Pedagogy			
No	11 (6.1)	3.02 (2.70 – 3.34)	3.55 (3.37 – 3.73)
Yes	170 (93.9)	2.91 (2.85 – 2.97)	3.55 (3.48 – 3.62)
Degree in Licentiate or Languages/Literature			
No	158 (87.3)	2.91 (2.85 – 2.97)	3.56 (3.49 – 3.63)
Yes	23 (12.7)	2.99 (2.80 – 3.18)	3.48 (3.24 – 3.72)
Specialization			
No	26 (14.4)	2.94 (2.75 – 3.13)	3.52 (3.34 – 3.70)
Yes	155 (85.6)	2.92 (2.85 – 2.99)	3.55 (3.48 – 3.62)
Master's / Doctorate			

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No	160 (88.4)	2.91 (2.85 – 2.97)	3.54 (3.47 – 3.61)
Yes	21 (11.6)	2.98 (2.80 – 3.16)	3.61 (3.38 – 3.84)
Time working in basic education			
1 to 10 years	63 (34.8)	2.87 (2.76 – 2.98)	3.55 (3.42 – 3.68)
11 to 20 years	66 (36.5)	2.97 (2.87 – 3.07)	3.58 (3.47 – 3.69)
Over 21 years	52 (28.7)	2.91 (2.80 – 3.02)	3.51 (3.39 – 3.63)
Works in Early Childhood Education			
No	45 (24.9)	2.93 (2.80 – 3.06)	3.56 (3.43 – 3.69)
Yes	136 (75.1)	2.91 (2.85 – 2.97)	3.54 (3.47 – 3.61)
Works in Elementary Education			
No	132 (72.9)	2.91 (2.85 – 2.97)	3.55 (3.47 – 3.63)
Yes	49 (27.1)	2.93 (2.81 – 3.05)	3.55 (3.42 – 3.68)
Public Municipal Institution			
No	69 (38.1)	2.94 (2.84 – 3.04)	3.58 (3.47 – 3.69)
Yes	112 (61.9)	2.90 (2.83 – 2.97)	3.53 (3.44 – 3.62)
Philanthropic Institution			

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No	148 (81.8)	2.91 (2.85 – 2.97)	3.53 (3.46 – 3.60)
Yes	33 (18.2)	2.95 (2.81 – 3.09)	3.61 (3.45 – 3.77)
Homeroom Teacher			
No	25 (13.8)	2.95 (2.79 – 3.11)	3.61 (3.43 – 3.79)
Yes	156 (86.2)	2.91 (2.85 – 2.97)	3.54 (3.46 – 3.62)
Permanent Employment Relationship			
No	54 (29.8)	2.93 (2.82 – 3.04)	3.57 (3.46 – 3.68)
Yes	127 (70.2)	2.91 (2.84 – 2.98)	3.54 (3.46 – 3.62)
Training course in the health area offered by the institution			
No	38 (21.0)	2.91 (2.77 – 3.05)	3.50 (3.34 – 3.66)
Yes	143 (79.0)	2.92 (2.85 – 2.99)	3.56 (3.49 – 3.63)
Development of project in the health area			
No	16 (8.8)	2.90 (2.65 – 3.15)	3.44 (3.15 – 3.73)
Yes	165 (91.2)	2.92 (2.86 – 2.98)	3.56 (3.49 – 3.63)

Legend: CI = confidence interval

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Script interview

1- Could you comment on the educational projects related to oral health in your class?

Note whether the participant addresses: What is the origin of these projects? Who promotes them? What is the scope of the topic? Who participates? How are they defined/planned? What are their objectives? How are they implemented? What resources are needed? And if such projects aren't carried out, what would you do in this area? Is the focus limited to brushing or occasional practices during dental visits?

2- What methodologies/approaches are used when developing projects related to oral health?
3- What policies, standards, and guidelines underpin the development of these projects?
4- In your opinion, how do oral health projects at your school impact the following areas:

- Individual—children's knowledge, skills, and attitudes
- Interpersonal—support networks
- Organizational—within the school environment and health services
- Community—in parents' attitudes, family dynamics, and community participation and action
- In promoting health-supportive environments and fostering healthy habits and autonomy (in terms of policies and legislation)?

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( )	Não

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A ferramenta de inteligência artificial Grammarly foi utilizada apenas para verificar a gramática em inglês do artigo e melhorar sua legibilidade.

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