

GRADUATION PROJECT

Degree in Dentistry

**KNOWLEDGE AMONG HEALTH SCIENCE
PROFESSIONALS ABOUT THE PREVENTION AND
TREATMENT OF DENTAL CARIES IN PRIMARY TEETH**

EMPIRICAL RESEARCH

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ABSTRACT

Introduction: Healthcare professionals play a key role as first points of contact, and their knowledge directly influences prevention, early detection, and management of primary teeth caries; **Objectives:** The primary objective was to assess healthcare professionals' knowledge regarding dental caries in the primary dentition. Secondary objectives were to evaluate their ability to distinguish non-cavitated from cavitated lesions and to analyse the extent to which preventive strategies are implemented in clinical environment; **Materials and Methods:** The study was carried out using a cross-sectional methodology, relying on a self-administered survey to gather information from participants; distributed to dentists, paediatricians, nurses, dental assistants, and nurse assistants via WhatsApp, Facebook, Instagram, and in person. The questionnaire assessed knowledge of primary tooth caries, lesion identification, and preventive practices; **Results:** Healthcare professionals demonstrated a moderate but uneven level of knowledge, with correct response rates ranging from **62.7% to 88.2%**. Early lesion recognition was generally strong: **69%** correctly identified a non-cavitated enamel lesion, while only **1%** misclassified it as cavitated. Preventive measures were commonly implemented—dietary advice (**31 respondents**) and oral-hygiene instruction (**23 respondents**)—although structured tools such as CRA and ICDAS were not routinely applied despite high familiarity; **Conclusions:** Healthcare professionals showed adequate but variable knowledge, strong early lesion recognition, and frequent use of basic preventive strategies. However, limited routine use of structured diagnostic and risk-assessment tools highlights the need to reinforce core paediatric caries principles and promote more standardised, prevention-focused practice.

KEYWORDS

dentistry; early childhood caries; primary teeth; knowledge assessment; healthcare professionals

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1. INTRODUCTION

1.1 Definition

Oral health is widely recognised as an essential component of overall systemic well-being. According to the World Health Organization, oral health extends beyond the absence of disease and includes the proper function and integrity of the oral cavity(8). It is defined as a state “free from oral lesions, cancers of the oral cavity and pharynx, pain and chronic conditions of the mouth, tooth loss and dental caries, congenital anomalies, and other disorders that compromise the oral cavity and its associated structures”. Dental caries in primary teeth is often seen as a chronic and complex disease process, influenced by multiple factors (7). Advances in diagnostic tools now enable dentists to distinguish early non-cavitated lesions from cavitated lesions (24). The distinction is a crucial aspect of preventive care, as it enables the early identification of pre-lesions before they progress into cavitated carious lesions. Early-intervention opportunities by frontline healthcare workers are critical for preventing the transition from initial lesions to cavitated decay (19).

1.2 Background

Preventing dental caries relies on daily fluoride-based oral hygiene, professional fluoride applications, appropriate dietary habits, and routine dental attendance (4,23). Non-dental clinicians are often positioned to recognise early oral-health concerns and support preventive behaviours during routine child-health encounters (3,18). However, their level of knowledge and attitude can significantly influence whether primary tooth decay is detected and addressed in a timely manner. The differences in awareness are not solely based on knowledge but also on socio-economic factors (15), indicating that while there may be an understanding of the disease, there may be a lack of resources to effectively prevent or treat it (1,12).

1.3 Theoretical Framework

This investigation highlights the fact that early childhood caries is a multifactorial disease associated with their developmental triad which includes host, oral microbiota and environment (ECC) (17). Early childhood caries continues to be a widespread chronic condition among young children globally, despite being largely preventable. Despite its preventable nature, over 530 million children are currently affected in their primary dentition, according to WHO (2022) (7,15). This condition contributes to a measurable burden in disability-adjusted life years (DALYs), reflecting its influence on both oral health and broader aspects of child well-being (15). Healthcare professionals often lack adequate training in the early identification, documentation,

and prevention of caries in the primary dentition (9,11,21). This fragmentation is partly due to the attitudes and perceptions that oral health is mainly the sole duty of dental professionals, limiting multidisciplinary engagement (9,22). Moreover, limited awareness of caries transmission pathways hinders effective early intervention during critical early developmental years of children (0-8years) (7,17).

1.4 Current Status of the Topic

Globally, the persistence of early childhood caries reflects not only biological risk factors but also systemic shortcomings in healthcare delivery (7,15). It may be inferred that there are limitations in training of non-dental healthcare professionals and the lack of consistent oral health surveillance systems, which simultaneously inhibit the early identification and prevention of caries in the primary dentition (10).

Studies report that a substantial proportion of medical professionals do not consistently evaluate caries risk during paediatric visits.(22,23). Dental professionals are generally more knowledgeable and equipped to prevent and manage dental caries however they often also fail to implement or encourage preventive measures (9,24).

1.5 Justification

Caries affecting primary teeth remains a significant public-health concern worldwide. Nurses, paediatricians, and family physicians are often the first professionals to encounter young children, yet their limited training in oral health means that prevention, documentation, and early referral are not consistently carried out. The use of structured frameworks such as the Canadian Caries Risk Assessment (CRA), (9) and the International Caries Detection and Assessment System (ICDAS), (24) could provide these professionals with practical tools to standardize risk evaluation and disease recording. This study is therefore justified by the need to strengthen the role of frontline healthcare providers in early detection and prevention, with the broader aim of improving interdisciplinary care and reducing the impact of early childhood caries worldwide.

2 OBJECTIVES

Primary objective:

- To determine the level of knowledge that healthcare professionals possess regarding dental caries in the primary dentition, including risk factors, early lesion outcomes, and preventive concepts.

Secondary objectives:

- To evaluate the accuracy with which professionals distinguish non-cavitated from cavitated lesions in primary teeth.
- To analyse the extent to which preventive strategies are implemented in routine clinical practice among healthcare professionals.

3 MATERIALS AND METHODS

A cross-sectional approach was used to assess health science professionals' knowledge of preventing and managing caries in primary teeth, providing a single-time snapshot of current understanding. Data collection was carried out across clinical and educational settings (dental clinics, hospitals, and primary care centers from December 2025 to April 2026).

The survey was approved by the Universidad Europea de Madrid Ethics Committee (**code OD.055/2526**).

3.1 Study Design and Setting

The study adopted a cross-sectional survey design (Annex 1) to investigate healthcare professionals' knowledge, attitudes, lesion detection skills and practices towards prevention in primary teeth. A self-administered questionnaire was developed in English and Spanish to ensure accessibility across both, participants in the United Kingdom and Spain. The survey targeted licensed professionals with direct paediatric involvement which included general dentists, paediatric dentists, dental hygienists, dental assistants, and nurse assistants and other related roles. Participants were recruited through digital platforms (WhatsApp, Facebook, Instagram) and via an in-person QR code. The survey opened with an informed-consent question to ensure voluntary participation.

Population and Sampling

The participants of this project were directly involved in the care of children aged **0–8 years** and play key roles in caries prevention, lesion detection in their daily practices.

The study groups were comprised of certified healthcare providers engaged in services for children's health. A total of **n = 112 men and women** were gathered using convenience sampling methods(13). Participants filled out a structured interview evaluating their awareness of cavitated and non-cavitated lesions, preventive strategies, and their overall comprehension of dental caries in primary teeth (3,13).

Participants were selected using a purposive sampling strategy, ensuring representation across professional roles, gender, and levels of clinical experience. Only practitioners fluent in English or Spanish were included, and questionnaires will be administered in both languages.

3.2.1 Inclusion criteria:

- Licensed healthcare professionals: Dentists, paediatricians, nurses, dental hygienists, dental assistants, and nurse assistants.
- Direct paediatric involvement: Actively caring for children aged 0–6 years in clinical or educational settings.

3.2.2 Exclusion criteria:

- Healthcare providers that do not have a direct relationship with patients and families (e.g.: radiologists, doctors who work at labs)
- Non-clinical or unlicensed staff: Students, trainees without registration, or administrative personnel.
- Language barrier: Unable to complete the questionnaire in English or Spanish

3.3 Instrument Development and Validation

A questionnaire was developed to assess healthcare professionals' knowledge, lesion recognition, attitudes and preventive practices related to primary-tooth caries. Items were based on established evidence. The survey included multiple-choice questions, Likert scales and short clinical scenarios. A pilot test was conducted to ensure clarity, and internal consistency was evaluated using Cronbach's alpha.

Variables and operational definitions

- **Independent variables:** Level of professional training and years of experience.
- **Primary outcome:** Knowledge score based on correct responses to caries-related items.
- **Secondary outcomes:** Accuracy in recognising early lesions and reported use of preventive practices.
- **Additional factors:** Workplace setting and number of children seen per week.

3.4 Procedures and Data Collection

A questionnaire was developed to assess healthcare workers' knowledge of primary-tooth caries including lesion recognition and preventive approaches. Participants were dentists, paediatricians, nurses, dental hygienists, dental assistants and nurse assistants. The survey was distributed through WhatsApp, email, social media, and QR codes. All responses were anonymous and stored securely. Data were collected using Microsoft Forms and analysed in Microsoft Excel to generate tables and graphs.

3.5 Statistical Analysis

Descriptive statistics were used to summarise participant characteristics. A knowledge score was calculated, and internal consistency was assessed with Cronbach's alpha. The main analysis examined the relationship between training level and knowledge, with additional tests exploring links between training, lesion recognition and preventive practices.

3.6 Ethics and Governance

The study protocol and questionnaire was submitted to the Universidad de Europea Madrid Ethics Committee for approval prior to distribution. To protect participant confidentiality, no personal identifiers will be collected, and all responses will be anonymized and securely stored with access limited to the research team. Participation involves minimal risk, and the anticipated benefit lies in strengthening knowledge of paediatric caries prevention and informing future training and guideline development. Data was handled in accordance with applicable privacy regulations, ensuring that participant information remains protected through anonymization and secure storage procedures.

4 RESULTS

4.1 Introduction

We hereby present the findings from the cross-sectional survey conducted among health science professionals. Incomplete or not answered questions were excluded and 112 participants were included in the final analysis. The results are categorised into descriptive characteristics of the sample, reliability testing of the knowledge scale, and analyses related to knowledge, lesion recognition, and preventive practices. Both descriptive and inferential approaches were used to interpret the data.

4.2 Participant characteristics

The sample highlighted a diversity of healthcare professionals who regularly interact with children in a clinical environment or the community settings. The most sampled group was the general dentists although the data set also included paediatric dentists, orthodontists, nurses, assistants and other allied health workers. This allowed the study to capture a realistic picture of how different professions understand and manage primary tooth caries (3,13)

4.3 Professional roles

Figure 1 shows the distribution of professional roles among participants indicates that the largest proportion of respondents were General Dentists (**46** participants). This was followed by Paediatric Nurses (**18**), Paediatric Dentists (**8**), Nurse Assistants (**8**), Dental Hygienists (**7**), General Nurses (**7**), and Orthodontists (**6**). Smaller professional groups included Healthcare Managers (**3**), Doctors in Medicine (**2**), Mental Health Nurses (**2**), and Paediatricians (**2**), with single respondents in the Endodontist and Physician categories. Overall, the distribution highlights the multidisciplinary composition of the sample and the range of clinical roles involved in oral-health-related care.

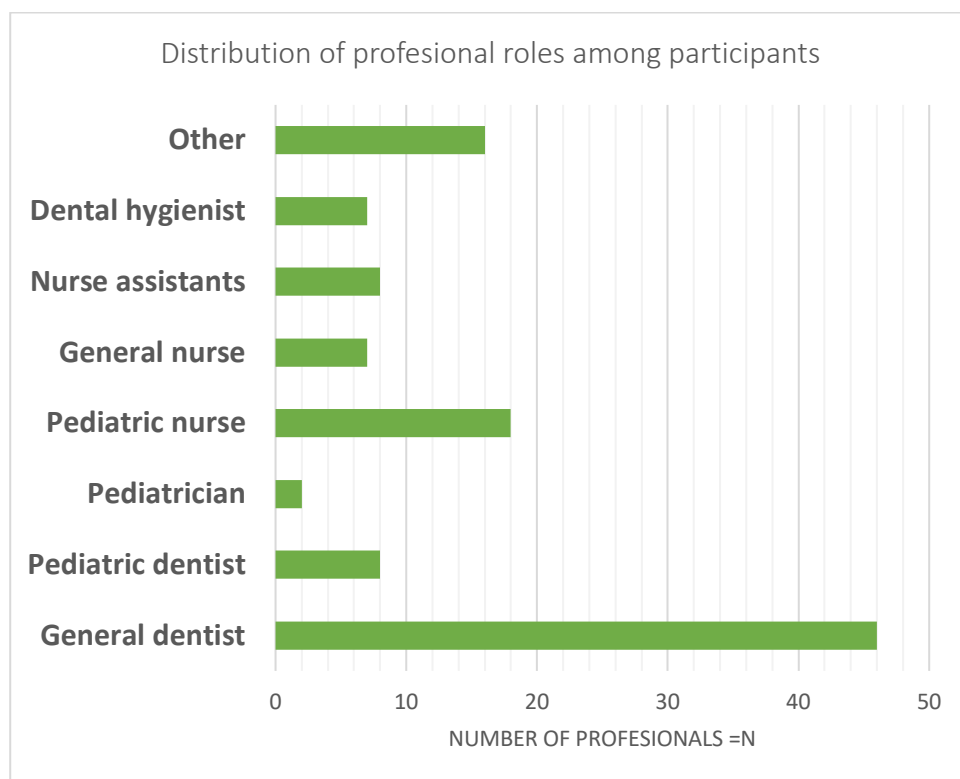


Figure 1. Distribution of Professional Roles Among Study Participants

4.4 Years of Experience

As shown in Figure 2 (distribution of participants by years of professional experience), the largest proportion of respondents reported six or more years of experience (**n = 49**), followed by those with zero to three years (**n = 42**). A smaller group indicated four to five years in practice (**n = 20**). This pattern suggests that the sample included a substantial number of experienced professionals, while still incorporating a meaningful representation of early-career practitioners.

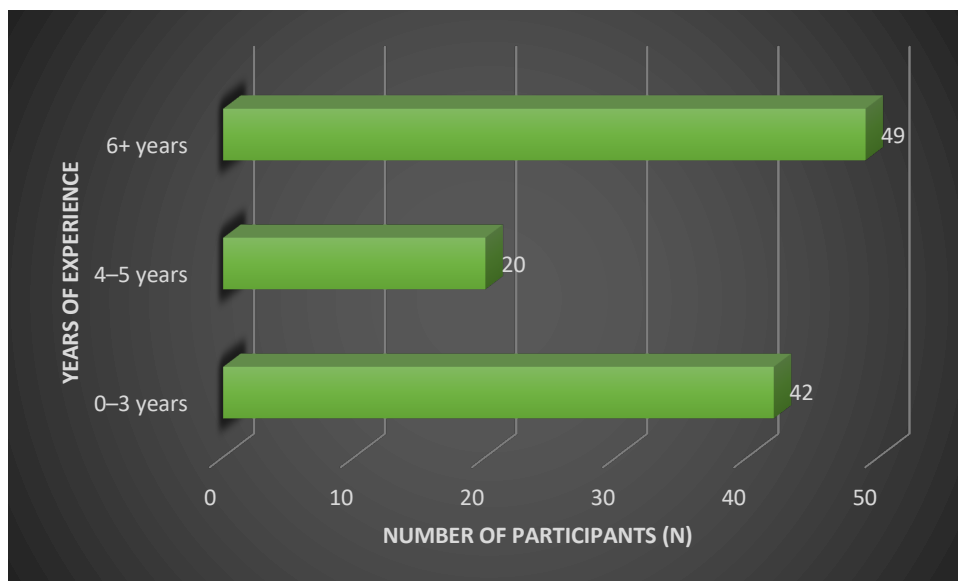


Figure 2. Distribution of Participants by Years of Professional Experience with Children

4.5 Workplace Setting

As shown in *Figure 3* the distribution of participants according to their workplace setting, over half of the respondents were employed in dental clinics **51%**, followed by those working in hospitals **23%** and health centres **11%**. Smaller proportions were based in general clinics **9%**, schools **3%**, and community-based services **2%** combined, with a small number of participants not specifying their workplace. This pattern reflects the predominance of dental-clinic settings in the provision of paediatric oral-health services, while also indicating that a range of healthcare and community environments contribute to patient care.

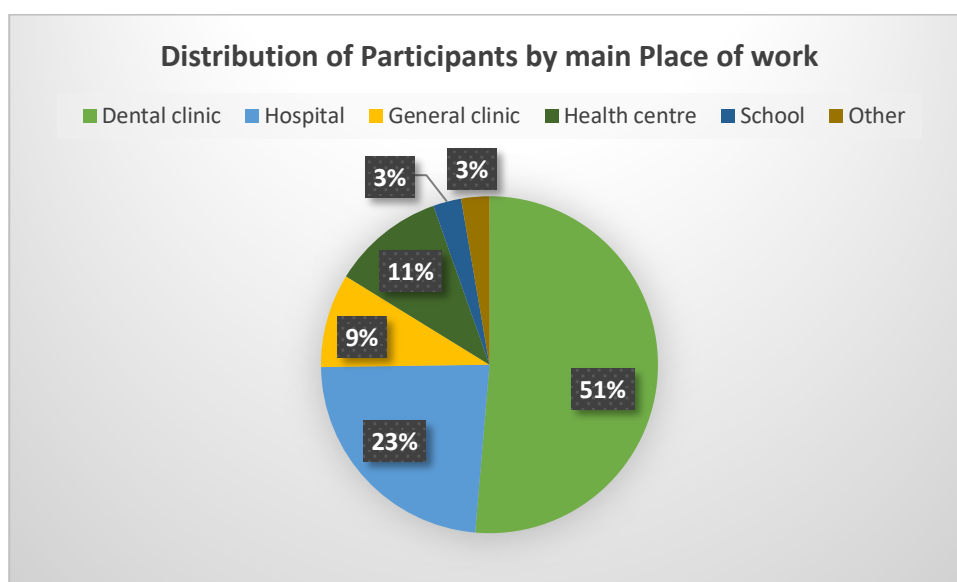


Figure 3. The distribution of respondents according to their workplace setting

4.6 Children with caries/tooth decay seen per week

Figure 4 shows the weekly number of children aged 0–8 presenting with caries as reported by respondents. The largest group indicated seeing six or more children per week ($n = 47$; 42%), followed by those seeing one to three children ($n = 26$; 23%). Smaller proportions reported seeing four to six children ($n = 16$; 14%) or none at all ($n = 15$; 13%). This distribution demonstrates that, for most respondents, encounters with young children affected by caries are a routine and frequent component of clinical activity.

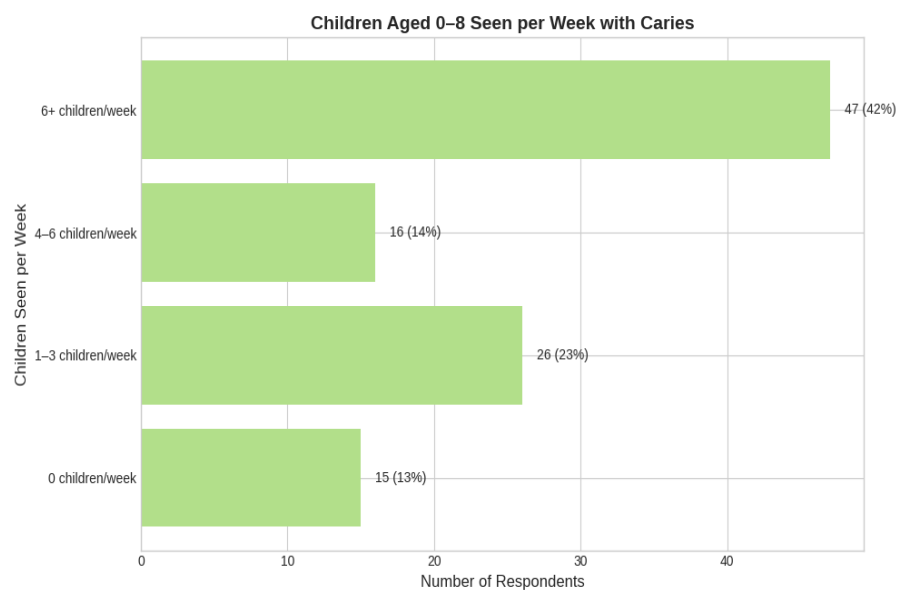


Figure 4. Children Aged 0–8 Years Seen per Week with Caries

4.7 Knowledge, attitudes and practices

Figure 5 shows the recommended measures selected by respondents. The most frequently reported measure was providing dietary advice aimed at reducing sugar intake ($n = 31$). This was followed by oral-hygiene instruction, reported by 23 respondents. A smaller proportion indicated referring children to dental services ($n = 5$), while only three respondents stated that they do not usually address these measures. Overall, preventive guidance particularly sugar-reduction advice was the most commonly reported approach.

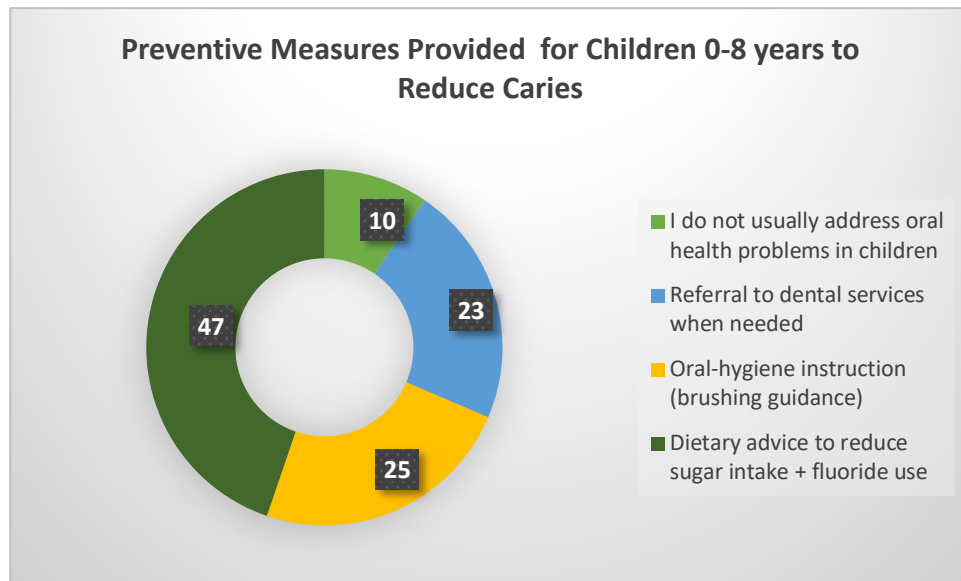


Figure 5. Preventative Measures Provided for Children 0-8 years to Reduce Caries

4.8 Familiarity with CRA and ICDAS

Figure 6 shows that most respondents were familiar with CRA and ICDAS, with the largest group reporting knowledge of both systems without using them ($n = 39$). A similar number indicated that they know and apply these systems in practice ($n = 30$). Familiarity was lower among those not aware of either system ($n = 29$), and only a small proportion had heard of them without understanding their use ($n = 6$). Overall, the data indicate high awareness but limited routine application.

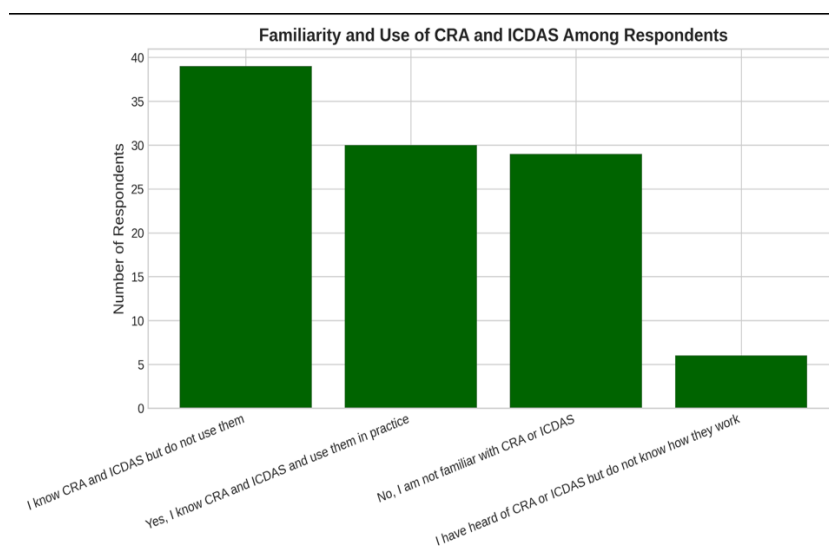


Figure 6. Familiarity and Use of CRA and ICDAS Among Respondents

4.9 Lesion recognition and prevention

Figure 7 shows that most respondents classified the lesion as an early enamel lesion, accounting for 69% of all responses. Preventive-care classification represented 21%, while only 1% identified the lesion as cavitated. A further 9% reported that this assessment falls outside their usual scope. The distribution demonstrates a clear predominance of non-cavitated interpretations.

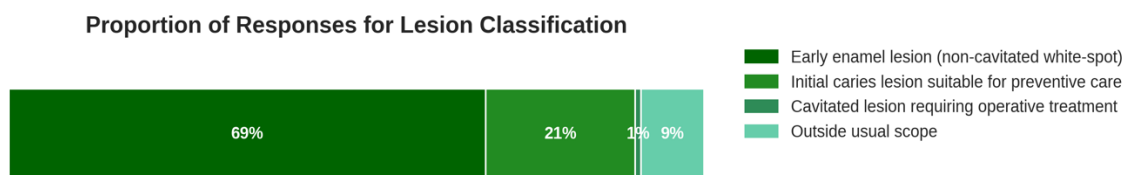


Figure 7. Proportion of Responses for Lesion Classification

4.10 Clinical Decision-Making When Caries Is Identified

Figure 8 presents the distribution of respondents' usual first action when caries is identified in a child aged 0–8 years. More than half of participants reported providing preventive guidance, including dietary advice, fluoride use, and oral-hygiene instruction (**55%, n = 58**). Operative treatment was selected by **27% (n = 28)** of respondents. A smaller proportion indicated monitoring the lesion and arranging follow-up (**9%, n = 9**). Finally, **10% (n = 10)** stated that they do not usually address oral health problems in children.

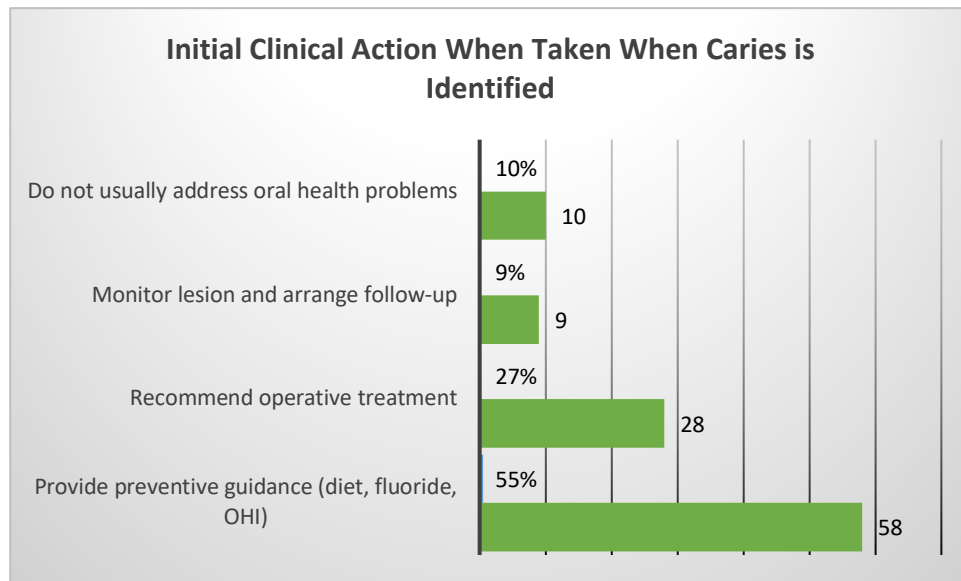


Figure 8. Initial clinical action taken when caries is Identified

4.11 Perceived Impact of Additional Training for Non-Dental Professionals

Figure 9 shows respondents' views on whether additional training for non-dental professionals would improve early detection and management of caries in children aged 0–8 years. Most participants indicated that such training would significantly improve early detection ($n = 67$), while a further proportion believed it would provide some improvement ($n = 33$). Only a small number were unsure of the potential impact ($n = 3$) or felt that additional training would not necessarily lead to improvement ($n = 1$). No respondents selected the "Other" option. The distribution demonstrates the relative frequency of each opinion within the sample.

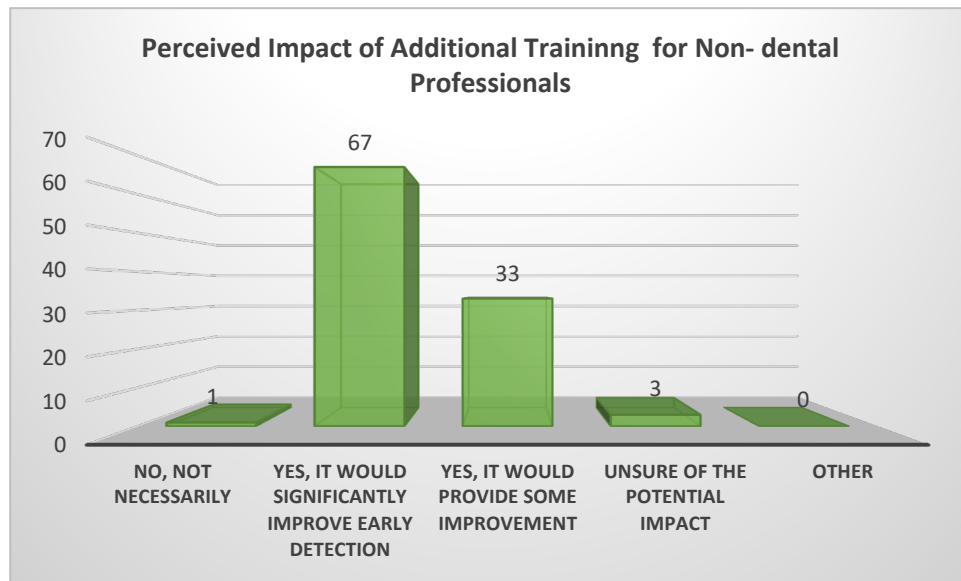


Figure 9. Perceived Impact of Additional Training for Non-dental Professionals

4.12 Reliability

Cronbach's alpha values for the two questionnaire sections (Table 1) ranged from **0.53 to 0.63**, indicating moderate internal consistency across the items. All corrected item–total correlations were positive, with values between **0.25 and 0.58**, showing that each item contributed to its respective section. “Alpha if deleted” values Table 2. Item Level Reliability Indicators (CITC and Alpha if Deleted) remained within a similar range, indicating that no single item substantially altered the internal consistency of the scale. Overall, the reliability statistics Tables 1 and 2 show that the questionnaire items performed consistently within each section and were suitable for subsequent descriptive analysis.

Section	No. of items	Mean	SD	Min	Max	Cronbach's alpha
Section 1: Knowledge and attitude	5	4.19	1.11	0	5	0.628
Section 2: Practice	3	1.67	0.97	0	3	0.530

Table 1. Internal Consistency of Questionnaire Sections (Cronbach's Alpha)

Section	Items	Correct Response (%)	CITC*	Alpha if deleted
Section 1: Knowledge Score	Q1. Risk factor for dental caries	69 (62.7%)	0.245	0.706
	Q2. Likely outcome of early lesions	89 (80.9%)	0.581	0.553
	Q3. Classification of lesions	97 (88.2%)	0.468	0.612
	Q4. Knowledge of preventive measures	70 (63.6%)	0.344	0.659
	Q5. Familiarity with ICDAS/CRA	74 (67.3%)	0.566	0.546
Section 2: Attitude Score	Q1. Role in promoting oral health	106 (96.4%)	0.440	0.324
	Q2. Opinion on treating primary teeth	100 (90.9%)	0.359	0.354
	Q3. Opinion on additional training	98 (89.1%)	0.249	0.579

Table 2. Item Level Reliability Indicators (CITC and Alpha if Deleted)

5 DISCUSSION

The present study explored the knowledge, attitudes and clinical practices of health-science professionals regarding the prevention and treatment of dental caries in primary teeth. The sample included general dentists, paediatric dentists, paediatricians, nurses, nurse assistants, dental hygienists and other health professionals, reflecting the multidisciplinary nature of paediatric oral healthcare. This diversity is consistent with previous research showing that early childhood oral health is influenced by a broad range of professionals who interact with children and families in clinical and community settings (3,12).

5.1 Knowledge of caries risk factors and early lesions

Most participants identified high sugar intake as the primary risk factor for dental caries in children, followed by poor oral hygiene. This aligns with established evidence that dietary sugars are the strongest modifiable determinant of caries in primary dentition (5,17). However, the very low selection of “low fluoride exposure” as a risk factor contrasts with guideline-based recommendations emphasizing fluoride as a central preventive measure in paediatric oral health (4,23). This suggests that while dietary knowledge is strong, awareness of fluoride-related risk may be less consistent across professional groups.

Knowledge of early non-cavitated lesions was generally appropriate. The majority recognised that white-spot lesions can be reversed or arrested with fluoride and behavioural change, which is consistent with minimally invasive caries management principles (4,17). Only a small proportion believed these lesions always progress or are unaffected by prevention, indicating that most respondents understand the preventive potential of early intervention.

When presented with a clinical scenario involving a 3-year-old child with an intact white-spot lesion, most respondents correctly classified it as an early enamel lesion suitable for preventive care. This aligns with diagnostic frameworks such as ICDAS, which distinguish non-cavitated from cavitated lesions and support preventive management (24). However, a minority misclassified the lesion or reported that classification was outside their scope, reflecting findings from other studies showing variability in diagnostic confidence among non-dental professionals (20).

5.2 Attitudes towards treatment of caries in primary teeth

Nearly all respondents agreed that caries in primary teeth should be actively treated, with most emphasising the need to prevent pain and infection. This strong treatment-oriented attitude is consistent with literature demonstrating the negative consequences of untreated caries on children’s wellbeing, growth and quality of life (2,25). The very small proportion who believed treatment is unnecessary reflects a shift away from outdated assumptions that

primary teeth are less important because they exfoliate naturally.

Participants also demonstrated strong awareness of the reversibility of early lesions, supporting contemporary preventive-focused caries management models (22). These findings align with studies showing that health professionals increasingly recognise the importance of early intervention and non-operative care in managing caries in young children (19,20).

5.3 Preventive measures and clinical decision-making

Dietary advice combined with fluoride use was the most frequently reported preventive measure, followed by oral-hygiene instruction and referral to dental services. This pattern is consistent with evidence-based recommendations that emphasise diet counselling, fluoride exposure and oral-hygiene support as core components of paediatric caries prevention (4,22). The relatively high use of dietary and fluoride-based advice mirrors findings from other studies showing that health professionals increasingly integrate preventive strategies into routine care (19).

When caries was identified, the most common first action was to provide preventive guidance, followed by recommending operative treatment. This reflects a balance between preventive and restorative approaches, similar to patterns observed in chronic disease management models for early childhood caries (22). The proportion recommending operative treatment as a first response suggests that some professionals may still prioritise restorative care, particularly for more advanced lesions, which is consistent with qualitative findings describing the tension between preventive and operative strategies in paediatric dentistry (25).

5.4 Use of caries risk assessment and diagnostic systems

Familiarity with CRA and ICDAS varied considerably. Some respondents used these tools, others knew them but did not apply them, and a notable proportion were unfamiliar with them. This mirrors findings from other settings where structured risk-assessment tools are recognised but inconsistently implemented due to time constraints, training gaps or perceived complexity (23). Recent work highlights the importance of integrating risk-based approaches into primary care to improve early detection and targeted prevention (19,23).

The limited routine use of CRA and ICDAS in this sample suggests an opportunity for further training and system-level support, particularly for non-dental professionals who frequently encounter young children in clinical settings.

5.5 Exposure to children with caries and perceived training needs

Most respondents reported seeing children with caries regularly, with a substantial proportion seeing six or more cases per week, reflecting the high burden of early childhood caries observed globally (24). Despite this frequent exposure, the majority believed that additional training for non-dental professionals would improve early detection and management. This perception aligns with studies identifying training needs among healthcare providers to implement caries risk assessment and integrate oral health into broader child health services (19,23).

The strong support for additional training suggests that professionals recognise both the importance of early detection and the need for enhanced competence in caries assessment, prevention and referral.

5.6 Methodological considerations and reliability

The questionnaire demonstrated moderate internal consistency, with Cronbach's alpha values between 0.53 and 0.63. All corrected item-total correlations were positive, and "alpha if deleted" values remained stable, indicating that each item contributed meaningfully to its section. These reliability levels are comparable to those reported in other KAP instruments used in oral-health research (20,21). The stability of the reliability metrics supports the validity of the descriptive findings and suggests that the instrument performed consistently across the sample.

6 CONCLUSION

6.1 Conclusion related to the primary objective

The study showed that healthcare professionals demonstrated a **moderate level of knowledge** regarding dental caries in the primary dentition, supported by a Cronbach's alpha of **0.628** for the knowledge and attitude section and item-level correct response rates ranging from **62.7% to 88.2%**. These findings indicate that although core concepts are generally understood, knowledge is not fully homogenous across items or professional groups, highlighting the need for reinforcement of paediatric caries principles.

6.2 Conclusion related to secondary objective 1

Professionals demonstrated a strong ability to distinguish non-cavitated from cavitated lesions, with **69%** correctly identifying the clinical image as an early enamel lesion and only **1%** classifying it as cavitated. A further **9%** reported that lesion assessment falls outside their usual scope. These findings confirm that early lesion recognition is generally adequate, although a minority of professionals still lack confidence or do not routinely engage in lesion assessment."

6.3 Conclusion related to secondary objective 2

Preventive strategies were frequently implemented, particularly dietary advice and oral-hygiene instruction, which were the most commonly reported measures. Referral alone and non-intervention were uncommon. Although familiarity with CRA and ICDAS was high, routine use remained limited, with many professionals reporting knowledge of these systems without applying them consistently. These findings indicate that preventive care is present in daily practice but not yet fully standardised, underscoring the need to promote systematic use of structured caries-risk and diagnostic tools.

7 SUSTAINABILITY

The results of this study contribute to sustainability by addressing a health condition—early childhood caries—that the *Sustainable Development Goals Report 2024* identifies as disproportionately affecting children in socially and economically vulnerable settings (26). By revealing gaps in knowledge, lesion recognition, and preventive practice among healthcare professionals, the study supports SDG 3 (Good Health and Well-Being) through the promotion of early-detection and prevention as cost-effective, long-term strategies. Strengthening professionals’ competencies reduces the need for invasive treatments, thereby lowering economic burdens on families and healthcare systems while promoting more efficient use of clinical resources.

Social sustainability is reinforced by emphasising equitable access to oral-health knowledge across all professional groups who interact with children, aligning with the SDG commitment to reducing early-life health inequalities. Environmentally, a shift toward prevention-focused care indirectly reduces the use of dental materials and clinical waste associated with restorative procedures. Overall, the study supports a sustainable model of paediatric oral health by promoting prevention-focused practice, interdisciplinary responsibility, and long-term improvements in child well-being, consistent with the ethical and social commitments outlined in RD 822/2021 and the priorities highlighted in the *Sustainable Development Goals Report 2024* (26).

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9. ANNEXES

9.1 Annex 1. Full survey instrument: healthcare professionals' knowledge of caries and prevention

🕒 15 minutes

Healthcare Professionals' Knowledge of Caries & Prevention



*The purpose of this survey is to assess health professionals' knowledge, ability to distinguish early from advanced carious lesions, routine use of preventive measures. This survey will take you approximately 12 minutes. **Este formulario está disponible en inglés y en español.***

* Required

1

INFORMED CONSENT This survey is part of the Graduation Project in Dentistry at Universidad Europea of Madrid titled *Título Trabajo Fin de Grado* and directed by *Nombre y apellidos del tutor/a*. The purpose of this work is *indicar objetivos del trabajo* and the information will be collected through a brief survey. Your participation in this study is voluntary. You may request to be withdrawn from the study without prior justification or prejudice to you. The information collected will be kept confidential and will not be used for any other purpose outside this research and research dissemination purposes. The data collected will be completely anonymous. No personal identifying information will be requested. Information collected in the survey will be treated in accordance with the provisions of Organic Law 3/2018, of December 5, Protection of Personal Data and Guarantee of Digital Rights. Do you give your consent to participate in the survey as a volunteer for the results to be used in the Final Degree Project *Título Trabajo Fin de Grado*? *

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Do you give your consent to participate in the survey as a volunteer for the results to be used in the Final Degree Project *Título Trabajo Fin de Grado*?

☐ ☐

☐ YES

☐ No

2

Please select your professional role

- ☐ General dentist
- ☐ Pediatric dentist
- ☐ Pediatrician
- ☐ Pediatric nurse
- ☐ General nurse
- ☐ Nurse assistants
- ☐ Dental hygienist
- ☐ Other

3

Which of the following best describes your main place of work? *

- ☐ Dental clinic
- ☐ Hospital
- ☐ General clinic
- ☐ Healthcentre
- ☐ School
- ☐ Other

4

How many years of clinical experience do you have working with children *

- ☐ 0-3 years
- ☐ 4-5 years
- ☐ 6 years +

5

I consider **promoting oral health** an important part of my professional role when working with children *

- ☐ Strongly agree
- ☐ Agree
- ☐ Neutral
- ☐ Disagree
- ☐ Strongly disagree

6

Mark the **most important risk factor** for dental caries (**tooth decay**) in children, in your opinion *

- ☐ High sugar intake (diet)
- ☐ Poor oral hygiene
- ☐ Low fluoride exposure
- ☐ Underlying conditions
- ☐ Tooth structure (enamel and dentin quality)

7

In your clinical opinion, should dental caries (tooth decay) **in primary teeth be actively treated**, rather than left to **progress naturally**? *

- ☐ Yes - treatment is essential to prevent pain and infection
- ☐ No - treatment is unnecessary as primary teeth will exfoliate naturally
- ☐ Yes - but only when symptomatic or advanced lesions
- ☐ No - only manage prevention and monitoring

8

With appropriate care, what is the likely outcome of early **non-cavitated white-spot lesions** (enamel-only caries) in children's teeth/tooth? *

- ☐ Can be reversed or arrested with fluoride and behaviour change
- ☐ Always progress to deep lesions
- ☐ Not affected by prevention or behaviour (habits)
- ☐ I am not confident in assessing these lesions

9

A 3-year-old child presents with a **white-spot lesion on a primary tooth**. The enamel surface is intact. How would you classify this lesion? *

Please select at most 2 options.

- ☐ Early enamel lesion (non-cavitated white-spot)
- ☐ Initial caries lesion suitable for preventive care
- ☐ Cavitated lesion requiring operative treatment
- ☐ Classification of this lesion is outside my usual scope

10

Which **preventive measures** do you typically provide for children aged 0–8 to reduce caries in primary teeth? *

- ☐ I do not usually address oral health problems in children
- ☐ Referral to dental services when needed
- ☐ Oral-hygiene instruction (brushing guidance)
- ☐ Dietary advice to reduce sugar intake + fluoride use

11

When you identify **caries (tooth decay)** in a child aged 0–8, what is your usual **first action**? *

- ☐ Provide preventive guidance (diet, fluoride, oral hygiene)
- ☐ Monitor the lesion and arrange follow-up
- ☐ Recommend operative treatment
- ☐ I do not usually address oral health problems in children

12

Are you familiar with Caries Risk Assessment (**CRA**) or the International Caries Detection and Assessment System (**ICDAS**), and do you use them in your practice? *

- ☐ No, I am not familiar with CRA or ICDAS
- ☐ Yes, I know CRA and ICDAS and use them in practice
- ☐ I know CRA and ICDAS but do not use them
- ☐ I have heard of CRA or ICDAS but do not know how they work

13

In a typical **week**, how many children aged **0–8 years** do you see with **caries (tooth decay)**? *

- ☐ 1-3 children/week
- ☐ 4-6 children/week
- ☐ 6+ children/week
- ☐ 0

14

Do you think **additional training** for **non-dental professionals** would improve **early detection and management of caries** in children aged 0–8 years? *

- ☐ No, not necessarily
- ☐ Yes, it would significantly improve early detection
- ☐ Yes, it would provide some improvement
- ☐ Unsure of the potential impact
- ☐

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 Microsoft Forms

The survey as approved by Universidad de Europea Madrid committee with code **OD.055/2526**.

