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Knowledge, Attitude, and Practice of Parents Regarding Oral Hygiene of Primary School Children in Zliten – Libya

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معرفة وموقف وممارسات أولياء الأمور فيما يتعلق بصحة الفم لدى أطفال المدارس الابتدائية في زليتن – ليبيا

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Abstract
Oral diseases rank among the most prevalent and pervasive health challenges worldwide, significantly impacting individual well-being and public health systems. In children, inadequate oral hygiene can lead to early dental issues that hinder physical, psychological, and social development. This study aims to evaluate the knowledge, attitudes, and practices of parents regarding their children's oral health behaviors, with a focus on preventive and hygienic care. A cross-sectional study was conducted in 2023 involving 160 parents of students enrolled in government primary schools in Zliten, Libya. Participants were selected through a random sampling technique. Data collection was facilitated via structured questionnaires, and responses were analyzed using Microsoft Excel to assess parental awareness, attitudes, and practices related to pediatric oral health. Findings revealed that 64% of parents reported their children did not clean their tongues. Approximately 43.75% of respondents were unaware that fluoride toothpaste can prevent dental caries, while only 23.75% recognized its protective benefits.

Regarding brushing techniques, 46% of parents believed the horizontal method was best, whereas 36% considered the method inconsequential. In terms of toothbrush replacement, 37% replaced brushes when visibly worn, 27.5% were uncertain, and only 22.5% adhered to the recommended three-month interval. The study highlights a substantial gap in parental knowledge and awareness concerning optimal oral hygiene practices and preventive dental care for children. These findings underscore the need for targeted interventions and continuous educational campaigns to enhance parental understanding and promote better oral health outcomes among school-aged children.

Keywords: Oral Diseases, Parent, Education, Attitude, Knowledge.

الملخص

تصنَّف أمراض الفم ضمن أكثر التحديات الصحية انتشارًا وتأثيرًا على مستوى العالم، حيث تُحدث تأثيرًا كبيرًا على رفاهية الأفراد وأنظمة الصحة العامة. وفيما يتعلق بالأطفال، فإن سوء نظافة الفم يمكن أن يؤدي إلى مشاكل مبكرة في الأسنان تعيق النمو البدني والنفسي والاجتماعي. تهدف هذه الدراسة إلى تقييم معرفة ومواقف وممارسات أولياء الأمور فيما يتعلق بسلوكيات صحة الفم لدى أطفالهم، مع التركيز على الجوانب الوقائية والصحية. تم إجراء دراسة مقطعية في عام 2023 شملت 160 من أولياء أمور طلاب المدارس الابتدائية الحكومية في مدينة زليتن، ليبيا. وقد تم اختيار المشاركين باستخدام تقنية العينة العشوائية. تم جمع البيانات من خلال استبيانات منظمة، وتم تحليل الردود باستخدام برنامج Microsoft Excelلتقييم مدى وعي أولياء الأمور ومعارفهم ومواقفهم المتعلقة بصحة الفم لدى الأطفال. أظهرت النتائج أن 64% من أولياء الأمور أفادوا بأن أطفالهم لا يقومون بتنظيف ألسنتهم، في حين أن حوالي 43.75% من المشاركين لم يكونوا على دراية بأن معجون الأسنان الذي يحتوي على الفلورايد يساعد في الوقاية من تسوس الأسنان، بينما 23.75% فقط أقرّوا بفوائده الوقائية. أما فيما يتعلق بتقنيات تفريش الأسنان، فقد رأى 46% من الآباء أن طريقة التفريش الأفقية هي الأفضل، في حين اعتبر 36% أن نوع التقنية غير مهم. وبالنسبة لاستبدال فرشاة الأسنان، أفاد 37% بأنهم يقومون بذلك عند تآكل الشعيرات، و27.5% كانوا غير متأكدين من التوقيت المناسب، بينما فقط 22.5% التزموا بالجدول الموصى به لاستبدال الفرشاة كل ثلاثة أشهر. تسلط الدراسة الضوء على وجود فجوة كبيرة في معرفة ووعي أولياء الأمور فيما يتعلق بممارسات نظافة الفم المثلى والرعاية الوقائية لصحة أسنان الأطفال. وتؤكد هذه النتائج على الحاجة الماسّة إلى تدخلات تعليمية موجَّهة وحملات توعية مستمرة لتعزيز فهم أولياء الأمور وتحقيق نتائج أفضل في صحة الفم بين الأطفال في سن المدرسة.

الكلمات المفتاحية: أمراض الفم، أولياء الأمور، التثقيف، المواقف، المعرفة.

Introduction

Oral diseases remain among the most prevalent and pervasive public health concerns globally [1]. Inadequate dental hygiene significantly compromises children's quality of life and may contribute to a broad spectrum of dental and systemic health complications [2]. Early childhood caries (ECC) and dental deterioration, particularly in children under six years of age, can adversely affect physical growth and developmental milestones. These conditions are often associated with persistent pain, discomfort, impaired eating and feeding, speech difficulties, sleep disturbances, reduced weight gain, and a marked decline in overall well-being [3].

The perceptions and experiences of both children and their parents are critical in understanding the dynamics of oral health behavior [4]. Early childhood represents a formative stage during which behavioral patterns and habits, particularly those related to health, are established and internalized [5]. Empirical evidence indicates that parental oral health practices and socioeconomic conditions exert a profound influence on children's dental hygiene behaviors. Notably, parental beliefs regarding oral health serve as a pivotal factor in shaping their children's oral care practices and attitudes [6].

Families of lower socioeconomic status, characterized by limited income, lower educational attainment, and restricted access to healthcare, are disproportionately burdened by poor oral hygiene and a higher incidence of dental diseases. Such families often exhibit limited awareness of appropriate oral health practices and face significant financial barriers to obtaining preventive and curative dental care [7].

Given that children spend the majority of their time within the familial setting, parental involvement, especially maternal knowledge and engagement, plays a crucial role in cultivating positive oral health attitudes and behaviors in children [8,9]. Indeed, parental influence is integral to both the maintenance and long-term outcomes of a child's dental health [10]. Furthermore, school-based dental health programs have demonstrated efficacy in enhancing both parental and child knowledge regarding oral hygiene. These initiatives typically include education on appropriate dietary practices and supervised tooth brushing techniques using high-fluoride gels, which collectively contribute to the reduction of dental caries and other oral pathologies [11].

This study makes a significant contribution to the existing body of knowledge on pediatric oral health by highlighting the critical role of parental influence on children's oral hygiene behaviors. It provides empirical evidence from a Libyan context, specifically Zliten municipality, on the extent of parental awareness, attitudes, and practices regarding preventive dental care. By identifying specific deficiencies in knowledge (e.g., the use of fluoride toothpaste), attitudes (e.g., underestimation of proper brushing techniques), and practices (e.g., irregular toothbrush replacement), the study addresses an important gap in public health research focused on oral health literacy at the family level. Furthermore, the study emphasizes the urgent need for structured, culturally tailored health promotion interventions targeting parents as key stakeholders in the oral health outcomes of children. Its findings can inform the design of educational campaigns, school-based programs, and community outreach initiatives aimed at fostering long-term preventive behaviors. The data-driven approach and context-specific insights offer a foundation for future research and policy formulation to improve child oral health both locally and in comparable settings across developing nations.

Materials and Methods

Study Design

This study employed a cross-sectional descriptive design to assess the attitudes, knowledge, and practices of parents concerning their children's oral health behaviors. The research was conducted from August to October 2023 in selected government primary schools within the municipality of Zliten, Libya. A random sampling technique was used to ensure a representative selection of participants. The study utilized a structured questionnaire divided into three main sections, focusing respectively on attitudes, knowledge, and practices related to oral hygiene.

Study Population

The study population comprised parents of school-aged children residing in Zliten, aged between 18 and over 50 years. A total of 160 participants were included in the sample, consisting of 120 female and 40 male respondents. These individuals were the primary caregivers of children enrolled in public primary schools within the city.

Study Area

Zliten is the fifth largest city in Libya, located within the northwestern region of the country. The municipality serves as an educational and administrative hub, making it a suitable site for research involving school-based populations. The study was conducted across selected government primary schools to capture a diverse sample of families within the community.

Data Collection and Analysis

Data were collected through a pre-designed questionnaire comprising 15 closed-ended questions. Participants completed the survey independently without external assistance. The instrument aimed to capture comprehensive information on parental awareness, beliefs, and behaviors related to their children’s oral hygiene. Prior to data collection, ethical approval and administrative consent were obtained from the school authorities. The collected data were entered and analyzed using Microsoft Excel, with descriptive statistics employed to evaluate the frequency and distribution of responses across the three main domains: knowledge, attitudes, and practices.

Results

A total of 160 parents, ranging in age from 18 years to over 50 years, were randomly selected to participate in the study by completing a structured questionnaire assessing their knowledge, attitudes, and practices related to oral health. As shown in Table 1, 58% of the respondents had completed secondary school, while 27.5% held a master's degree or higher. In terms of gender distribution, 75% of the participants were female and 25% were male.

The questionnaire included various items aimed at evaluating parental understanding of oral hygiene, including dietary impact on dental caries, frequency and method of tooth brushing, and the timing of toothbrush replacement.

The analysis revealed a notable correlation between higher levels of parental education and improved oral hygiene practices in children. Furthermore, a substantial proportion of parents expressed a desire to gain more knowledge regarding effective strategies for maintaining their children’s oral health. These findings underscore the role of education in shaping oral health behaviors and highlight the need for targeted awareness campaigns to promote preventive practices among parents.

Table 1. Demographic Characteristics of the Parent Participants.

Variable	Frequency (n)	Percentage (%)
Age Group		
18 – 29 Years	9	5.5%
30 – 39 Years	21	13%
40 - 49 Years	76	47.5%

50 and more	54	34%
Gender		
Male	40	25%
Female	120	75%
Education Level		
Primary school and lower	7	4.5%
High school and above	93	58%
Vocational	16	10%
Master and above	44	27.5%

The findings of this study underscore notable gaps in parental knowledge, attitudes, and practices concerning children's oral hygiene. The majority of participants were mothers (75%) and a significant proportion (47.5%) belonged to the 40–49 years age group, suggesting that the primary caregivers are mature adults likely to influence children's health behaviors. Although a considerable number of parents (58%) had attained education at the high school level or above, the results revealed insufficient awareness of essential oral hygiene practices, including appropriate brushing techniques, the role of fluoride toothpaste, and the frequency of toothbrush replacement.

Importantly, despite some parental recognition of the importance of oral health, inconsistencies in daily practices, such as supervision during brushing and knowledge of cariogenic foods, highlight the need for more structured oral health education. These gaps were especially evident among those with lower educational attainment. Therefore, it is imperative to implement comprehensive, community-based oral health promotion programs targeted at parents. These initiatives should focus on improving health literacy, reinforcing evidence-based practices, and empowering families, particularly those with limited formal education, to adopt and model positive oral hygiene behaviors. Strengthening parental capacity through school-based interventions and public awareness campaigns can play a pivotal role in promoting long-term oral health outcomes in children.

Attitude of Parents regarding Oral Hygiene of Children

Various questions regarding the oral health attitude: 34% of parents answered that maintaining oral health was very important, while 42.5% regarded it as important. This indicates a simple awareness and insufficient attitude among parents about the importance of oral hygiene for their children. However, the majority of the parents (64%) have reported their children did not clean their tongues, while 22% said they were unaware of their children cleaning their tongues. When their children were brushing their teeth, 51.5% of parents reported that they were in a joyful mood, compared to 36% who reported that they were depressed.

Parental Attitudes Toward Children's Oral Hygiene

The study assessed parental attitudes toward the importance of oral hygiene in children through a series of targeted questions. Findings revealed that 34% of parents perceived maintaining oral health as very important, while 42.5% considered it important. Although these responses reflect a general awareness of the relevance of dental care, the data also indicate a limited depth of understanding and a somewhat insufficient attitude toward proactive oral hygiene practices.

A notable 64% of parents reported that their children did not engage in tongue cleaning, an essential component of comprehensive oral hygiene. Additionally, 22% of respondents stated they were unaware of whether their children cleaned their tongues at all. These responses suggest a gap in both supervision and awareness regarding daily oral care routines.

In exploring the emotional context associated with tooth brushing, 51.5% of parents observed that their children appeared to be in a joyful or positive mood while brushing, whereas 36% reported signs of disinterest or depression during the activity. This emotional dimension may influence the consistency and effectiveness of oral hygiene behaviors in children and highlights the role of parental encouragement and environment in shaping attitudes.

The findings presented in Table 2 provide valuable insight into the attitudes and behaviors of parents regarding their children's oral health. While 75% of parents considered oral health either "very important" (32.5%) or "important" (42.5%), the remaining 25% expressed either neutral or dismissive views, reflecting a partial awareness that may not translate into consistent oral health practices. Alarmingly, 64% of parents reported that their children did not clean their tongues, and an additional 22% were unsure, indicating a critical gap in the understanding of comprehensive oral hygiene routines. This neglect may compromise the overall effectiveness of daily brushing habits.

Moreover, while a majority of parents (51.5%) observed that their children brushed their teeth happily, a significant portion (36%) exhibited sadness, and 12.5% showed resistance during brushing.

These emotional responses may reflect either discomfort with the practice or a lack of positive reinforcement from caregivers.

Table 2. Oral health attitude

Variable	Frequency (n)	Percentage (%)
Attitude toward dental health		
Very important	52	32.5%
Important	68	42.5%
Neutral	22	14%
Less important	16	10%
Not important	2	1%
Brushing of Tongue		
Yes	22	14%
No	103	64%
Don't know	35	22%
Child's Mood When Brushing Teeth		
Happily,	82	51.5%
Sad	58	36%
Resistant	20	12.5%

Knowledge of Parents regarding Oral Hygiene of Children

When questioned about the timing of their child's first tooth eruption, 40% of parents correctly reported it occurred between 6 and 10 months of age. However, a considerable proportion (37%) indicated uncertainty, while 23% believed that eruption occurred between 10 and 16 months, indicating variable levels of awareness regarding early dental development. Regarding the appropriate timing for offering sweets to children, 41% of parents were uncertain, 30% reported doing so after meals, and 18% admitted to providing sweets between meals. These responses suggest limited knowledge of dietary practices that influence caries risk. In identifying foods associated with dental caries, a majority (64%) recognized chocolate as a primary contributor, while 17% and 14% identified cakes and biscuits, respectively. Although some awareness of cariogenic foods exists, the limited diversity in responses highlights gaps in comprehensive nutritional knowledge. Furthermore, parental understanding of fluoride's preventive function in dental care appeared insufficient. When asked if fluoride toothpaste helps prevent dental cavities, 43.75% of parents expressed uncertainty, 32.5% responded negatively, and only 23.75% affirmed its protective role. These findings emphasize the need for improved education on the benefits of fluoride in routine oral hygiene.

Parental Knowledge Regarding Children's Oral Hygiene

Parental knowledge concerning various aspects of children's oral health was assessed through multiple indicators. When asked about the typical timing of their child's first tooth eruption, 40**%** of respondents correctly identified the period as between 6 and 10 months. However, a substantial proportion (37%) indicated they were unsure, while 23% believed that tooth eruption occurred between 10 and 16 months, reflecting moderate awareness with evident knowledge gaps.

Regarding the appropriate timing for offering sweets to children, 41% of parents were uncertain, 30% reported it was acceptable after meals, and 18% stated in-between meals. These findings underscore a general lack of consensus and insufficient understanding of dietary factors contributing to dental decay. When asked to identify foods responsible for causing dental caries, the majority of parents (64%) correctly cited chocolate as a primary contributor. By contrast, 17% and 14% of respondents identified cakes and biscuits, respectively, suggesting a partial recognition of cariogenic food items.

In relation to preventive dental care, parents were asked about their awareness of fluoride toothpaste and its role in reducing dental cavities. The responses revealed a significant knowledge deficiency: 43.75% of parents reported being unsure, 32.5% disagreed, and only 23.75% agreed that fluoride toothpaste is effective in preventing dental caries.

Collectively, these findings highlight critical gaps in parental knowledge, particularly regarding the timing of dental development, dietary risk factors, and the preventive role of fluoride, emphasizing the need for targeted oral health education initiatives.

The data in Table 3 highlight significant knowledge gaps among parents regarding essential aspects of children's oral health. While 40% of parents correctly identified the typical age range for first tooth eruption (6–10 months), a considerable proportion (37%) reported being unsure, and 23% provided incorrect information, indicating the need for greater awareness of early dental development milestones.

Parental understanding of appropriate dietary practices was also limited. Only 30% of respondents identified “after meals” as the best time to give sweets, while 41% were uncertain, and 11% believed it was acceptable to provide sweets at night before bed, a habit known to increase the risk of caries.

Table 3. Oral health knowledge.

Variable	Frequency (n)	Percentage (%)
Age for First Tooth Growth		
10 – 6 months	64	40%
16 – 10 months	37	23%
Don’t know	59	37%
Best Time to Give Sweets		
After meals	48	30%
In-between meals	29	18%
At night, before bed	17	11%
Don’t know	66	41%
Foods that Cause Tooth Decay		
Chocolate	102	64%
Biscuits	23	14%
Fruits	8	5%
Cakes	27	17%
Fluoride Toothpaste Knowledge		
Agree	38	23.75%
Disagree	52	32.5%
Don't know	70	43.75%

When identifying cariogenic foods, 64% of parents recognized chocolate as a primary contributor to tooth decay. However, far fewer identified biscuits (14%), cakes (17%), and fruits (5%), suggesting a lack of comprehensive understanding of the broader range of sugary foods associated with dental caries. Additionally, awareness of the preventive role of fluoride toothpaste was notably insufficient. Only 23.75% of parents agreed that fluoride toothpaste helps prevent dental cavities, while 32.5% disagreed and a substantial 43.75% reported not knowing, an alarming indicator of misinformation or lack of exposure to evidence-based oral health guidance. These findings underscore the urgent need for targeted educational interventions to improve parental knowledge in areas such as tooth development timelines, cariogenic dietary habits, and the proven benefits of fluoride. Enhancing parental oral health literacy is critical for fostering healthier practices at home and ensuring long-term dental well-being in children**.**

Practice of Parents regarding Oral Hygiene of Children

When evaluating parental knowledge and practices regarding toothbrush replacement, 37% of respondents indicated that they replaced their child’s toothbrush when the bristles became frayed, while 27.5% reported being unsure. Additionally, 22.5% adhered to the recommended practice of replacing toothbrushes every three months, whereas 13% believed that a six-month interval was sufficient. In terms of brushing frequency, 46% of parents stated that they brushed their children’s teeth once daily, while 29% reported brushing twice a day, and 25% claimed to do so after every meal. When asked about the brushing technique deemed most appropriate, 46% preferred the horizontal method, 36% indicated that the technique was not important, and only 18% advocated for the circular (Bass or Fones) technique, which is more commonly recommended by dental professionals.

Regarding the amount of toothpaste applied, 42.5% of parents reported using a full-length strip on the brush, 35.5% believed the quantity did not matter, and only 22% correctly identified a pea-sized amount as appropriate, especially for younger children, according to dental guidelines. Parental supervision during tooth brushing was also assessed. Approximately 52.5% of parents stated that they actively supervised their children while brushing, whereas 28% provided verbal guidance without direct observation, and 19.5% were unsure about their involvement. These findings suggest considerable variation in oral hygiene practices, with a need for greater parental education on proper techniques, fluoride use, and supervision to promote effective and age-appropriate oral care routines.

The data summarized in Table 4 highlight several shortcomings in the oral health practices of parents concerning their children's dental hygiene. Although 37% of parents reported replacing toothbrushes when the bristles splay, only 22.5% adhered to the recommended practice of replacing toothbrushes every three months. Notably, 27.5% were unaware of when to replace a toothbrush, underscoring a significant knowledge gap in routine oral care. In terms of brushing frequency, 46% of parents indicated

that their children brushed once daily, while 29% reported brushing twice a day, and 25% did so after every meal. These figures suggest that while some parents encourage optimal brushing habits, a substantial portion may not be meeting evidence-based recommendations.

Table 4. Oral health practice.

Variable	Frequency (n)	Percentage (%)
Replacement Timing		
Every 3 months	36	22.5%
Every 6 months	21	13%
When bristles splay	59	37%
Don't know	44	27.5%
Brushing Frequency		
Twice a day	46	29%
Once a day	73	46%
After every meal	41	25%
Best Brushing Method for a Child		
Circular motions	29	18%
Scrubbing to and fro	74	46%
Doesn't matter	57	36%
Toothpaste Usage		
Small pea-size	35	22%
Full-length	68	42.5%
Doesn't matter	57	35.5%
supervised parents while brushing		
Watch their children while brushing teeth	84	52.5%
Do not watch but advise them	45	28%
Never cared	31	19.5%

Regarding the brushing method, 46% of parents preferred a horizontal scrubbing motion, while only 18% selected the circular method, which is more commonly advocated by dental professionals. Additionally, 36% stated the technique did not matter, reflecting a lack of awareness of its importance in effective plaque removal. Toothpaste usage also showed variation. While 42.5% applied toothpaste along the full length of the brush, only 22% used the recommended pea-sized amount, and 35.5% believed the amount was not important. This overuse may increase the risk of fluorosis in younger children and points to a need for better parental guidance.

Collectively, these findings reveal inconsistent and often suboptimal oral health practices among parents. Targeted educational interventions are essential to promote correct brushing techniques, optimal brushing frequency, appropriate toothpaste use, and timely toothbrush replacement. Such efforts will be critical in enhancing oral hygiene outcomes for children and fostering a culture of preventive dental care within families.

Discussion

The present study reveals that while a majority of participating parents possessed a basic understanding of oral hygiene practices, significant gaps remain in their awareness and education, particularly regarding preventive and treatment measures that influence their children's oral health. As primary role models, parents play a critical role in shaping their children's health-related behaviors, including oral hygiene routines. When assessing attitudes, 42.5% of parents acknowledged the importance of maintaining oral health, whereas a smaller proportion (14% and 10%, respectively) considered it less significant, findings consistent with previous studies [12]. However, despite this awareness, 64% of parents reported that their children did not clean their tongues, and 22% were unsure, results that align with findings by [13], though lower than those reported in studies [14–16].

In terms of emotional response during tooth brushing, 51.5% of parents observed their children in a joyful mood, while 36% noted signs of reluctance or distress. This emotional dynamic echoes observations in prior research [17, 18], underscoring the influence of positive reinforcement on children's dental routines. Parental knowledge regarding dental development was variable; 40% correctly identified the eruption of the first tooth between 6 and 10 months, while 37% were unsure and 23% believed it occurred later, a trend consistent with studies [19, 20]. Furthermore, 41% of parents were uncertain about the appropriate time to offer sweets to children, while 30% suggested after meals

and 18% in-between meals. These figures are notably lower than those reported in [21], suggesting an area for improvement in dietary guidance.

Encouragingly, 64% of parents recognized chocolate as a major contributor to dental caries, compared to smaller proportions identifying cakes (17%) and biscuits (14%), mirroring findings from previous studies [9, 12, 22–24]. Nevertheless, awareness of fluoride toothpaste's role in preventing cavities was limited; 43.75% of parents expressed uncertainty, 32.5% disagreed, and only 23.75% affirmed its benefit, lower than findings reported in [21, 25]. Regarding toothbrush replacement, 37% of parents stated they replaced toothbrushes when the bristles became frayed, 27.5% were unsure, and only 22.5% followed the recommended three-month interval. These results are comparable to findings in [15, 26]. In terms of brushing frequency, 46% reported brushing their children's teeth once daily, while 29% did so twice a day, and 25% after each meal, findings in line with [27].

Parental understanding of correct brushing techniques also varied. 46% supported the horizontal method, 36% reported that the technique did not matter, and 18% preferred the circular method, findings consistent with those of [28]. Concerning the amount of toothpaste used, 42.5% applied a full-length strip, 35.5% were indifferent, and only 22% used the pea-sized amount recommended for children. These findings align with studies [29] and are somewhat higher than those reported in [13, 30, 31]. Lastly, when asked about supervision during brushing, 52.5% of parents reported actively watching their children, 28% offered advice without supervision, and 19.5% were unsure. These responses are in agreement with findings from [30], emphasizing the importance of direct parental involvement in fostering consistent oral hygiene habits.

Conclusion

This study highlights substantial deficiencies in parental awareness and education regarding pediatric oral hygiene, particularly in preventive measures and daily care practices. The data suggest that many parents, especially those with lower educational backgrounds, lack essential knowledge related to optimal brushing techniques, fluoride use, dietary influences, and supervision. To address these gaps, it is imperative to implement targeted educational interventions and community-based oral health promotion programs. Such initiatives should aim to enhance parents' understanding of preventive care, correct misconceptions, and foster behavioral changes that enable them to recognize and respond to their children's oral health needs effectively. Integrating oral health education into school curricula and parent-teacher communication channels may serve as a strategic pathway toward improving oral health outcomes among children in Libya and similar settings. Data collection was conducted through structured questionnaires, and the responses were systematically analyzed using Microsoft Excel to evaluate parental knowledge, attitudes, and practices concerning pediatric oral hygiene. The findings revealed notable deficiencies in specific areas of oral health behavior. Notably, 64% of parents reported that their children did not engage in tongue cleaning, indicating a lack of awareness of its role in maintaining overall oral hygiene. Furthermore, 43.75% of participants were unaware that fluoride toothpaste contributes to the prevention of dental caries, and only 23.75% recognized its preventive efficacy, highlighting a significant gap in knowledge regarding evidence-based preventive measures. Regarding brushing techniques, 46% of parents believed that the horizontal method was most effective, while 36% considered the method insignificant, reflecting limited awareness of optimal brushing practices recommended by dental professionals. Toothbrush replacement practices were also suboptimal: 37% of parents reported replacing toothbrushes only when bristles became visibly worn, 27.5% were uncertain about appropriate replacement intervals, and merely 22.5% adhered to the recommended schedule of every three months.

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