

The Influence of Socio-Economic Status and Financial Support Policies on the Utilisation of Preventive Dental Services for Children: Systematic Literature Review

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ABSTRACT

Oral health is an essential component of children's general health and well-being, with dental caries remaining one of the most prevalent and largely preventable oral diseases worldwide. Despite the availability of preventive dental services and financial support policies, disparities in access and utilisation remain evident across socioeconomic groups. This study aims to systematically review the influence of socio-economic status and financial support policies on the utilisation of preventive dental services among children and adolescents. The method used is a Systematic Literature Review (SLR) approach guided by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework, with searches conducted in PubMed, Scopus, Web of Science, and ScienceDirect. A search across the four databases identified 291 records, of which 170 were removed before screening. The remaining 87 records underwent title and abstract screening, followed by full-text assessment. Of the 87 full-text reports assessed, 24 studies met the predefined eligibility criteria and were included in the systematic review. The included studies demonstrated a consistent socioeconomic gradient in pediatric dental service utilisation, with children from higher socioeconomic backgrounds more likely to receive preventive dental care. Parental education and household income were identified as important determinants of dental attendance and access to care. Financial support mechanisms, including dental insurance and government subsidies, were associated with improved utilisation, although financial assistance alone did not fully eliminate socioeconomic disparities. Workplace support, particularly access to paid sick leave, also facilitated children's preventive and diagnostic dental visits. Non-financial barriers, including limited oral health literacy, lack of time, inconvenience, and perceived treatment costs, continued to influence dental care-seeking behaviour. Overall, socio-economic status is an important determinant of children's utilisation of preventive dental services. Financial support policies can facilitate access, but integrated strategies addressing educational, structural, financial, and time-related barriers are needed to promote equitable pediatric oral healthcare.

Keywords: children; socio-economic status; preventive dental services; dental service utilisation; financial support; dental insurance; systematic literature review

INTRODUCTION

Oral health is a fundamental component of general health and well-being, particularly in children, because oral conditions during childhood may influence physical development, daily functioning, school attendance, and quality of life [1-4]. Dental caries remains one of the most prevalent chronic diseases affecting children worldwide and continue to represent a substantial public health burden [2,5,6]. Untreated dental caries may result in pain, impaired oral function, difficulties in eating, sleep disturbances, and reduced quality of life [1,7,8].

Preventive dental care plays an important role in reducing the burden of oral disease. The American Academy of Pediatric Dentistry recommends establishing a dental home early in childhood, with preventive dental care beginning at an early age [9]. Early and regular dental visits provide opportunities for oral health assessment, preventive interventions, anticipatory guidance, fluoride application, and early management of dental disease. Early dental visits have also been associated with reduced treatment needs and lower treatment costs among children [10,11].

However, the utilization of preventive dental services is not distributed equally across populations. Dental service utilization is influenced by a multidimensional interaction of socioeconomic, demographic, behavioral, and structural factors [5,12,13]. Socio-economic status (SES), commonly represented by household income, parental education, and occupational status, is consistently identified as an important determinant of children's dental care utilization [5,12-15].

Children from families with higher socioeconomic status generally demonstrate greater utilization of dental services than children from disadvantaged families [5,14,16]. Parental education may influence utilisation not only through socioeconomic resources but also through health literacy, awareness of preventive care, and understanding of the importance of early dental visits [13,15]. Household income and accumulated assets may similarly determine whether families are able to afford dental treatment and associated indirect costs.

Financial support policies have been introduced in many healthcare systems to reduce financial barriers to dental care. These policies include universal dental insurance, government-funded subsidies, and mixed public-private dental care systems [5,17-19]. Nevertheless, the availability of financial assistance does not necessarily eliminate socioeconomic disparities in dental service utilisation. Families may continue to experience out-of-pocket expenses or perceive dental treatment as unaffordable [17].

In addition to direct financial barriers, structural factors can influence whether parents are able to bring their children to dental appointments. Workplace policies, particularly parental access to paid sick leave, may facilitate children's utilisation of preventive and diagnostic healthcare services by reducing the economic consequences associated with taking time away from work [19-21]. Lack of time and difficulties arranging appointments may therefore represent important barriers even when dental services are financially accessible.

Non-financial factors, including oral health literacy and parental perceptions, may further influence utilisation. Parents with limited oral health knowledge may be less likely to recognise the importance of preventive dental visits and may seek dental care only when children experience pain or other symptoms [13,18,22,23]. This pattern may contribute to delayed dental attendance and increased treatment needs.

Although socioeconomic status, financial barriers, and structural factors have each been examined in relation to children's dental service utilisation, the available evidence remains heterogeneous across healthcare systems and populations. Differences in the measurement of socioeconomic status, the types of financial support available, and the outcomes used to assess dental service utilisation make it difficult to determine the relative contribution of these factors to preventive dental attendance. Furthermore, financial

support policies may reduce direct economic barriers but may not adequately address non-financial barriers, such as parental education, oral health literacy, time constraints, and difficulties accessing dental services. Consequently, an integrated synthesis of socioeconomic determinants and financial support mechanisms is needed to better understand the factors influencing equitable utilization of preventive dental services among children and adolescents.

Therefore, understanding how socioeconomic conditions and financial support policies influence children's utilization of preventive dental services is essential for developing effective strategies to reduce inequalities in pediatric oral healthcare. A comprehensive synthesis of the available evidence may help identify which socioeconomic and financial factors consistently influence dental service utilisation and whether financial assistance alone is sufficient to overcome existing barriers. Therefore, this systematic literature review aimed to identify and synthesise evidence regarding the influence of socioeconomic factors and financial support policies on the utilisation of preventive dental services among children and adolescents.

MATERIALS AND METHODS

Study Design

This systematic literature review was conducted in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020 guideline, which provides a standardised framework to ensure transparency and methodological rigour throughout the identification, screening, eligibility assessment, and inclusion of studies. The review aimed to synthesise available evidence regarding the influence of socioeconomic status and financial support policies on the utilisation of preventive dental services among children and adolescents.

Eligibility Criteria

Eligibility criteria were defined a priori using the Population, Exposure, Comparison, and Outcome (PECO) framework, reflecting the specific scope of this review on socioeconomic determinants, financial support policies, and pediatric dental service utilisation.

- *Population (P)*: Children and adolescents who were eligible for or had access to dental healthcare services.
- *Exposure (E)*: Socioeconomic and financial factors, including socioeconomic status, household income, parental education, occupational status, household assets, financial resources, dental insurance, government-funded subsidies, and workplace financial support.
- *Comparison (C)*: Higher versus lower socioeconomic status, or populations with versus without financial support, insurance coverage, subsidies, or other forms of financial assistance.
- *Outcome (O)*: Utilisation of dental services, particularly preventive dental visits, routine dental examinations, diagnostic dental visits, and other preventive dental care.

Observational and quantitative studies reporting measurable associations between socioeconomic or financial factors and dental service utilisation were eligible for inclusion. Studies were required to report outcomes relevant to pediatric dental service utilisation. Systematic reviews were considered as supporting evidence for the overall synthesis but were not included as primary studies.

Studies were excluded if they were qualitative studies without measurable dental service utilisation outcomes, editorials, protocols without results, conference abstracts, dissertations, reports, or articles without accessible full-text content. Studies that did not address the predefined PECO criteria were also excluded.

Information Sources and Search Strategy

A systematic literature search was conducted across four electronic databases: PubMed, Scopus, Web of Science, and ScienceDirect. These databases were selected to provide broad coverage of biomedical, dental, public health, and multidisciplinary literature relevant to socioeconomic determinants, financial support, and dental service utilisation.

The search strategy combined controlled vocabulary, including Medical Subject Headings (MeSH) where applicable, and free-text terms representing three core concepts: socioeconomic and financial factors, dental service utilisation, and the pediatric population. The search terms were combined using Boolean operators as follows:

("socioeconomic factors" OR "socioeconomic status" OR income OR education OR "financial subsidy" OR insurance) AND ("dental health services" OR "dental service utilisation" OR "preventive dental visit") AND (child OR children OR adolescent OR pediatric)

Database-specific search syntax and field specifications were adjusted according to the requirements of each database. The search strategy was designed to identify studies examining socioeconomic and financial determinants associated with the utilisation of dental services among children and adolescents.

Studies published in English and available as full-text articles were considered for eligibility. The search identified a total of 79 records from the four databases.

Study Selection Process

The study selection process followed the four stages outlined in the PRISMA 2020 flow diagram: identification, screening, eligibility assessment, and inclusion (Figure 1). A total of 79 records were identified through database searching. Following identification, 6 duplicate records were removed prior to screening, leaving 73 records for title and abstract screening.

The remaining 73 records were screened based on their titles and abstracts against the predefined eligibility criteria. Of these, 41 records were excluded because they did not meet the predefined relevance criteria. A total of 32 reports were subsequently sought for full-text retrieval.

Of the 32 reports sought for retrieval, 8 reports could not be retrieved because their full-text articles were unavailable or inaccessible. Therefore, 24 accessible full-text reports were assessed for eligibility against the predefined PECO criteria. All 24 reports met the eligibility criteria and were included in the final systematic literature review.

The eight reports that could not be accessed in full text were therefore excluded from the final synthesis because their eligibility could not be assessed. The final review included 24 studies that fulfilled all predefined eligibility criteria and had accessible full-text articles.

Data Extraction

Data from the included studies were extracted using a standardised data extraction format. The extracted information included author and year of publication, country, study population, sample characteristics, study design, socioeconomic or financial exposure, dental service utilisation outcome, principal findings, and relevance to the review question.

Data extraction was performed systematically to ensure consistency in the identification and recording of relevant information across all included studies. Particular attention was given to the socioeconomic indicators evaluated, types of financial support or insurance mechanisms, and measures of preventive or diagnostic dental service utilisation.

Data Synthesis

Given the heterogeneity in study populations, healthcare systems, socioeconomic indicators, financial support mechanisms, study designs, and outcome measures across the included studies, a narrative synthesis approach was adopted rather than a quantitative meta-analysis.

The findings were organised thematically according to the major socioeconomic and financial determinants identified across the studies included. These included parental education, household income and financial resources, socioeconomic status, dental insurance and government subsidies, workplace support, and other non-financial barriers to dental service utilisation. The synthesis focused on identifying consistent patterns in the relationship between these factors and children's utilisation of preventive and diagnostic dental services, as well as factors that may contribute to persistent socioeconomic disparities in pediatric dental care.

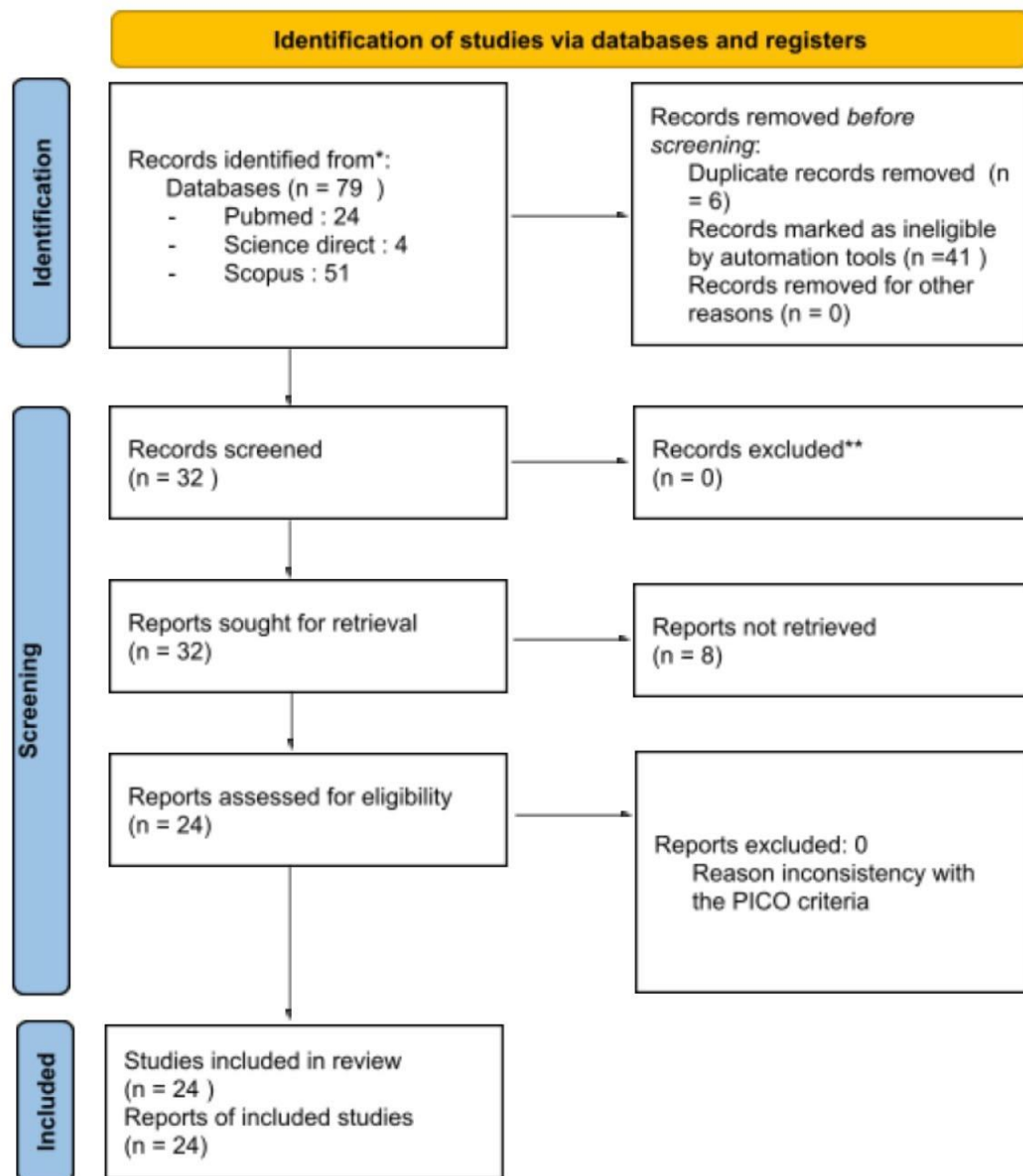


FIGURE 1: PRISMA flow diagram of the study selection process.

RESULTS

Overview of Included Studies

Twenty-four studies met the predefined eligibility criteria and were included in the final synthesis. The included studies investigated a range of socioeconomic, financial, educational, behavioral, and structural factors associated with pediatric dental service utilization. Socioeconomic factors included household income, parental education, occupational status, and socioeconomic status, while financial factors included dental insurance, government subsidies, and workplace support.

Several studies also examined parental oral health literacy, knowledge, attitudes, previous dental experiences, time constraints, accessibility, and caregiver practices as determinants of preventive dental attendance and dental care-seeking behavior. The included studies involved diverse populations of children, adolescents, parents, and caregivers across different countries and healthcare settings. Characteristics of the included studies are summarized in Table 1.

TABLE 1: Summary of studies included in the systematic review.

Reference	Population	Outcome	Key Findings	Significance
Hegde et al. (2026)	100 parent-child pairs; children ≤ 71 months with ECC	OHL and dental attendance	No significant difference in OHL was found between dental attenders and non-attenders. Active child temperament, lack of time, and perceived inefficiency were major barriers to attendance.	High OHL alone does not guarantee preventive dental attendance when situational barriers are present.
Benghasheer & Saub (2022)	381 Libyan parents of children aged 1–7 years in Malaysia	Parental knowledge, attitudes, and oral health practices	Most parents demonstrated good knowledge (77.2%) and positive attitudes (86.4%), but these were not consistently translated into favourable oral health practices.	Education and positive attitudes alone may be insufficient; behavioural-change strategies are needed.
Karamüftüoğlu et al. (2026)	238 parent-child pairs; children aged 6–12 years	OHL, oral hygiene, and dental attendance	Parents with TOHLAT-P scores ≤ 30 were 5.3 times more likely to have children with poor oral hygiene. OHL was significantly associated with toothbrushing habits and regular dental visits.	Parental OHL is an important determinant of children's oral health behaviours and preventive dental utilisation.
Latti et al. (2022)	414 parents of primary school children in Kerala, India	Dental attendance and utilisation patterns	Fewer than 30% of parents reported regular dental visits, while 43% of dental visits were treatment-oriented rather than preventive.	A substantial gap exists between favourable parental perceptions and actual preventive dental utilisation.
Matijević et al. (2025)	948 Croatian parents of children aged 1–7 years	Oral health knowledge and preventive practices	Parents demonstrated moderate knowledge, with important gaps concerning bacterial transmission and tooth eruption. Preventive visits were frequently delayed despite awareness of oral hygiene.	Targeted education is required to improve parental OHL and preventive behaviour.
Kolarić et al. (2025)	100 parents of children aged 0–7 years in Zagreb, Croatia	OHL, toothbrushing, and dental attendance	Low parental OHL predicted inadequate toothbrushing (OR=2.58), while irregular dental attendance was associated with a history of dental pain (OR=3.42).	Both caregiver literacy and children's previous dental experiences influence oral health and attendance.
Olatosi et al. (2021)	350 mothers in Lagos, Nigeria	Knowledge of first dental visit and dental attendance	51.4% of mothers did not know when a child should have the first dental visit, and 65.4% of children had never visited a dentist.	Early introduction of the dental home concept through maternal and child health services is warranted.
Amirian et al. (2025)	886 children aged 0–12 years and their parents in Tehran, Iran	Preventive and curative dental service utilisation	Parental knowledge and SES predicted preventive dental utilisation, whereas perceived need was the strongest predictor of curative service utilisation (OR=54.77).	Preventive and curative utilisation may be driven by different determinants; socioeconomic enabling factors are important policy targets.

Reference	Population	Outcome	Key Findings	Significance
Opydo-Szymaczek et al. (2021)	Parents and 7-year-old schoolchildren in Poland	Preventive dental attendance and socioeconomic factors	University-level parental education increased the likelihood of preventive dental attendance (OR=2.5), while economic factors remained important despite free dental services.	Educational advantages do not completely eliminate socioeconomic barriers to preventive care.
Halawany (2026)	Children and parents in Saudi Arabia	Parental OHL, diet, and preventive dental utilisation	Parental OHL was consistently associated with dietary practices and preventive service utilisation. Misconceptions regarding primary teeth and delayed dental visits were frequently reported.	Family-centred preventive strategies should address both oral health literacy and parental misconceptions.
Allarakia et al. (2025)	72 caregivers of children with autism in Jeddah, Saudi Arabia	Oral health knowledge, practices, and dental attendance	Caregivers demonstrated knowledge of oral hygiene, but their practices did not consistently reflect this knowledge. Approximately 72.2% sought dental care only when the child experienced pain.	A substantial knowledge–practice gap persists among caregivers of children with autism.
Khalifa et al. (2025)	48 children with ASD and their caregivers in Tunisia	Dental attendance and oral hygiene	Approximately 60% of children with ASD had never visited a dentist, 33.3% did not brush regularly, and poor oral hygiene was identified in 46.6% of the sample.	Targeted caregiver education and improved access are essential for reducing oral health disparities among children with ASD.
Tan et al. (2024)	591 caregivers of individuals with IDD in Singapore	Household income, financial subsidies, and dental utilisation	Higher household income was associated with a 1.48-fold greater likelihood of preventive dental attendance. Financial subsidies alone had limited effects on utilisation.	Household income remains an important determinant of dental utilisation beyond direct financial assistance.
Kamalabadi et al. (2025)	130 pregnant women in Ontario	Dental attendance during pregnancy and educational determinants	Only 26.9% of women reported a dental visit during pregnancy, while educational level was the strongest predictor of oral health status.	Integration of dental care into routine prenatal services may improve early preventive oral health behaviours.
Alshamrani et al. (2025)	465 parents in Riyadh, Saudi Arabia	Knowledge and adherence to pediatric preventive dental recommendations	Although 39.6% of parents knew the recommended timing of the first dental visit, only 30.5% complied with the recommendation. Lack of time (42%) and access (22%) were major barriers.	Knowledge of clinical recommendations does not necessarily translate into preventive dental attendance.
Lamsal & Naavaal (2025)	7,652 parent–child pairs from MEPS data	Paid sick leave and children’s dental utilisation	Access to paid sick leave was associated with increased likelihood of preventive dental attendance (OR=1.18).	Employment policies may reduce time-related barriers and facilitate children’s preventive dental care.
Mueller et al. (2022)	170 participants in an observational study	Childhood parental experiences and dental self-efficacy	Parenting experiences during childhood influenced attitudes toward dental care, while negative experiences were associated with lower dental self-efficacy.	Early family experiences may have long-term effects on perceived control and oral health behaviour.

Reference	Population	Outcome	Key Findings	Significance
Li et al. (2021)	18,383 parents of schoolchildren in Wuhan, China	Pandemic-related concerns, dental needs, and care seeking	Fear of infection during the COVID-19 pandemic discouraged dental care seeking, while 44.2% of children experienced dental pain during school closures.	External crises may widen the gap between dental need and actual care seeking.
Costa et al. (2022)	770 caregivers of children in Spain and Portugal	Parental supervision and dental attendance during lockdown	Parental supervision during toothbrushing was associated with dental attendance, while most children did not receive dental care during quarantine.	Caregiver behaviours and contextual factors influence children's oral health practices during periods of restricted healthcare access.
Jinsong Chen et al. (2025)	Systematic review of 41 studies on digital pediatric oral health management	Digital gamification, parental engagement, knowledge, and behaviour	Gamification increased parental engagement, and 38% of reviewed studies reported improvements in oral health knowledge or behaviour.	Interactive digital approaches may be useful for promoting sustained engagement and behavioural change.
Panda et al. (2025)	Systematic review of 45 school-based oral health education studies	Educational methods, parental involvement, and oral health behaviour	Interactive educational approaches involving parents were more effective than traditional classroom-based teaching.	Sustainable oral health behaviour change requires active parental participation.
Dalsochio et al. (2025)	Qualitative systematic review of 16 studies on caregiver perceptions	Dentist communication, caregiver satisfaction, and behavioural change	Dentists' attitudes, instructions, and oral health communication influenced caregiver acceptance and behavioural change.	Trust and effective communication with dental professionals are important for adoption of preventive recommendations.
Senavirathna et al. (2025)	Meta-analysis of 48 studies involving children and adolescents globally	Socioeconomic status and dental service utilisation	Children from high-SES families were approximately twice as likely to utilise dental services. Parental education and occupation were important SES indicators.	Socioeconomic inequality remains a major global determinant of pediatric dental service utilisation.
Wang et al. (2022)	Systematic review of parents of children aged ≤12 years	mHealth interventions, parental knowledge, and oral health behaviour	mHealth interventions improved parental knowledge, although evidence for sustained behavioural improvement remained limited.	Digital interventions should incorporate behavioural theories rather than focus solely on knowledge acquisition.

The eight reports that could not be accessed in full text were therefore excluded from the final synthesis because their eligibility could not be assessed. The final review included 24 studies that fulfilled all predefined eligibility criteria and had accessible full-text articles.

Socioeconomic and Financial Determinants of Preventive Dental Service Utilisation

The included studies demonstrated a consistent socioeconomic gradient in pediatric dental service utilisation. Higher socioeconomic status, household income, parental education, and occupational conditions were generally associated with greater utilisation of preventive dental services [5,13–16,23]. Socioeconomic status is a multidimensional construct encompassing not only financial capacity but also educational resources, employment conditions, and the ability to access healthcare. This multidimensional perspective is consistent with the behavioural approach to oral health promotion, which identifies income and financial constraints, educational attainment and health literacy, employment status, and job benefits as important factors influencing dental care utilisation [25].

The meta-analysis by Senavirathna et al. reported that children and adolescents from higher socioeconomic backgrounds were approximately twice as likely to utilise dental services compared with those from lower socioeconomic groups [23]. Parental education and occupational status were also identified as important socioeconomic determinants. Parental education appeared to influence dental utilisation through both socioeconomic and behavioural pathways. Higher educational attainment may increase parents' awareness of preventive dental care, improve their ability to understand oral health information, and facilitate navigation of healthcare services [5,9,13,15]. Opydo-Szymaczek et al. reported that children whose parents had university-level education were more likely to attend preventive dental services, with an odds ratio of 2.5 [9]. However, the association between education and utilization was not explained solely by knowledge, as several studies identified a persistent gap between parental knowledge and actual preventive practices [2,4,5].

Household income and accumulated financial resources represented another important determinant of dental service utilization. Higher-income families may have greater capacity to cover direct dental expenses as well as indirect costs associated with transportation, time away from work, and other healthcare-related expenditures [5,13,16]. Tan et al. found that higher household income was associated with greater preventive dental attendance among caregivers of individuals with intellectual and developmental disabilities, with higher-income participants showing 1.48 times greater odds of preventive attendance [13]. Overall, these findings suggest that socioeconomic conditions influence preventive dental utilisation through interconnected financial, educational, occupational, and healthcare access pathways.

Financial Support Policies and Dental Insurance

Financial support mechanisms were examined as potential strategies for reducing economic barriers to pediatric dental care. The reviewed evidence included government subsidies, dental insurance,

and other forms of financial assistance intended to reduce out-of-pocket expenditure. Although financial support was generally associated with improved access, the available evidence suggests that financial assistance alone did not completely eliminate socioeconomic disparities [13,17].

Evidence from Singapore demonstrated that dental subsidies may facilitate access to oral healthcare; however, household income remained independently associated with preventive dental attendance [13]. This finding suggests that families may continue to experience financial barriers despite the availability of subsidies. Remaining out-of-pocket costs, indirect expenses, eligibility requirements, and differences in access to participating providers may limit the effectiveness of financial support programs.

The relationship between financial assistance and utilisation therefore appears to be more complex than a simple reduction in treatment costs. Financial support may increase the affordability of dental care, but families with fewer socioeconomic resources may continue to face barriers related to time, transportation, health literacy, perceived need, and accessibility. Consequently, financial policies should be integrated with educational and structural interventions rather than implemented as isolated measures.

Workplace Support and Time-Related Barriers

Workplace conditions emerged as an additional structural determinant of children's dental service utilisation. Parental employment may create competing demands between work responsibilities and children's healthcare appointments, particularly when dental visits are scheduled during working hours.

Lamsal and Naavaal, using data from 7,652 parent-child pairs in the Medical Expenditure Panel Survey, reported that access to paid sick leave was associated with greater utilisation of children's preventive dental services, with an odds ratio of 1.18 [16]. Paid sick leave may reduce the opportunity cost of attending dental appointments by allowing parents to take time away from work without experiencing the same degree of financial loss.

This finding demonstrates that access to healthcare extends beyond the availability and affordability of dental services. Even when dental treatment is subsidised or covered by insurance, parents may be unable to attend appointments because of work schedules, lack of paid leave, or difficulties arranging childcare and transportation. Workplace policies may therefore function as an important enabling factor for preventive dental attendance.

Oral Health Literacy, Knowledge, and the Knowledge-Practice Gap

Several studies identified parental oral health literacy (OHL), knowledge, and attitudes as important behavioural determinants of preventive dental service utilisation [1–3,5–7,10,11,15].

However, the relationship between knowledge and actual utilisation was not always linear. Across the included evidence, higher knowledge or OHL generally supported preventive behaviours, but knowledge alone did not consistently translate into regular dental attendance.

Karamüftüoğlu et al. reported that low parental OHL was strongly associated with poor child oral hygiene and irregular dental attendance, while Hegde et al. found that high OHL did not necessarily result in preventive attendance when parents experienced situational barriers such as lack of time, child temperament, or perceived inefficiency of dental visits [1,3]. Similarly, Benghasheer and Saub reported that although most parents demonstrated good knowledge and positive attitudes, these were not consistently reflected in favorable oral health practices [2].

A similar knowledge–practice gap was observed in studies examining the timing and frequency of dental attendance. Olatosi et al. found that 51.4% of mothers did not know the appropriate timing for a child's first dental visit, while 65.4% of children had never visited a dentist [7]. Alshamrani et al. also reported that only 39.6% of parents knew the recommended timing of pediatric preventive visits and only 30.5% complied with the recommendations [15]. These findings indicate that improving parental knowledge is necessary but may not be sufficient to produce sustained preventive dental utilisation.

Behavioural, Structural, and Contextual Barriers. Beyond socioeconomic and financial determinants, several non-financial barriers influenced preventive dental service utilisation. Lack of time, inconvenience, limited accessibility, perceived treatment costs, previous negative dental experiences, and perceived need for treatment were repeatedly identified across the included studies [1,6,8,17–19].

The distinction between preventive and symptom-driven dental utilisation was particularly evident. Latti et al. reported that fewer than 30% of children attended dental visits regularly, while 43% of visits were primarily treatment-oriented rather than preventive [4]. Amirian et al. similarly demonstrated that different determinants may operate for preventive and curative utilisation, with parental knowledge and socioeconomic status predicting preventive utilisation, while perceived need was the strongest predictor of curative dental care [8].

Previous dental experiences may also influence future care-seeking behaviour. Mueller et al. found that childhood parental experiences were associated with dental attitudes and self-efficacy, suggesting that negative experiences may have longer-term consequences for confidence in managing oral healthcare [17]. In addition, studies conducted during the COVID-19 pandemic demonstrated that external contextual factors, including fear of infection and quarantine

restrictions, could further disrupt dental attendance despite existing dental needs [18,19].

The Interaction Between Socioeconomic Status, Financial Support, and Behavioural Factors

The findings indicate that pediatric dental service utilisation is determined by an interconnected combination of socioeconomic, financial, behavioural, and structural factors rather than by a single determinant. Socioeconomic status influences access through household financial resources, parental education, and employment conditions, while financial support policies may reduce direct economic barriers. However, oral health literacy, perceived need, time availability, accessibility, and previous dental experiences may continue to determine whether families ultimately use preventive dental services.

The evidence therefore suggests a distinction between access to dental care and actual utilisation of preventive dental services. Financial assistance may make services more affordable, but affordability does not necessarily ensure that parents recognise the need for preventive visits, have sufficient time to attend appointments, or are able to overcome practical barriers. This may explain why socioeconomic disparities persist even in healthcare systems where dental services are subsidised or financially supported.

Overall, the reviewed studies demonstrate that preventive dental utilisation is shaped by multiple interacting pathways. Higher socioeconomic resources may facilitate access, parental education and OHL may strengthen preventive decision-making, financial subsidies may reduce direct costs, and workplace support may reduce time-related opportunity costs. Conversely, limited resources, low health literacy, lack of time, perceived costs, and previous negative experiences may reinforce delayed or symptom-driven dental attendance. These findings support the need for integrated interventions that combine financial assistance with parental education, oral health literacy promotion, workplace support, and accessible preventive dental services.

CONCLUSION

Based on the systematic literature review of 24 included studies examining socioeconomic, financial, behavioural, and structural determinants of pediatric dental service utilisation, several conclusions can be drawn. Socioeconomic status consistently emerged as an important determinant of preventive dental service utilisation among children and adolescents. Higher household income, parental education, occupational status, and overall socioeconomic resources were generally associated with greater utilisation of dental services, indicating a persistent socioeconomic gradient in pediatric oral healthcare.

Financial support mechanisms, including dental insurance and government subsidies, may improve the affordability and accessibility of dental care, but

their availability alone does not completely eliminate socioeconomic disparities. Household income remained an important predictor of utilisation even in settings where financial assistance was available. This suggests that financial support may reduce direct economic barriers while leaving other structural and behavioural barriers unresolved.

Workplace support also represents an important enabling factor. In particular, access to paid sick leave may facilitate children's preventive and diagnostic dental visits by reducing the opportunity costs associated with taking time away from work. Thus, the accessibility of pediatric dental care is influenced not only by the cost of services but also by parents' ability to allocate time and manage employment-related responsibilities.

The findings further demonstrate that non-financial determinants, particularly parental oral health literacy, knowledge, perceived need, lack of time, inconvenience, previous dental experiences, and accessibility, may influence whether financial and healthcare resources are translated into actual preventive dental utilisation. Higher knowledge and oral health literacy generally support preventive behaviours; however, knowledge alone does not consistently result in regular dental attendance, highlighting a persistent knowledge–practice gap.

Overall, the evidence suggests that socioeconomic disparities in pediatric preventive dental service utilisation are multidimensional and cannot be addressed through financial assistance alone. Effective strategies should integrate financial support, parental oral health education and literacy promotion, workplace policies that facilitate healthcare attendance, and accessible and convenient preventive dental services.

However, the current evidence base remains heterogeneous in study populations, socioeconomic measures, healthcare systems, and outcome definitions, which limits direct comparison across studies. Future research should prioritise longitudinal and well-controlled studies, standardised measures of socioeconomic status and preventive dental utilisation, and evaluations of integrated interventions that simultaneously address financial, educational, behavioural, and structural barriers. Such approaches are needed to determine how financial support can be combined with broader social and healthcare policies to achieve more equitable pediatric oral healthcare utilisation.

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