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Factors Associated with Preventive Oral Health Behaviours Among Indian Migrant Parents in Australia: A Cross-Sectional Study

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Highlights

What are the main findings?

- Higher parental advanced oral health knowledge was associated with more favourable preventive oral health behaviours among preschool children of Indian migrant families in Victoria, Australia.
- Greater parental self-efficacy for daily oral health behaviours was associated with less frequent sugary food consumption, while only 31.1% of children had a regular dental practitioner.

What are the implications of the main findings?

- Oral health promotion initiatives for Indian migrant families should combine practical oral health education with strategies that strengthen parental confidence in managing children's daily oral health behaviours.
- Improving access to regular preventive dental care and providing culturally responsive support may help families establish and maintain recommended oral health practices.

Abstract

Background: Preventive oral health behaviours play a critical role in reducing the risk of early childhood caries (ECC). However, the factors associated with these behaviours among migrant parents remain poorly understood, particularly among Indian migrant families living in Australia. Objective: To examine factors associated with parent-reported children's preventive oral health behaviours and dietary practices among preschool children of Indian-origin parents living in Victoria, Australia. Methods: A cross-sectional study was conducted among 132 migrant Indian parents of preschool-aged children. Data were collected using a structured online questionnaire assessing sociodemographic characteristics, parent-reported children's preventive oral health behaviours and dietary practices, parental oral health knowledge, parental self-efficacy, and perceived barriers to accessing dental care. Sociodemographic characteristics, child-related factors, oral health knowledge, and parental self-efficacy factor scores derived from a previously reported exploratory factor analysis were included as predictor variables. Multivariable generalised linear models were used to identify factors associated with children's preventive oral health behaviours and dietary practices. Results: Although 97.0% of parents reported regular morning toothbrushing and 93.9% reported parental assistance with toothbrushing, only 31.1% reported that their child had a regular dental

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practitioner. Higher scores for advanced oral health knowledge' domain of the knowledge scale was significantly associated with more favourable preventive oral health behaviours (B = 0.06, SE = 0.02, $p = 0.006$), whereas self-efficacy for oral health management and care and the overall effect of duration of residence in Australia were not statistically significant in the adjusted model. Higher self-efficacy for daily oral health behaviours was significantly associated with a lower frequency of children's sugary food consumption (B = −0.04, SE = 0.01, $p < 0.001$). Primary carer status (B = 0.44, SE = 0.17, $p = 0.01$) and parent-reported child general health (B = −0.46, SE = 0.17, $p = 0.006$) were significantly associated with the frequency of children's sweetened beverage consumption. Conclusions: Advanced parental oral health knowledge was significantly associated with more favourable parent-reported preventive oral health behaviours, while parental self-efficacy for daily oral health behaviours was associated with a lower frequency of children's sugary food consumption. Duration of residence in Australia was associated with selected dietary practices. These findings highlight the importance of practical oral health knowledge and suggest that culturally appropriate oral health promotion strategies incorporating parental confidence-building may support recommended preventive practices among Indian-origin families in Australia.

Keywords: early childhood caries; preventive oral health behaviours; parental self-efficacy; oral health knowledge; Indian migrants; preschool children; dietary practices; dental care access

1. Introduction

Early childhood caries (ECC) remains the most prevalent chronic disease affecting children worldwide and continues to be a significant public health concern despite being largely preventable [1,2]. ECC can negatively affect children's oral health, quality of life, nutrition, growth, and overall well-being, while also imposing substantial economic burdens on families and healthcare systems [2,3]. The prevention of ECC relies heavily on the establishment and maintenance of positive oral health behaviours during early childhood, including regular toothbrushing with fluoridated toothpaste, appropriate utilisation of preventive dental services, and limiting the consumption of sugary foods and beverages [4–6]. These behaviours are recognised as key modifiable factors for reducing caries risk and promoting lifelong oral health.

Oral health behaviours are influenced by a complex interaction of biological, behavioural, social, and environmental determinants. The Fisher-Owens conceptual model of children's oral health proposes that oral health outcomes are shaped by multiple influences operating at child, family, and community levels [7]. Within this framework, health behaviours represent an important determinant at the child level, while parental characteristics, family functioning, social environment, and healthcare access contribute to the development and maintenance of these behaviours. Previous research has demonstrated that factors such as parental oral health knowledge, health literacy, self-efficacy, socioeconomic circumstances, and access to dental services can influence oral health behaviours and ultimately affect children's oral health outcomes [8–11]. Migration-related factors, including acculturation, adaptation to new healthcare systems, and changes in social and food environments, may further influence the adoption and maintenance of preventive oral health behaviours among migrant families [12]. Understanding the factors associated with preventive oral health behaviours is important because behaviours established during the preschool years often persist into later childhood and adulthood [13].

Preschool-aged children rely on caregivers to establish daily oral hygiene routines, regulate dietary practices, and facilitate access to preventive dental care [6,14].

Consequently, children's oral health behaviours are shaped by caregiver practices and family routines established during early childhood. However, the adoption and maintenance of recommended oral health behaviours may be influenced by a range of contextual factors that extend beyond parental knowledge alone.

Migration represents one such contextual influence that may affect oral health behaviours. The process of migration often requires families to adapt to unfamiliar healthcare systems, social environments, cultural expectations, and economic circumstances [12]. Previous research suggests that migrant families may experience challenges in navigating oral healthcare services, understanding preventive care recommendations, and maintaining established health practices following resettlement [15,16]. Language barriers, competing settlement priorities, financial constraints, and limited familiarity with healthcare systems may further influence engagement with preventive oral health behaviours [15–17]. In addition, migration may influence dietary practices through increased exposure to processed foods, sweetened beverages, and changing food environments, potentially increasing the risk of dental caries among children [12,18].

Dietary behaviours are particularly important in the context of childhood oral health. Frequent consumption of free sugars is a well-established risk factor for dental caries and remains a major contributor to the global burden of oral disease [2,19]. Parents play a key role in shaping children's dietary patterns, particularly during the preschool years when food choices are largely controlled within the family environment. Changes in dietary habits following migration have been reported among several migrant populations, with acculturation often associated with increased consumption of sugary foods and beverages and reduced adherence to traditional dietary practices [12,20]. These changes may influence children's oral health outcomes and represent an important area for preventive intervention.

Indian-born people constitute one of the largest and fastest-growing migrant populations in Australia [21]. Despite this rapid population growth, there remains limited evidence regarding oral health behaviours among children of Indian migrants. Existing research has primarily focused on oral health outcomes, access to care, or migrant populations as a whole, often overlooking potential differences between migrant communities [15–17]. However, migrant populations are not homogeneous, and oral health behaviours may be shaped by cultural beliefs, family practices, migration experiences, dietary transitions, and healthcare expectations that differ substantially between groups [12,21]. Consequently, findings derived from other migrant populations or the general Australian population may not be directly applicable to Indian migrant families. Examining Indian migrant families separately is particularly relevant because the substantial growth of this population in Australia has not been accompanied by comparable population-specific evidence on preventive oral health behaviours among preschool children, including how family practices and experiences of navigating Australian dental services may relate to these behaviours. In particular, few studies have simultaneously examined oral hygiene practices, dietary behaviours, dental service utilisation, and barriers to oral healthcare among Indian migrant families in Australia. Addressing this evidence gap may provide a more comprehensive understanding of preventive oral health behaviours within this population and inform culturally responsive oral health promotion and service delivery.

Despite the importance of preventive oral health behaviours during early childhood, few studies have simultaneously examined oral hygiene practices, dietary behaviours, dental service utilisation, and barriers to care among Indian migrant families in Australia. Examining these factors within this population may provide population-specific evidence to inform culturally responsive oral health promotion and service approaches.

Therefore, this study aimed to examine the factors associated with parent-reported children's preventive oral health behaviours and dietary practices among preschool children of Indian-origin parents living in Victoria, Australia.

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2. Materials and Methods

2.1. Study Design and Setting

This cross-sectional study formed part of a larger mixed-methods research project investigating factors that impact early childhood caries among Indian migrant families living in Australia. Detailed information regarding study design, participant recruitment, questionnaire development, and validation has been reported elsewhere [22]. Although the present study and a related manuscript [22] used the same survey dataset, they addressed distinct research questions, with parental self-efficacy examined as the outcome in the related manuscript and children's preventive oral health behaviours and dietary practices examined as outcomes in the present study.

2.2. Participants and Recruitment

Participants were parents or caregivers residing in Victoria, Australia, with at least one child aged 1–6 years. Eligibility was assessed through an initial screening question asking whether both the respondent and their partner were born in India. Respondents who selected "Yes" were eligible to proceed with the questionnaire. Accordingly, Indian-origin families were operationally defined as families in which both parents were born in India. Participants were required to complete the questionnaire in English. Participants were instructed to answer child-related questions with reference to their child aged 1–6 years. Where participants had more than one preschool-aged child, they were instructed to consider the child about whom they were most concerned regarding dental issues.

Participants were recruited using convenience and snowball sampling methods through playgroup centres and Indian community associations, which distributed study advertisements via their social media platforms and other communication channels. Organisations were initially contacted via email and provided with information regarding the study, including a participant information statement and survey link. Following organisational approval, study advertisements containing the survey link were distributed through organisational mailing lists, newsletters, social media pages, and community networks. Participants were also encouraged to share the survey link with other eligible parents within their networks.

Participation was voluntary, and informed consent was obtained electronically before commencement of the survey, as described previously [22]. Data were collected between August 2025 and February 2026. A total of 132 migrant Indian parents of preschool-aged children who completed the questionnaire were included in the present analyses.

2.3. Sample-Size Determination

An a priori sample-size calculation was undertaken during the study planning stage using G*Power software (version 3.1.9.2). Based on the planned regression analysis, an assumed effect size of 0.15, a significance level of 0.05, statistical power of 80%, and 12 predictors, the estimated minimum required sample size was 127 participants. The final analytical sample comprised 132 participants, exceeding the calculated minimum requirement.

2.4. Data Collection

Data were collected using a structured self-administered questionnaire hosted on the Research Electronic Data Capture (REDCap) platform. The questionnaire was developed by reviewing the existing literature and previously published instruments assessing parental oral health knowledge; parental self-efficacy; parent-reported children's oral health behaviours and dietary practices; and perceived barriers to accessing dental care [8,9,15,16]. The questionnaire was primarily informed by BenGhasheer and Saub (2022) [23]. Several items assessing parental self-efficacy and perceived control were also

comparable to those reported by Adair et al. (2004) [24] and de Silva-Sanigorski et al. (2013) [9]. Subsequent psychometric evaluation of the Parental Attitudes towards Child Oral Health instrument was reported by Zaborskis et al. (2024) [25]. Selected items were adapted to reflect the objectives of the present study and the context of Indian migrant parents in Australia. Further details regarding questionnaire development, validation, and factor structure have been reported elsewhere [22].

The questionnaire consisted of five sections:

1. Sociodemographic and other characteristics;
2. Children's preventive oral health behaviours (e.g., toothbrushing frequency, bedtime toothbrushing, parental assistance with brushing, and dental service utilisation);
3. Dietary practices (e.g., frequency of sugary food and sweetened beverage consumption);
4. Parental oral health knowledge and self-efficacy; and
5. Perceived barriers to accessing dental care.

The survey questionnaire used for data collection is provided as Supplementary File S1. Sociodemographic and other characteristics included child's age and, sex, the number of children aged under six years, primary carer status, parent-reported child's general and oral health, age when tooth cleaning commenced, and whether the child had a regular dental practitioner. Child general and oral health were assessed using five-category ordinal response scales: very poor (1), poor (2), fair (3), good (4), and excellent (5), with higher scores indicating better parent-reported health. Primary carer status identified the person primarily responsible for the child's day-to-day care and was dichotomised as mother versus other primary carer for the regression analyses, with mother used as the reference category. Educational attainment was dichotomised as bachelor's/postgraduate degree versus other education, with other education used as the reference category. Having a regular dental practitioner was included as a binary variable (yes/no), with "no" used as the reference category.

The questionnaire was initially pilot-tested using a paper-based format among 12 Indian-origin parents of preschool-aged children residing in Victoria, Australia, to assess clarity, cultural appropriateness, relevance, and comprehensibility. Based on pilot feedback, revisions were implemented to improve inclusivity and clarity. These included refining selected sociodemographic response options, modifying caregiver-related items, simplifying selected response formats, and improving the presentation of self-efficacy items. Following these revisions, the questionnaire was uploaded to REDCap for the main survey. As individual responses could not be reliably linked across the pilot and main survey phases, it was not possible to determine whether any pilot participants subsequently completed the revised questionnaire. Therefore, their inclusion in the final analytical sample could not be verified. Nevertheless, the self-reported nature of the data and the non-probability sampling approach may have introduced recall, social desirability, and selection biases, respectively.

2.5. Measures

Children's preventive oral health behaviours were assessed using a composite index comprising nine dichotomous indicators covering oral hygiene practices, dietary-related behaviours, and preventive dental attendance. These included the use of fluoridated toothpaste, avoidance of sweetened drinks or milk during sleep, morning toothbrushing, bedtime toothbrushing, twice-daily toothbrushing, parental assistance with brushing, six-monthly dental check-ups, limiting sweetened or acidic drinks to once daily, and limiting sugary foods to once daily. Favourable responses were coded as 1 and unfavourable responses as 0, resulting in a total score ranging from 0 to 9. Each indicator was assigned equal weight to represent the number of favourable preventive practices reported rather than their relative clinical importance. Higher scores indicated a greater number of

reported preventive behaviours. The composite was considered an exploratory behavioural index rather than a validated unidimensional scale. Internal consistency was low (Cronbach's α = 0.412). This index was used as the outcome variable in the regression analyses. The bounded nature of this nine-item score (0–9) was considered when evaluating the suitability of the regression model.

In addition, children's dietary practices were assessed using two parent-reported numerical questions examining the frequency of sugary food and sweetened beverage consumption during a typical day. Participants reported the number of consumption occasions per day, rather than quantities or standardised serving sizes. Both variables were analysed as separate behavioural outcomes in the regression analyses. Parental oral health knowledge was assessed using 26 retained items representing two dimensions: Basic Oral Health Knowledge and Advanced Oral Health Knowledge. Responses were recorded on a five-point Likert-type scale, with "Don't know" assigned a value of 3. Negatively worded knowledge items were reverse-coded so that higher scores indicated greater oral health knowledge. Parental oral health-related self-efficacy was assessed using 19 items representing two dimensions: self-efficacy for daily oral health behaviours, and self-efficacy for oral health management and care. Items requiring reverse coding were recoded so that higher scores reflected more favourable oral health-related capability and management perceptions. Domain-specific knowledge and self-efficacy scores were included as predictor variables in the regression analyses.

Parental oral health-related self-efficacy was conceptualised as parents' perceived capability to manage their children's oral health and respond to challenges encountered in everyday caregiving. The 19-item measure included statements addressing perceived capability, difficulties in maintaining oral health routines, management of dietary behaviours, oral health-related attitudes, and navigation of dental care. Responses were collected using a five-point agreement scale rather than a direct confidence-rating scale. Accordingly, the measure was considered an exploratory assessment of parental oral health-related capability and management perceptions, rather than a conventional measure of task-specific self-efficacy. The two dimensions identified through principal component analysis were interpreted in relation to their item content, and their construct validity as distinct self-efficacy dimensions was not assumed.

The dimensional structure of the parental oral health knowledge and self-efficacy measures was examined using principal component analysis (PCA) with Varimax rotation and Kaiser normalisation. Two-component solutions were examined for both measures, and a minimum component loading of 0.30 was applied during item evaluation [26]. For parental oral health knowledge, PCA was conducted on 29 items. Sampling adequacy was supported by the Kaiser–Meyer–Olkin (KMO) measure of 0.847 and Bartlett's test of sphericity ($\chi^2(406) = 1881.145$, $p < 0.001$). The two-component solution explained 40.54% of the total variance (24.77% and 15.77% following rotation). Three items (K5, A5 and A11) did not achieve a loading of 0.30 on either component and were excluded from the subsequent dimension scores, resulting in 26 retained items: 14 in Basic Oral Health Knowledge and 12 in Advanced Oral Health Knowledge. The PCA was not repeated after item exclusion; therefore, the reported component loadings, communalities and explained variance correspond to the original 29-item analysis.

The 26 retained knowledge items were allocated to two dimensions based on their component loadings. Basic Oral Health Knowledge comprised 14 items (K6, K8, K9, K10, K15, K16, K17, K18, A1, A2, A4, A7, A9 and A10), whereas Advanced Oral Health Knowledge comprised 12 items (K2, K3, K7, K11, K12, K13, K14, K19, A3, A6, A8 and A12). The corresponding item-level component loadings and communalities are presented in Supplementary Table S1.

Knowledge items were scored using a five-point response scale ranging from 1 (strongly disagree) to 5 (strongly agree). Negatively worded statements were reverse-coded so that higher scores consistently indicated greater parental oral health knowledge. Domain-specific knowledge scores were calculated by summing the responses to the retained items within each dimension. The possible score ranges were 14–70 for Basic Oral Health Knowledge (14 items) and 12–60 for Advanced Oral Health Knowledge (12 items).

For parental self-efficacy, PCA was conducted on 19 items, with adequate sampling suitability (KMO = 0.800; Bartlett's test of sphericity: $\chi^2(171) = 1097.678$, $p < 0.001$). The two-component solution explained 45.07% of the total variance (24.82% and 20.25% following rotation). All 19 items achieved loadings of at least 0.30 and were retained, comprising nine negatively worded self-efficacy items and ten positively worded self-efficacy items. Internal consistency was assessed separately for each dimension using Cronbach's alpha and McDonald's omega. For Basic Oral Health Knowledge, Cronbach's α was 0.902 and McDonald's ω was 0.901; for Advanced Oral Health Knowledge, α was 0.821 and ω was 0.816. For Self-efficacy for daily oral health behaviours, α was 0.880 and ω was 0.879; for Self-efficacy for oral health management and care, α was 0.804 and ω was 0.795. Detailed component loadings and communalities are provided in Supplementary Tables S1 and S2.

Perceived barriers to accessing dental care were assessed using a multiple-response question consisting of 11 potential barriers. Participants were asked to select one or more factors that they considered barriers to taking their child to a dental practitioner. The listed barriers included lack of time, unaffordable dental services, complex dental treatments, fear of the dentist, lack of trust in dentists, limited availability of dental services for young children, previous negative dental experiences, language barriers, transportation difficulties, insufficient dental insurance, and long waiting times for dental services [17].

Responses were summarised descriptively using frequencies and percentages, with participants able to select multiple barriers.

2.6. Statistical Analysis

A total of 146 survey responses were received. Of these, 14 incomplete responses were excluded, resulting in a final analytical sample of 132 participants. Complete data were available for all variables included in the analyses among the 132 retained questionnaires, and no missing-data imputation was performed.

Data were analysed using IBM SPSS Statistics version 29 (IBM Corp., Armonk, NY, USA). Descriptive statistics were used to summarise participant characteristics, preventive oral health behaviours, dietary practices, oral health knowledge, and perceived barriers to dental care. Categorical variables were reported as frequencies and percentages, while continuous variables were summarised using means and standard deviations (SD).

Factor scores for the identified oral health knowledge and parental self-efficacy domains were computed and included as independent variables in subsequent regression analyses.

Generalised linear models (GLMs) with a normal probability distribution and identity link function were used to identify factors associated with: (1) preventive oral health behaviour scores, (2) frequency of children's sugary food consumption, and (3) frequency of children's sweetened beverage consumption. Independent variables included socio-demographic characteristics, child-related factors, oral health knowledge factor scores, and parental self-efficacy factor scores. Duration of residence in Australia was recorded in four categories (less than 3 years, 3–5 years, 6–10 years, and more than 10 years) and was entered into the multivariable regression models as a categorical factor, with more than 10 years as the reference category. All variables were entered simultaneously into the adjusted multivariable models based on their theoretical and clinical relevance. Covariate selection was informed by the study's conceptual framework, which recognises the influence of child, family, and broader contextual factors on children's oral health, together

with existing evidence concerning parental knowledge, self-efficacy, and preventive oral health practices.

Regression coefficients (B), standard errors (SE), 95% confidence intervals (CI), and *p*-values were reported. Model fit was assessed using deviance, Pearson chi-square, and Akaike's information criterion (AIC). Outcome distributions were examined using descriptive statistics, skewness, histograms, and Shapiro–Wilk tests. Normal-identity GLMs were initially selected to estimate adjusted mean differences. Given the bounded preventive behaviour score (0–9) and count-based dietary outcomes, additional Poisson GLMs with log links were fitted as sensitivity analyses to assess the robustness of the findings to alternative model specifications. Overdispersion was evaluated using Pearson chi-square and deviance divided by their respective degrees of freedom [27]. Statistical significance was set at $p < 0.05$.

Supplementary linear regression diagnostics were conducted for the preventive oral health behaviour index using the same predictors as the primary generalised linear model. Residual histograms, normal probability plots, and residual-versus-predicted plots were examined to assess residual distribution and patterns of dispersion. Multicollinearity was assessed using tolerance and variance inflation factor (VIF) values [28]. Potentially influential observations were identified using Cook's distance, with values exceeding $4/n$ (0.0303) used as a screening criterion [29]. A sensitivity analysis was conducted by refitting the linear regression after excluding the flagged observations. These diagnostic findings were considered alongside the goodness-of-fit statistics from the primary generalised linear model.

The regression analyses were exploratory, as no formal primary hypotheses were prespecified. Associations between parental oral health knowledge, self-efficacy, sociodemographic characteristics, and children's preventive oral health behaviours and dietary practices were examined based on the study objectives and conceptual framework. Given the examination of multiple predictors across three regression models, no formal adjustment for multiple comparisons was applied. Consequently, findings were interpreted cautiously, particularly associations with *p*-values close to 0.05, with consideration of effect sizes, confidence intervals, consistency across outcomes, and their relevance to the study's conceptual framework.

2.7. Ethical Considerations

Ethical approval for the study was obtained from the La Trobe University Human Research Ethics Committee (Approval No. HEC24499). All participants provided informed consent prior to participation. Survey responses were collected anonymously. Participants who expressed interest in a subsequent qualitative interview were invited to provide an email address for follow-up contact. These contact details were stored separately from the survey responses and were excluded from the quantitative analytical dataset. No identifying information was included in the statistical analyses.

3. Results

3.1. Sociodemographic Characteristics of Participants

A total of 132 Indian migrant parents participated in the study. Detailed participant characteristics have been reported previously [22]. Briefly, most participants were female (68.2%), highly educated (93.2% held a bachelor's degree or higher), and almost half had lived in Australia for more than 10 years (46.2%). Only nine participants (6.8%) had qualifications below bachelor's degree level. Regarding primary caregiving arrangements, 71 (53.8%) reported both parents, 52 (39.4%) reported the mother, and nine (6.8%) reported other caregivers.

Descriptive statistics for the preventive oral health behaviour score, dietary consumption outcomes, oral health knowledge, and parental self-efficacy are presented in Supplementary Table S3. The mean preventive behaviour score was 6.14 (SD = 1.61). Mean daily frequencies of sweetened beverage and sugary food consumption were 1.09 (SD = 1.18) and 1.38 (SD = 1.11), respectively. Both dietary outcomes showed positively skewed distributions, supporting the additional reporting of medians and interquartile ranges. The preventive behaviour score showed slight negative skewness (−0.304), whereas sugary food and sweetened beverage consumption showed positive skewness (0.874 and 1.316, respectively). Shapiro–Wilk tests indicated departures from normality for all three outcomes ($p < 0.001$).

3.2. Preventive Oral Health Behaviours

Children's preventive oral health behaviours and dietary practices, as reported by the participating parents, are presented in Table 1. Most children brushed their teeth as part of their morning routine (97.0%), and 70.5% brushed their teeth before bedtime. Approximately two-thirds of children (65.2%) brushed their teeth at least twice daily. Most parents (93.9%) reported assisting their child with toothbrushing, and fluoridated toothpaste use was reported for 77.3% of children. However, only one-third (33.3%) of parents reported taking their child for six-monthly dental check-ups. Dietary practices showed mixed patterns. While 71.2% of parents reported limiting sugary food consumption to once daily, only 50.0% limited sweetened or acidic drinks to once per day. Additionally, 44.7% of parents reported that their child was given a sweetened drink during sleep.

Table 1. Preventive Oral Health Behaviours and Dietary Practices of Children.

Statement	No *n* (%)	Yes *n* (%)
My child brushes with fluoridated toothpaste	30 (22.7)	102 (77.3)
My child does not drink sweetened drinks during sleep	59 (44.7)	73 (55.3)
Tooth brushing is part of morning routine	4 (3.0)	128 (97.0)
My child brushes teeth before bedtime	39 (29.5)	93 (70.5)
My child brushes at least twice daily	46 (34.8)	86 (65.2)
I take my child for 6-monthly dental check-ups	88 (66.7)	44 (33.3)
I help my child in brushing teeth	8 (6.1)	124 (93.9)
I limit sweetened/acidic drinks to once daily	66 (50.0)	66 (50.0)
I limit sugary foods to once daily	38 (28.8)	94 (71.2)
Child has visited a dental practitioner	61 (46.2)	71 (53.8)
Regular dental practitioner	91 (68.9)	41 (31.1)
Breastfed	9 (6.8)	123 (93.2)
Bottle/pacifier use	38 (28.8)	94 (71.2)

Note: "Yes" responses generally indicate favourable preventive behaviours, except for breastfeeding and bottle/pacifier use, which are presented as descriptive early feeding practices.

Early feeding practices are also summarised in Table 1. Most children (93.2%) had been breastfed. Among those who were breastfed, the majority of parents reported feeding on demand (81.8%), while 18.2% followed a scheduled feeding pattern. Bottle or pacifier use was reported for 71.2% of children, whereas 28.8% had never used a bottle or pacifier.

3.3. Perceived Barriers to Accessing Dental Care

Several barriers to accessing dental care were reported. Financial constraints were the most commonly reported barrier, with 67.4% of parents indicating that dental services were not affordable. Time-related constraints were also prominent, with 53.0% reporting lack of time to take their child to the dentist.

Structural barriers included insufficient dental insurance (50.8%) and long waiting times for dental services (40.9%). In contrast, fewer participants reported barriers such as fear of the dentist (16.7%), lack of trust (17.4%), or limited availability of services for young children (9.8%).

Language barriers (4.5%) and transportation issues (1.5%) were reported less frequently compared to financial and time-related constraints. A summary of perceived barriers is presented in Table 2.

Table 2. Distribution of Reported Barriers to Accessing Dental Care.

Barrier	No *n* (%)	Yes *n* (%)
Lack of time to take the child to the dentist	62 (47.0)	70 (53.0)
Dental services are not affordable	43 (32.6)	89 (67.4)
Complex and prolonged dental treatments	104 (78.8)	28 (21.2)
Fear of the dentist	110 (83.3)	22 (16.7)
Lack of trust in the dentist	109 (82.6)	23 (17.4)
Dental services for young children not available	119 (90.2)	13 (9.8)
Previous bad dental experience	121 (91.7)	11 (8.3)
Language barriers in communication	126 (95.5)	6 (4.5)
Lack of transportation	130 (98.5)	2 (1.5)
Lack of/insufficient dental insurance	65 (49.2)	67 (50.8)
Long waiting time for dental services	78 (59.1)	54 (40.9)

Note: Participants could select multiple barriers.

3.4. Factors Associated with Preventive Oral Health Behaviours

The nine-item preventive behaviour index had a mean score of 6.14 (SD = 1.61), a median of 6.00 (IQR = 2.00), and an observed range of 2–9. The distribution showed slight negative skewness (−0.30), with a significant Shapiro–Wilk test ($p < 0.001$).

Multivariable generalised linear model analysis identified advanced oral health knowledge as significantly associated with higher preventive oral health behaviour scores (B = 0.07, SE = 0.02, 95% CI: 0.02 to 0.11, $p = 0.006$). When duration of residence in Australia was analysed as a categorical variable, parents who had lived in Australia for 6–10 years had significantly lower preventive oral health behaviour scores than those who had lived in Australia for more than 10 years (B = −0.74, 95% CI: −1.43 to −0.06, $p = 0.03$). However, the overall association between duration of residence in Australia and preventive oral health behaviour scores was not statistically significant (Wald $\chi^2(3) = 5.52$, $p = 0.14$). Therefore, the significant category-specific comparison should not be interpreted as evidence of an overall or linear association with duration of residence. Self-efficacy for oral health management and care was not significantly associated with preventive oral health behaviour scores in the final model (B = 0.01, $p = 0.61$).

No significant associations were observed for basic oral health knowledge or the remaining sociodemographic variables. The adjusted multivariable generalised linear model results are presented in Table 3.

Supplementary linear regression diagnostics involving 132 participants suggested an approximately normal residual distribution, with minor deviations and no clear funnel-shaped pattern. Variance inflation factor (VIF) values ranged from 1.15 to 2.29, indicating no substantial multicollinearity. Using Cook's distance greater than $4/n$ (0.0303) as a screening criterion, nine observations (6.8%) were flagged as potentially influential; none exceeded a Cook's distance of 1. Sensitivity analysis excluding these observations ($n = 123$) showed that the association between advanced oral health knowledge and the preventive behaviour index remained statistically significant (B = 0.08, $p < 0.001$). The full sample ($n = 132$) was retained for the primary analysis.

The primary generalised linear model for the nine-item preventive behaviour index used a normal probability distribution with an identity link. The model yielded a deviance of 261.45 (114 residual degrees of freedom), a Pearson chi-square of 261.45, and an Akaike information criterion (AIC) of 502.81. These statistics describe the fitted model but do not independently establish the adequacy of its distributional assumptions.

A Poisson regression with a log link was fitted as a sensitivity analysis for the preventive oral health behaviour score. The model demonstrated substantial underdispersion (deviance/df = 0.40; Pearson χ^2/df = 0.38). Advanced oral health knowledge (B = 0.01, p = 0.12) and residence in Australia for 6–10 years compared with more than 10 years (B = −0.12, p = 0.23) were not statistically significant. These findings indicate sensitivity to model specification and should be interpreted cautiously.

Table 3. Factors Associated with Children's Preventive Oral Health Behaviour Scores (Adjusted Generalised Linear Model).

Predictors	Category	B (SE)	95% CI	*p*-Value
Years lived in Australia	Less than 3 years	−0.62 (0.41)	−1.31–0.25	0.13
	3–5 years	−0.35 (0.39)	−1.02–0.50	0.36
	6–10 years	−0.74 (0.35)	−1.43–−0.06	0.03
	More than 10 years	Ref		-
Number of children	One child	−0.04 (0.43)	−0.88–0.80	0.92
	Two children	0.11 (0.38)	−0.63–0.85	0.76
	Three or more children	Ref		
Number of children below 6 years		0.34 (0.38)	−0.40–1.08	0.37
Sex of the child	Male	−0.43 (0.29)	−1.00–0.14	0.14
	Female	Ref		
Age (months)		0.006 (0.009)	−0.004–0.03	0.53
Primary carer status	Other primary carer	−0.21 (0.28)	−0.76–0.34	0.45
	Mother	Ref		
Education	Bachelor's/Postgraduate degree	−0.27 (0.29)	−0.84–0.30	0.35
	Other education	Ref		
Child general health rating		0.33 (0.28)	−0.22–0.88	0.24
Child oral health rating		0.26 (0.24)	−0.21–0.73	0.28
Child age when first started cleaning teeth		0.02 (0.01)	0.00–0.04	0.17
Does your child have a regular dental practitioner	Yes	0.27 (0.34)	−0.40–0.94	0.41
	No	Ref		
Basic oral health knowledge		0.02 (0.02)	−0.02–0.06	0.44
Advanced oral health knowledge		0.06 (0.02)	0.02–0.11	0.006
Self-efficacy for daily oral health behaviours		0.004 (0.02)	−0.04–0.05	0.86
Self-efficacy for oral health management and care		0.01 (0.02)	−0.04–0.07	0.61

B = regression coefficient; SE = standard error; Ref = reference category. Statistical significance was set at $p < 0.05$. Items within the Self-efficacy for daily oral health behaviours domain were negatively worded and reverse-scored; higher scores for both self-efficacy domains indicate greater parental self-efficacy. Overall effect of duration of residence: Wald $\chi^2(3) = 5.52$, $p = 0.14$.

3.5. Factors Associated with Sugary Food and Sweetened Beverage Consumption

Higher self-efficacy for daily oral health behaviours was significantly associated with a lower frequency of children's sugary food consumption (B = −0.04, SE = 0.01, $p < 0.001$). Duration of residence in Australia was also significantly associated with sugary food consumption (Wald $\chi^2(3) = 13.04$, $p = 0.005$). Compared with parents who had resided in Australia for more than 10 years, those residing for 6–10 years reported significantly lower consumption (B = −0.65, SE = 0.21, $p = 0.002$). No significant associations were observed for oral health knowledge, self-efficacy for oral health management and care, or the remaining sociodemographic characteristics.

Primary carer status and child general health rating (as reported by the parent) were significantly associated with children's sweetened beverage consumption. Compared with children whose mother was the primary carer, children with another primary carer had a higher frequency of sweetened beverage consumption (B = 0.44, SE = 0.17, $p = 0.01$). As parent-reported child general health ratings increased, indicating better general health, the frequency of children's sweetened beverage consumption decreased (B = −0.46, SE = 0.17, $p = 0.006$). Duration of residence in Australia was also significantly associated with sweetened beverage consumption (Wald $\chi^2(3) = 9.13$, $p = 0.03$). Compared with parents residing in Australia for more than 10 years, those residing for 6–10 years reported significantly lower consumption (B = −0.66, SE = 0.24, $p = 0.006$). No significant associations were observed for oral health knowledge, self-efficacy for daily oral health behaviours, self-efficacy for oral health management and care, or the remaining sociodemographic characteristics. The adjusted multivariable generalised linear model results for both dietary outcomes are presented in Table 4.

Table 4. Factors Associated with Children's Sugary Food and Sweetened Beverage Consumption (Adjusted Generalised Linear Models).

Predictors	Category	Sugary Foods			Sweetened Beverages		
		B (SE)	95% CI	*p*-value	B (SE)	95% CI	*p*-value
Years lived in Australia	Less than 3 years	0.08 (0.24)	−0.39–0.55	0.74	0.03 (0.27)	−0.50–0.56	0.91
	3–5 years	−0.41 (0.23)	−0.87–0.05	0.07	−0.02 (0.26)	−0.53–0.50	0.95
	6–10 years	−0.65 (0.21)	−1.0–−0.234	0.002	−0.66 (0.24)	−1.13–−0.19	0.006
	More than 10 years	Ref		-	Ref		-
Number of children	One child	0.01 (0.24)	−0.46–0.48	0.95	0.41 (0.26)	−0.10–0.92	0.11
	Two children	−0.23 (0.21)	−0.64–0.18	0.27	−0.30 (0.23)	−0.75–0.15	0.18
	Three or more children	Ref			Ref		
Number of children below 6 years		0.08 (0.21)	−0.33–0.49	0.71	0.22 (0.23)	−0.23–0.6	0.35
Sex of the child	Male	0.31 (0.16)	−0.00–0.62	0.05	0.13 (0.17)	−0.20–0.46	0.45
	Female	Ref			Ref		
Age in months		0.01 (0.01)	−0.01–0.03	0.32	0.00 (0.01)	−0.01–0.01	0.89
Primary carer	Other primary carer	−0.009 (0.15)	−0.30–0.28	0.95	0.44 (0.17)	0.11–0.77	0.01
	Mother	Ref			Ref		
Education	Bachelor's/Postgraduate degree	0.24 (0.17)	−0.09–0.57	0.15	0.07 (0.18)	−0.28–0.42	0.67
	Other education	Ref			Ref		
Child general health rating		−0.26 (0.15)	−0.55–0.03	0.10	−0.46 (0.17)	−0.79–−0.13	0.006
Child oral health rating		−0.16 (0.13)	−0.41–0.09	0.22	−0.02 (0.15)	−0.31–0.27	0.85
Child age when first started cleaning teeth		−0.00 (0.01)	−0.02–0.02	0.87	0.00 (0.01)	−0.01–0.02	0.65
Does your child have a regular dental practitioner	Yes	0.16 (0.19)	−0.21–0.53	0.39	0.05 (0.20)	−0.34–0.44	0.77
	No	Ref			Ref		
Basic oral health knowledge		−0.01 (0.01)	−0.03–0.01	0.51	−0.02 (0.016)	−0.05–0.01	0.22
Advanced oral health knowledge		0.00 (0.01)	−0.02–0.02	0.99	−0.01 (0.02)	−0.04–0.02	0.50
Self-efficacy for daily oral health behaviours		−0.04 (0.01)	−0.07–−0.02	<0.001	−0.02 (0.01)	−0.05–0.01	0.06
Self-efficacy for oral health management and care		−0.02 (0.02)	−0.06–0.02	0.11	−0.03 (0.017)	−0.06–0.003	0.08

B = regression coefficient; SE = standard error; Ref = reference category. Statistical significance was set at $p < 0.05$. Overall effect of duration of residence: sugary food consumption, Wald $\chi^2(3) = 13.04$, $p = 0.005$; sweetened beverage consumption, Wald $\chi^2(3) = 9.13$, $p = 0.03$.

3.6. Sensitivity Analyses

Poisson regression models with log links were fitted for the dietary frequency outcomes. For sugary food consumption, the Pearson χ^2/df and deviance/df ratios were 0.62 and 0.75, respectively, indicating no evidence of overdispersion. Self-efficacy for daily oral health behaviours was associated with lower sugary food consumption frequency (B = −0.03, 95% CI: −0.06 to −0.008; $p = 0.008$). For sweetened beverage consumption, the corresponding dispersion ratios were 0.95 and 1.08. Self-efficacy for oral health management and care was associated with lower sweetened beverage consumption frequency (B = −0.06, 95% CI: −0.08 to −0.01; $p = 0.007$). Some associations differed from the primary normal-identity models, indicating sensitivity to model specification.

4. Discussion

This study examined factors associated with preventive oral health behaviours and dietary practices among preschool children of Indian-origin parents residing in Victoria, Australia. Advanced oral health knowledge was significantly associated with more favourable preventive oral health behaviours, while higher self-efficacy for daily oral health behaviours was associated with a lower frequency of children's sugary food consumption. Duration of residence in Australia was significantly associated with sugary food and sweetened beverage consumption, but not with the overall preventive oral health behaviour score. Primary carer status and parent-reported child general health rating were associated with sweetened beverage consumption. Collectively, these findings suggest that different aspects of children's oral health-related practices were associated with parental oral health knowledge, parental self-efficacy, and migration-related context. Financial and time-related barriers to dental care were commonly reported and provide important contextual information that should be considered when designing oral health promotion strategies.

Most parents reported that their children brushed their teeth every morning (97.0%) and that they provided assistance with toothbrushing (93.9%). However, only 65.2% of children reportedly brushed their teeth twice daily, indicating that adherence to the recommended toothbrushing frequency was not universal**.** Similar findings have been reported among Australian parents and culturally diverse populations, where regular toothbrushing is commonly adopted as part of daily childcare routines [17,30]. However, despite relatively high levels of morning toothbrushing and parental assistance with toothbrushing, preventive dental attendance remained relatively low, with only approximately one-third of children reported to have a regular dental practitioner. Similar patterns have been reported among Australian children from immigrant backgrounds, who often experience lower utilisation of preventive dental services despite generally favourable oral hygiene behaviours [18]. This discrepancy between home-based oral care and utilisation of preventive dental services has been observed among migrant populations in Australia and internationally [15–18]. Studies have shown that many migrant families continue to access dental care primarily when symptoms arise rather than for routine preventive visits [15–17]. In addition, cultural beliefs regarding the limited importance of the primary dentition may further reduce the perceived need for preventive dental visits, particularly when children are asymptomatic. This pattern may partly reflect differences in previous healthcare experiences and oral healthcare utilisation patterns prior to migration, where preventive dental attendance may be less common and dental services are often sought in response to symptoms rather than for routine prevention [31]. Consequently,

although migration may increase exposure to preventive oral health information, previously established beliefs regarding the importance of primary teeth and previous patterns of symptom-based dental attendance may continue to influence the uptake of preventive dental care [12,16].

Dietary behaviours represented a more challenging aspect of oral health maintenance. Although many parents reported efforts to limit sugary foods and drinks, a substantial proportion of children continued to consume sugary foods and sweetened beverages. Frequent exposure to dietary sugars remains one of the most important risk factors for early childhood caries and is strongly associated with disease initiation and progression [17,19]. Direct comparisons with studies specifically involving Indian migrant families were limited due to the scarcity of directly comparable evidence; therefore, findings from other migrant populations are considered where relevant to contextualise the present results. Similar dietary challenges have been reported among migrant populations in Australia, Canada, and the United Kingdom, where migration is often associated with dietary acculturation and increased exposure to processed foods, convenience foods, and sugar-rich beverages [12,20,32,33]. Previous research has suggested that migration-related dietary changes may be influenced by school environments, peer influences, marketing, and changing social norms within the host country [20,33]. These factors may contribute to difficulties maintaining traditional dietary practices following migration and highlight the need for oral health promotion programs that address dietary behaviours alongside oral hygiene practices.

Primary carer status and parent-reported child general health were also associated with sweetened beverage consumption. Children with a primary carer other than their mother had a higher frequency of sweetened beverage consumption, suggesting that differences in caregiving arrangements and household routines may be relevant to children's beverage practices. Better parent-reported child general health was associated with a lower frequency of sweetened beverage consumption, which may reflect broader health-conscious family practices. However, these findings should be interpreted cautiously given the cross-sectional design and the small number of participants reporting a primary carer other than the mother. Further research is needed to explore these associations and the underlying family and behavioural mechanisms.

A key finding of the present study was the significant association between advanced oral health knowledge and preventive oral health behaviours, whereas basic oral health knowledge was not associated with behavioural outcomes. This finding suggests that general awareness alone may not be associated with more favourable preventive behaviours to the same extent as specific and actionable oral health knowledge. Advanced oral health knowledge encompasses understanding the role of fluoride, the importance of early dental visits, preventive dental attendance, and evidence-based caries prevention strategies. Similar findings have been reported among Australian and international populations, where oral health literacy and applied knowledge were more strongly associated with preventive oral health practices than general awareness alone [10,11,34,35]. While many parents may understand that oral health is important, translating this awareness into consistent preventive behaviours requires a deeper understanding of how specific practices contribute to disease prevention. These findings support previous research indicating that oral health promotion initiatives for Indian migrant families should move beyond simply increasing awareness and instead focus on improving parents' understanding of practical, culturally relevant preventive strategies that can be incorporated into everyday family routines [10,11,35].

Parental self-efficacy was another factor examined in relation to children's oral health behaviours. Higher self-efficacy for daily oral health behaviours was significantly associated with a lower frequency of children's sugary food consumption, whereas self-efficacy

for oral health management and care was not significantly associated with the overall preventive oral health behaviour score. This suggests that different dimensions of parental self-efficacy may have different relationships with specific oral health practices, although these findings require cautious interpretation. The self-efficacy for oral health management and care domain reflects parents' perceived confidence in managing their child's oral health, responding to dental problems, and accessing appropriate dental advice and care, although this domain was not independently associated with the composite preventive behaviour score in the adjusted model. In contrast, self-efficacy for daily oral health behaviours reflects parents' confidence in managing everyday challenges related to toothbrushing and children's dietary practices, including limiting sugary foods and maintaining consistent routines. These findings are consistent with Social Cognitive Theory, which identifies self-efficacy as a central mechanism influencing behavioural adoption, maintenance, and persistence in the face of challenges [36]. However, these associations should be interpreted cautiously, as some items assessing parental oral health-related self-efficacy addressed behaviours similar to those included in the behavioural outcomes, particularly toothbrushing, dietary practices, and preventive dental attendance. This conceptual overlap, together with reliance on parent-reported measures, may have contributed to the observed associations through shared item content and common-method variance.

Previous studies have similarly reported that parents with higher levels of self-efficacy are more likely to establish and maintain healthy oral hygiene routines, supervise toothbrushing, and regulate children's dietary behaviours [8,9,37]. Conversely, parents with lower levels of self-efficacy may experience difficulties implementing recommended oral health and dietary practices consistently [8,9,37]. Although advanced oral health knowledge was significantly associated with more favourable preventive oral health behaviours, knowledge alone may be insufficient unless parents also feel confident in translating this knowledge into consistent oral hygiene and dietary practices within everyday family life. Parents may possess adequate oral health knowledge but still experience difficulties maintaining oral hygiene routines or limiting sugary food consumption if they lack confidence in managing common challenges such as child resistance, competing responsibilities, or family routines. This highlights the importance of incorporating behavioural skill-building, parental support, and confidence-enhancing strategies within oral health promotion interventions [35,38].

Duration of residence in Australia was significantly associated with children's sugary food and sweetened beverage consumption, although its overall association with the composite preventive oral health behaviour score was not statistically significant. Parents who had resided in Australia for 6–10 years reported less frequent consumption of sugary foods and sweetened beverages than those who had resided in Australia for more than 10 years. These findings suggest that dietary practices may vary across residence-duration categories; however, the cross-sectional design does not establish whether these differences reflect changes occurring after migration. Similar findings have been reported among migrant populations internationally, where longer residence has been associated with improved health literacy, greater familiarity with healthcare systems, and increased utilisation of preventive healthcare services [12,16,18,32]. As migrant families become more integrated into Australian society, they may develop a better understanding of available dental services, eligibility requirements, and preventive oral health recommendations. However, acculturation is a complex process that may influence health behaviours in both positive and negative ways. Although greater familiarity with the healthcare system may facilitate engagement with preventive dental care, the present findings do not establish a consistent relationship between longer residence and more favourable preventive behaviours. Previous research also suggests that dietary acculturation may contribute to increased exposure to sugar-rich foods and beverages. Changes in culturally influenced

beliefs and attitudes may also occur during acculturation; however, these changes were not directly measured in the present study [12,20,32]. These findings highlight the need for oral health promotion strategies that support Indian migrant families in navigating the Australian healthcare system while also strengthening oral health literacy, addressing culturally influenced beliefs and practices, and supporting healthy dietary behaviours during the acculturation process.

Financial constraints and lack of time were the most commonly reported barriers to accessing dental care, whereas language and transportation barriers were reported less frequently. Similar barriers have been consistently described among other migrant families and socioeconomically disadvantaged populations in Australia and internationally [15–17,38]. Although participants in the present study were generally well educated, financial constraints were still commonly reported, suggesting that educational attainment alone may not protect against structural barriers to accessing dental care among this group of migrant families. These findings align with the Fisher-Owens conceptual model, which proposes that children's oral health outcomes are shaped by multiple interacting influences operating at the individual, family, community, and healthcare system levels [7]. Although these barriers were examined descriptively rather than as predictors in the regression analyses, they provide important contextual information that should be considered when developing culturally specific and responsive oral health promotion strategies. Together, these findings highlight the importance of addressing broader social and environmental factors associated with health alongside individual behaviour change [39].

The regression findings should be interpreted with caution given the examination of multiple predictors across three outcome models without formal adjustment for multiple comparisons. This increases the possibility that some statistically significant associations may have occurred by chance, particularly those with p-values close to 0.05. Accordingly, greater emphasis should be placed on the magnitude and precision of the estimated associations, their consistency across outcomes, and their alignment with existing evidence rather than statistical significance alone. These findings should be regarded as exploratory and require confirmation in larger studies.

Taken together, the findings indicate that advanced parental oral health knowledge was significantly associated with more favourable preventive oral health behaviours, while higher self-efficacy for daily oral health behaviours was associated with less frequent sugary food consumption. Duration of residence in Australia was associated with children's sugary food and sweetened beverage consumption, although its overall association with the composite preventive behaviour score was not statistically significant. These findings highlight the importance of culturally responsive oral health promotion strategies that emphasise practical oral health knowledge, support parental confidence in managing daily oral health practices, and consider culturally influenced beliefs and broader contextual factors affecting children's oral health behaviours [7–9,12,39].

The present study has certain limitations. The cross-sectional design precludes causal inferences regarding the associations between parental oral health knowledge, self-efficacy, and preventive oral health behaviours. Participants were recruited through convenience and snowball sampling in Victoria, which may limit the generalisability of the findings to the broader Indian migrant population in Australia. The high educational attainment of participants (93.2% held a bachelor's or postgraduate degree), English-language eligibility requirement, and reliance on recruitment networks may have resulted in underrepresentation of families with different educational, linguistic, and socioeconomic backgrounds. In addition, eligibility was based on self-reported parental country of birth, and parents with multiple preschool-aged children were asked to consider the child about whom they had the greatest dental concerns, potentially influencing the child-related findings.

The reliance on self-reported information may have introduced recall and social desirability bias, while duplicate survey submissions could not be independently excluded. The parental self-efficacy measure included items reflecting perceived capability alongside attitudes, reported practices, outcome expectations, and access-related perceptions, using agreement-based rather than confidence-specific response options. Consequently, the identified dimensions should not be interpreted as exclusively measuring self-efficacy. Some items also overlapped conceptually with the preventive behaviour outcomes, potentially contributing to associations through shared item content and common-method variance. The nine-item preventive behaviour index combined heterogeneous preventive practices using equal weighting, with some overlapping indicators, particularly those relating to toothbrushing. Its low internal consistency (Cronbach's $\alpha = 0.412$) limits its interpretation as a unidimensional scale; therefore, it should be considered an exploratory composite rather than a validated measure of overall preventive oral health behaviour.

Although the a priori sample-size requirement was achieved, some predictor categories contained relatively few observations, potentially affecting the precision and stability of individual estimates. Differences between statistical model specifications and the examination of multiple associations without formal adjustment for multiple comparisons may increase the risk of Type I errors, particularly for findings with p-values close to 0.05. Further studies involving more diverse samples and validated measures would help establish the robustness and broader applicability of these findings.

5. Conclusion

In conclusion, advanced parental oral health knowledge was significantly associated with more favourable parent-reported preventive oral health behaviours among children of Indian migrant parents in Australia. Higher self-efficacy for daily oral health behaviours was associated with a lower frequency of children's sugary food consumption, while duration of residence in Australia was associated with sugary food and sweetened beverage consumption but not significantly associated with the overall preventive oral health behaviour score. Although many parents reported regular morning toothbrushing and parental assistance with toothbrushing, important gaps remained in twice-daily toothbrushing, preventive dental attendance, and dietary behaviours. These findings may inform the development of culturally responsive oral health promotion strategies tailored to Indian migrant families, with a focus on practical oral health knowledge, parental confidence, and recommended preventive oral health behaviours. Further longitudinal and intervention studies are needed to determine whether such approaches can improve children's oral health outcomes among Indian migrant families.

Supplementary Materials: The following supporting information can be downloaded at: https://www.mdpi.com/article/10.3390/children13121632/s1. **Table S1.** Parental oral health knowledge; **Table S2.** Parental self-efficacy; **Table S3.** Descriptive statistics for preventive oral health behaviours, dietary consumption, oral health knowledge, and parental self-efficacy (N = 132); **Supplementary File S1.** Survey Questionnaire.

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