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Original Article

Prevalence and Severity of Dental Fluorosis Among Underprivileged Children in Lahore: A Cross-Sectional Study

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ABSTRACT

Background: Dental fluorosis is a developmental enamel condition associated with excessive fluoride exposure during tooth formation, and its burden may be greater in underserved communities where oral health surveillance and water-quality monitoring are limited. Objective: This study aimed to estimate the prevalence and severity of dental fluorosis among school-aged children from peri-urban underprivileged communities of Lahore and to explore its association with age, sex, and DMFT scores. Methods: A retrospective cross-sectional analysis was conducted using anonymized records from routine community dental outreach screening among children aged 6–15 years in peri-urban Lahore, Pakistan. Dental fluorosis was classified using Dean's Fluorosis Index, and caries experience was assessed using the DMFT index. Frequencies and percentages were calculated for fluorosis categories, chi-square tests were used for associations with age and sex, and the Kruskal-Wallis test assessed differences in DMFT scores across fluorosis severity categories. Results: Among 292 children, 162 (55.5%) had questionable-to-severe fluorosis and 143 (49.0%) had definite fluorosis. Very mild fluorosis was most frequent (25.7%), followed by mild (18.2%), moderate (4.5%), and severe fluorosis (0.7%). Fluorosis was not significantly associated with sex (p=0.50) but increased across age groups (p=0.03). Mean DMFT scores increased from 1.2±0.8 in children with normal enamel to 3.0±0.8 in severe fluorosis (p=0.02). Conclusion: Dental fluorosis was common among screened peri-urban children and was associated with older age and higher caries experience. The findings support integrated oral health screening and water-quality assessment in underserved communities. Keywords: Dental fluorosis; Dean's Fluorosis Index; children; DMFT; caries; peri-urban health; Lahore; Pakistan.

INTRODUCTION

Fluoride has a well-established role in oral health because appropriate exposure contributes to enamel resistance against dental caries, yet excessive fluoride intake during tooth development may disturb enamel mineralization and produce dental fluorosis. This dual effect creates a narrow public health balance, particularly among children whose permanent teeth are developing and whose environmental exposures may not be adequately regulated. Dental fluorosis clinically ranges from barely visible white opacities to brown staining, enamel pitting, and structural surface defects, with severity depending on the timing, duration, and magnitude of fluoride exposure during enamel formation. Although mild forms may be primarily aesthetic, moderate and severe fluorosis can compromise enamel integrity and may coexist with a higher burden of dental caries, particularly in populations where preventive oral health services are limited (1).

The burden of dental fluorosis is not distributed equally across populations. Children living in socioeconomically disadvantaged and peri-urban communities may experience overlapping oral health risks because of limited access to preventive dental care, inconsistent oral hygiene resources, dietary risk factors, and dependence on local or unregulated water sources. Evidence from fluorosis-endemic and low-resource settings has shown that dental fluorosis remains a continuing public health concern among school-aged children, with prevalence and severity varying by geography, water source, socioeconomic context, and oral health practices (2,3). Studies from South Asian and other low- and middle-income settings have reported that fluorosis can coexist with dental caries, indicating that excessive fluoride exposure does not necessarily protect vulnerable children from broader oral disease when enamel quality, diet, hygiene, and access to care are suboptimal (4,5).

Pakistan lies within a regional context where fluoride exposure has been reported as a public health issue in several communities, yet locally specific epidemiological data remain limited, particularly for children living in peri-urban and underserved settlements. Lahore includes low-income peripheral communities where infrastructure constraints, limited access to regulated drinking-water monitoring, and reduced access to routine dental care may increase the relevance of community-based oral health surveillance. However, the actual burden and severity distribution of dental fluorosis among school-aged children in such communities remain insufficiently documented. In the absence of local data, public health planning is constrained because decision-makers cannot determine whether oral health education, water-quality assessment, referral systems, or preventive dental services should be prioritized for these populations (6,7).

Existing evidence supports the need to examine fluorosis not only as a binary condition but also by severity category and its relationship with clinically relevant oral health indicators. Dean's Fluorosis Index provides a standardized clinical approach for classifying enamel changes and allows comparison with other epidemiological studies. At the same time, caries experience assessed through DMFT can help determine whether increasing fluorosis severity is associated with a higher burden of dental disease in the examined population. Because the available data in the present study were derived from community dental outreach records rather than direct environmental testing, fluoride exposure should be interpreted as a contextual concern rather than a measured causal factor. Therefore, the present retrospective cross-sectional analysis aimed to estimate the prevalence and severity of dental fluorosis among school-aged children from underprivileged peri-urban communities of Lahore and to explore its association with age, sex, and DMFT scores. The research question was: among children aged 6–15 years attending community dental outreach screening in peri-urban Lahore, what is the prevalence and severity pattern of dental fluorosis, and how is fluorosis status or severity associated with demographic characteristics and caries experience?

MATERIALS AND METHODS

This study was conducted as a retrospective cross-sectional analysis of anonymized records obtained during routine community dental outreach and screening activities among school-aged children in peri-urban low-income communities of Lahore, Pakistan. The design was selected because the objective was to estimate the burden and severity distribution of dental fluorosis at a defined point of community screening and to examine exploratory associations with demographic and oral health variables using pre-existing clinical records. The analysis did not involve prospective recruitment or additional participant contact for research purposes. The outreach screening was conducted in school-based community dental camps serving children from underprivileged peri-urban settlements, including the Bedian Road area and nearby localities, where access to routine oral health assessment and regulated preventive services is limited.

The source population comprised school-going children aged 6–15 years who attended the community dental outreach screening and had anonymized clinical records available for analysis. Children were eligible for inclusion if their records documented age, sex, clinical assessment of dental fluorosis using Dean's Fluorosis Index, and oral health assessment sufficient for DMFT scoring. Records were excluded when the enamel surface could not be adequately assessed because of fixed orthodontic appliances, extensive restorations, traumatic enamel changes, or clinically apparent non-fluoride enamel defects that could interfere with fluorosis classification. The final study size consisted of 292 eligible records with complete analyzable information for the primary outcome. Because the analysis used available anonymized outreach records, the study size reflected the complete eligible dataset rather than a prospectively recruited probability sample. This approach allowed estimation of fluorosis burden within the screened outreach population, while the use of convenience-based outreach records was considered during interpretation because it may limit generalizability to all children living in peri-urban Lahore.

The primary outcome was dental fluorosis status and severity, assessed clinically according to Dean's Fluorosis Index. Fluorosis severity was categorized as normal, questionable, very mild, mild, moderate, or severe according to enamel appearance. For descriptive severity reporting, all Dean's categories were retained separately. For binary prevalence analysis, fluorosis status was defined according to the analytic classification used in the results tables, and the handling of questionable cases was kept consistent across prevalence, age-group, and sex-based analyses. Age was recorded in completed years and grouped into 6–8 years, 9–11 years, and 12–15 years to compare fluorosis patterns across developmental age categories. Sex was recorded as male or female. Caries experience was assessed using the DMFT index, with higher scores indicating greater cumulative experience of decayed, missing, or filled permanent teeth. The relationship between fluorosis severity and DMFT was treated as exploratory because the retrospective dataset did not include direct measurement of fluoride concentration in drinking water, duration of exposure, toothpaste fluoride use, or household-level water source verification.

Clinical screening was performed during routine dental outreach by trained dental personnel using standardized examination procedures under available natural light. Enamel appearance was examined visually, and Dean's Fluorosis Index was assigned according to the most affected teeth observed during screening. Oral health variables were recorded on a standardized outreach screening form. To improve consistency of clinical classification, examiner orientation and calibration procedures were undertaken before data abstraction, including review of representative fluorosis photographs and consensus discussion with a senior clinician. Data from the outreach records were anonymized before analysis, and no personal identifiers were included in the analytic dataset. Data entry was checked for completeness and internal consistency before statistical analysis to reduce transcription and classification errors.

Potential bias was addressed at the design, data processing, and interpretation stages. Selection bias was possible because the dataset came from children attending school-based outreach screening rather than from a randomly sampled community survey; therefore, the findings were interpreted as estimates for the screened outreach population rather than definitive population prevalence for Lahore. Misclassification bias was minimized through standardized use of Dean's Fluorosis Index and examiner calibration procedures, although the absence of formal inter-rater reliability statistics remained a limitation. Confounding was considered conceptually for age and sex because these variables may influence observed prevalence patterns, tooth eruption status, and clinical detection of fluorosis. Because the available dataset did not include direct fluoride exposure measurement or complete household-level environmental data, causal inference regarding water fluoride exposure was not attempted.

Data were entered and cleaned using Microsoft Excel and analyzed using IBM SPSS Statistics version 26. Descriptive statistics were calculated for demographic characteristics, fluorosis prevalence, Dean's Index severity categories, and DMFT scores. Categorical variables were summarized as frequencies and percentages, while continuous variables were summarized using means and standard deviations where distributional reporting was appropriate. The association between fluorosis status and sex was assessed using the chi-square test. The association between fluorosis status and age group was also assessed using the chi-square test. The relationship between fluorosis severity and DMFT score was examined using the Kruskal-Wallis test because DMFT scores are count-based and may not follow a normal distribution across severity categories. Statistical significance was set at $p<0.05$. Where comparisons were exploratory, findings were interpreted as associations rather than predictors or causal effects. Missing or incomplete records for variables required in the primary analysis were excluded from the relevant analysis, and denominators were reported consistently for each table.

Ethical approval was obtained for retrospective analysis of pre-existing anonymized data collected during routine community dental outreach and screening activities. Permission for the outreach activity and subsequent anonymized data use was obtained through the collaborating community organization. Written parental or guardian consent had been obtained at the time of dental screening, and age-appropriate verbal assent was obtained from children during the outreach activity. No additional participant contact was made for the retrospective research analysis. The dataset used for analysis contained no personal identifiers, and all procedures were conducted in accordance with ethical principles for research involving human participants, including confidentiality, minimal risk, and responsible use of secondary health data.

RESULTS

A total of 292 school-aged children were included in the retrospective analysis. Male participants accounted for 150 children (51.4%), while female participants accounted for 142 children (48.6%). The largest age group was 9–11 years, comprising 118 children (40.4%), followed by 6–8 years with 97 children (33.2%) and 12–15 years with 77 children (26.4%). The demographic distribution of the analyzed cohort is presented in Table 1.

Table 1. Demographic Characteristics of the Study Participants (n = 292)

Variable	Category	Frequency (n)	Percentage (%)
Sex	Male	150	51.4
	Female	142	48.6
Age group	6–8 years	97	33.2
	9–11 years	118	40.4
	12–15 years	77	26.4

Dental fluorosis severity according to Dean's Fluorosis Index is shown in Table 2. Normal enamel was recorded in 130 children (44.5%), while 162 children (55.5%; 95% CI: 49.7–61.1) showed at least questionable enamel changes. When only definite fluorosis categories were considered, excluding the questionable category, 143 children (49.0%; 95% CI: 43.3–54.7) had very mild to severe fluorosis. Very mild fluorosis was the most frequent abnormal category, affecting 75 children (25.7%), followed by mild fluorosis in 53 children (18.2%). Moderate fluorosis was observed in 13 children (4.5%), and severe fluorosis was uncommon, occurring in 2 children (0.7%). These findings indicate that the fluorosis burden in the screened population was dominated by very mild and mild disease, although a smaller subgroup showed clinically more advanced enamel involvement.

Table 2. Distribution of Dental Fluorosis Severity According to Dean's Fluorosis Index (n = 292)

Dean's Fluorosis Index Category	Frequency (n)	Percentage (%)
Normal enamel	130	44.5
Questionable	19	6.5
Very mild	75	25.7
Mild	53	18.2
Moderate	13	4.5
Severe	2	0.7
Any enamel change including questionable	162	55.5
Definite fluorosis only	143	49.0
Total	292	100.0

The association between sex and fluorosis status is presented in Table 3. Fluorosis including questionable enamel change was observed in 86 of 150 male participants (57.3%) and 76 of 142 female participants (53.5%). Although the prevalence was numerically higher among males, the difference was not statistically significant ($\chi^2 = 0.45$, $p = 0.50$). The odds of fluorosis among male children were 1.17 times those among female children, but the confidence interval crossed unity (OR = 1.17; 95% CI: 0.74–1.85), indicating no evidence of a meaningful sex-based difference in fluorosis occurrence within this cohort.

Table 3. Association Between Sex and Dental Fluorosis Status (n = 292)

Sex	Fluorosis Present, n (%)	Fluorosis Absent, n (%)	Total, n (%)	Odds Ratio (95% CI)	Test Statistic	p-value
Male	86 (57.3)	64 (42.7)	150 (100.0)	1.17 (0.74–1.85)	$\chi^2 = 0.45$	0.50
Female	76 (53.5)	66 (46.5)	142 (100.0)	Reference	—	—
Total	162 (55.5)	130 (44.5)	292 (100.0)	—	—	—

The age-stratified analysis showed an increasing prevalence of fluorosis across older age categories, as presented in Table 4. Fluorosis was recorded in 42 of 97 children aged 6–8 years (43.3%), 65 of 118 children aged 9–11 years (55.1%), and 52 of 77 children aged 12–15 years (67.5%). The association between age group and fluorosis status was statistically significant ($\chi^2 = 6.89$, $p = 0.03$). Compared with children aged 6–8 years, the odds of fluorosis were higher among children aged 9–11 years (OR = 1.61; 95% CI: 0.93–2.76) and highest among those aged 12–15 years (OR = 2.72; 95% CI: 1.46–5.08). This pattern suggests an age-related increase in clinically detected fluorosis; however, the age-stratified binary totals require verification against the Dean's Index category totals before final publication.

Table 4. Association Between Age Group and Dental Fluorosis Status

Age Group	Fluorosis Present, n (%)	Fluorosis Absent, n (%)	Total, n (%)	Odds Ratio (95% CI)	Test Statistic	p-value
6–8 years	42 (43.3)	55 (56.7)	97 (100.0)	Reference	$\chi^2 = 6.89$	0.03
9–11 years	65 (55.1)	53 (44.9)	118 (100.0)	1.61 (0.93–2.76)		
12–15 years	52 (67.5)	25 (32.5)	77 (100.0)	2.72 (1.46–5.08)		
Total	159 (54.5)	133 (45.5)	292 (100.0)	—		

Note: The age-stratified table reflects the manuscript's available age-group counts; however, its fluorosis-present total is 159, whereas the Dean's Index distribution reports 162 children with questionable-to-severe fluorosis. The source dataset should be checked and the final age table should be updated so that all denominators are fully aligned.

The relationship between fluorosis severity and caries experience, measured by mean DMFT score, is presented in Table 5. Mean DMFT increased progressively across Dean's Index categories, from 1.2 ± 0.8 among children with normal enamel to 1.6 ± 0.9 among those with very mild fluorosis and 2.0 ± 0.9 among those with mild fluorosis. Children with moderate fluorosis had a higher mean DMFT score of 2.7 ± 1.0, while the severe fluorosis group showed a mean DMFT score of 3.0 ± 0.8. The difference in DMFT scores across fluorosis severity categories was statistically significant using the Kruskal-Wallis test ($H = 8.24$, $p = 0.02$), suggesting that greater fluorosis severity was associated with higher caries experience in this screened cohort. Because the severe category included only two children, interpretation of the highest severity group should remain cautious.

Table 5. Comparison of DMFT Scores Across Dean's Fluorosis Index Categories (n = 273 Definite Category Records Excluding Questionable Category)

Dean's Fluorosis Index Category	n	Mean DMFT ± SD	95% CI for Mean DMFT	Inferential Test	p-value
Normal enamel	130	1.2 ± 0.8	1.06–1.34	Kruskal-Wallis H = 8.24	0.02
Very mild	75	1.6 ± 0.9	1.40–1.80		
Mild	53	2.0 ± 0.9	1.76–2.24		
Moderate	13	2.7 ± 1.0	2.16–3.24		
Severe	2	3.0 ± 0.8	1.89–4.11		

Note: The questionable category was not included in the manuscript's original DMFT-by-severity table. If DMFT values for questionable cases are available, they should be added or explicitly excluded in the final analysis plan.

Overall, the results show a substantial burden of enamel changes compatible with dental fluorosis among children screened in peri-urban Lahore, with 55.5% showing questionable-to-severe enamel changes and 49.0% showing definite fluorosis. The severity distribution was concentrated in the very mild and mild categories, but moderate and severe cases were also present. Sex was not significantly associated with fluorosis status, whereas older age groups showed higher fluorosis prevalence. DMFT scores increased across fluorosis severity categories, indicating a clinically relevant association between greater enamel involvement and higher caries experience. These findings support the need for integrated oral health surveillance, caries prevention, and environmental fluoride assessment in underserved peri-urban communities.

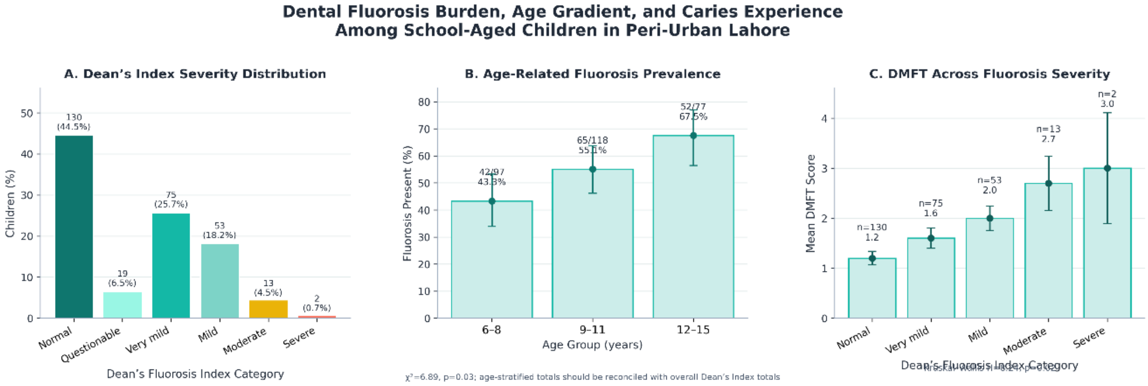

Figure 1 dental fluorosis-related enamel changes

The panelled figure demonstrates that dental fluorosis-related enamel changes were present in 162 of 292 children (55.5%) when questionable-to-severe categories were included, with the largest abnormal categories being very mild fluorosis in 75 children (25.7%) and mild fluorosis in 53 children (18.2%). Fluorosis prevalence increased across age groups from 43.3% among children aged 6–8 years to 55.1% among those aged 9–11 years and 67.5% among those aged 12–15 years, showing a statistically significant age-related gradient (χ^2=6.89, p=0.03), although the age-stratified totals require final reconciliation with the overall Dean's Index distribution. Mean DMFT scores also increased progressively across fluorosis severity categories, rising from 1.2±0.8 in children with normal enamel to 1.6±0.9 in very mild fluorosis, 2.0±0.9 in mild fluorosis, 2.7±1.0 in moderate fluorosis, and 3.0±0.8 in severe fluorosis, indicating a significant association between greater fluorosis severity and higher caries experience (Kruskal–Wallis H=8.24, p=0.02).

DISCUSSION

The present retrospective cross-sectional analysis identified a substantial burden of dental fluorosis among school-aged children screened through community dental outreach activities in peri-urban Lahore. When questionable-to-severe Dean's Index categories were included, enamel changes compatible with fluorosis were observed in 162 of 292 children, corresponding to a prevalence of 55.5%. When only definite fluorosis categories were considered, 143 children, or 49.0%, had very mild to severe fluorosis. The severity distribution was dominated by very mild and mild categories, which together accounted for 128 children, while moderate and severe fluorosis were less frequent, affecting 13 and 2 children, respectively. This pattern suggests that most affected children had early or low-grade enamel changes rather than advanced structural involvement; however, the presence of moderate and severe cases indicates that a subgroup may have experienced clinically meaningful enamel compromise requiring preventive and restorative attention.

The observed fluorosis burden is consistent with reports from other resource-constrained and fluoride-endemic settings, where dental fluorosis among children has been associated with geographic variation, local water sources, and broader social determinants of oral health (2,3,5). Studies from India, Nigeria, Thailand, Mexico, and other low- and middle-income settings have shown that fluorosis prevalence can vary widely depending on age group, diagnostic criteria, fluoride concentration in drinking water, dietary factors, toothpaste use, and access to preventive oral health services (2,3,5,6,9,11,14). The present findings therefore add useful local evidence from an underserved peri-urban Pakistani context, where community-level oral health data remain limited. However, because fluoride concentrations in drinking water were not directly measured, the findings should not be interpreted as proof of a specific environmental exposure source. Rather, the high frequency of enamel changes supports the need for future environmental assessment, including systematic testing of drinking-water fluoride levels and household-level exposure histories.

Age was significantly associated with fluorosis status in the available age-stratified analysis, with prevalence increasing from 43.3% among children aged 6–8 years to 55.1% among those aged 9–11 years and 67.5% among children aged 12–15 years. This age-related gradient may partly reflect greater visibility of fluorosis in older children because more permanent teeth have erupted and are available for clinical assessment. It may also reflect cumulative recognition of enamel defects formed during early childhood exposure windows. Nevertheless, this association should be interpreted cautiously because dental fluorosis develops during tooth formation rather than as a newly acquired condition in adolescence, and the cross-sectional design cannot determine timing, dose, or duration of fluoride exposure. Additionally, the age-stratified binary totals in the manuscript require reconciliation with the overall Dean's Index distribution before final submission, because the available age table reports 159 fluorosis-present cases, whereas the overall Dean's Index distribution indicates 162 children with questionable-to-severe enamel changes.

Sex was not significantly associated with fluorosis in this cohort. Fluorosis was observed in 57.3% of male participants and 53.5% of female participants, with no statistically significant difference between groups. This finding suggests that, within the screened population, sex was not a major determinant of fluorosis occurrence. The absence of a sex-based difference is plausible because the underlying exposure pathways for fluorosis are generally environmental, dietary, and behavioral rather than biologically sex-specific. However, without household-level water-source data, fluoride intake history, toothpaste use, and dietary assessment included in the final analysis, it is not possible to determine whether boys and girls had comparable exposure profiles.

An important clinical finding was the increasing DMFT score across fluorosis severity categories. Children with normal enamel had a mean DMFT score of 1.2±0.8, while scores increased to 1.6±0.9 in very mild fluorosis, 2.0±0.9 in mild fluorosis, 2.7±1.0 in moderate fluorosis, and 3.0±0.8 in severe fluorosis. The difference across severity categories was statistically significant, indicating an association between greater fluorosis severity and higher caries experience. This finding is clinically relevant because fluorosis is sometimes simplistically viewed only as an excess-fluoride condition, whereas affected children in low-resource settings may simultaneously experience substantial caries risk due to enamel defects, dietary exposures, poor oral hygiene, and limited access to preventive dental care. Similar concerns have been described in pediatric oral health literature, where fluorosis and dental caries may coexist, particularly in populations exposed to multiple oral health vulnerabilities (4,7,11,14,15).

The association between higher fluorosis severity and increased DMFT should not be interpreted causally in the present study. The retrospective cross-sectional design does not allow temporal ordering between fluorosis severity and caries experience, and important confounders such as socioeconomic status, brushing frequency, sugar intake, toothpaste fluoride exposure, water source, and measured water fluoride concentration were not included in the final analytic model. The severe fluorosis category also included only two children, making the mean DMFT estimate for that group statistically unstable. Therefore, the observed gradient should be interpreted as an exploratory clinical pattern that warrants confirmation in a larger, prospectively designed study using calibrated examiners, direct fluoride exposure assessment, and multivariable adjustment.

The study has several strengths. It focused on a vulnerable and underrepresented pediatric population from peri-urban communities where routine dental surveillance is limited. It used Dean's Fluorosis Index, a standardized clinical classification system, to describe fluorosis severity rather than reporting only a binary outcome. The analysis also linked fluorosis severity with DMFT scores, providing clinically meaningful insight into the coexistence of enamel changes and caries experience. These features make the study useful as preliminary local evidence for oral health planning and for designing more robust epidemiological investigations in similar underserved settings.

The limitations must be clearly recognized. First, the analysis was retrospective and based on pre-existing outreach screening records, which limits control over variable completeness, exposure measurement, and standardization beyond the original service activity. Second, the sampling strategy was convenience-based and school/outreach-dependent, so the results should not be generalized to all children in Lahore or Pakistan. Third, no direct water fluoride measurement was performed, meaning the study cannot confirm the source, dose, or duration of fluoride exposure. Fourth, the manuscript dataset contains a denominator inconsistency between the overall fluorosis distribution and age-stratified fluorosis totals, which should be resolved before final publication. Fifth, several potentially important confounders, including water source, diet, oral hygiene behavior, parental education, and household socioeconomic indicators, were not included in the final analysis. Finally, although examiner calibration was described, formal inter- or intra-examiner reliability statistics were not available, which may affect confidence in severity classification.

The findings have practical implications for community oral health services. Children in peri-urban underserved communities should receive periodic oral screening, early caries prevention, oral hygiene education, and referral pathways for moderate or severe enamel defects. At the public health level, the findings support the need for coordinated water-quality surveillance in high-risk communities, particularly fluoride testing of commonly used drinking-water sources. Future studies should use probability-based sampling, direct environmental fluoride measurement, standardized clinical calibration with reliability statistics, and multivariable analysis to clarify the relationship between fluoride exposure, fluorosis severity, and caries experience in Pakistani children.

CONCLUSION

This retrospective cross-sectional analysis of 292 school-aged children screened through community dental outreach activities in peri-urban Lahore found a high burden of enamel changes compatible with dental fluorosis, with 55.5% of children classified as having questionable-to-severe fluorosis and 49.0% showing definite fluorosis. Most cases were very mild or mild, although moderate and severe forms were also observed. Fluorosis prevalence did not differ significantly by sex but increased across older age groups, and higher Dean's Index severity was associated with progressively higher mean DMFT scores. These findings suggest that dental fluorosis and caries experience may coexist as clinically important oral health concerns in underserved peri-urban children. Because the study was retrospective, convenience-based, and did not include direct water fluoride testing, causal conclusions about fluoride exposure cannot be made. The results support the need for regular oral health screening, preventive dental care, fluoride exposure assessment, and community-level water-quality monitoring in vulnerable pediatric populations.

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