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Distribution of Dental Caries in 12-Year Old Children of Chandigarh using DMFT and SiC Index- A Cross-Sectional Study

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Abstract

Aims: To evaluate the distribution of dental caries using the DMFT index (Decayed, Missing, Filled Teeth) and Significant Caries Index (SiC) in 12-year old children of Chandigarh. To comparatively analyze the risk factors between the two groups - 'SiC index group' and 'least DMFT group' and to determine if the WHO Health goals have been achieved for the population. **Methods:** The examination for dental caries was done as per the WHO recommendations on 495 children. DMFT, SiC values and the oral health behaviours were recorded and the risk predictors for caries identified on logistic regression analysis. **Results:** The prevalence of dental caries was 74.1%. The mean DMFT was 2.93 ± 2.57 (0-12) and the mean SiC was 5.76 ± 1.89 (4-12). The odds of being in the SiC group were lesser with ≥ once a day tooth cleaning (OR:0.644, CI:0.109 - 3.822, p-value 0.628) and higher with ≤ once a day sugar intake (OR:1.286; CI:0.782-2.115, p-value 0.322), ≤ once a day fruit intake (OR: 1.485; CI:0.820 - 2.691, p-value 0.192), in boys (OR:1.175;CI:0.748 - 1.847, p - value 0.484) and in the lower strata (OR:2.578; CI:1.187 - 5.598, p-value 0.017). **Conclusion:** The study confirmed an unequal distribution of dental caries and aims to focus on the more susceptible lower strata and reduction of the D component of DMFT. The WHO Health Goals for 2000 were achieved for the population, but the Goals for 2015 were yet to be met. The study also highlights the need to strive to attain the WHO Health Goals for 2020.

Keywords: Behaviour, Children, Dental Caries, Prevalence, Socioeconomic Status

Abbreviations

DMFT - Decayed, Missing, Filled Teeth

WHO - World Health Organization

SES - Socioeconomic Status

1. Introduction

Dental caries has been assessed in epidemiological surveys using the DMFT Index, an irreversible index[1, 2]. The index was proposed by Klein, Knutson and Palmer in 1938 with the advantages of permitting assessment

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of communities, being simple and no requirement for radiographic examination[3].

The distribution of dental caries is, however, not uniform. An assessment using the DMFT index often leads to an underestimation of dental caries, particularly in the high-risk groups[4–7]. Of recent, Significant Caries Index (SiC) is used to evaluate the skewed distribution of dental caries. The index was introduced by Bratthall in 2000[8]. It is calculated as the mean of one-third of the population with the highest DMFT.

Chandigarh, an Indian city, has a population of approximately 10.5 lakhs[9], a literacy rate of over 86.05%[9] and a per capita income of over Rs. 1,50,000[10]. The projected population of 11-13 - year-old children in the year 2012 is approximately 57,000[11]. An assessment of the 12-year age group is important as all the permanent teeth have usually erupted by this age. It is for this reason that the 12-year age group is declared as a global index age by the WHO[12]. Although dental caries in this age group has been recorded in Chandigarh using the DMFT index[13,14], yet SiC index for the age group was reported long before, in the year 2002-3[14].

The aim of the study was to assess the present dental caries experience using the DMFT and SiC Index, to determine the risk factors involved and to evaluate if the WHO Health Goals have been achieved for the 12 - year old school children of Chandigarh.

2. Methodology

The Ethics approval for the study was obtained vide letter no. PUIEC/10/235 dated 14/10/2010. Schools in Chandigarh were stratified into government and private schools. The initial sample of 2294 children, aged 11-16 years, were selected randomly, using the lottery method, from five government (n = 1314) and four private schools (n = 980)[15]. These children were examined over ten months from April 2014 to February 2015[15]. The present study involved an analysis of a sub-sample of 495 twelve-year old children out of these 2294 children, with a representation from all the schools. The minimum sample size was calculated as 250 subjects at 95% confidence interval and 5% margin of error.

The necessary permissions for conduction of the surveys in schools were obtained from the Principal and the District Education Officer, Chandigarh Administration and a signed, informed consent obtained from the parents. The children were grouped based on gender and socioeconomic status, the latter was assessed using the Kuppuswamy socioeconomic scale- an updated version 2013[16]. Four socioeconomic classes were considered-upper, upper middle, lower middle and lower as a combination of upper lower and lower[15].

The WHO Oral Health Questionnaire recorded oral health behaviour and the WHO Oral Health Assessment Form for Children-2013 recorded the DMFT[12]. The children were examined in schools by a single, calibrated and trained examiner using the WHO prescribed criteria and methodology[12]. An insignificant intra-observer variability with Cronbach's alpha was observed (>0.8).For Cronbach's alpha, an intraclass correlation coefficient was applied to check intra-observer variability (>0.8).

Fewer than thirty children were examined in a day, on a chair with the head tilted back. A portable battery-operated torch in the blue-white spectrum was used and the children faced away from natural sunlight. The DMFT was recorded using a plane dental mirror and a Hu-Friedy dental probe.

Recently, a new index, the SiC index has been proposed to identify the groups with a high caries experience. The mean of one-third of the children with the highest DMFT was recorded as the SiC Index and comprised the 'SiC' group (n = 165). On a similar pattern, another group of children (n = 165) having the least DMFT was selected and comprised the 'Least DMFT' group. The study identified the risk factors for dental caries by comparing the socio-demographic and behavioural factors among the two groups.

Kolmogorov - Smirnov tests of Normality was used to check the normality of quantitative data. As the data was skewed, non - parametric Mann-Whitney U - test was used to analyse the two groups (among gender). The group comparisons of values of skewed data was analysed using Kruskall Wallis test, where there were more than 2 groups (among SES). Pearson Chi-square test or Fisher's exact test was used to compare the results of categorical data. Logistic regression analysis was conducted to find out the predictors of SiC group. All the statistical tests were two-sided and performed at a significance level of $\alpha = .05$ using SPSS Statistics for Windows, Version 22.0 (IBM Corp., Armonk, NY, USA).

3. Results

A total of 495 children in the 12-year age group were investigated, out of which 254 were boys and 241 were girls. According to the socioeconomic strata, 68 children were in the upper SES, 177 in the upper middle, 109 in the lower middle and 141 children were in the lower SES.

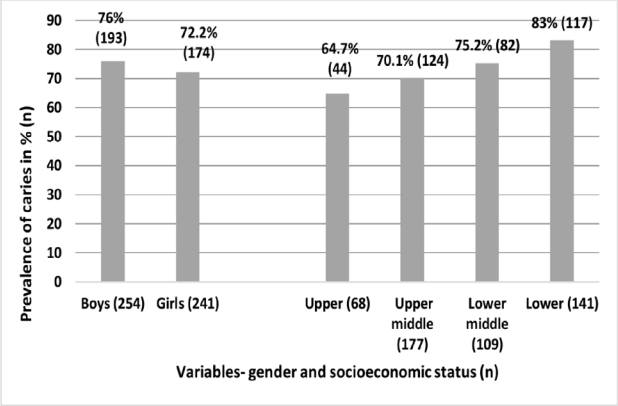


Figure 1. Prevalence of caries according to gender and SES [cumulative mean 74.1% (n=367)].

The prevalence of dental caries was 74.1% (n = 3 67); 76.0% boys (n = 193) and 72.2% girls (n = 174) were affected [p-value 0.336] (Figure 1). Dental caries was prevalent in 64.7% of the upper SES (n = 44), 70.1% of the upper middle SES (n = 124), 75.2% of the lower middle SES (n = 82), 83.0% children of the lower SES (n = 117) and the difference was statistically significant (p - value 0.015).

The mean DMFT of children was 2.93 ± 2.57 (range 0-12) (Table 1). The mean DMFT was higher in boys [2.96 ± 2.58 (0 - 11)] as compared to girls [2.89 ± 2.57 (0 - 12)] but the difference was not statistically significant (p-value 0.808). However, a statistically significant difference was observed among the SES groups (p-value 0.002). The lower SES had the highest mean DMFT [3.50 ± 2.64 (0 - 12)] followed by the lower middle SES [3.15 ± 2.61 (0 - 11)], upper middle [2.54 ± 2.41 (0-11)] and the upper SES [2.38 ± 2.55 (0 - 11)]. Among all the individual DMFT components, only the number of decayed teeth or D was statistically significant with respect to socioeconomic strata (p - value 0.002) and the highest value was observed in the lower SES [3.46 ± 2.63 (0 - 12)].

Table 1. Mean DMFT values of 495 children

Parameter (n)		Mean DMFT ±SD (range)	p-value	Mean number of decayed teeth D	p-value	Mean number of missing teeth M	p-value	Mean number of filled teeth F	p-value
Gender	Boys (254)	2.96±2.58 (0-11)	0.808	2.89±2.56 (0-11)	0.768	0.012±0.14 (0-2)	0.592	0.059±0.33 (0-3)	0.245
	Girls (241)	2.89±2.57 (0-12)		2.81±2.56 (0-12)		0.004±0.06 (0-1)		0.075±0.32 (0-2)	
SES	U (68)	2.38±2.55 (0-11)	0.002*	2.24±2.48(0-11)	0.002*	0.00±0.00	0.943	0.147±0.47 (0-2)	0.149
	UM (177)	2.54±2.41 (0-11)		2.45±2.38 (0-11)		0.011±0.15(0-2)		0.079±0.36 (0-3)	
	LM (109)	3.15±2.61 (0-11)		3.09±2.63 (0-11)		0.009±0.10 (0-1)		0.046±0.25 (0-2)	
	L (141)	3.50±2.64 (0-12)		3.46±2.63 (0-12)		0.007±0.08 (0-1)		0.028±0.24 (0-2)	
Total children (495)		2.93±2.57 (0-12)		2.85±2.56 (0-12)		0.008±0.11 (0-2)		0.067±0.33 (0-3)	

U-Upper; UM-Upper middle; LM: Lower middle; L-Lower

DMFT: Decayed, Missing and Filled Teeth

SES: Socioeconomic Status

SD: Standard Deviation

*p-value < 0.05 is significant

The distribution of the population according to incremental DMFT (Table 2) showed that 25.9% children (n = 128) had a DMFT of 0 or were caries-free, 8.9% (n = 44) had a DMFT of 1.00, 11.9% (n = 59) had a DMFT of 2.00 and 12.1% (n = 60) had a DMFT of 3.00. The cumulative data showed that 58.8% children (n = 291) had values of ≤ 3.00 DMFT.

Table 2. Distribution of the population according to incremental DMFT

DMFT	Frequency	Percent	Cumulative percent
0.00	128	25.9	25.9
1.00	44	8.9	34.7
2.00	59	11.9	46.7
3.00	60	12.1	58.8
4.00	96	19.4	78.2
5.00	33	6.7	84.8
6.00	27	5.5	90.3
7.00	19	3.8	94.1
8.00	16	3.2	97.4
9.00	4	0.8	98.2
10.00	2	0.4	98.6
11.00	6	1.2	99.8
12.00	1	0.2	100.0
Total	495	100.0	100.0

DMFT: Decayed, Missing and Filled Tooth

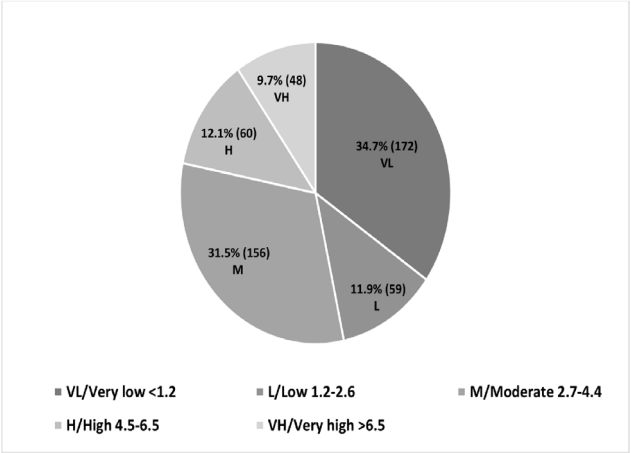


Figure 2. Prevalence according to DMFT severity levels at age 12 years [% (n)].

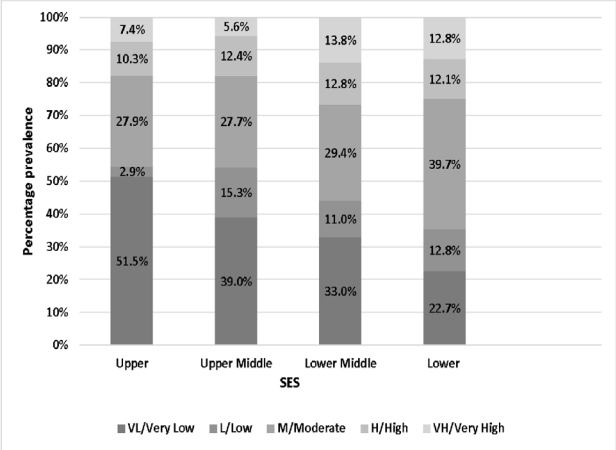


Figure 3. Prevalence of caries according to DMFT severity levels in SES.

The severity levels of dental caries are depicted in Figure 2. Of all the children, 34.7% (n = 172) had very low DMFT (< 1.2), 11.9% (n = 59) had low DMFT (1.2 - 2.6), 31.5% (n = 156) had moderate DMFT (2.7 - 4.4), 12.1% (n = 60) had high DMFT (4.5-6.5) and 9.7% (n = 48) had very high DMFT (> 6.5). A 'moderate-very high' severity of DMFT (≥ 2.7) was most prevalent in the lower SES followed by the lower middle SES as compared to the upper middle and upper strata (p - value 0.003) (Figure 3).

The 'SiC group' comprised of 165 children out of which 86 were boys and 79 were girls. As per the socioeconomic strata, 17 children were in the upper SES, 44 in the upper middle, 47 in the lower middle and 57 children were in the lower SES. The mean SiC value was 5.76 ± 1.89 (4 - 12) (Table 3); 5.78 ± 1.92 (4 - 11) in boys and 5.73 ± 1.88 (4 - 12) in girls. The mean SiC values were 5.71 ± 2.02 (4 - 11) in upper SES, 5.77 ± 1.82 (4 - 11) in upper middle SES, 5.60±1.65 (4-11) in lower middle SES and 5.89 ± 2.13 (4-12) in the lower SES.

A comparative analysis of oral health behaviours among the two groups (Table 4) showed that 16.4% children (n = 27) of the SiC group consumed fruit more than once a day as compared to 29.1% (n = 48) of the least DMFT group (p-value 0.006). Tooth cleaning at least once a day was comparable among the groups (p-value 0.685). However, 35.8% (n = 59) children of the SiC group ate sugary foods, more than once a day, as compared to 49.1% (n = 81) of the least DMFT group (p-value 0.014). A total of 13.9% children (n = 23) of the SiC group reported regular dental visits (≤6 months) as compared to 9.7% (n = 16) of the least DMFT group (p-value 0.233).

Table 3. Mean SiC values of 165 children

Parameter (n)		Mean SiC±SD (range)	Mean number of decayed teeth D	Mean number of missing teeth M	Mean number of filled teeth F
Gender	Boys (86)	5.78±1.92 (4-11)	5.67±1.99 (3-11)	0.00	0.11±0.49 (0-3)
	Girls (79)	5.73±1.88 (4-12)	5.63±1.94 (3-12)	0.01±0.11 (0-1)	0.09±0.36 (0-2)
SES	Upper (17)	5.71±2.02 (4-11)	5.29±2.34 (3-11)	0.00	0.41±0.80 (0-2)
	UM (44)	5.77±1.82 (4-11)	5.61±1.88 (3-11)	0.00	0.16±0.57 (0-3)
	LM (47)	5.60±1.65 (4-11)	5.60±1.65 (4-11)	0.00	0.00
	L (57)	5.89±2.13 (4-12)	5.84±2.15 (4-12)	0.02±0.13 (0-1)	0.04±0.27 (0-2)
Total children (165)		5.76±1.89 (4-12)			

U-Upper; UM-Upper Middle; LM- Lower Middle; L-Lower

*p-value <0.05 is significant

SiC: Significant Caries Index

SES: Socioeconomic status

SD: Standard Deviation

Although not significant, yet 36.4% children (n = 16) of the least DMFT group visited the dentist in conditions of pain/trouble with teeth/gums/mouth as compared to 41.5% (n = 22) of the SiC group. Only 39.6% children (n = 21) of the SiC group visited the dentist for routine check-up/treatment as compared to 47.7% (n = 21) of the least DMFT group [p-value 0.424].

Table 4. A comparison of the oral health behaviour among the 'SiC group' and the 'least DMFT group'

Parameter		SiC group (n=165)	Least DMFT group (n=165)	p-value
Fruit	> 1/day	16.4% (27)	29.1% (48)	0.006*
Tooth cleaning	≥ 1/day	97.6% (161)	98.8% (163)	0.685
Sugary foods	> 1/day	35.8% (59)	49.1% (81)	0.014*
Visits to dentist	≤ 6mths (Regular)	13.9% (23)	9.7% (16)	0.233
Reasons for dental visit (n=53) (n=44)				
Pain or trouble with teeth, gums or mouth		41.5% (22)	36.4% (16)	0.603
Treatment/follow-up treatment		17.0% (9)	15.9% (7)	0.888
Routine check-up of teeth/ treatment		39.6% (21)	47.7% (21)	0.424
I don't know/don't remember		1.9% (1)	0	1.000

*p-value <0.05 is significant

SiC: Significant Caries Index

DMFT: Decayed, Missing, Filled Teeth

Logistic regression analysis (Table 5) showed that the children who cleaned the teeth ≥ once a day had lesser odds of being in the SiC group (OR: 0.644; CI: 0.109-3.822; p-value: 0.628). However, the odds of being in the SiC group were higher in children with ≤ once a day fruit intake (OR:1.485; CI: 0.820-2.691; p-value: 0.192); ≤ once a day intake of sugary foods (OR:1.286; CI: 0.782-2.115; p-value: 0.322); in boys (OR: 1.175; CI: 0.748-1.847; p-value: 0.484); and in the lower SES (OR:2.578; CI: 1.187-5.598; p-value: 0.017).

4. Discussion

Dental caries is a multifactorial, chronic infectious disease resulting from an imbalance between demineralization and remineralization, eventually causing localized destruction of teeth. Dental caries in children is reportedly, common than asthma and seasonal allergies by five and seven times respectively[17].

The National Oral Health Survey in India (2002-2003) observed a prevalence of 52.5% dental caries among 12-year old Indian children[14]. In Chandigarh, the prevalence was reported as 93.4% in the year 2002-3[14] and another study reported a prevalence of 80-87 % in the year 2002 in the same age group[13]. The former had examined children from households of both urban and

Table 5. Parameter estimates using regression analysis ('SiC group' vs 'least DMFT group')

Parameter estimates					
SiC vs Least DMFT groups (n=165 each)		p-value	Odds ratio	95% Confidence Interval for Odds ratio	
				Lower Bound	Upper Bound
SiC group	Intercept	0.560			
	[fruit ≤once/day]	0.192	1.485	0.820	2.691
	[fruit >once/day]	.	.	.	.
	[Tooth cleaning ≥once/day]	0.628	0.644	0.109	3.822
	[Tooth cleaning <once/day]	.	.	.	.
	[sugary foods ≤once/day]	0.322	1.286	0.782	2.115
	[sugary foods >once/day]	.	.	.	.
	[Gender=Boy]	0.484	1.175	0.748	1.847
	[Gender=Girl]	.	.	.	.
	[SES=Upper Middle]	0.789	1.104	0.536	2.275
	[SES=Lower Middle]	0.056	2.108	0.981	4.529
	[SES=Lower]	0.017*	2.578	1.187	5.598
	[SES=Upper]	.	.	.	.

*p-value < 0.05 is significant

SES: Socioeconomic status

DMFT: Decayed, Missing, Filled Teeth

rural areas whereas the latter had included children from government schools. The present study, conducted in both government and private schools in the year 2014-15, observed a prevalence of 74.1% dental caries in the 12-year age group. The prevalence of dental caries was high even though 98.4% cleaned the teeth ≥ once a day using a toothbrush (99.4%) and toothpaste (99.4%). Almost similar values were observed by NOHS in 12-year old children of Chandigarh with 97.3% reportedly cleaning the teeth at least once a day, using a toothbrush (99.4%) and toothpaste (98.7%)[14].

There could be several possible reasons for a high prevalence of dental caries among 12-year olds in Chandigarh. First, in a sizeable 42.2% of the population in the present study, frequent intake of sugary foods (≥twice/day) was observed. Toffees, sweets and other retentive foods are easily available and affordable. Facilities for home delivery, ease of convenience and sedentary lifestyle brought about by television and use of electronic media promote weight gain and encourage frequent intake of junk or fast foods. Second, among all the examined 495 children, only 21% children (n = 109) ate fruit two or more times daily. Less frequent fruit intake (≤once a day) could be another contributing dietary factor. Third, important parameters such as technique and timings of tooth brushing (before or after meals) were not recorded. It is possible that even though 99.4% reportedly brushed the teeth, tooth brushing was not instituted in a proper manner and hence, was not beneficial. Fourth, regular dental visits were observed by only 13.3% children (n = 66). The barriers to dental care could be proximity to hospitals, time constraints, affordability, lack of oral health education in schools, lack of motivation, ignorance and many more. Last, lack of parental knowledge about eruption times of permanent first molars, the ones most affected by dental caries, may also have contributed to a neglected dental health from a young age.

A literature review of the mean DMFT for 12-year olds is presented. The Global weighted mean DMFT was reported as 2.43 in the year 1980 (number of countries not listed),[18] 1.61 in 2004 (188 countries)[18] and 1.86 in 2015, the latter involved an assessment of 209 countries with 73% (n = 153) having a DMFT of 3 or less[18]. In SEARO, the weighted mean DMFT was 1.12 in the year 2004, 1.87 in 2011 and 2.97 in the year 2015.[18] Sri Lanka reported a decline in the mean DMFT from 1.9 in 1983-4 to 0.9 in the year 2002-3 citing community centred oral health preventive programs, school dental clinics and fluoridated toothpastes as some of the contributing factors[19]. The mean DMFT of Indian children was reported as 1.7 [14]. The children of Chandigarh reported a mean DMFT of 3.03 in the year 2002,[13] 4.5 in the year 2002-3[14] and the present study recorded 2.93 in the year 2014-15. The WHO & FDI World Dental Federation (1981) together adopted the Goals for 2000 stating that the mean DMFT for 12-year olds should not exceed 3[20]. The present study observed that the mean DMFT of children of Chandigarh was within the recommended WHO Health goal for 2000. This could be attributed to factors such as a high per capita

income[10], high literacy rate[9] and several dispensaries, clinics and hospitals catering to dental care[21]. However, it was interesting to note that the target of < 3 DMFT was achieved by only 58.8% of the children (Table 2), denoting a skewed distribution of dental caries.

The WHO has classified severity of dental caries as very low (< 1.2), low (1.2-2.6), moderate (2.7-4.4), high (4.5-6.5) and very high (> 6.5). The DMFT severity level of India was classified as 'low to moderate' with values ranging from 1.4-3.8 in 12-year old children in the year 1993[22]. A 'low' severity level was depicted in 2003 (July) in most areas of India[20]. The DMFT values of 12-year old children of Chandigarh ranged from 1-3 in 31.7% and 4-7 in 51.9% children in the year 2002-3[14]. The present study observed a 'very low to low' severity of dental caries in 46.6% children (n = 231) with the remaining population experiencing a 'moderate to very high' (≥ 2.7) severity, thus signifying a polarized distribution (Figure 2). The latter comprised mainly the lower strata (Figure 3). It is, hence, important not only to impart but also reinforce dental education and employ preventive strategies to all children. However, the focus should primarily be on the target population or the lower strata.

The WHO (2000)-Goals for 2015 state that SiC values should be less than 3 for 12-year olds[8]. The mean SiC values for SEARO countries was reported as 3.6 in Sri Lanka, 2.9 in Thimphu, Bhutan and 2.5 in Nepal.[18] The mean SiC value of 12-year-old Indian children was reported as 4.5 in the year 2002-3[14] and 7.0 in Chandigarh[14]. The present study observed a mean SiC value of 5.76 showing that the WHO Health goal for 2015 was yet to be attained. Considerable variations in SiC values could be due to differences in fluoridation of water supplies, use of fluoridated dentifrices, dietary patterns, socioeconomic status and oral health care policies and programs.

The present study analysed the factors governing oral health behaviour among the two groups - 'SiC index group' and the 'least DMFT group' (Table 4). Tooth cleaning, at least once a day, was comparable between the two groups. Frequent fruit intake (>once/day) was reported by 29.1% children of the least DMFT group as compared to 16.4% of the SiC group. The benefit of fruit consumption in dental caries is attributed to an increase in fibre content prompting greater salivary flow[23].

Interestingly, the present study observed that frequent intake of sugary foods (>once/day) was reported by 49.1% children of the least DMFT group as compared to 35.8% of the SiC group (p-value 0.014). The reasons for this finding could be several. First, the least DMFT group also frequently consumed fruit > once a day. The beneficial effects of fruit could have neutralized the harmful effects of sugars on the dentition. Moreover, important cariogenic dietary factors such as timings of intake (with or without meals), form and retentiveness of foods were not recorded. It is possible that the intake of sugary foods was with meals and in a form not cariogenic or retentive. Second, 13.9% children of the SiC group regularly visited the dentist as compared to 9.7% of the least DMFT group. A notable finding here was that despite more untreated decay and increased treatment needs in the SiC group, only a few had regular dental visits. The reasons could be fear of previous treatment (objective fear), fear generated by others (subjective fear), inadequate finances, lengthy dental treatment, lack of knowledge, motivation and awareness. Third, dental visits for the SiC group were mostly in conditions of pain/trouble with the teeth/gums and may have acted as a deterrent to sugary food consumption. The children may also, have been advised at each dental visit to reduce the frequency of sugary foods.

In the present study, among all the individual DMFT components, the number of decayed teeth or D were more as compared to the number of missing M and filled F teeth (Table 1). The D component serves as a marker of untreated disease. This component increased significantly from 2.38 in the upper SES to 3.50 in the lower SES (Table 1) signifying increased treatment needs in the latter. The reasons could be dietary factors, inadequate oral health knowledge, attitude and practices, irregular dental visits, socioeconomic causes and many more. The IADR, WHO, FDI (2003) in the Goals for 2020 state that one should aim to reduce the D component of DMFT at regional levels for the 12-year olds[24]. In the present study, the D component needs to be reduced and worked upon, particularly targeting the lower strata.

Although not significant, yet a higher prevalence of dental caries among boys was observed in the present study as compared to girls. On the contrary, Al-Darwish *et al.*, observed a significantly higher prevalence of dental caries in girls as compared to boys[25]. However, several studies failed to observe any statistically significant gender difference although a predilection for girls was evident[26-28]. The reasons cited were fluctuating hormone levels, early eruption and frequent snacking. In the present study, a high caries prevalence in boys could be because boys are less self-conscious and possibly, less oral hygiene compliant. Also, boys are often pampered and frequently

indulged with a high caloric and a sweetened diet in north India.

The study, however, has certain limitations. This needs to be conducted on a larger scale. Second, the questionnaire was reported by children themselves and may have been exaggerated. Third, details on intake of sugary foods and oral hygiene measures is needed.

The study observed that the WHO Health Goals for 2000 were achieved for the population, but the Goals for 2015 were yet to be met. The study also highlights the need to strive to attain the WHO Health Goals for 2020. Additionally, the study confirmed an unequal distribution of dental caries among the 12-year-old children of Chandigarh. Creating awareness and generating knowledge about oral health among all children, particularly targeting the more susceptible lower strata, while aiming to reduce the 'D' component of DMFT is essential.

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