A Study to Establish the DMFT Index amongst Adults Reporting to the Hospital

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ABSTRACT
Background: Despite of various technological advances and the truth that it is a preventable condition, it continues to be a major health issue. According to World Health organisation, it is amongst the three most common non communicable chronic conditions that require treatment and prevention. The aim of the present study is to determine the DMFT index amongst adults reporting to the department for routine dental check up.

Materials and Methods: The present study was conducted during a period of 6 months. The examiner was well versed with protocol of the study and was also provided with a recorder. Dental examination was carried out with mouth mirror, probe, tweezer under complete dry conditions wearing protective barrier All the data thus obtained was arranged in a tabulated form and analysed using SPSS software. Percentage was obtained of the results. Data was also expressed as mean +/- Standard deviation.

Results: In the present study a total of 350 subjects were involved. Out of these there were 120 subjects between 20-30 years of age. There were 68.3% (n=82) subjects between 20-30 years of age having dental caries. There were 178 decayed, 20 missing and 110 filled teeth amongst subjects aged between 20-30 years. The mean DMFT index was 2.2 +/- 0.76.

Conclusion: The mean DMFT was comparable amongst all the age groups. The incidence of caries was maximum amongst 31-40 years of age.

Keywords: Caries, DMFT, Incidence.

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INTRODUCTION
One of the major oral health problems amongst industrialised nations affecting 60-90% of the school children and majority of adults is dental caries. It is widely prevalent in Asian and Latin-American countries while not so prevalent amongst African countries.\(^1\) It is a common chronic condition of childhood interfering with diet, speech, daily activities and nutrition. As it leads to pain that severely affects the normal food uptake. It ultimately leads to under nourished children with retarded cognitive development.\(^2\) Despite of various technological advances and the truth that it is a preventable condition, it continues to be a major health issue. According to World Health organisation, it is amongst the three most common non communicable chronic conditions that require treatment and prevention.\(^3\) Oral health is a crucial part of person's overall health that contributes to a person's well-being. It positively affects the quality of life affecting both physical and mental health and habits.\(^4\) In a developing nation like India, there has been an sudden upsurge in the incidence of this disease over a short period of time. In the year 1920, the dental caries prevalence was 30 years of age having dental caries. There were 178 decayed, 20 missing and 110 filled teeth amongst subjects aged between 20-30 years. The mean DMFT index was 2.2 +/- 0.76.

The mean DMFT was comparable amongst all the age groups. The incidence of caries was maximum amongst 31-40 years of age.

55.5% amongst 5 year and 12 year children and it rose to 68% in the year 1960 and then to 89% in the recent years.\(^5\)\(^7\) The aim of the present study is to determine the DMFT index amongst adults reporting to the department for routine dental check up.

MATERIALS AND METHODS
The present study was conducted during a period of 6 months. The study included subjects more than 20 years of age reporting to the department for routine dental check up. All the subjects were informed about the study and a written consent was obtained from all in their vernacular language. Subjects with special needs were excluded from the study. Adults belonging to ASA grade III or IV were also excluded from the study. Pregnant of lactating females were also not included in the study. The examiner was well versed with protocol of the study and was also provided with a recorder. Dental examination was carried out with mouth mirror, probe, tweezer under complete dry conditions wearing protective barrier. The number of decayed, missing and filled teeth were noted and recorded. Patient's demographics were also recorded.
A tooth was regarded as decayed if there was visible evidence of
dental caries. Every subject was informed about good oral
hygiene practices and importance of oral health. All the data thus
obtained was arranged in a tabulated form and analysed using
SPSS software. Percentage was obtained of the results. Data was
also expressed as mean +/- Standard deviation.

RESULTS
In the present study a total of 350 subjects were involved. Out of
these there were 120 subjects between 20-30 years of age. There
were 100 subjects between 31-40 years of age. There were 80
subjects and 50 subjects between 41-50 years and 51-60 years of
age respectively.
Table 1, Graph 1 shows the prevalence of dental caries according
to age group. There were 68.3% (n=82) subjects between 20-30
years of age having dental caries. There were 79% (n=79) subjects between 31-40 years of age having dental caries. There
were 77.5% (n=62) subjects between 41-50 years of age having
dental caries. There were 54% (n=27) subjects between 51-60
years of age having dental caries.
Table 2 illustrates the DMFT index amongst different age groups.
There were 178 decayed, 20 missing and 110 filled teeth amongst
subjects aged between 20-30 years. The mean DMFT index was
2.2 +/- 0.76. There were 139 decayed, 29 missing and 92 filled
-teeth amongst subjects aged between 31-40 years of age. The
mean DMFT was 1.8 +/-0.54. There were 152 decayed, 49
missing and 99 filled teeth amongst subjects aged between 41-50
years. The mean DMFT index was 2.1 +/- 0.51. There were 34
decayed, 64 missing and 37 filled teeth amongst subjects aged
between 51-60 years. The mean DMFT index was 1.2 +/- 0.32.

Table 1: Prevalence of dental caries according to age group

<table>
<thead>
<tr>
<th>Age group</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>20-30 years</td>
<td>82</td>
<td>68.3</td>
</tr>
<tr>
<td>31-40 years</td>
<td>79</td>
<td>79</td>
</tr>
<tr>
<td>41-50 years</td>
<td>62</td>
<td>77.5</td>
</tr>
<tr>
<td>51-60 years</td>
<td>27</td>
<td>54</td>
</tr>
</tbody>
</table>

Table 2: DMFT index according to age group

<table>
<thead>
<tr>
<th>Age group</th>
<th>Decayed</th>
<th>Missing</th>
<th>Filled</th>
<th>Total (DMFT)</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>20-30 years</td>
<td>178</td>
<td>57.8</td>
<td>20</td>
<td>6.4</td>
<td>110</td>
</tr>
<tr>
<td>31-40 years</td>
<td>139</td>
<td>69.5</td>
<td>29</td>
<td>14.5</td>
<td>92</td>
</tr>
<tr>
<td>41-50 years</td>
<td>152</td>
<td>50.7</td>
<td>49</td>
<td>16.3</td>
<td>99</td>
</tr>
<tr>
<td>51-60 years</td>
<td>34</td>
<td>24.5</td>
<td>68</td>
<td>48.9</td>
<td>37</td>
</tr>
</tbody>
</table>

DISCUSSION
Good overall health is a chief goal for people and the society in
which they reside. Sir William Osler has shown that the oral health
is significant and is the mirror of overall general health.
Dental caries occurs because of complex interaction with due
course of time between acid forming bacteria and fermentable
-carbohydrates, and various other host factors like teeth and
saliva.7 During adolescence, the relationship between biological,
behavioural, socioeconomic, and psychological conditions have a
pronounced effect on caries development.\(^9\) In the year 2007, the World health organisation has reported that 60%-90% of the school going children around the world had caries.\(^{10}\) The SIC index has been developed to raise attention to the subjects who have the high caries scores amongst every population.\(^{11}\) It is a useful indicator that throws light on the situation amongst the most caries prone individuals and this can be included in the population-based oral health related surveys in the future together with the mean DMFT score.\(^{12}\) According to the present study, there were 178 decayed, 20 missing and 110 filled teeth amongst subjects aged between 20-30 years. The mean DMFT index was 2.2+/-0.76. There were 139 decayed, 29 missing and 92 filled teeth amongst subjects aged between 31-40 years of age. The mean DMFT was 1.8+/-0.54. There were 152 decayed, 49 missing and 96 filled teeth amongst subjects aged between 41-50 years. The mean DMFT index was 2.1+/-0.51. There were 34 decayed, 64 missing and 37 filled teeth amongst subjects aged between 51-60 years. The mean DMFT index was 1.2+/-0.32. As per the conceptual model given by Petersen\(^{13}\) to elucidate the severity of Dental caries the determinant factors are classified as either distal or proximal. The distal level is associated with socioeconomic-environmental factors and availability of oral health services; on the contrary the proximal level is associated with modifiable behaviour, like oral hygiene practices, life style changes and the acquirement of oral health services. According to the present study, there were 68.3% (n=62) subjects between 20-30 years of age having dental caries. There were 79% (n=79) subjects between 31-40 years of age having dental caries. There were 77.5% (n=62) subjects between 41-50 years of age having dental caries. There were 54% (n=27) subjects between 51-60 years of age having dental caries. Petry et al.\(^{14}\) in their study found a significant relation between the regular use of dental care services and caries status. The regular use of dental care services has been an important factor in lesser incidence of caries because this variable is associated with social and behavioural factors and is an important determinant in the difference regarding caries severity amongst different populations.\(^{15,16}\)

**CONCLUSION**

From the above study it is clear that the knowledge about dental caries is not much amongst the subjects. The mean DMFT was comparable amongst all the age groups. The incidence of caries was maximum amongst 31-40 years of age.

**REFERENCES**


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**Conflict of Interest:** None Declared.

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