

# “Association of Parental Education with Frequency of Dental Caries in Mal-Occluded Teeth among 3-11 Years old Children”

ADEEL HAIDAR<sup>1</sup>, HIRA SHAFIQUE<sup>2</sup>, GUL MUHAMMAD SHAIKH<sup>3</sup>, MEHWISH MUNAWAR<sup>4</sup>, ATTIQUE UR REHMAN<sup>5</sup>, MUHAMMAD WAHEED AZFAR<sup>6</sup>, AMINA TARIQ<sup>7</sup>

<sup>1</sup>Assistant Professor, Department of Oral Pathology and Oral Diagnostics, University College of Medicine and Dentistry, The University of Lahore

<sup>2</sup>Assistant Professor, Community and Preventive Dentistry, Islam Dental College, Sialkot

<sup>3</sup>Assistant Professor CMH LMC and IOD Lahore

<sup>4</sup>Assistant professor, Department of Operative Dentistry, Azra Naheed dental college, Lahore

<sup>5</sup>Assistant professor, Department of Operative Dentistry, Azra Naheed dental college, Lahore

<sup>6</sup>Senior Demonstrator, Department of Medical Education, University College of Medicine and Dentistry, The University of Lahore

<sup>7</sup>Research coordinator, Research cell, University College of Medicine and Dentistry, The University of Lahore

Correspondence to: Amina Tariq, Email: [aminatariq8@gmail.com](mailto:aminatariq8@gmail.com)

## ABSTRACT

**Objective:** The study aimed to explore the association of parental education with frequency of dental caries in mal-occluded teeth among 3- 11 years old children

**Method:** This analytical cross-sectional study was conducted at Dental hospital of Institute of dentistry of a tertiary care hospital of Lahore. Data was collected from 250 patients having dental caries with mal-occluded teeth using purposive sampling technique. For data analysis SPSS version 25.0 was used. For gender and educational categories, frequency and percentages were calculated whereas to explore the impact of parental education on the occurrence of dental caries among children of 3-11 years with dental malocclusion, chi-square was used.

**Result:** Results of chi-square revealed that parental education has a significant impact on dental caries occurrence among children having maloccluded teeth ( $P=0.037$ ). 30(71.43%) children with maloccluded teeth has dental caries parents of whom were having post-graduation degree. 68(66.67%) children with maloccluded teeth has dental caries parents of whom were having graduation degree. 28(70%) children with maloccluded teeth has dental caries parents of whom were diploma holders. 6(50%) of children with maloccluded teeth has dental caries parents of whom were having high school education. Only 37(75%) children with maloccluded teeth has dental caries whose parents had education till middle school. 1(11.11%) children with maloccluded teeth has dental caries whose parents had education till primary school whereas 10(100%) children with maloccluded teeth has dental caries whose parents were illiterate.

**Conclusion:** Oral health of children needs additional attention by introducing more programs dealing with oral health preventive measures which will be helpful in reducing the prevalence of dental caries.

**Keywords:** Dental caries, Malocclusion, School children, Parental education

## INTRODUCTION

Among all oral health issues, occurrence of dental caries is the most common and major problem due to which around 60% or above school going children get affected.<sup>1</sup> severity of tooth decay due to caries resulted in costly as well as time taking treatment.<sup>2,3</sup> Literature has supporting evidence that with adopting preventive measures and healthy life style with enhanced social environment, reduction in occurrence of dental caries in a significant manner.<sup>4,5,6,7,8,9,10</sup>

As a causative factors, socio-economic status has a major role in occurrence of dental caries as it is directly linked with the eating habits as well as the lifestyle patterns.<sup>11,12</sup> It was also found that males are more towards sweets food eating as well as consuming soft drinks as compared to females, so gender also has different frequency of dental caries.<sup>13</sup> Attitude of parents can play a vital role in maintaining preventive oral health habits among children to control the occurrence of dental caries.<sup>7</sup> Eating habits as well as food choice could be monitored by parents play important part in maintaining oral hygiene among children.<sup>8,9</sup> In seeking preventive dental care, utmost thing is the belief of parents about the significance of oral health in maintaining general health.<sup>10</sup> There are several other barriers including financial issues, awareness about benefits of oral health maintenance and dental treatment cost. It was also reported that without pain, need of dental treatment is not felt in majority of people. Dental visits are also considered as unimportant due to dental fear or anxiety resulted in previous bad experience.<sup>14</sup> Maintaining oral health of school going children depends upon the knowledge and awareness of parents. It is assumed that education may play an important role, which has been scarcely be assessed in Lahore. So, the study aimed to explore the association of parental education with frequency of dental caries in mal-occluded teeth among 3- 11 years old children

## METHODOLOGY

This analytical cross-sectional study was conducted at Dental hospital of Institute of dentistry, of a tertiary care hospital of Lahore. Data was collected from 250 patients having dental caries with mal-occluded teeth using purposive sampling technique. Children of both gender aged 3-11 years with mal-occluded teeth visited the dental hospital of Institute of dentistry, CMH Lahore Medical College for dental treatment were included in the study. The excluded patients were with any physical or mental disability. Instruments required for dental examination were dental chair, explorer and mouth mirror. Dental caries in mal-occluded teeth of children was examined and recorded. For data analysis SPSS version 25.0 was used. For gender and educational categories, frequency and percentages were calculated whereas to explore the impact of parental education on the occurrence of dental caries among children of 3-11 years with dental malocclusion, chi-square was used.

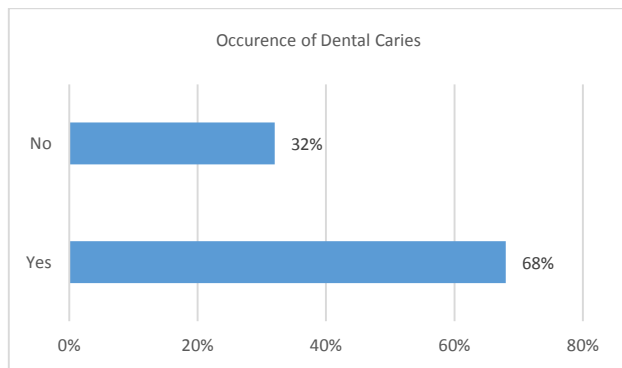
## RESULTS

Among total patients included in the study, 120(48%) were males and 130(52%) were females.

Table I: Demographic table

Gender	Frequency (%)
Males	120(48%)
Females	130(52%)
Education of head of family	
Illiterate	42(16%)
Primary	93(37.2%)
Middle	40(16%)
High school	12(4.8%)
Diploma	44(17.6%)
Graduate	9(4%)
Post-graduate	10(4%)

Prevalence of dental caries among children of 3-11years with mal-occluded teeth was 170(68%) whereas patients with no dental caries were 80(32%).



Graph 1: Occurrence of Dental Caries

Results of chi-square revealed that parental education has a significant impact on dental caries occurrence among children having maloccluded teeth ( $P=0.037$ ). 30(71.43%) children with maloccluded teeth has dental caries parents of whom were illiterate. 68(66.67%) children with maloccluded teeth has dental caries parents of whom were having education till primary level. 28(70%) children with maloccluded teeth has dental caries parents of whom studied till middle level. 6(50%) of children with maloccluded teeth has dental caries parents of whom were having high school education. Only 37(75%) children with maloccluded teeth has dental caries whose parents had any diploma. 1(11.11%) children with maloccluded teeth has dental caries whose parents had education till graduation whereas 10(100%) children with maloccluded teeth has dental caries whose parents were postgraduated.

Table 2: Association of parental education and occurrence of dental caries in mal-occluded teeth

Education	Dental caries Yes (n=170)	Dental Caries No (n=80)	Sig
Illiterate	30(71.43%)	12(28.57%)	0.037
Primary	62(66.67%)	31(33.33%)	
Middle	28(70%)	12(30%)	
High school	6(50%)	6(50%)	
Diploma	33(75%)	11(25%)	
Graduate	1(11.11%)	8(88.89%)	
Post-graduate	10(100%)	0(0.0%)	

**DISCUSSION**

In developing as well as under developed countries, frequency of dental caries is the most widespread disease which causes tooth loss and discomfort exhibiting negative impact on quality of life in terms of growth and development. The active participation of children in daily routine depends upon the maintenance of oral health.<sup>15</sup> There are numerous factors associated with the occurrence of dental caries but education is the major significant factors in maintaining the oral health and hygiene of children as educational process ought to gain importance for achieving the desired outcomes of oral health.<sup>16</sup> As finding of the current study revealed that education is a major barrier in maintaining oral health and hygiene due to which occurrence of dental caries are more prevalent around the globe.

The findings of current study reported 68% prevalence of dental caries among children of 3 to 9years of age with maloccluded teeth which is quite high and in line with the findings of other research studies conducted in different gulf countries.<sup>17,18,19,20</sup> Higher frequency of dental caries among different developed countries showed that even with the launched

awareness programs among parents, dental caries incidence could not be controlled.<sup>21</sup>

The finding of current study revealed that higher education is associated with low incidence of dental caries which is not supported by the existing literature.<sup>22,23,24</sup> Lack of awareness about the oral hygiene maintenance was found among less educated parents as compared to parents with higher education.<sup>25,26</sup>

Oral health of children needs additional attention by introducing more programs dealing with oral health preventive measures which will be helpful in reducing the prevalence of dental caries.<sup>21</sup> In maintaining oral health and hygiene, education of parents is a very important factors as it deals with the frequency of dental check-ups and understanding standing the need of professional dental care. Therefore, managing dental problems may have a progressive influence on the quality of life of children as well as on their educational progress.<sup>27</sup>

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