



CODEN [USA]: IAJPBB

ISSN: 2349-7750

**INDO AMERICAN JOURNAL OF  
PHARMACEUTICAL SCIENCES**<http://doi.org/10.5281/zenodo.1254403>Available online at: <http://www.iajps.com>

Research Article

**ANALYSIS OF ORAL HYGIENE EDUCATION IN OBESE  
CHILDREN IN LOCAL POPULATION OF PAKISTAN**Dr. Fatima Karamat<sup>1</sup>, Dr. Tayyaba Tahir<sup>2</sup>, Dr. Maryam Hanif<sup>2</sup>, Zareen Gul<sup>3</sup><sup>1</sup>Dental Surgeon<sup>2</sup>Dental Surgeon at Tehsil Head Quarter Hospital, Muridke, Pakistan<sup>3</sup>Rawalpindi Medical University, Pakistan**Abstract:**

**Introduction:** Overweight and obesity have become public health problems in both developed and developing countries. The rapid increase in bodyweight in both settings indicates that the trend is largely due to social, environmental and behavioural changes, rather than hereditary changes. **Objectives of the study:** Our study aim to analyze the Oral hygiene education in obese children in local population of Pakistan. **Methodology of the study:** This study was conducted at THQ hospital Muridkey and Rawalpindi Medical College during November to December, 2017. A total of 100 (male 60 and female 40) obese children were selected for this study. **Results:** Knowledge of the participants regarding the oral health is described. Females scored more favorably in knowledge and behaviors concerning dental health particularly a significant difference ( $P < 0.05$ ) in brushing habit was observed between the two genders. The Interdentally cleaning habit was observed only in 03% cases. **Conclusion:** It is concluded that obese children have ore bad habits of eating and due to this reason they suffer more from oral health problems as compared to those who eat properly and clean their teeth's in a proper manner.

**Key words:** Dental, Oral, Obesity, Diet**Corresponding author:****Dr. Fatima Karamat,**  
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Please cite this article in press Fatima Karamat et al., *Analysis of Oral Hygiene Education in Obese Children in Local Population of Pakistan*, Indo Am. J. P. Sci, 2018; 05(05).

**INTRODUCTION:**

Overweight and obesity have become public health problems in both developed and developing countries. The rapid increase in bodyweight in both settings indicates that the trend is largely due to social, environmental and behavioural changes, rather than hereditary changes [1]. Globalization, increasing urbanization, changes in traditional family structures and lifestyles, and a more mechanized workplace directly or indirectly affect dietary and physical activity patterns. Excess body weight, along with hypertension, cigarette smoking and hypercholesterolaemia, is an important risk factor for cardiovascular disease (CVD), and is also associated with a higher prevalence of hyperlipidaemia, diabetes mellitus, hypertension and several cancers [2].

Obesity is a major WHO concern now and WHO has updated recommendations for action to governments, international agencies and concerned partners in the public and private sectors. Dental caries has a wide spectrum of risk factors ranging from child's gender, increasing age, lack of fluoride exposure, oral health behaviours, unhealthy dietary lifestyle such as use of sugar-sweetened beverages [3], low socio-economic status (SES), and maternal oral health. Dental caries is an important public health issue since its lack of treatment leads to pain, repeated prescription of antibiotics, tooth loss, malnutrition, poor childhood development, low self-esteem, and missed school days. Hence, it compromises a child's overall quality of life. Also, it has been acknowledged that decay in primary teeth is a strong risk factor of dental caries in the permanent teeth [4].

Dental health care is the maintenance of teeth in order to keep the teeth clean and prevent dental disorders. Basic dental or oral care involves regular brushing and flossing the teeth, eating a mouth-healthy diet and regular dental checkups as per schedule<sup>5</sup>. Hence the dental health care is essential for general health, quality of life and prevention of oral diseases. The causes of dental diseases are primarily rooted in poor socioeconomic and physical environment; unhealthy lifestyles and oral health related behaviour [1]. Some scientists demonstrated that dental health is seen from a health perspective as a balance between destructive factors such as sugar-rich diet, tobacco use and poor oral hygiene versus protective factors including good oral hygiene [2].

**Background of the study**

A good oral health is the state of mouth free of any disease affecting the oral cavity and its surrounding structures. Oral health has remained as an integral

part of an individual's general health and overall well-being. Maintaining good oral hygiene is one of the most important things for healthy teeth and gums. Good oral health not only enables a person to look and feel good, it is equally important in maintaining oral functions.

**Objectives of the study**

Our study aim to analyze the Oral hygiene education in obese children in local population of Pakistan.

**METHODOLOGY OF THE STUDY:**

This study was conducted at THQ hospital Muridkey and Rawalpindi Medical College during November to December, 2017. A total of 100 (male 60 and female 40) obese children were selected for this study. All children falling between age limit 10 to 18 years and permanent residents of the area were included. This study was conducted by the ethical approval committee of hospital. Parents of the participants were explained the objectives of the study and assured of the confidentiality. A written consent was taken from all of them. The designed questionnaire contained questions that were closed-ended and some were multiple-choice items with alternative statements. The questions asked were about demographic characteristics like age, sex, class, family income and habits like cigarette smoking and chewing tobacco. Obesity history were also asked to the children's.

**Statistical Analysis**

The data was entered through a trained computer operator and imported into statistical package for social sciences (SPSS) version 17 for statistical analysis. Frequency distribution tables were produced with percentages.

**RESULTS:**

Knowledge of the participants regarding the oral health is described in table-1. Females scored more favorably in knowledge and behaviors concerning dental health particularly a significant difference ( $P < 0.05$ ) in brushing habit was observed between the two genders. The Interdentally cleaning habit was observed only in 03% cases. Girls were observed to consume more sweets, snacks and soft drink as compared to boys. Daily eating habits of children's were also included in the table (table 1).

Significantly more girls reported brushing their teeth. The habit of daily brushing was more prevalent in the young age group when compared to students of age 15–18 years but the difference was not significant statistically (table 2).

**Table 1: Oral health knowledge of the respondents**

Knowledge	Frequency (%)
<b>Daily brushing frequency in obese children</b>	
Yes	45.76
No	19.56
Do not know	33.56
<b>High content of sugar in the diet</b>	
Yes	60.76
No	7.0
Don't Know	32.25
<b>Daily eating habits effect on oral health</b>	
Yes	33.45
No	16.78
Do not know	2.21
<b>Oral problems</b>	
Consult a physician	21.5
Consult a dentist	34.5
Consult a Hakim	5.5
Not care	34.56
<b>Obesity issues</b>	
Yes	78.98
No	21.02

**Table 2: Relationship between demographic variables and oral health knowledge**

Socio demographic variables	Frequency (%)	Brushing daily ( <i>n</i> = 191) (%)	<i>P</i> value*
<b>Gender</b>			
Boy	176(61.3)	101(57.4)	0.001
Girl	111(38.7)	90(81.1)	
<b>Age</b>			
10-14	105(36.6)	71(67.6)	0.771
15-18	182(63.4)	120(65.9)	
<b>Obesity</b>			
Less than normal value	183(63.8)	116(63.4)	0.132
Greater than normal value	104(36.2)	75(72.1)	
<b>Using tooth brush</b>			
Yes	251(87.5)	187(74.5)	<0.001
No	36(12.5)	4(11.1)	

**DISCUSSION:**

This study aims to provide the oral health knowledge in obese children's because obesity is the common issue in Pakistan. The main factors which contribute towards obesity is our local environment and eating habits [6].

In literature, knowledge and awareness about oral health is reported to be very low and marked differences in oral hygiene habits, depending on age and educational levels were observed. Studies conducted in Spain and Kuwait showed an association between increased knowledge and better oral health [7]. Good oral health practice can be

accomplished mainly through self-induced habits like maintenance of dental hygiene, restriction of diet especially reduced sugar intake, use of fluoridated products and also with the help of available dental services, which includes, regular dental checkup, utilization of primary and preventive care and dental health education [8]. It is important to prevent dental problems before they start. The easiest way is to practice daily brushing and flossing that in turn will reduce the dental diseases [9]. In our study the prevalence of daily brushing is reported as 66.5%. A figure which is similar to that reported in a Saudi study conducted in 2003 and found that 65% of students were doing brushing at least once. The same

study reported that private school students had a better dental hygiene practice and that age was inversely related to oral health practices [10]. While in our study, we found that both age and type of schooling were not significantly related to the habit of tooth brushing. Our results are consistent with a Chinese study that assessed oral health behavior in schoolchildren and reported that, around 22% of the 12-year-old group brushed at least twice a day, 62% reported brushing frequency to be once a day and it was observed that 16% never brushed or brushed less frequently [11].

Overweight and obesity, defined as excess body fat compared to lean body mass and growing public-health problem in the world. Decreasing physical activity, increasing sedentary lifestyles and dietary changes are factors strongly associated with the development of overweight and obesity [12]? Studies have observed increases in being overweight in childhood and adolescence since the beginning of 2000, resulting in the increased risk of cardiovascular diseases, respiratory disorders and other chronic diseases during adulthood [13].

Diet plays an important role in the increased prevalence of obesity due to the higher consumption of foods rich in fat and carbohydrates. Overweight or obese children and adolescents reported higher consumption of sugary drinks and foods such as “fast food” compared with those who reported normal weight. Besides being directly associated with obesity, eating habits, especially regarding the intake of sucrose, have a well-established causal relationship with tooth decay, along with socio-demographic aspects, such as low socioeconomic status [14]. However, the presence of a common factor such as a high-sugar diet, caused by the ingestion of food such as soft drinks, cake, and ice cream, seems to increase the probability of both diseases and seems to be the most acceptable theory to explain the relationship between obesity and dental caries [15].

### CONCLUSION:

It is concluded that obese children have ore bad habits of eating and due to this reason they suffer more from oral health problems as compared to those who eat properly and clean their teeth’s in a proper manner.

### Conflict of interest

There is no conflict of interest.

### REFERENCES:

1. Garkoti PD, Rawat CMS, Singh RK, Rawat V, Bartwal J. Pattern of dental diseases among patients attending OPD of dental: a hospital based Cross- sectional study. NJMR 2015; 5: 212-16.
2. Shah SMA, Luby SP, Rahbar M, Khan AW & McCormick J (2001b) Prevalence and determinants of hypertension among adults aged 18 years and over in high mountain rural villages of North Pakistan. Journal of Human Hypertension 15, 107–112.
3. Keys A (1980) Seven Countries: A Multivariate Analysis of Death and Coronary Heart Disease. Harvard University Press, Cambridge, MA.
4. Ohlson LO, Larsson B, Svardsudd K et al. (1985) The influence of body fat distribution on the incidence of diabetes mellitus: 13.5 years of follow-up of the participants in the study of men born in 1913. Diabetes 34, 329–334.
5. Shah SMA, Arif A, Delclos G, Khan AR & Khan A (2001a) Prevalence and correlates of smoking on the roof of the world. Journal of Tobacco Control 10, e1
6. Jayant K & Deo MG (1986) Oral cancer and cultural practices in relation to betel quid and tobacco chewing and smoking. Cancer Detection and Prevention 9, 207–213
7. Schlecht NF, Franco EL, Pinto J et al. (1999) Interaction between tobacco and alcohol consumption and the risk of cancers of the upper aero-digestive tract in Brazil. American Journal of Epidemiology 150, 1129–1137.
8. M. Okada, M. Kawamura, Y. Kaihara, Y. Matsuzaki, S. Kuwahara, H. Ishidori, *et al.* Influence of parents’ oral health behaviour on oral health status of their school children: an exploratory study employing a causal modelling technique Int J Paediatric Dent, 12 (2002), pp. 101-108
9. Singh M, Saini A, Saimbi CS, Bajpai AK. Prevalence of dental diseases in 5- to 14-year-old school children in rural areas of the Barabanki district, Uttar Pradesh, India. Indian J Dent Res 2011; 22: 396-99.
10. World Health Organization. Oral Health Promotion through Schools. WHO Information Series on School Health. Document 11. Geneva: World Health Organization 2003.
11. Rohr IM, Bagramian RA. Oral Health-Related Quality of Life. Chicago: Quintessence, 2002.
12. Al-Subait AA, Alousaimi M, Geeverghese A. Oral health knowledge, attitude and behavior among students of age 10–18 years old attending Jenadriyah festival Riyadh; a cross-sectional study. Saudi J dent Res 2016; 7: 45-50.

13. Umer MF, Farooq U, Shabbir A, Zofeen S, Mujtaba H, Tahir M. Prevalence and associated factors of dental carries, Gingivitis and Calculus deposits in school children of Sargodha District, Pakistan. *J Arm Med Coll* 2016; 28: 152-56.
14. Doichinova, L.; Bakardjiev, P.; Peneva, M. Assessment of food habits in children aged 6–12 years and the risk of caries. *Biotechnol. Biotechnol. Equip.* 2015, 29, 200–204.
15. Salanitri, S.; Seow, W.K. Developmental enamel defects in the primary dentition: Aetiology and clinical management. *Aust. Dent. J.* 2013, 58, 133–140.