# Dental Health Knowledge and Behavior in Al –Najaf city.


## Sana Abdul- Razak Ibraheem (M.sc.) Collage of Dentistry/ Kufa University

**اسم الباحث : د.سناء عبد الرزاق إبراهيم**

**كلية طب الأسنان/ جامعة الكوفة**



**الخلاصة:**

**تم إجراء مسح صحي عشوائي على** 669**شخص** (300 شخص من البالغين و 369 **من الأطفال**) **في محافظة النجف الاشرف** . **ومن النتائج** تبين بأن (67 % من البالغين و الأطفال) يمتلكون معلومات مقبولة حول صحة الأسنان، وكذالك تبين بأن (91 % للبالغين لكلا الجنسين و 87 % **للأطفال لكلا الجنسين**) يقومون بتنظيف أسنانهم ولو مرة واحدة أسبوعيا. أما عن مراجعة طبيب الأسنان فظهر أن نسبة 33.33%للإناث والذكور يراجعون طبيب الأسنان بسبب الألم وبنفس النسبة يراجعون لإجراء القلع والحشوات وأمراض اللثة وبذالك تصبح نسبة الذين يزورون طبيب الأسنان هي 67.5% **للإناث و**68.89 % **للذكور، مقارنة بنسبة** 32 % **للإناث و** 31 % للذكور من البالغين لا يراجعون طبيب الأسنان لعدم وجود الألم والكلفة العالية لعلاج الأسنان وكذلك بسبب الخوف.

**النتائج** تبين أن المصدر الرئيسي للمعلومات حول صحة الأسنان هو التلفزيون من خلال البرامج العلمية وكذلك من خلال القراءة والمطالعة حيث كانت النسبة ( 65.5 % للذكور البالغين و 49 % **للإناث**)، **أما الأطفال فالمدرسة تعتبر المصدر الأول للمعلومات**.

**التوصيات** المهمة لهذه الدراسة إضافة الدروس الصحية التعليمية الخاصة بطب الأسنان للمدارس وتوعية الطلبة وكذالك تهيئة البرامج الصحية الخاصة للعناية بصحة الأسنان وبثها عبر قنوات التلفزيون.

## Abstract:

Poor oral health can effect growth, and can lead to medical complications of untreated disease, and results in poor social outcomes. A closed ended questionnaire consist of 18 questions for adults and 9 question for school children to assess the oral health education and knowledge for groups of 300 adults and 369 children were randomly selected from Najaf city in (Najaf governorate), 160 kilometers south of Baghdad. The results showed that the adults and children have acceptable dental health knowledge (67 %) and good dental behavior as teeth brushing (about 91 % for adults and 87 % for children) even once every week. The study reveals that about (32 %for females and 31 % for males) they never visited the dentist because no pain, a financial problem, and a fear or dental anxiety made a strong barrier for them to seek dental care. While about (69% males, and 67.5 % for females), they usually visited dentist because of pain, extraction, filling, and gingivitis the main causes for the visiting the dentist. The main source of dental health education were the T. V. and reading for adults ( for male about 65.5 % and about 49% for female ) and the school for the children.

The most important recommendations are to added a special dental educational learning studies in school's programs, and special television programs for dental health care education.



## Key words:

Dental health education, knowledge, behavior, dental caries, teeth, brushing, dental floss, dentist, pain, prophylaxis, filling, extraction, gingival bleeding.

## INTRODUCTION:

Oral health is a fundamental to general health and well-being. A health mouth enables an individual to speak, eat, and socialize without experiencing active disease, discomfort or embarrassment Childhood is the period of greatest change in life. School children are indeed a tremendous human resource of the country. Schools provide an ideal platform for reaching out to all sections of children, thus classroom education has been considered as an important effort to improve preventive dental behavior(1). Dental disease is widespread disease, well known to mankind and affecting all ages. Dental caries has undergone a striking reduction in most developed countries over a relatively short period. While in developing countries the trend is opposite that there is increase in caries experience. It is widely recognized that good oral health practices are necessary from a young age to ensure positive long term dental health and hygiene(2). Evidence had showed that strong knowledge of oral health demonstrates better oral care practice. Similarly for those with more positive attitude towards oral health are influenced by better knowledge in taking care of their teeth and further oral health education can help to cultivate healthy oral health practice (3,4). In order to deliver such, oral health education, the assessment of knowledge attitude and behavior is essential. Hence this study was done to evaluate the effectiveness of oral health education on the knowledge,

## MATERIALS AND METHODS:

The present study was a longitudinal study. The present study was conducted to evaluate the effectiveness of oral health education on the knowledge, attitude, and behavior among adults and schoolchildren.

The purpose and details of the study was explained to the all participants as adults, teachers, parents of school children and written informed consent was then obtained from them. The sample was randomly selected from a community living in Al – Najaf schools.

Province with a closed ended questionnaire consisting of 18 questions assessing the knowledge, attitude, and behavior, source of dental health education, and barriers of seeking dental care for adults. The sample collected from different places as collages, peoples who worked in hospital, and from special dental clinics and from primary school (males & females).

Oral health education material in the form of Audio-visual aids. The validity of questionnaire was assessed the questions; while content validity was checked by ensuring that the questions covered all the areas of knowledge and behaviors'.

All the information related to student identification which included name, age and standard of life were noted. The data was collected through a self-administered closedended questionnaire consisting of 9 questions on the topics related to importance of deciduous and permanent teeth, functions of teeth, constituents of their school lunch box, consumption of sweets maintenance of oral hygiene and on the importance of regular visit to the dentist.

## RESULTS:

This study was conducted to assess the effect of oral health education and knowledge, attitude and behavior regarding oral health among adults and schoolchildren in Al – Najaf. Province the sample consisted of 300 adults (120 females and 180 males), and 369 school children aged from 6 – 12 years (163 females and 206 males).The sample was 669 individuals ( table 1). Table 2 shows that the positive and negative answers of adults were to questions number 4, 5 and up to 12, most of these questions concerned with dental knowledge. While, table 3 shows that most of the answers to the questions concerned tooth brushing behavior were positive. The causes of negative tooth brushing behavior of adults illustrated in table 4 indicated that the main reasons were the lack of knowledge about the dental health.

The sources of dental health knowledge of adults from mass media and especially from the parents and dentist in (table 5). Table 6 shows that the last visit to dentist for both male and female adults. The main barriers for seeking dental care for adults to visit dental clinic is no pain, even decayed teeth or even retained roots, fair, and the cost as shown in (table 8). The main cause of visit to the dentist was due to pain in females, and gingival bleeding in males in (table 7). Table 9 shows that the adult males were getting the dental knowledge from T.V., science programs, and most of females have no any knowledge about the dental health. Reading of books or notes about dental health are the lowest one. Some patient's favorite the dentist according to the gender (table 10). The children expressed positive answers concerning questions dealt with dental health knowledge and behavior (table 11). Table 12 shows that the source of children's dental knowledge were from parents, schools, and dentist respectively, while the (table 13) shows that most of the answers to questions about teeth brushing practice by children.

**Table 1: Distribution of participants according to their gender.**

| Type of participant | Gender | | Total |
|---|---|---|---|
| | Female | Male | |
| Adults | 120 (40%) | 180 (60%) | 300 |
| Children | 163 (44.18%) | 206 (55.82%) | 369 |
| Total | 283 (42.3%) | 386 (57.7%) | 669 |

**Table 2: Number of positive answers of adults by gender.**

| Gender | Questions | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| Males | 60<br>33.3% | 131<br>72.7% | 85<br>47.2% | 154<br>85.5% | 118<br>65.6% | 158<br>87.7% | 139<br>77.2% | 121<br>67.2% | 150<br>83.3% |
| Females | 55<br>45.8% | 55<br>45.8% | 45<br>37.5% | 115<br>95.8% | 35<br>29.2% | 104<br>86.7% | 101<br>84.2% | 75<br>62.5% | 100<br>83.3% |
| Total | 115<br>38.3% | 186<br>62% | 130<br>43.3% | 269<br>89.7% | 153<br>51% | 262<br>87.3% | 240<br>80% | 196<br>65.3% | 260<br>86.7% |

**Table 3: Teeth brushing practice and use of dental floss by adults.**

| Gender | Teeth brushing and dental floss practice | | | Total |
|---|---|---|---|---|
| | Daily once | Every 2 days | Every week | |
| Males | 122 (67.77 %) | 30 (16.67 %) | 13 (7.22 %) | 165 (91.67%) |
| Females | 87 ( 72.5% ) | 19 ( 15.83%) | 4 (3.33 % ) | 110 (91.67%) |
| Total | 209 (69.66%) | 49 ( 16.33%) | 17 (5.66 %) | 275 (91.67%) |

**Table 4: Causes of not brushing teeth by adults**

| Gender | Causes of non – brushing teeth | | | | Total |
|---|---|---|---|---|---|
| | Lack of knowledge | Careless | Have no brush | Others | |
| Males | 10 (5.55 %) | 5 (2.77 %) | 0 | 0 | 15 (8.32%) |
| Females | 0 | 10 (8.33 %) | 0 | 0 | 10 (8.33%) |
| Total | 10 (3.33 %) | 15 (5 %) | 0 | 0 | 25 (8.33 %) |

**Table 5: The source of dental health education as tooth brushing of adults by gender.**

| Gender | Source of dental health education (tooth brushing) | | | | | | Total |
|---|---|---|---|---|---|---|---|
| | parents | Friends | School | T.V. | Dentist | Others | |
| Males | 89 (49.44%) | 3 (1.66% ) | 20 ( 11.11 %) | 3 (1.66%) | 50 (27.77%) | 3 (1.66%) | 168 (93.3%) |
| Females | 66 ( 55 %) | 2 (1.66%) | 5 (4.16%) | 5 (4.16%) | 25 (20.83%) | 7 (5.83%) | 110 (91.7%) |
| Total | 155 (51.66%) | 7 (2.33%) | 25 (8.33%) | 8 (2.66%) | 75 (25 %) | 10 (3.33%) | 278 (92.7%) |

**Table 6: Last visit to the dentist by adults by gender.**

| Gender | Last visit to the dentist | | | | Total |
|---|---|---|---|---|---|
| | Before 6 months | Before one year | Before two years | More than two years | |
| Males | 25 (13.88%) | 30 (16.66%) | 29 (16.11 %) | 40 (22.22%) | 124 (68.88%) |
| Females | 30 (25 %) | 15 (12.5%) | 14 (11.66%) | 22 (18.33%0 | 81 (67.5 %) |
| Total | 55 (18.33%) | 45 (15 %) | 43 (14.33%) | 62 ( 20.66 %) | 205 (68.33%) |

**Table 7: Causes of visiting dentist by adults by gender.**

| Gender | Causes of visiting dentist | | | | | | Total |
|---|---|---|---|---|---|---|---|
| | Pain | Prophylaxis | Filling | Extraction | Gingival bleeding | Others | |
| Males | 58 (32.22 %) | 10 ( 5.55 %) | 18 ( 10 %) | 21 ( 11.66%) | 15 (8.33%) | 2 (1.11%) | 124 (68.88%) |
| Females | 42 (35 %) | 2 (1.66 %) | 17 (14.16 %) | 13 (10.83 %) | 4 (3.33%) | 3 (2.5 %) | 81 (67.5% ) |
| Total | 100 (33.33 %) | 12 ( 4 % ) | 35 ( 11.66%) | 34 (11.33%) | 19 (6.33%) | 5 (1.66%) | 205 (68.33 %) |

**Table 8: Causes of non – visiting dentist by adults by gender.**

| Gender | Cause of non – visiting dentist | | | | Total |
|---|---|---|---|---|---|
| | No pain | Financial problem | Fear | Dental clinic far away | |
| Males | 45 (25 %) | 6 (3.33%) | 5 (2.77 %) | 0 | 56 (31.11 %) |
| Females | 25 (20.83%) | 7 (5.83 %) | 7 (5.83 %) | 0 | 39 ( 32.5 % ) |
| Total | 70 (23.33%) | 13 (4.33 %) | 12 (4 % ) | 0 | 95 (31.67 %) |

**Table 9: Source of dental health knowledge in general.**

| Gender | Source of health knowledge | | | Total |
|---|---|---|---|---|
| | Reading | T.V. program | No any knowledge | |
| Males | 32 (17.78 %) | 86 (47.78 %) | 62 (34.44 %) | 180 |
| Females | 18 (15 %) | 41 (34.16 %) | 61 (50.85 %) | 120 |
| Total | 50 (16.67 %) | 127 (42.33 %) | 123 (41 %) | 300 |

**Table 10: The favorite gender of dentist.**

| Gender | The gender of dentist | | | Total |
|---|---|---|---|---|
| | Females | Males | No difference | |
| Males | 8 (4.44 %) | 13 (7.22 % ) | 159 (88.33 %) | 180 |
| Females | 60 (50 %) | 11 (9.16 %) | 49 (40.83 %) | 120 |
| Total | 68 (22.67 % ) | 24 (8 %) | 208 (69.33 %) | 300 |

**Table 11: Number of positive answers of children by gender.**

| Gender | Questions | | |
|---|---|---|---|
| | 3 | 4 | 5 |
| Males | 198 (96.11 %) | 193 (93.68 %) | 185 (89.8 %) |
| Females | 160 (98.15 %) | 153 (93.86 %) | 145 (85.79 %) |
| Total | 358 (97.01 %) | 346 (93.76 %) | 330 (89.43 %) |

**Table 12: Teeth brushing and dental floss practice of children by gender.**

| Gender | Teeth brushing and dental floss practice | | | | | Total |
|---|---|---|---|---|---|---|
| | Once a day | Every 2 days | Every 3 days | Every week | Never brushing | |
| Males | 81 (39.32%) | 49 (23.78%) | 27 (13.11%) | 20 (9.71%) | 29 (14.07%) | 206 |
| Females | 70 (42.94%) | 45 (27.6 %) | 18 (11.04%) | 12 (7.36%) | 18 (11.04%) | 163 |
| Total | 151 (40.92%) | 94 (25.47%) | 45 (12.19%0 | 32 (8.67%) | 47 (12.73%) | 369 |

**Table 13: Source of dental health education of children by gender.**

| Gender | Source of dental education | | | | | Total |
|---|---|---|---|---|---|---|
| | Parents | Friends | school | T.V. | Dentist | |
| Males | 87 (42.23 %) | 5 (2.42%) | 35 (16.99%) | 11 (5.33%) | 39 (18.93%) | 177 (85.92%) |
| Females | 71 (43.55%) | 5 (3.06%) | 41 (25.15%) | 7 (4.29%) | 21 (12.88%) | 145 (88.95 %) |
| Total | 158 (42.81%) | 10 (2.71%) | 76 (20.59 %) | 18 (4.87 %) | 60 (16.26 %) | 322 (87.26 %) |

## DISCUSSION:

The oral health education programmes should be identified to promote oral healthcare a lifelong practice. The incorporation of oral health education activities into the school's curriculum has already taken place, but more efforts in the form of educational materials, health promotion activities need to be carried out.

The present study indicates a positive effect of the oral health education on oral health behavior such as tooth brushing, dental visits, and less frequent consumption of sweets \ biscuit among school children. The effect was in accordance with other studies which have reported positive effects of oral health education on oral health behavior (5, 6).

Our results are in contrast to those of previous studies of health education among schoolchildren, which have not shown significant results in

changing behavior (7), especially tooth brushing (8,9), but have improvements in knowledge (7,9).

The results of this study showed that the people in the Najaf city have an acceptable dental knowledge about (67 %) for adults and children, while for good dental behavior as teeth brushing about (91 % for adults and 87 % for children) even once a week, it was more than twice the figure (44.4%) reported by WHO (10). Also use of dental floss in Iraq even once or more a week (11), in contrast with the finding in San Francisco where 75% of the participants used dental floss at least once per day(12).

Data of this study showed that relief of pain was the most frequent dental demand, about (33.33 %) both males and females suffering from pain. This may indicate that people seek treatment when an emergency dental problem arises. This finding was in accordance to works of others (13,14,15).

In restoration of carious teeth formed also at the present study, check up, extraction, and periodontal disease and \ or frequent demand in a percentage equal to relief of pain which about (33.33%), that means about (67.5% for females and 68.89 % for males) visited the dentist, in contrast with about (32 %for female and 31 % for male) they never visited the dentist because they have no pain, a financial problem, and fear or dental anxiety that cause a strong barrier for them to seek dental care. The negative experiences are reported as painful/ unpleasant and are influenced by the patient's perception of lack of coping and control (16). The other cause of the poor oral health, some patients believed that dental treatments are very expensive and costly. So they haven't enough money for the dental treatment.

The study showed that they visited their dentist when they had dental problem. However, the frequency of dental visit remains relatively low as ( 68.33 %) as compared to a study done in Canada(17).

The study was showed in (table 5) some of participants about (92.67%) were answered all questions, and about (7.33%) did not answer some questions, so their was different in the total number, in (table 6, and 7), were explain the numbers of participant who only visited the dentist and the causes of visiting, while the (table 8) explained the non – visitors and total of these numbers gave the total number of participants.

In our city the religious or social behavior give a special behavior in some group of adults especially females that they favorite the gender of dentist and this explained in (table 10) about (50 % )of females preferred female dentist.

The study showed that, some of adults have no knowledge about the dental health about (51% for females and 34% for males) and this due to sociality and the little education about the health program in our community, this was shown in (table 9).

Research examining the factors which influence patient's choice of general dental practitioner has been limited. However, it would appear that such choice are not random, they had sought some information about the practice, most notably from friends and relatives. When asked what characteristic of their dentist would influence their choice, the general public tend to focus on the dentist's manner (18). Similarly, when asked about characteristics of their "ideal" dentist, members of general public place great emphasis upon communication skill (19). Some authors conclude that patients feel that it is important that their doctor understands their culture and language, also to examine the influence of sex and ethnicity on patient's expressed choice of dentist and their perceptions of the dentist's competence and caring (20).

## CONCLUSION:

The most important conclusions from the work are-

Oral health education program resulted a significantly increased of oral health knowledge, attitude and behavior among school children. This awareness stimulated by an educational program during the school-age years, could be a factor in determining future health-related behavior. It is important step to proven a good and healthy society.

## RECOMMENDATION:

1 - It is suggested that oral health education should continue to be a part of public health programs designed to prevent and control oral diseases.

2– Mass media should be précised or a special dental health education and behaviors through the television programs about the dental health care education.

## REFERENCES:


1. Kwan SY, Petersen PE, Pine CM, Borutta A. Health-promoting schools: an opportunity for oral health promotion. Bull World Health Organ. 2005;85-677:(9)83.
2. Mathur A, Avinash J , Mathur A, Gupta T. Oral health Attitude Knowledge Behavior and Conset towards Dental treatment among School children. Journal of Orofacial Research 2011;1(1):6-10.
3. Lian CW, Phingb TS, Chata CS, Shina BC, Baharuddina LH, Che, Jalila ZBJ. Oral health knowledge, attitude and practice among secondary school students in Kuching Sarawak. Archives of orofacial Sciences 2010; 5(1):9 -16.
4. 4Al-Omiri MK, Al-Wahadni AM, Saeed KN. Oral health attitudes, knowledge, and behavior among school children in North Jordan.J Dent Educ 2006; 87-179(2)70.
5. Batthall D, Hansel-Petesson G. Sundbetg H. Reasons for the caries decline: what do the experts believe? Ear J Oral Sri 1996; 104: 26-422.

6. Sogaard AJ, Hoist D. The effect of different school based dental health education programmes in Norway. Community Dental Health 1988:5(2):84-169.
7. Kay E, Locker D. A systematic review of the effectiveness of health promotion aimed at improving oral health. Community Dent Health, 1998; 15-144:132.
8. Koerber A, Burns JL, Berbaum M, Punwani I, Levy S, Cowell J, Flay B. Toothbrushing patterns over time in at-risk metropolitan African–American 5th-8th graders: a brief communication. J Public Health Dent 2005;65: 43–240.
9. Redmond CA, Blinkhorn FA, Kay EJ, Davies RM, Worthington HV, Blinkhorn AS. Cluster randomized controlled trial testing the effectiveness of a school-based dental health education program for adolescents. J Public Health Dent 1999;59:12–17
10. Population nutrient intake goals for preventing diet-related chronic diseases. [Online]. Retrieved March 2012, 18. http://www.who.int/nutrition/topics/5_populationnutrient/en/index18.html_
11. Russel BA, Horowitz AM and Frazier PJ. School-based preventive regiments and oral health knowledge and practices of sixth graders. J Public Health Dent 1989:49(4):192-200.
12. Walsh MM. Effect of school-based dental health education on knowledge, attitudes and behavior of adolescents in San Francisco. Community Dent Oral Epidemiol 1985:13(3): 47-143.
13. Razak I.A. and Jaafer N.: Dental needs, demands, and pattern of service utilization in a selected Malaysian urban populationCommunity Dent. Oral Epidemiol.1976; 15-91:188.
14. Helderman V.P. and Natho Z. Aw.:Dental treatment demands among patients in Tanzania Community Dent. Oral Epidemiol.1990;7-19:65.
15. Warnakulasuriya S.: Demand for dental care in Serilanka. Community Dent. Oral Epidemiol.1985; 13:9- 60.
16. Sharet E, Soevdsnes EK. Behavioral science in dentistry. The role of the dental hygienist in prevention and treatment of the fearful dental patient, International Journal of Dental Hygiene 2005; 3 (1) : 2.
17. Scott G, Brodeur JM, Olivier M , Benigeri M.: Parental factors associated with regular use of dental service by second-year secondary school students in Quebec. J Can Dent Assoc 2002:68(10); 08-604.
18. Butman JS, Richard ND, Slack GC.: Demand and need for dental care. London, Oxford University Press 1996.
19. Lahti, S., Verkasalo, M., HaUsen H & Tuuti : Ideal role behviours as seen by dentist and patients themselves and by their role partners: Do they differ ? Community Dentistry and Oral Epidemiology, 1996 24, 8 - 245.
20. Ahmad, W.I, Kernohan , E.E.& Baker, M.R.,: Patients choice of general practitioner: Importance of doctors sex and gender: British Journal of General practice 1992 :41,330 -331.