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Assess the Knowledge and Practice Regarding Management and Prevention of Dental Caries among Mothers in Selected Urban Areas

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Abstract:
Dental caries is a major public health problem globally and is the most widespread non communicable disease (NCD). It is also the most prevalent condition included in the 2015 Global Burden of Disease Study, ranking first for decay of permanent teeth (2.3 billion people) and 12th for deciduous teeth (560 million children). **Objective:** To assess the Knowledge and Practice Regarding Management and Prevention of Dental Caries among Mothers in Selected Urban Areas at Bhuj- Kachchh, Gujarat. **Methodology:** Quantitative research approach was used in this study**.** A Non-experimental design with descriptive study design was adopted for this study. The sample size consists of 60 mothers residing at selected urban areas. For the assessment of level of knowledge and practice, Structured Knowledge Questionnaires and Structured Five-Point Rating scale was used. **Results:** Study result shows that the level of knowledge score reveals that, 51.7% (31) of mothers had adequate knowledge, and the level of practice score reveals, 48.3% (29) of mothers had satisfactory practice. Study result evaluate that the relationship between the level of knowledge and practice regarding management and prevention of Dental caries among mothers, the mean score of level of knowledge is 13.30 and SD value is 3.08. The mean score of level of practice is 29.06 and SD value is 7.71. Mean difference is 15.76. The obtained 'r' value is r = 0.9 which is statistically highly significant at $p<0.001$ level (df = 58: table value is p = 0.408). **Conclusion:** It can be concluded that majority of mothers having adequate knowledge and practice regarding management and prevention of dental caries.

Key words: Assess Knowledge, Practice, Dental Caries, Mothers.

1. INTRODUCTION:

Dental caries in young children is commonly untreated and represents a public health problem. Dental caries in children is reported to affect their anthropometric outcomes, but the evidence is conflicting. Some studies found no association, whereas others found that caries was associated with underweight or overweight. The objective was to assess the relationship between dental caries status and height and weight in 6- to 8-year-old Saudi children with high caries prevalence. A quasi experimental study was conducted to assess the effect of a school-based oral health education program on caries incidence in

children. Among 240 children, 120 in experimental group and 120 in control group. The method of data collection was by using DMFT scale. All children were initially examined for dental caries (DMFT), and after 3 years, 98 children from the experimental group and 96 from the control group were again examined and answered a questionnaire on oral health issues. The students from the experimental group stated knowing what was dental caries and declared that they use dental floss daily, but no significant differences in caries incidence was observed between the experimental and control groups. The study concluded that school-based oral health education program is not adequately efficient to decrease caries incidence after three years, but some issues about oral health knowledge could be slightly improved (Jaime .R.A, et al., 2015)

NEED FOR STUDY:

A cross sectional studies regarding Oral bacteria can grow in two ways in plank tonic or biofilm forms. In the past, most microbial studies were studies of the plank tonic form. Only around 0.1% of oral bacteria grow in the plank tonic state. (Mohammed Awadh Al-Shahrani, 2019). A cross-sectional study design was used to recruit 578 male Saudi primary school children, aged 6–8 years, from 12 primary schools in five different regions of Riyadh. Dental caries was prevalent among children (83%, 95% confidence interval 79.7–86.0%). Individual factors, including irregular brushing, late adoption of brushing habit, consulting dentist for symptomatic treatment, lack of breast feeding, sleeping with a bottle in mouth, habit of snacking between meals, low consumption of fruits, and frequent consumption of soft drinks and flavoured milk, were predominantly associated with dental caries in children, instead of socioeconomic factors ($p < 0.05$, adjusted R-square 80%). (Yazeed Abdullah Alhabdan. Et. Al., 2018).. The gender-wise prevalence of dental caries shows, females to have slightly higher prevalence than male. The prevalence of dental caries at the age group of 6 years was 57%, seven year 67%, eight year 63%, nine year 74%, 10 year 76%, 11 year 74%, 12 year 69%, 13 year 71%, and 14 year 69%. The distribution of CARS (Caries associated with Sealants and Restorations) in the surveyed population was only 1.4% The distribution of non-cavitated /early enamel lesions was higher in the studied population and indicated a requirement of a sustained dental health preventive program targeting specific segments of the population. (Ponnudurai Arangannal et.al., 2016). An epidemiological study was conducted on oral health status of 5 years and 12 years old school going children in rural Gurgaon, India. The objective of the study oral health is an essential component of health throughout life. Total of 1003 children were examined of which 619 were in 5 years age group and 384 in 12 years group. Five years age group had prevalence of dental caries was 68.5%, dental fluorosis was 22.5% and treatment needs were 63.7%. In 12 year age group prevalence of dental caries was 37.5%, dental fluorosis was 76.04%, highest community periodontal index score was 2, seen in 80.2% and overall treatment needs were 44.3%. (Meenu Mittal, et al., 2014)

OBJECTIVES OF THE STUDY:

1. To assess the level of knowledge and practice regarding management and prevention of dental caries among mothers
2. To find out the relationship between the level of knowledge and practice regarding management and prevention of dental caries among mothers

3. To find out the association between the level of knowledge and practice regarding management and Prevention of dental caries among mothers and demographic variables such as age, Mothers' education, Mothers' occupation, Family income, Family type, dietary pattern and source of health information.

HYPOTHESES:

RESEARCH HYPOTHESES:

H_1: There is a significant relationship between the level of knowledge and practice regarding management and prevention of dental caries among mothers.
H_2: There is a significant association between the level of knowledge and practice regarding management and Prevention of dental caries among mothers and demographic variables such as age, Mothers' education, Mothers' occupation, Family income, Family type, Dietary pattern and source of health information.

NULL HYPOTHESES:

H_{01}: There is no significant relationship between the level of knowledge and practice regarding management and prevention of dental caries among mothers
H_{02}: There is no significant association between the level of knowledge and practice regarding management and Prevention of dental caries among mothers and demographic variables such as age, Mothers' education, Mothers' occupation, Family income, Family type, Dietary pattern and source of health information.

ASSUMPTIONS:

- Literate mothers may have adequate knowledge and practice regarding management and prevention of dental caries than illiterate mothers.
- Young mothers may have good knowledge and practice regarding management and prevention of dental caries than aged mothers.

DELIMITATIONS:

- The study was limited to 60 samples.
- The study was limited to mothers those who residing in selected urban areas at Bhuj- Kachchh, Gujarat.

2. METHODOLOGY:

RESEARCH APPROACH:

In this study the researcher used quantitative research approach.

RESEARCH DESIGN:

In this study the researcher used non-experimental research design in that descriptive design used.

TARGET POPULATION:

Target population of study was mothers in selected urban areas at Bhuj-Kachchh

ACCESSIBLE POPULATION:

Accessible populations of the study were mothers and those were available at the time of data collection in selected urban areas at Bhuj-Kachchh.

SAMPLE:

In this study samples were mothers in selected urban areas.

SAMPLE SIZE:

The sample size was 60 mothers in selected urban areas.

SAMPLING TECHNIQUE:

Non-probable type in that Purposive Sampling Technique was used to select the sample**.**

INCLUSION CRITERIA:

- Mothers who spoke and understood Gujarati, Hindi and English languages.
- Mothers who were willing to participate.
- Mothers who were present at the time of data collection.

EXCLUSION CRITERIA:

- Those who were not willing to participate.
- Those who were not present at the time of data collection.

DEVELOPMENT AND DESCRIPTION OF TOOL:

The instruments used in this study were demographic variables, Structured Knowledge Questionnaire and Structured Five-Point Rating scale.

METHODS OF DEVELOPMENT OF THE TOOL:

A Structured Knowledge Questionnaire was developed to assess the level of Knowledge and Structured Five-Point Rating scale was developed to assess the level of practice of mother's selected urban areas.

It consists of three Tools

Tool 1:- Demographic Variables

Tool 2: - Structured Knowledge Questionnaire

Tool 3: - Structured Five-Point Rating scale

DESCRIPTION OF THE TOOL:

Tool-1:

It dealt with the demographic variables such as age, Mothers' education, Mothers' occupation, Family income, Family type, Dietary pattern and source of health information.

Tool-2:

It dealt with the knowledge questions regarding management and prevention of dental caries among mothers in selected urban areas. It had 20 Structured Knowledge Questionnaires. Each right answer awarded by "1" mark, wrong answer had "0" mark. No Negative Marks. Total score is 20.

Tool-3:

It dealt with key answered and scoring system of practice regarding management and prevention of dental caries among mothers in selected urban areas. All questions dealt with Structured Five-Point Rating scale. Maximum score of the question was 4 and minimum score was 0. Total score of practice rating scale is 40.

CONTENT VALIDITY:

Validity of tool was estimated by submitting the tools to 3 experts, 2 experts from the field of the Nursing, one expert from the field of Medicine. After establishing the validity, the tool was translated from English to Gujarati and again translated into English by language experts to validate the language.

RELIABILITY:

The reliability refers to the accuracy and consistency of measuring tool. The reliability of tool was elicited by using test re-test method and findings were compared. Karl Pearson's Correlation-Coefficient formula was used for computing the results and finding out the reliability of the tool. The "r" value is r = 0.8. It shows the positive correlation.

STUDY PERIOD:

The investigator was obtained permission from the Ethical committee of BMCB College of Nursing at Bhuj-Kachchh, Gujarat. Data collection period was 1 month.

DATA ANALYSIS:

Descriptive statistic such as frequency & percentage was used to analyze the socio demographic variables.. In inferential statistic, Karl Pearson's 'r" test was used to correlation between knowledge and practice and chi-square X 2 used to determine the association of knowledge and practice scores with selected demographic variables.

3. RESULTS:

Demographic variables:

- 46.7% (28) mothers were between 31 – 35 years of age
- 51.7% (31) mothers had primary education
- 81.7% (49) were doing private job
- 53.3% (32) mothers belong to joint family
- 55% (33) mothers' family monthly income is between 20,001 to 30,000
- 100% (60) mothers were vegetarians.
- 51.7% (31) mothers got health information from mass media.

LEVEL OF KNOWLEDGE

Table 4.2: Frequency and percentage distribution of the level of knowledge **(N=60)**

SR. NO	LEVEL OF KNOWLEDGE	FREQUENCY(FR)	PERCENTAGE (%)
1.	Adequate Knowledge	31	51.7
2.	Moderately adequate Knowledge	20	33.3
3	In adequate Knowledge	09	15.00

Table 4.2 depicts the frequency and percentage distribution of the level of knowledge regarding management and prevention of Dental Caries among mothers at selected urban areas. As per data, knowledge score reveals that, 51.7% (31) of mothers had adequate knowledge, 33.3% (20) of mothers had moderately adequate knowledge and only 15% (09) of mothers had inadequate knowledge. The numerals show, most of mothers had adequate knowledge.

LEVEL OF PRACTICE

Table 4.3: Frequency and percentage distribution of the level of practice **(N=60)**

SR.NO	LEVEL OF PRACTICE	FREQUENCY (Fr)	PERCENTAGE (%)
1.	Satisfactory practice	29	48.3
2.	Moderately satisfactory practice	18	30

3.	Unsatisfactory practice	13	21.7

Table 4.3 depicts the frequency and percentage distribution of the level of practice regarding management and prevention Dental caries among mothers at selected urban areas. As per the data practice score reveals, 48.3% (29) of mothers had satisfactory practice, 30% (18) of mothers had moderately satisfactory practice and only 21.7% (13) of mothers had unsatisfactory practice. The numerals show, most of mothers had satisfactory practice level.

Table 4.4: Comparison of mean and standard deviation level of knowledge and practice **(N=60)**

CORRELATION	**MEAN**	**MEAN DIFFERENCE**	**SD**	**"r" VALUE**
level of knowledge	13.30	15.76	3.08	r = 0.9*** df = 58 p = 0.408 (p<0.001)
level of Practice	29.06		7.71	

Key: Significant at p<0.001 level ***, Significant at p<0.01 level **, Significant at p<0.05 level *, Ns-Not significant

Table 4.4 portrays that, the relationship between the level of knowledge and practice regarding management and prevention of Dental caries among mothers, the mean score of level of knowledge is 13.30 and SD value is 3.08. The mean score of level of practice is 29.06 and SD value is 7.71. Mean difference is 15.76. The obtained 'r' value is r = 0.9 which is statistically highly significant at p<0.001 level (df = 58: table value is p = 0.408).

DISCUSSION:

Study result shows that the level of knowledge score reveals that, 51.7% (31) of mothers had adequate knowledge, 33.3% (20) of mothers had moderately adequate knowledge and only 15% (09) of mothers had inadequate knowledge. Study result shows that the level of practice score reveals, 48.3% (29) of mothers had satisfactory practice, 30% (18) of mothers had moderately satisfactory practice and only 21.7% (13) of mothers had unsatisfactory practice. Study result evaluate that the relationship between the level of knowledge and practice regarding management and prevention of Dental caries among mothers, the mean score of level of knowledge is 13.30 and SD value is 3.08. The mean score of level of practice is 29.06 and SD value is 7.71. Mean difference is 15.76. The obtained 'r' value is r = 0.9 which is statistically highly significant at p<0.001 level (df = 58: table value is p = 0.408). The analytical report of the table explains that the demographic variables such as mother's education, family type and sources of health information have obtained $\chi 2$ value above the level of tabulated value, therefore researcher accepted research hypothesis and rejected null hypothesis.

4. CONCLUSION:

This study was conducted to assess the level of knowledge and practice regarding management and prevention of dental caries among mothers at selected urban areas.

REFERENCES:

1. Al-sHahrani AM, Al-Mushayt AS, Otaibi MF, Wyne AH. (2019) Knowledge and attitude of Saudi mothers towards their preschool children's oral health. Pak J Med ;30:720–4.
2. Mittal ML, Narang R, Jha K, Anamika R. Caries experience and its relationship with parent's education, occupation and socio economic status of the family among 3-6 years old preschool children of Sri Ganganagar City, India. Open journal of dentistry and Oral Medicine. 2014;1(1):1–4
3. Yazeed Abdullah Alhabdan, Abdulhameed Ghassan Albeshr, Nagarajkumar Yenugadhati, Hoda Jradi; Prevalence of dental caries and associated factors among primary school children: a population-based cross-sectional study in Riyadh, Saudi Arabia; Environmental Health and Preventive Medicine (2018) 23:60
4. Jaime .R.A et al., Oral health education program on dental caries incidence ; savannah Journal of Medical. Research and Practice. 2015;4(1):15-20. [78] (2015).
5. Ponnudurai Aranganal, Sunil Kumar Mahadev, Jeevarathan Jayaprakash; Prevalence Of Dental Caries Among School Children In Chennai, Based on ICDAS II; Journal of Clinical and Diagnostic Research. 2016 Apr, Vol-10(4): ZC09-ZC12