

ORIGINAL RESEARCH**A Cross Sectional Study on Disparity in Oral Hygiene practices in rural v/s urban population of Muzaffarpur district of Bihar**

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Abstract

Background: Poor oral hygiene is one of the most important reasons for poor oral health. Dental plaque is believed to be most common etiology of the periodontal problems and dental caries. Since dental caries and periodontal problems are the two most common problems of the oral cavity, therefore dental plaque can be considered as one of the most important reason for poor oral health.

Aim: This study was conducted in Muzaffarpur district of Bihar as a cross sectional study on disparity in oral hygiene practices in rural v/s urban population.

Methods and Materials: A questionnaire was constructed in both English and Hindi language consisting of twelve questions after analyzing the previous literature. The questionnaire was distributed among the study subjects. The questions in the questionnaire were broadly divided into two groups. One consisted of the questions regarding the demographic details of the study including information whether the study participant belonged to rural population or urban population. The maximum score of practice was maintained at 22. Once the completed questionnaires were obtained, the information were placed in the ms excel sheet and statistical analysis was carried out. SPSS 21 version was used for carrying out statistical analysis. Independent t tests, chi square test was used for analysis.

Results: The mean practice score of rural population was found out to be 14.13 with standard deviation of 4.552 while the mean practice score was 16.93 in urban population with standard deviation of 4.461. (Table 2). Independent t test was used to analyse whether mean practice score is significantly related to rural population and urban population. The statistical analysis revealed that mean practice score was significantly correlated with the type of population to which the study subject belongs to. Further it was also revealed that the study subjects of urban population were more statistically associated with better oral hygiene practice as compared with the rural population.

Conclusion: According to the findings of this research it can be concluded that the awareness regarding the maintenance of oral hygiene is low in rural population as compared to urban population of the Muzaffarpur district of Bihar. Therefore necessary steps should be taken to increase awareness among rural population regarding the practice of oral hygiene

Keywords: Oral hygiene practices, rural, urban, Muzaffarpur

Introduction

According to the recommendations of the world health organization proper health of oral cavity is a vital component of general health. Further it is stated by world health organization that proper health of oral cavity affects the society significantly. Oral cavity is considered as the mirror of the whole body. It affects the overall health of the body. The proper oral health is very important for maintaining good quality of life. It has been found that bad smell from oral cavity put psychological impact on the individual confidence. These individuals with foul smell from oral cavity avoid social interaction and put them in social isolation. This problem is also observed in the individuals with stains and deposit in the teeth region. It has been found that other problems of oral cavity like tooth ache as a result of dental caries affect the overall health of a person as well as their quality of life. It has been also revealed in several research that poor oral health is associated with problems of other system of body like cardiovascular system.^{1,2}

It has been postulated that poor oral hygiene is one of the most important reason for poor oral health. Dental plaque is believed to be most common etiology of the periodontal problems and dental caries. Since dental caries and periodontal problems are the two most common problems of the oral cavity, therefore dental plaque can be considered as one of the most important reason for poor oral health. The best method to reduce the incidence of dental plaque is maintenance of the good oral hygiene. Oral hygiene practices are very vital for our oral health and overall health of the body.^{3,4}

In our country the population is broadly categorized as the urban population and rural population. It is very necessary to analyze the oral hygiene practices in both urban population and rural population and obtain the information about awareness regarding maintenance of oral hygiene in both urban and rural population. If there are different level of awareness in these different populations then government will be able to plan efficiently to organize awareness programmes in urban population and rural population differently.^{5,6} No study has been conducted in past which have evaluated the various oral hygiene practices among rural and urban population of Muzaffarpur district of Bihar. This study was conducted in Muzaffarpur district of Bihar as a cross sectional study on disparity in oral hygiene practices in rural v/s urban population.

Materials and methods

A cross sectional study was carried out among the population of Muzaffarpur district of Bihar who have reported at for various health issues at the health centre. A total of two hundred study subjects were included in the study and among them 164 were selected as 22 of them gave vague answer and 14 of them left the study before completion of research. The study participants were aged more than eighteen years of age. The study participants were not well versed in English language. Hence the study was conducted in Hindi language. The sampling was carried out with the help of simple random technique. The study was initiated after obtaining the written informed consent.

A questionnaire was constructed in both English and Hindi language consisting of twelve questions after analyzing the previous literature. The questionnaire was distributed among the study subjects. The questions in the questionnaire were broadly divided into two groups. One consisted of the questions regarding the demographic details of the study including information whether the study participant belonged to rural population or urban population. The maximum score of practice was maintained at 22. Each study participant was provided 30 minutes to complete the process of answering questions of the questionnaire. Once the completed questionnaires were obtained, the information were placed in the ms excel sheet and statistical analysis was carried out. SPSS 21 version as used for carrying out statistical analysis. Independent t tests, chi square test were used for analysis.

Results

In this study 84 study subjects of rural population while 80 study subjects of urban population were included. 20 study subjects of rural population and 48 study subjects of urban population were found to carry out brushing twice daily. While 64 study subjects of rural population and 30 study subjects of urban population were found to carry out brushing daily. It was observed that twenty study of rural population used dental floss while 68 study subjects of urban population were found to use tooth floss. It was noticed that 82 study subjects of rural population and 76 study subjects of urban population were found to rinse their mouth after taking food. (Table 1)

The mean practice score of rural population was found out to be 14.13 with standard deviation of 4.552 while the mean practice score was 16.93 in urban population with standard deviation of 4.461. (Table 2). Independent t test was used to analyse whether mean practice score is significantly related to rural population and urban population. The statistical analysis revealed that mean practice score was significantly correlated with the type of population to which the study subject belongs to. Further it was also revealed that the study subjects of urban population were more statistically associated with better oral hygiene practice as compared with the rural population.(Table 3).

Table 1:- Response to questions related to practice of oral hygiene

		Practice Score	
		Rural	Urban
Brushing Habit	Twice daily	20	48
	Daily	64	30
	Interval	0	2
Brushing by Using	Tooth Paste	76	70
	Ash	6	0
	Neem Stick	2	2
Do you change your brush regularly	Yes	50	76
	No	34	16
Do you clean your tongue	Yes	76	80
	No	8	0
Do you use dental floss	Yes	20	68
	No	64	12
Do you rinse your mouth after meal	Yes	82	76
	No	2	4
Do you use mouth wash	Yes	44	52
	No	40	28
Do you visit dentist	Regularly	24	22
	Irregularly	34	22
	Never	26	34
Do you smoke	Yes	68	56
	No	16	24

Do you chew tobacco	Yes	52	14
	No	32	66

Table 2:The group statistics

Descriptive Statistics associated with Practice of oral Hygiene						
		N	Mean	Std. Deviation	Skewness	Kurtosis
Practice Score	Rural	84	14.13	4.552	.091	-.322
	Urban	80	16.93	4.461	-.117	-.545

Table 3:- Independent sample t test

Independent samples Statistics						
		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig	T	df	Sig- (2 tailed)
Practice Score	Equal variances assumed	.004	.959	-3.448	81	.002
	Equal variances not assumed			-3.449	79.959	.002

Discussion

The importance of good oral health in having a high quality of life cannot be overstated. It has been discovered that a poor odour from the mouth has a psychological impact on an individual's confidence. These people who have a terrible odour coming from their mouth avoid social interaction and are socially isolated. This condition is also seen in those who have stains and deposits on their teeth. It has been discovered that various oral health issues, such as tooth soreness caused by dental caries, have an impact on a person's general health and quality of life. Poor dental health has also been linked to difficulties with other body systems, such as the cardiovascular system, according to multiple studies. It has been postulated that poor oral hygiene is one of the most important reason for poor oral health.⁷

This cross-sectional study was undertaken in the Muzaffarpur area of Bihar to look at the differences in oral hygiene practises between rural and urban populations. This study included 84 study subjects from the rural population and 80 study subjects from the urban population. Brushing was reported to be done twice daily by 20 study subjects from the rural population and 48 study subjects from the urban population. Brushing was reported to be done on a daily basis by 64 study subjects from the rural population and 30 study subjects from the urban population. Twenty study participants in the rural area used dental floss, while 68 study participants in the urban group used tooth floss. It was discovered that 82 study participants from the rural population and 76 study participants from the urban population rinsed their mouth after eating. According to the World Health Organization's recommendations, dental health is a critical component of overall health. Furthermore, the World Health Organization claims that good dental health has a substantial impact on society. The oral cavity is regarded as a mirror of the entire body. It has an impact on the body's overall wellness. The rural population's mean practise score was 14.13 with a standard

deviation of 4.552, whereas the urban population's mean practise score was 16.93 with a standard deviation of 4.461. Independent t test was used to analyse whether mean practice score is significantly related to rural population and urban population.

The mean practise score was substantially connected with the sort of population to which the study participant belonged, according to the statistical analysis. Furthermore, as compared to the rural population, the study respondents from the urban population were statistically associated with superior oral hygiene practises.

Tooth plaque is thought to be the most common cause of periodontal disease and dental cavities. Dental plaque might be regarded one of the most important reasons for poor oral health because dental caries and periodontal disorders are the two most frequent oral cavity diseases. Maintaining regular oral hygiene is the most effective way to prevent the incidence of dental plaque. Oral hygiene practices are very vital for our oral health and overall health of the body.⁸

The population of our country is divided into two groups: urban and rural. Analyzing oral hygiene habits in both urban and rural populations, as well as obtaining information on oral hygiene knowledge in both urban and rural populations, is extremely important. If these communities have varied levels of knowledge, the government will be able to plan efficiently to conduct awareness programmes for urban and rural populations in distinct ways..^{9,10}

Conclusion

According to the findings of this research it can be concluded that the awareness regarding the maintenance of oral hygiene is low in rural population as compared to urban population of the Muzaffarpur district of Bihar. Therefore necessary steps should be taken to increase awareness among rural population regarding the practice of oral hygiene.

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