

A Cross Sectional Study On Existence Of Oral Hygiene Practice In Rural And Semi Urban Population Of East Midnapore District Of West Bengal

Dr. Jayeeta Majumder, Susmi Biswas, Dr. Sourav Gangopadhyay

Abstract: The oral hygiene is an important issue of health; it has both physical and social issues. Many researchers have found that a large number of people are not maintaining good oral hygiene practice especially in the rural areas of developing countries including India. There are lots of variation existed among the people of urban, rural and semi urban populations. Very few researches have conducted to assess whether any significant differences existed between rural and semi urban population of East Midnapore district of West Bengal in respect to practice of oral hygiene. In this regard we have conducted independent sample t test on 82 numbers of people of East Midnapore district. The result shows that practice of oral hygiene of rural and semi urban population of East Midnapore district is significantly different from each other as the P value is .001 as per the results of independent sample t test.

Key words : East Midnapore, physical, oral hygiene, rural, semi Urban, social, West Bengal.

1. INTRODUCTION

Oral health is an integral part of the general health as recommended by WHO. Oral health has a significant impact on the society (WHO, 2003). The health without maintenance of oral health is not possible also oral health has a social issue as mouth is regarded as the mirror of the body (Navneet, 2007). It was observed that the oral diseases restrict different activities and it causes bad impact on psychology which affects the quality of life (Ashley, 1996). Initially the oral problems are painless but then if it is ignored or remained untreated then it causes effect on the vital organs. In this regard creating awareness among the people regarding the oral health is becoming necessary (National Oral Health Survey and Fluoride Mapping, 2002). There are disparity of awareness among rural and urban people have shown in many research papers (Varenne, 2004; Singh, 2005). In most of the cases the children are included in the study but there are very few researches have conducted which cover other age group (Rao, 2010; Arora, 2015). For that reason extensive awareness programs are needed for the mass people to reduce various oral diseases (AI – Shammery, 1991). Oral disease can be controlled if primary health care is reached effectively. (Ramandeep, 2017) Most of the studies have conducted on the oral health in rural and urban population in India. Many studies have shown that the grass root level workers of Indian health care system are responsible for creating awareness on oral hygiene among rural people (Kumar, 2005; Udani, 1980).

Aims and Objectives

1. To assess the oral hygiene practice among rural and semi urban people of East Midnapore district of West Bengal.
2. To assess whether there are any disparity of oral hygiene practice existed among the people of rural and semi urban region of East Midnapore district.

MATERIALS AND METHODS

A cross sectional study has conducted among the people of East Midnapore district who have come to the Dakshin Narikelda Dhauladhar sub center for treatment. Total 100 patients are included in the study and among them 82 were selected as 11 of them gave ambiguous answer and 7 of them lost interests in the research. Respondents are all aged more than 18 years and all are literate and comfortable in English. Simple random sampling method has followed. Informed consent was obtained from each respondent. After reviewing several research papers, a self constructed 12 items close ended questionnaire in English was formulated and distributed to all respondents. The questionnaire has two parts - first part is containing name, age, gender, religion marital status and residential status i.e. either rural or semi urban areas. Second part is containing the information of existing level of practice of oral hygiene. Total score of practice is set to 22. 15 minutes are allotted for completing the questionnaire process. The interview of process was conducted during the month of October 2019. After getting the result it was analyzed by Microsoft excel and SPSS 21 version.

RESULT

In this study among 82 respondents 20 are female and 62 are male; 33 are unmarried and 49 are married and 42 are Hindu and 40 are Muslims. Also among 82 respondents 42 are from rural areas and 40 are from semi urban areas.

- Dr. Jayeeta Majumder (Corresponding Author)
- Assistant Professor, Dept. of Hospital Management, Haldia Institute of Management
- Susmi Biswas
- Assistant Professor, Dept. of Hospital Management, Haldia Institute of Management
- Dr. Sourav Gangopadhyay
- Assistant Professor, Dept. of Hospital Management, Haldia Institute of Management

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

		Practice Score	
		Rural	Semi Urban
Brushing Habit	Twice daily	10	24
	Daily	32	15
	Interval	0	1
Brushing by Using	Tooth Paste	38	35
	Ash	3	0
	Neem Stick	1	1
Do you change your brush regularly	Yes	25	38
	No	17	8
Do you clean your tongue	Yes	38	40
	No	4	0
Do you use dental floss	Yes	10	34
	No	32	6
Do you rinse your mouth after meal	Yes	41	38
	No	1	2
Do you use mouth wash	Yes	22	26
	No	20	14
Do you visit dentist	Regularly	12	11
	Irregularly	17	11
	Never	13	17
Do you smoke	Yes	34	28
	No	8	12
Do you chew tobacco	Yes	26	7
	No	16	33

- According to the study among rural 42 rural people 38 are using tooth paste, three of them are using ash and one of them is using neem stick. Among 40 number of semi urban people 35 of them are using tooth paste and one of them is using neem stick and none of them is using ash.
- The study also shows among rural 42 rural people 10 of them brush twice daily and 32 of them brush once daily but in case of semi urban areas among 40 people, 24 of them brush twice a day and 15 of them brush once a day and one of them brush irregularly.
- According to the study among 40 number of semi urban people 32 of them change their brush regularly and among 42 rural people 25 of them change their brush regularly.
- The study shows that among 42 rural people 38 of them clean their tongue during brushing and all of the semi urban people clean their tongue during brushing.
- Among 42 rural people 32 of them are not using dental floss and in case of 40 number of semi urban only 6 of them are not using dental floss.
- Among 42 rural people 41 of them rinse their mouth after meal and 40 number of semi urban people 38 of them rinse their mouth after meal.
- The study shows among 42 rural people 12 of them visit dentist regularly, 17 of them visit dentists irregularly and 13 of them never visit a dentist. In case of 40 number of semi urban people 11 of them visit dentist on regular basis and 17 of them never visit a dentist.
- Among 42 rural people 34 of them smoke and 26 of them chew tobacco. In case of 40 number of semi urban people 28 of them smoke and 7 of them chew tobacco.

Table 2: - The group statistics

Descriptive Statistics associated with Practice of oral Hygiene						
Practice Score		N	Mean	Std. Deviation	Skewness	Kurtosis
Semi Urban	40	15.82	3.350	-.116	-.544	

The rural group (N=42) was associated with a practice of oral hygiene score M=13.02 (SD= 3.441). By comparison Semi urban group (N=40) was associated with a numerically higher practice of oral hygiene score M=15.82 (SD=3.350). To see whether rural and semi urban population were associated with statistically significantly different mean practice of oral hygiene score an independent t test was performed.

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	.003	.958	-3.447	80	.001
	Equal variances not assumed			-3.449	79.959	.001

The independent sample t test (Table 3) is showing that the practice score is significantly related with area the people are living as the P value is .001. As can be seen in table 2 the rural and the semi urban distribution were sufficiently for the purpose of conducting a t test (i.e. skew <2 and Kurtosis i.e. <9; Schmider, Ziegler, Danay, Beyer, & Buhner, 2010). Additionally the assumption of homogeneity of variance was tested and satisfied via Levene's F (80) = .003, P = .958. The independent sample t test was associated with a statistically significant effect, t (80) = -3.447, P = .001. Thus the semi urban populations were associated with a statistically significantly higher practice of oral hygiene score than rural people.

DISCUSSION

The survey has conducted to find out the oral hygiene practice among the people of East Midnapore district. It shows whether the practice score is significantly related with the area the people are residing i.e. whether the practice of oral hygiene significantly defers among rural and semi urban people of East Midnapore district. Many researchers have shown that there is existence of clear gap between urban and rural people in respect to the practice and knowledge of oral hygiene. Very few researches have made to identify the existing gap between the rural and semi urban people of these regions. The research is showing that the practice of oral hygiene of rural people and semi urban people are significantly different as out of 22 the rural people have scored 13.02 which is about 59.20% and

in case of semi urban people, they have scored 15.82 out of 22 i.e. 71.90% and also independent t test is showing the P value of .001. So it proves that the difference is significantly different. According to the study in both rural and semi urban population the tooth brush with tooth paste is most common way of brushing, but dental floss is not common in case of rural people, this finding is supporting the finding of Ronis (1993) and Lang (1995), but in case of semi urban population use of dental floss is common, which is opposing many research. The study shows that most of the semi urban people i.e. 60% of them are brushing twice a day and in case of rural people it is only about 23.80%. This study is opposing the findings of Ananth in the year 2014 which says 52% of the rural people are brushing twice a day. The study shows most of the people both rural and semi urban clean their tongue i.e. in case of rural it is 90.47% and in case of semi urban it is 100%. This finding is not similar in case of findings of other researches done by Nitika in the year 2012, which says only 20% of the population clean their tongue regularly. Also the same research is claiming that 29 % of the people are rinsing their mouth after eating but this study is also opposing the result as it shows 97.76% of rural people and 95% of semi urban people are rinsing their month after eating. Our study shows 52% of the rural people are using mouth wash which is almost similar in case of findings of Syed in the year 2012 which says 51.14% of the rural people are using mouth wash. Almost 31% of the rural people and 42% of the semi urban population never visited dentists but according to Syed in the year 2012 it is about 22.57% of rural people who never visited dentists. The study also covers the smoking and the tobacco chewing habit of the rural and semi urban people as both have negative impact on the oral health. Nearly 81% of the rural people and 70 % of the semi urban people smoke and nearly 62 % of the rural people and 82.5% of the semi urban people are chewing tobacco. So it proves that smoking is more common in case of rural people but in case of tobacco chewing is more common in case of semi urban people. The result is not similar to Kolappan et. al. in the year 2013 as it was showing 14.3% of the rural and 13.9% of the semi urban people are smokers.

CONCLUSION

Very few researches have conducted to assess whether there are any significant differences are existed between semi urban and rural people in developing countries. No studies have conducted in the region of East Midnapore in respect of practice of oral hygiene. Our study shows that the people of semi urban people of East Midnapore district are maintaining better oral hygiene practice than that of rural people. It means there should be uniformity in the awareness program on oral hygiene, should be maintained in rural and semi urban areas of East Midnapore district. Also more awareness program should be conducted in both the areas, as the score of practice of oral hygiene is not satisfactory in those areas.

REFERENCE

- [1] Gambhir, R. S., & Gupta, T. (2016). Need for Oral Health Policy in India. *Annals of medical and health sciences research*, 6(1), 50–55. doi:10.4103/2141-9248.180274.
- [2] The World Oral Health Report. (2003). Continuous improvement in the oral health in the 21st century – the approach of the WHO Global Oral Health Program.
- [3] Grewal, N., & Kaur, M. (2007). Status of Oral health awareness in Indian children as compared to western children. *J Indian Soc Pedod Prev Dent*, 25(1), 15-9.
- [4] Ashley, F.P. (1996). Role of dental health education in preventive dentistry. In: Murray JJ, Editor. *Prevention of Dental Disease*, 3, 406-14. Oxford University Press.
- [5] National Oral Health Survey and Fluoride Mapping. (2002). India: Bali, R.K., Mathur, V.B., Talwar P.P., & Chaina, H.B.
- [6] Rao, C.N., & Metha, A. (2010). Dentition status and treatment needs of 12 year old rural school children of Panchkula district, Haryana, India. *Journal Indian Dental Association*, 4(9), 33-05.
- [7] Arora, G., & Bhateja, S. (2015). Prevalence of dental caries, periodontitis, and oral hygiene status among 12-year-old school children having normal occlusion and malocclusion in Mathura city: a comparative epidemiological study. *Indian J Dent Res*, 26, 48-52.
- [8] General Directorate of Research Grants Programs, King Abdulaziz City for Science and Technology. (1991). *An Oral Health Survey of Saudi Arabia: Phase I. Riyadh, Saudi Arabia*, 1-150. King Saud University Press, Saudi Arabia: Shammery, A., Guile, E., Backly, M., & Lamborne, A.
- [9] Varenne, B., Petersen, P.E., & Ouattara, S. (2004). Oral health status of children and adults in urban and rural areas of Burkina Faso, Africa. *International Dental Journal*, 54, 83–89.
- [10] Singh, G.P.I., Bindra, J., Soni, R.K., & Sood, M. (2005). Prevalence of Periodontal Diseases in Urban & Rural Areas of Ludhiana. *Indian Journal of Community Medicine*, 30(4), 128-29.
- [11] Kumar, S., & Bhawani, L. (2005). Managing child malnutrition in a drought affected district of Rajasthan – A case study. *Indian J Public Health*, 49, 198-206.
- [12] Udani, R. H., Chothani, S., Arora, S., & Kulkarni, C. S. (1980). Evaluation of knowledge and efficiency of anganwadi workers. *Indian J Pediatr*, 47, 289-92
- [13] Ronis, D.L., Lang, W.P., Fraghaly, M.M., & Passow, E. (1993). Tooth brushing, flossing and preventive dental visits by Detroit area residents in relation to demographic and socio economic factors. *J Public Health Dent*, 53(3), 138-45. doi: 10.1111/j.1752-7325.1993.tb02692.x
- [14] Lang, W.P., Ronis, D.L., & Fraghaly, M.M. (1995). Preventive behavior as correlates of periodontal health status. *J Public Health Dent*, 55, 10-7.
- [15] Kamath, A., Nadeem, M., Bijle, M. N. Walimbe, H. & Patil, V. (2014). Oral hygiene awareness among school children of rural Mangalore. *Journal of Dental Research and Review*, 1, 7-9. Doi: 10.4103/2348-3172.126156.
- [16] Chockalingam, K., Vedhachalam, C., Rangasamy, S., Sekar, G., Adinarayanan, S., Swaminathan, S., & Menon, P.A. (2013). Prevalence of Tobacco Use

- in Urban, Semi Urban and Rural Areas in and around Chennai City, India. PLoS ONE 8(10): e76005. Doi:10.1371/journal.pone.0076005.
- [17] Rafi, A.T., Yaseen, S.M., Zakirulla, M, Nasim, V.S. & AlZamzami,M. (2012). Oral hygiene knowledge and practices among school children in a rural area of southern Saudi Arabia. *International Journal of Contemporary Dentistry*, 3, 57-62.
- [18] Gambhir, R.S., Anand, S., Gupta, T., Singh, A., Kahlon, H., & Kaur, A. (2016). Knowledge and awareness regarding oral health among anganwadi workers in India: A systematic review. *J Indian Assoc Public Health Dent*, 14(2), 231-6.
- [19] Jain, N., Mitra, D., Ashok, K. P., Dundappa, J., Soni, S.,& Ahmed, S. (2012). oral hygiene-awareness and practice among patients attending oPd at Vyas dental College and Hospital, Jodhpur. *Journal of Indian Society of Periodontology*, 16(4), 524-8.
- [20] Schmider, E., Ziegler, M., Danay, E., Beyer, L., & Buhner, M. (2010). Is it really robust? Reinvestigating the robustness of ANOVA against violations of the normal distribution assumption. *Methodology:European journal of Research Methods for the Behavioral and Social Sciences*, 6, 147-51.