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Factors affecting the oral health behavior of Indian married women: It's lifestyle of something else? (a questionnaire based original research study)

Dr. Manoj Tiwari

Associate Professor, Department of Periodontology, Mansarovar Dental College Hospital and Research Centre, Bhopal, Madhya Pradesh, India

*Corresponding author email: manojtiwari1987@gmail.com

Dr. Mayank Sharma

Associate Professor, Department of Pediatric and Preventive Dentistry, Mansarovar Dental College Hospital and Research Centre, Bhopal, Madhya Pradesh, India

Dr. Pratibha Sharma

Associate Professor, Department of Orthodontics and Dentofacial orthopedics, Mansarovar Dental College Hospital and Research Centre, Bhopal, Madhya Pradesh, India

Dr. Kartik Choudhary

Associate Professor, Department of Pediatric and Preventive Dentistry, *Rishiraj College of Dental Sciences* and Research Centre, Bhopal, Madhya Pradesh, India

Dr. Nitin Awasthi

Associate Professor, Department of Oral Pathology and Microbiology, Mansarovar Dental College Hospital and Research Centre, Bhopal, Madhya Pradesh, India

Dr. Neha Bedwal

Assistant Professor, Department of Conservative Dentistry and Endodontics, Mansarovar Dental College Hospital and Research Centre, Bhopal, Madhya Pradesh, India

Abstract--With an objective to better understand differences in oral health related behavior and practices of working and non working, this study was conducted. Duration of the study was three months, from August 2021 to October 2021 and it was conducted in Department of Periodontics, Mansarovar Dental College and Research Center, Bhopal (M.P.), India. A questionnaire based survey was conducted amongst 300

married female participants aged 18 years or more (111 working women and 189 non-working women). The samples were heterogeneous group from different occupation and economic status. None of the participants in the present study was found to have good oral hygiene and more than 50.0% of the patients were having poor oral hygiene. It is an observation which needs attention. It was hence concluded that the oral health related behavior of the working and non-working married woman differ significantly.

Keywords--questionnaire, oral hygiene, periodontics, oral hygiene index.

Introduction

Oral diseases have high prevalence and incidence globally, thus constitute a major public health problem.¹ Age, gender, Socioeconomic status, marital status, lifestyle behavior, education have been found to have a significant impact on the oral health. ² In countries like India, it is seen that more men seek medical help when compared to women. This disparity can be attributed to our social fabric, in which men are given more importance in all the spheres and accordingly their health gets more medical attention.³ Middle-aged women manifest increased susceptibility for developing plaques, gingivitis, periodontitis, and reduced tooth anchorage. Women often show lack of utilization of health services owing to their health attitude, poor accessibility, and affordability of services.³ Unavailability of time and workplace-home imbalance can also be a factor affecting the oral health related behavior and practices of women. In the present study, an effort has been made to identify and understand the existing differences in the oral health related behavior and practices of working and non-working adult women. Understanding oral beliefs and behaviors differences between working and non-working women can be beneficial to the community health care providers. This understanding would help health care policy makers to better appreciate the beliefs and behaviors, which would lead to better allocation of effort and resources to the areas needed most. Since there is no published studies found to address the differences in beliefs and consequently behaviors among working and non-working Indian female population, this study come to shed light on this aspect.

Materials and Method

A questionnaire-based survey was conducted amongst 300 married female participants aged 18 years or more (111 working women and 189 non-working women). The samples were heterogeneous group from different occupation and economic status. The study was conducted for the duration of 3 months from August 2021 to October 2021 at Department of Periodontics, Mansovar Dental College and Research Center, Bhopal (MP), India. Based on the preliminary discussion with the women, a structured interview questionnaire was developed. The pre-tested self-administered questionnaire consisted of 12 items assessing the general and oral health related behavior and practice of working and non-working married women (table 2). The questions were close ended. A pre-designed proforma was utilized for the recording the Oral Hygiene Index score of

the participant. The sample size calculation was done using G* power software. The sample size was calculated assuming effect size- 0.5; proportion p1- 0.5; α error probability; power- 0.80; allocation ratio- $N1/N2 - 1$.

The minimum required sample size was 128 (64 in each group). Thus, the number of participating females was more than minimum required. The participants were allocated to the groups based on their working status using quota sampling technique. The inclusion criteria were female, aged 18 years or above, married, ability to read and write. The working women included those having job (private or government) or entrepreneurship and who work outside the home for income in addition to the work they perform at home in raising their children.⁴ The study was approved by the Institutional ethical committee. Participants provided written consent before starting interview. Confidentiality of information was maintained. The data was entered into the excel sheet. The data was analyzed using SPSS (Statistical Package for Social Sciences) 20.0 version. The data was analyzed for probability distribution using Kolmogorov-Smirnov test, p value<0.05 indicated that the data was not normally distributed. The inter-group comparison of the continuous variables was done using Man-Whitney U test and comparison of categorical variable was done using Chi-square test. p value<0.05 was considered statistically significant. Confidence interval was set at 95%.

Results

The study assessed the difference in the health related behavior of working and non-working married women in India. Altogether, maximum participants in both the groups reported to sleep for 7 or 8 hours (81% & 85.7% in group 1&2 respectively). The habit of having daily breakfast was found to be less in Indian females, 72.0% & 97.2% females in group 1& group 2 respectively, skip there breakfast either always or sometimes and the working women (27.9%) were significantly more disciplined in having breakfast (never/rarely skip breakfast) as compared to non-working women (2.6%) [Chi-square value- 42.485, p value<0.001]. The frequency of consumption of food in between the meals was very less. No participant (0%) in either of the groups reported to eat "almost every day" between the meals. On comparing between the groups the number of participants 'sometimes' eating between the meals was significantly more in group 2 (70.4%) and those eating rarely between the meals was significantly more in group 1 (63.1%) [Chi-square value- 32.088, p value<0.001]. Amongst Indian females, lack of physical exercise was found to be more prevalent (51.7% females including both the groups reported 'no physical exercise).

A significantly greater proportion of working women (42.3%) reported themselves to engage 'sometimes' in physical exercise as compared to non-working women (28.0%) [Chi-square value- 13.540, p value<0.001] The number of tobacco users was significantly greater in group 1 (65.8%) as compared to group 2 (21.7%) [Chi-square value- 57.654, p value<0.001]. None (0.0%) of the participants in either group reported to consume alcohol. The tendency to tolerate the pain rather than visiting the dentist in order to cope up with toothache was more prevalent amongst Indian married women, where 73.3% including both the groups reported not to visit the dentist. Amongst those who visit the dentists, the number of non-

working women (82.9%) was significantly high as compared to working women (17.1%) [Chi-square value-20.511, p value<0.001]. Amongst all, 60.0% of the participants brush teeth only once or less. The number of participants brushing 'three times' daily was significantly more in group 1(15.3%) as compared to group 2 (0.5%) [Chi-square value- 27.174, p value<0.001].

None (0.0%) of the participants were using inter-dental floss routinely. Regular dental visit was significantly less amongst working women (0.0%) [Chi-square value- 65.317, p value<0.001]. Amongst group 1 participants, highest percentage was of those who have not visited dentist in last one year (53.2%). The behavior of participants belonging to two groups, after a dental check-up did not differ significantly. Most of the patients said that they 'will certainly go' to the dentist for the treatment. On comparing the BMI of the patients, it was found that the BMI of working women was significantly more than the BMI of non-working women. The proportion of patients having BMI grade 3 was significantly more in group 1 as compared to group 2 [Chi-square value-37.142, p value<0.001]. The median OHI-S score of participants belonging to group 1 was 3.2 (2.6-3.7) and group 2 was 3.1 (2.4-3.75). This difference in OHI-S score was not statistically significantly [p value>0.05]. In both the groups, none of the participant had good oral hygiene (0.0%). More than 50% of the participants in both the groups had poor oral hygiene.

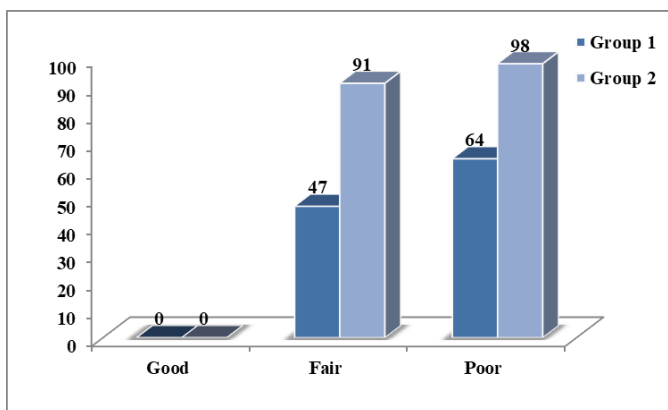


Figure 1. Comparison of OHI-S score of participants belonging to two groups

Table 1
Comparison of OHI-S score of participants belonging to two groups

Score	Group 1		Group 2		P value [∞]
	Median	Inter-quartile range	Median	Inter-quartile range	
Debris index-S	1.4	1.2-1.9	1.5	1.1-2.0	0.877
Calculus index-S	1.8	1.3-2.0	1.5	1.1-2.0	0.058
Oral hygiene index-S	3.2	2.6-3.7	3.1	2.4-3.75	0.295

[∞]Man-WhitneyU test. OHI-S- Oral Hygiene Index- Simplified

Table 2
Questionnaire responses assessment

Questionnaire	Variables	Options
1	In a day how many hours you sleep?	a-6 hours, b-7 hours, c-8 hours, d->9 hours
2	How often you skip breakfast?	a-always every day b- sometimes c- rarely or never
3	How often eat between meals?	a-almost every day b-Sometimes c- Rarely or never
4	Any physical exercise you do?	a-regularly b-Sometimes c-never
5	Any form of tobacco used?	Yes/No
6	Do you consume alcohol?	Yes/No
7	Do you know about these terms?	Calculus Yes/No
		Dental plaque Yes/No
		Dental floss Yes/No
		Gums diseases Yes/No
		Fluoride containing mouth wash Yes/No
		Temporomandibular disorder Yes/No
8	How you are cope with pain in gums and teeth?	a- Dental visit readily b- no dental visit tolerate the pain c- no answer
9	The frequency of tooth brushing per day	a- three times b- two times c <1 times
10	Use of interdental floss routinely?	Regularly/No use
11	Are you visit dentist in regular interval (dental visit during a past one year?)	a-Regular dental check-up b-Dental visit because of trouble with teeth c-No dental visit d- No answer.
12	Behavior after dental check-up?	a-Will certainly go for treatment b- Unsure of going for treatment c-Will not go for treatment d- No answer

Discussion

The present study was conducted amongst 300 participants to identify the differences in the health related behavior of working & non-working married women in India. Many studies have reported married working women to have better general health despite having dual roles and responsibilities; however, to the best of our knowledge, none of the study has been conducted to assess the oral health related behavior between the two groups. Thus, in the present study an attempt has been made to analyze the difference in the oral health related behavior between the working and non-working married woman. In this study we used Self-reported questionnaire since it is one of the most feasible method to gather information by a large population.⁵ The results of the study showed that overall, 34.7% respondents did not have breakfast. Due to morning hour rush the respondents may lacked the time for a proper breakfast.⁶ The results of the present study showed that the breakfast consumption was significantly more regular amongst working women as compared to non-working women. Tiwari S et al. (2018) also reported that the more working women have breakfast compared to non-working women. This can be attributed to the prompt consumption of convenience food by the working women and to the scheduled life of working women.⁷ A study done by Joglekar A (2013) found that the working women were more inclined towards convenience food as compared to non-working women.⁸ In the present study, eating of in-between meal snacks was more common amongst non-working women as compared to working women. It may be because of close proximity of non-working women to the kitchen.

However, Priyadarshini V (2016) reported in between meal snacking to be common amongst working women. She found that 14.55 per cent of the working women and 38.18 per cent of the non-working women reported to have no snacks in between meals in a day.⁶ The physical exercise was done by less than 50.0% of respondents. Panigrahi A et al. (2014) also reported that 80% of married women did not spend any time for yoga/meditation/exercise. The physical exercise was performed more commonly by working women as compared to non-working women. The performance of physical exercise can be an effort made by working women to combat their stress.⁹ It was documented by Oraon KC & Kumari R (2019) that the stress amongst working married women was high as compared to non-working married women.¹⁰ Shukla S et al. (2017) also reported greater stress amongst women was high as compared to non-working married women.¹¹ Physical exercise is known to be effective in stress management.¹² The greater stress level in the working women compared to the non-working women can also be the reason for the greater tobacco consumption by them.¹³ No woman divulged to consumption of alcohol in the present study. Although many surveys revealed that in India women consume alcohol as a coping mechanism to stress, depression, loneliness anxiety, pain, physical and mental trauma and to cope with the needs and pressures of fast paced life.¹⁴ There is a great possibility that the females had hid their history of alcohol consumption as alcohol consumption by women is still culturally not acceptable in India. It was seen in this study that the greater proportion of non-working women compared to working women was more prompt in visiting dentist on having dental pain.

This difference may be because of availability of time. Women seemed to be more sensitive to travel time to the health service.¹⁵ Present study revealed that 73.3% including both the groups reported not to visit the dentist and preferred to tolerate pain rather than to visit dentist. Females have higher dental fear, and are dependent on other family members on matters related to decisions making about visits to the dentists. These can be the reasons for the overall lower rate of dental visit by females in India.¹⁶ In the present study nearly, 40% of the married women were found to brush teeth 2-3 times daily. However, amongst general population (including both males and females) in India it was found that nearly 60% people brush teeth twice daily.¹⁷ Oberoi SS et al. (2014) reported that 50.9% females (including both working and non-working) in India brush their teeth twice daily.¹⁸ The lesser frequency of brushing in the present study as compared to other studies can be attributed to the marital status of the study population and thus lack of time due to added responsibilities.

In the present study, on comparing between the working and non-working women, the proportion of non-working woman brushing twice or more daily was greater as compared to the working women. Being homemakers, non-working women have flexible daily routine and are thus more promoted towards higher teeth cleaning behavior.¹⁹ The present survey was found to raise the awareness amongst the respondents. As a response to question regarding visit to dentist on experiencing pain, 73.3% women reported that they preferred to tolerate pain, however, by the end of survey 63.3% respondents said that they 'will certainly go' to the dentist for the treatment. According to Dholakia PM & Morwitz VG (2002) surveys engage people; a single yes-or-no question on a direct-mail envelope can induce them to look inside and thus help in raising awareness.²⁰ In the present study the BMI of working women was significantly more than the BMI of non-working women. However, Sharma L & Chaudhary D (2020) reported no significant difference in the BMI of working and non-working woman.²¹ Gouda J & Prusty RK (2014) reported that as compared to working women, non-working were more likely to be overweight or obese than working women.²²

This difference in the finding can be attributed to the difference in socioeconomic backgrounds of the study populations in different studies. In the present study socioeconomic status was not consideration which is a limitation of the study. In the present study, oral health related behavior have been described, however, an attempt should also be made to analyze the reason behind the exhibited behavior. The impact of the socioeconomic status, parenthood, psychological well being, locality, availability of dental health facilities should also be evaluated. None of the participants in the present study was found to have good oral hygiene and more than 50.0% of the patients were having poor oral hygiene. It is an observation needing attention. The reason behind poor oral hygiene should be evaluated and steps must be taken to raise awareness and to motivate them to adopt good oral hygiene practices amongst married women in India.

Conclusion

It can be concluded that the oral health related behavior of the working and non-working married woman differ significantly.

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