

Oral Health Beliefs & Dental Caries Status Among Bank Employees, Of Different Socio Economic Classes, Of Guntur City, Andhra Pradesh: A Cross Sectional Study

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ABSTRACT

Background: To assess the prevalence of oral health beliefs & caries experience among bank employees of different socioeconomic classes in Guntur city, Andhra Pradesh.

Materials & Methods: A cross-sectional study was conducted on 109 randomly selected bank employees, from various randomly selected banks in Guntur. A pretested questionnaire was designed to elicit their oral health beliefs and dental caries experience using DMFT index.

Results: The prevalence of caries was 58.71%. 100% of upper class participants had a negative belief on causation of caries and extraction. Chi-square & ANOVA tests were used to determine the association between the socio-economic status, caries experience and oral health beliefs.

Conclusion: The subjects had considerable belief in myths & false perceptions regarding oral health issues which differed accordingly with socioeconomic status.

Keywords: Oral health beliefs, Socio-economic status, bank employees.

INTRODUCTION

Oral health is an important part of general health and may be defined as the 'standard of health of the oral and related tissues which enables an individual to eat, speak and socialize without active disease, discomfort or embarrassment and which contributes to general well-being' (Department of Health, 1994).^[1] Over the last few decades there have been improvements in oral health in India. However, inequalities in oral health exist throughout the region. Poor health precedes socioeconomic position in the causal pathway, and

then there would be little point in addressing socioeconomic factors to reduce socioeconomic inequalities in health.

There has been a reduction in the prevalence of dental caries in both developed and developing countries. However, the prevalence remains high among populations of low socioeconomic status. Therefore, socioeconomic indicators are associated with risk factors for dental caries. Socially disadvantaged individuals also experience disadvantages with regard to health in general. The greater frequencies of disease in small

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population groups are known as polarization. The association between the relative position each social group occupies and differences in the risk for various health conditions and in access to healthcare services makes social stratification a determinant of these conditions.^[2]

Each culture has its own system of beliefs (Helman 1990), a collection of beliefs, perceptions and ideas about health and illness, which underpin the health related behaviors. An understanding of relevant health belief systems is crucial in developing culturally sensitive health promotion programmes.(Lee et al, 1993; Brown and Williams 1994)^[3]

The oral diseases are associated directly to people with behaviour of not practising proper oral hygiene, also resulting into the bad breath. Many people are not aware of proper tooth brushing being the good preventive measure of their oral diseases. Their attitude toward brushing is only for cosmetic purpose. Further more people have no behavior of visiting dental clinics for general check up. They believe that the sign of dental diseases is painful tooth/teeth, and treatment available to dental clinic is only extraction. There are no studies relating the oral health beliefs with the dental caries experience among the socio-economically varied groups of bank employees.

Hence, a study was conducted to assess the influence of socioeconomic status on the knowledge, attitudes of the bank employees towards the dental problems and dental visits, and their dental caries experience. After collecting data from the subjects, the task forward will be improving on education on dental services. This will enhance awareness, positive attitude and utilization of dental services among the bank employees. There is a big task for dentists to create awareness regarding the dental diseases and educate the community on the different types of dental services provided and their importance in improving oral health.^[4]

MATERIALS AND METHODS

This cross-sectional, single-blind survey took place over a period of approximately one month (July– August, 2013) in Guntur city among a representative sample of bank employees. This

population is considered representative in terms of geographic and cultural variables. Permission to carry out the survey was obtained from the bank managers of the respective banks. A pilot study was conducted on the bank employees of 2 banks located near the institution.

Sample

A convenient sample of 109 bank employees aged 18 to 60 years in Guntur town were considered for the study after taking informed consent. Of total 185 banks in Guntur district, 12 banks were selected by simple random sampling (lottery method). All the employees including managerial, official and clerical staff of the selected banks present on the day of data collection were included.

Data collection:

Due permission was obtained from the bank managers before initiating the study. After taking informed consent from the subject, a self-designed, pre-tested, close-ended questionnaire consisting of two parts, in which Part-I consisted of format for recording socioeconomic status, demographic data and Part –II consisted of 5 sets of questions on a dichotomous scale which were prepared in simple words in two languages, i.e., English and Telugu, for easy understanding of the participants. The first set of questions dealt with beliefs regarding dental caries (Q1 – Q3), second set regarding gum diseases (Q4 – Q6), third set regarding dental treatments (Q7-Q11), fourth set regarding visit to a dentist (Q12-Q14), fifth set regarding the oral health problems (Q15- Q18). For assessing socioeconomic status, the necessary information regarding education, occupation, annual income was obtained and divided accordingly from class I to class V, using Modified Kuppaswamy's socioeconomic status scale^[5]. The investigator was blinded to the questionnaire filled by bank employees. The type III clinical examination was carried out in the bank premises where there was good day light illumination, during working hours of bank, to record their DMFT scores.

Statistics:

Chi-square & ANOVA tests were used to determine the association between the socio-economic status,

caries experience and oral health beliefs. "P" value of less than 0.05 was accepted as indicating

statistical significance with confidence intervals of 95%.

QUESTIONNAIRE

Part I – General Personal & Professional Information

Name of the bank & branch / బ్యాంకు పేరు మరియు బ్రాంచి :

Name of the employee / ఉద్యోగి పేరు :

Age / వయస్సు :

Sex / లింగం :

Education / విద్యార్హత :

Occupation / వృత్తి :

Annual Income / వార్షిక ఆదాయం :

Work experience / వృత్తి అనుభవము :

Socio-economic class :

PART II – ORAL HEALTH BELIEFS

I. Beliefs regarding dental caries :-

1. Do you believe that dental caries is caused by "Worms"?
☐ Yes ☐ No
2. Do you believe that it is important to prevent decay in primary teeth?
☐ Yes ☐ No
3. Do you believe that sweet foods cause dental caries?
☐ Yes ☐ No

II. Beliefs regarding Gum Diseases :-

1. Do you believe that swelling of the gum results from intense heat or flaring fire in the stomach?
☐ Yes ☐ No
2. Do you believe that tooth brushing stops gum problems?
☐ Yes ☐ No
3. Do you believe that bleeding from the gums is common during brushing?
☐ Yes ☐ No

III. Beliefs regarding dental treatments :-

1. Do you believe that tooth extraction affects the eye vision?
☐ Yes ☐ No
2. Do you believe that dental diseases are curable solely by medicines?
☐ Yes ☐ No
3. Do you believe that professional dental cleaning causes loosening of teeth?
☐ Yes ☐ No
4. Do you believe that dental treatments are expensive?
☐ Yes ☐ No
5. Do you believe that dental procedures are always painful?
☐ Yes ☐ No

IV. Beliefs regarding visit to a dentist :-

1. Do you believe that visiting a dentist can reduce dental problems?
☐ Yes ☐ No
2. Do you believe that personal preventive practices could render visits to the dentist unnecessary?
☐ Yes ☐ No
3. Do you believe that visiting the dentist is only necessary when experiencing dental pain?
☐ Yes ☐ No

V. Beliefs regarding Oral Health Problems :-

1. Do you believe that Oral Health Problems are as important as other health problems?
☐ Yes ☐ No
2. Do you believe that dental problems could affect your appearance?
☐ Yes ☐ No
3. Do you believe that dental problems can be serious if neglected?
☐ Yes ☐ No
4. Do you believe that tooth loss is an outcome of ageing only?
☐ Yes ☐ No

RESULTS

Demographic characteristics:

The mean age of the study population is 40.74 ± 11.83 years. The study participants comprised of 71.55% males (78) and 28.44% females (31) with mean age of 38 years [Table 1]. Although participation was nonobligatory, response rate was 100%. Based on Modified Kuppaswamy's socioeconomic status scale, 36.69% (40) study subjects belonged to upper class (class I), 54.12% (59) belonged to upper middle class (class 2), and 9.17%(10) belonged to upper lower class & lower class (class 3 & 4).

Table 1: Distribution of study subjects according to their age and gender.

AGE	GENDER		TOTAL
	MALE	FEMALE	
19-29	18 (75%)	6 (25 %)	24
30-39	22 (78.5 %)	6 (21.5%)	28
40-49	10(58.8%)	7 (41.2 %)	17
50-59	28 (70%)	12 (30%)	40
TOTAL	78 (71.55%)	31 (28.44%)	109

Table 2: Distribution of study subjects according to their socioeconomic status.

GENDER	SOCIO ECONOMIC STATUS			TOTAL
	Class I	Class II	Class III & IV	
MALE	23(29.48 %)	48 (61.53%)	7(8.97%)	78
FEMALE	17(54.83 %)	11(35.48 %)	3(9.67%)	31
TOTAL	40(36.69%)	59(54.12%)	10(9.17%)	109

Table 3: Caries status of the study subjects according to gender.

GENDER	DMFT		TOTAL
	Caries status (DMFT = 0)	Caries status (DMFT ≥ 1)	
MALE	33 (42.3%)	45(57.6%)	78
FEMALE	12(38.7%)	19(61.29%)	31
TOTAL	45(41.28%)	64 (58.71%)	109

Chi-square value = 0.118 P value =0.731; NOT SIGNIFICANT

Fig 1: Caries status in the study subjects according to their gender.

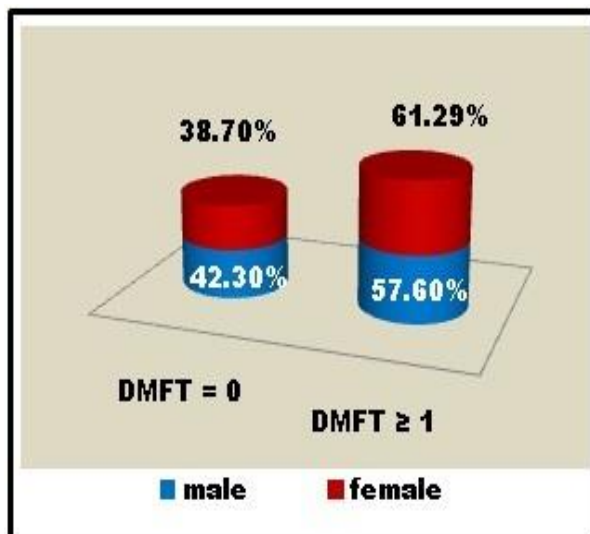


Fig 2: Caries status in the study subjects according to their socioeconomic status.

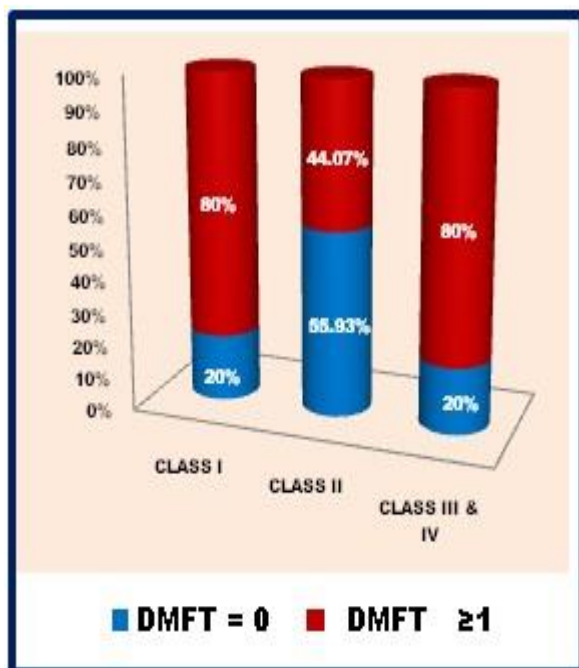


Fig 3: Percentage distribution of Questionnaire response (Yes) of sample according to socioeconomic status.

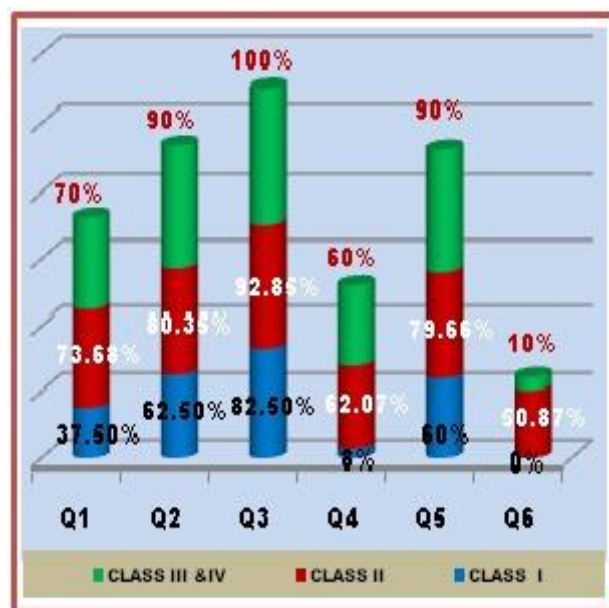


Fig 4: Percentage distribution of Questionnaire response (Yes) of sample according to socioeconomic status.

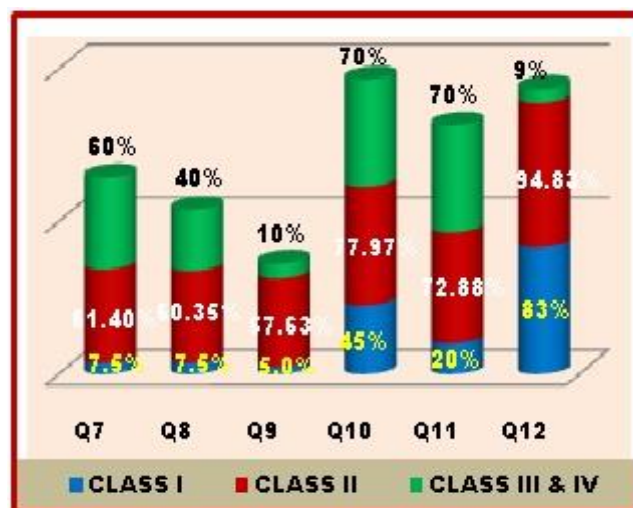


Fig 5: Percentage distribution of Questionnaire response (Yes) of sample according to socioeconomic status.

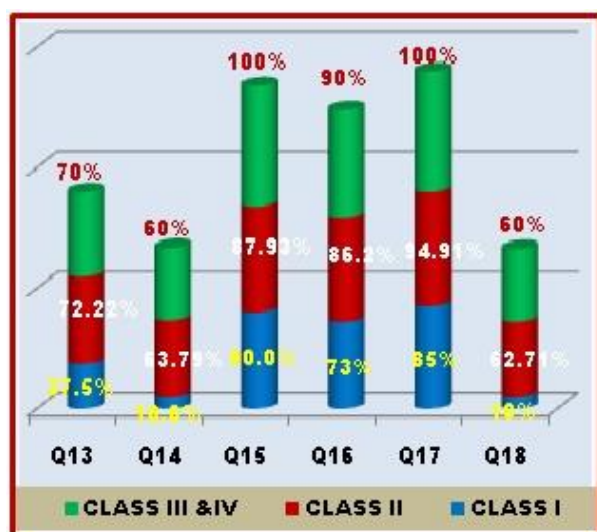
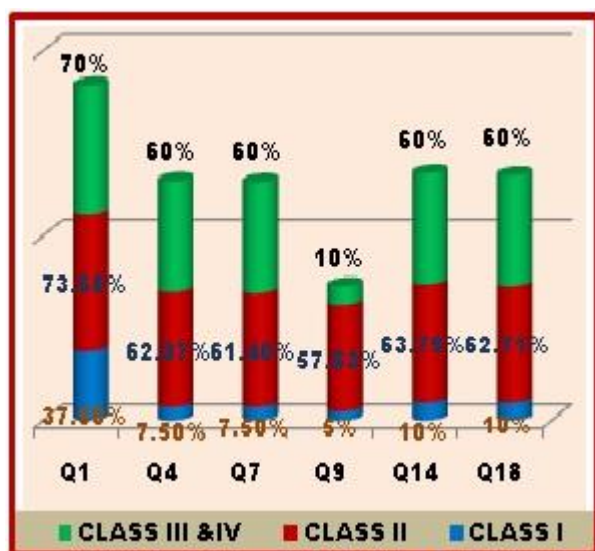


Fig 6: Percentage distribution of Questionnaire response (Yes) of most important beliefs of sample according to socioeconomic status.



The majority of the participants were males (71.55%) and in the age group of 30-39 years (78.5%). [Table 1]. The majority of the male participants 48 (61.53%) belonged to Socioeconomic Class II & majority of the females 17 (54.83%) belonged to Socioeconomic Class I. [Table 2]. The prevalence of caries was high among females (61.29%), but the difference was not statistically significant. (Fig.1). The prevalence of caries was high among Class I and Class III & IV. (Fig. 2).

The "Yes" response to the questionnaire regarding the beliefs about the dental diseases and visits to the dentist was maximum among the socioeconomic class III & IV for the questions 2,3,5,15,16,17 whereas the "Yes" response was maximum among the socioeconomic class II for the questions 1,4,6,7,8,9,10,11,12,13,14,18. (Fig.3,4,5) There was a statistically significant difference in the response to all the questions among the different socioeconomic classes.

The "Yes" response, to the most important and commonly followed beliefs (Q1,4,7,9,14,18) regarding the dental diseases and dental care, shows the highest response among socioeconomic class II followed by class III & IV, and the difference is statistically significant. (Fig.6)

DISCUSSION

Oral hygiene awareness and practices may differ from country to country and community to community depending on traditional beliefs and socio-economic development. The ageing population was targeted as they would reflect locally held beliefs compared to youth. Cultural barriers remain a strong deterrent for accessing the health care. Different cultures bring with them, a host of taboos, mores and beliefs that may hinder utilization of dental care. Dental anxiety and beliefs play a major role in a patient seeking dental care and there is a need for a reliable and cost-effective, culturally appropriate instruments to measure dental beliefs in this important population. There is paucity of information on the prevalence of oral health beliefs and dental caries among bank employees at global level. Hence, this study was conducted to evaluate the role of socioeconomic status and the implication of results in understanding the public perception of oral health among bank employees in Guntur city, Andhra Pradesh, India. In the present study, caries prevalence was 57.6% among males and 61.29% among females. 80% caries prevalence was seen among socioeconomic class III. The overall prevalence of dental caries was 58.7% which is less than that in the study by Aswini Y. Balappanavar et al³ in which it was 86.5%. The overall prevalence of dental myths was 60.8% in the present study which is less than that in the study by Saumyendra et al⁴ where it was 81%. This low prevalence of dental

myths in the present study might be attributable to the social desirability in answering the questionnaire. 60.5% had a misbelief that dental caries is caused by “worms”, out of which majority of them belonged to SECII. Though 75.2% agreed that the primary teeth are important only 11% of SEC III were aware of the importance of primary teeth. 89.9% agreed that sugars are responsible for dental caries, but only 10.2% of them belonged to SEC III. Only 42% believed that the swelling of the gums result from stomach problems, out of which 6.5% were from SECI and 13% were from SECIII. 73.4% had a positive thought that tooth brushing prevents gingival problems, but this was seen only in 11% of SEC III. 70% of them felt that bleeding from gums during brushing is an abnormal finding, out of the 30% who felt bleeding is a common finding during brushing, majority (96%) of them belonged to SEC II. Regarding the beliefs about the dental treatments, 42% believed that tooth extraction affects the eye vision, out of which 80% belonged to SEC II. Although only 40% believed that dental diseases are curable only by medicines, 83% of them belonged to SEC II. 66% of the participants have a positive thought about professional cleaning of teeth, 91% of those who believe that cleaning causes loosening of teeth, were SEC II. 65% of the bank employees felt that the dental treatment is expensive, out of which 64% were from SEC II. 53.2% of the participants felt that the dental treatments are always painful, 62.7% of SEC I felt they are not painful. This shows the social desirability in answering the questions among the different socioeconomic classes. It is appreciating response that 90% of them agreed that visiting a dentist might reduce the dental problems. But, 60.5% of them believed that personal preventive practices can prevent dental visits. Though 56% of them agreed that dental visits should not be only when experiencing pain, majority (79%) of SEC II participants felt that dental visit is necessary only when experiencing pain. 86.2% believed that oral health problems are as important as the other health problems, out of which 55% were from SEC II. 81% agreed that dental problems affect the esthetics, in which 57% were from SEC II. This shows that SEC II were more conscious of the dental aesthetics. 91% of the participants agreed that dental problems might become serious if not treated and in this, 56% of them were SEC II, this shows that SEC II believed that the dental problems

if not treated at an earlier stage, might become serious and the further treatments might require higher expenditure. Majority (56.8%) of the participants opposed the belief that tooth loss is an outcome of ageing only, while 78% of the SEC II participants accepted the belief. The most common beliefs which showed a statistically significant difference in their response among the different socioeconomic classes were regarding the causation of dental caries, causation of gingivitis, loss of eye vision due to extraction of tooth, loosening of teeth due to professional cleaning, importance of oral health problems in similar with other health problems, and finally tooth loss as an outcome of ageing only. The present study showed that the majority of the beliefs are seen among the SEC II, as these participants might not be aware of the various oral health issues and might be having social and cultural beliefs regarding the oral health.

CONCLUSION

The subjects had considerable belief in myths & false perceptions regarding oral health issues which differed accordingly with socioeconomic status. The high prevalence of dental myths would prevent such individuals from obtaining appropriate dental care, even if made available to them. A concerted effort to achieve better dental education in these ageing populations should be made by organising awareness programmes, considering that such individuals may be incapable or unwilling to commute for economic, motivational and health related causes.

CONFLICT OF INTEREST

No potential conflict of interest relevant to this article was reported.

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