

Assessment of Knowledge And Attitude Regarding Dental Insurance Among General Population In Mumbai Region –A Cross-Sectional Survey

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Abstract

Background: In India, the dental health insurance remains in its nascent stage with very few insurance companies providing the service. The available options in market generally cover the costs arising due to a dental emergency/ accidents, whereas routine dental ailments are usually left out.

Aim: This study aims to assess the general adult population's knowledge and attitude towards dental insurance residing in Mumbai and Navi Mumbai cities.

Material and methods-Present study was a cross-sectional questionnaire-based survey study conducted among 384 literate people in the age group of 18-70 years in Mumbai and Navi Mumbai by administering a self-designed pretested questionnaire consisting of 15 questions. Data

were analysed using SPSS (V-22.0IBM) software and association of two variables was done using Chi-square test keeping alpha error at 5%, beta error at 20% and power at 80%, p-value <0.05 was considered statistically significant

Result: 54.3% were not aware of any dental insurance policy in India, overall 78.4% of people felt the need of dental insurance in India and this was statistically significant with age (0.007) and gender (0.001).69.8% of people could pay for the dental insurance as low premium of 0-500/month.77.1% were ready to get themselves insured which showed significant association with age(0.017), gender(0.003) and KP Score(0.003).52.2% preferred to get themselves insured under public sector showing Significant association with KP score (0.001)

Conclusion- The present study throws light on the fact that the though people are still not well aware of the dental insurance policy but they open to the fact that one needs dental insurance and they understood that dental insurance would help them seek better dental care.

Keywords: dental, insurance, knowledge, utilization

Introduction

Good oral health translates to good health overall. Neglecting oral hygiene can result in many systemic diseases. So it is important to visit the dentist regularly to ensure good oral health. But the sole problem is paying out-of-pocket for regular dental check-ups which prove to be expensive. The prohibitive cost of dental treatment has become a hindrance that deprives individuals of promptly availing the services from qualified clinicians [1] [2] Some individuals do have dental insurance coverage through their jobs except for most, only the medical expense may be partly covered by self-bought insurance plans while dental expenses are left to be paid from one's pocket. Paying the full price for dental treatment can be overwhelming and challenging, especially if major dental work needs to be done. [2]

The World Health Organization advocates for universal dental coverage as a way to make sure that everyone can access medically necessary care. Dental coverage eliminates the cost barriers that prevent individuals from accessing care. A systematic review and meta-analysis report stated that dental insurance has a significant effect on increasing utilization in dental care. [3] Unlike the western countries, we don't have any assistance to alleviate this problem in the form of dental insurance. In India, the dental insurance sector is still at its nascent stage. Here the oral health is normally integrated with general insurance schemes and most of the insurances fail to highlight the oral health coverage [4] [5]. This study was done to understand the awareness among the general

adult population regarding the utilization of services and their knowledge and attitude towards the dental insurance

Methods and Materials

A. Study Setting

The present cross-sectional study was conducted to assess the knowledge and attitude of the general adult population about dental insurance residing in Mumbai and Navi Mumbai cities, Maharashtra, India

B. Study Population

The study population consisted of both educated males and females aged above 18 years residing permanently in Mumbai and Navi Mumbai cities.

C. Inclusion Criteria

General adult population residing in Mumbai and Navi Mumbai cities aged 18 years and above who were willing to participate in the study were included.

D. Exclusion Criteria

The exclusion criteria were as follows:

- Those who refused to participate in the study
- The age of the person less than 18 years of age
- Those who were no longer residing in Mumbai and Navi Mumbai

E. Sample Size

Sample size was determined using the estimates from the parent article & using a single proportion formula as

$$n = \frac{1.96^2 p(1-p)(DEFF)}{d^2}$$

Where p = Estimate of the expected proportion

d = Desired level of absolute precision

Assuming the current error prevalence/event rate to be at least 50% and keeping 5% confidence limit, for p = 0.05

$$\begin{aligned} n &= \frac{1.96 \times 1.96 (0.5 \times [1 - 0.5])}{0.05 \times 0.05} \\ &= 384 \end{aligned}$$

F. Ethical Approval

The ethical approval was obtained from the Institutional Ethics Committee of YMT Dental college and hospital, Kharghar, Navi Mumbai numbered as 04/IRB/YMTDC/2019. The people participating were asked to sign a consent form before they filled the questionnaire. Only the people who consented were asked to fill the questionnaire.

G. Methodology

The questionnaire consisted of 15 self-structured questions to assess the awareness, attitude toward dental insurance, and utilization of dental services and distributed in the form of hard copies and Google forms to literate adult individuals. Before administering the questionnaire a pilot survey was conducted to validate the questions. The questionnaire was divided into two sections –section I consisted of demographic details that include age, gender, and socioeconomic details and section II included multiple choice questions assessing the awareness, attitude of individuals towards dental insurance, and utilization of dental services. The data thus collected was compiled on the MS OFFICE Excel sheet and assessed using SPSS software (V-22.0IBM). Association of responses with independent variables was performed using the CHI-SQUARE TEST. Significant p values were set to < 0.05.

Result and Discussion

A. Result

This study was done to assess the knowledge and attitude towards dental insurance and the awareness of the utilization of dental services. The overall response rate was 63.5%. Out of the total study population, 51.8% of the participants belonged to 18-27 years and only 3.3% of participants belonged to 58-67 years of age. In the study group 155(63.3%) of the participants were females and 90(36.7%) were males. Participants when classified according to Kuppuswamy classification, 63.3% belonged

to Class II, followed by 33.5% in Class I and 3.3% in Class III (Table I)

More than one fourth of the participants visited the dentist last year (28.6%) followed by 22.4% who visited the dentist 3-6 months back based on the age. A significant association with gender (0.049*) was found. The most common response to the reason for their visit was cleaning of teeth (41.6%), followed by pain (34.3%). Here the significant association was found with age (0.001*) and gender (0.004*).

Majority of them felt the need to visit a dentist at least once a year for regular check-ups (86.9%). Here the association was significant with age (0.001*) and gender (0.001*). The ones (12.7%) who disagreed to this gave the reasons as it is unnecessary and waste of time (3.7%) and they could take care of their teeth (7.3%).

Seventy-one per cent of the participants in this study preferred to get their dental treatment done at a private clinic which was found to be significant with the KP score (0.012*). The reason 35.9% gave was that it is convenient for them to get treated there which was significant with age (0.046*).

Less than half of the participants (40.8%) were aware of the availability of public dental services near them. This is significantly associated with age (0.001*).

When questions about their attitude and knowledge towards dental insurance were asked the following was found. 133 people (54.3%) were not aware of dental insurance policy available in the market. But when asked about their opinion on it needing in India 78.4% of the total study group positively responded. This was found to be significant with age (0.007*) and gender (0.001*). On asking them about the premium which they can pay for the dental insurance 69.8% responded that they wanted a low premium of 0-500/month.

Most of them (95.1%) were not aware of the names of the companies providing dental insurance. Only 4.9% were aware about the dental insurance policies available in the market (Fig 2). Out of all their responses the correctly identified were ICICI Lombard health insurance (9%), ICICI prudential health saver insurance (9%), oriental life insurance (19%), United India health insurance (9%), SBI LIFE smart INSURANCE (18%) and LIC lifesaver plus (9%) [6][7] [8]. When asked that if given a choice would they get themselves insured, 77.1% responded in affirmation here the significant association with age(0.017*), gender(0.003*), and KP Score(0.003*) was found. Majority (86.1%) participants agreed that with the help of dental insurance they will be able to seek dental treatment better in future here too the significance was found in relation with age(0.017*) and gender(0.035*) (Fig 1). Fifty-two per cent of participants preferred to get themselves insured under the public sector followed by the 32.4 % in private sector (Fig 3). A significant association with the KP score (0.001*) was found. Nearly half of the participants were consented to be called by us in future (56.3%) which was found to be significant with age (0.001*), gender (0.001*), and KP score (0.001*).

B. Discussion

In India when we talk of stand-alone dental insurance plans, not many options are available. Here dental insurance is often integrated with health insurance but very few people are aware of it. [9] With this study we tried to assess the knowledge and awareness that people have towards dental insurance and how accepting they are to discuss it in the future. Unlike most studies that focus on the dentist's perspective, this study focuses on the general population as a whole as it becomes important to know the public's view if we are to introduce dental insurance to them in the future. The questionnaire of this study was self-structured / customized after the literature

search. It was content and face validated. The questionnaire was pilot tested. The response rate was 65.5% which was low in comparison to the studies based on the dentist's perspective by Joshi et al which had a 100% response rate. [10] In our study, 28.6% of the participants had visited the dentist a year back whereas in a study done by Kakatkar et al [11] 15.5% people visited the dentist a year back and study done by D. Locker et al. [12] 23.9% of participants had visited a dentist in less than a year. The difference in the percentages could be due to different dental needs of the population which again could be influenced by the location, age, gender, education, and socioeconomic status. In the present study 86.9% of people felt the importance of visiting the dentist annually for regular check-up. This shows that people value their teeth and they also believe in prevention rather than just cure. This finding is similar to a recent survey conducted on oral health and dental insurance awareness by Subhash Nagpal et al [13], where 92% of the people agreed to go for regular dental check-ups and preventive treatment if it is covered under insurance. In this study, 71% of people preferred private clinics over public hospitals and multispecialty clinics. On asking them the reason for their preference the common answer was that it was convenient for them to go to the private clinic and get all the treatment under one roof. This shows that people believe in quality treatment which is less time seeking and available throughout the day. This finding here is similar to that found in Bailoor et al [14], where 73% people preferred private clinics for their treatment as limited treatment was available in government hospitals. In a study done by D. Locker et al, [12] 56.0%, were covered by employment-related private dental insurance, either their own or that of a family member, and 4.9 % had their dental care paid for by public dental programs or through social assistance or welfare provisions. The remainder,

39.1%, paid for their dental care out-of-pocket. In our study, 54.3% of people were not aware of dental insurance policy in contrast to 100% people not aware of it in Bailoor et al [14] and Subhash Nagpal et al [13]. The reason for this could be increased exposure of the people to the new advancements happening in the world via news, internet, etc. than the people in the other two studies. On asking their views on the need for dental insurance, 78.4% of people positively responded. This is in line with the studies done by Bailoor et al[14] and Subhash Nagpal et al[13], where 90% of people felt the need to implement dental insurance policy.

Also in parallel lines with the study done by Amanda et al [15] where 52% of the population feels that there is a need for a dental insurance plan and in Maniyar et al[5] where 3/4th of the uninsured study group felt the need of dental insurance.

However, when asked if they knew the name of any insurance company, surprisingly 95.1% said No and 4.9% said yes. It reflects poor knowledge, it could in a way reflect that people don't know as they don't feel the importance of health insurance but on another hand, it's surprising that in this era of the internet and so much information they have poor knowledge.

When the participants were further asked if they could name the insurance companies covering dental insurance, 4.9% responded to this and ICICI Prudential, ICICI Lombard, SBI Life, LIC Life were the answers that were received (Fig 2) [6].

When in a different study done by Joshi et al [10], a similar question was asked to the dentists only 51% of them were able to correctly identify the insurance plans providing dental insurance. This indeed shows the lack of awareness present in the dental professionals too as dental insurance is not discussed too much in our country.

In our study it was found that 77.1% of people were ready to get them insured for dental insurance policy and most of them wanted a minimal premium rate. It was also found that the majority of them wanted the public sector to come up with the insurance plan. This shows the people's trust and faith in the government sector. This is in line with the study done by Maniyar et al [5] where people were ready to get themselves insured if the premium rate was minimum.

In a Canadian study it was found that the lowest income group was most likely to be covered by public programs; these are variable and usually limited to emergency care only. Consequently, these programs are unlikely to ensure that the poor can maintain or improve their oral health [12] This is similar to the situation we have in India where the general health insurance that is available in the markets just focuses on emergency treatment and not on overall oral health also the schemes and medical health programs available for poor people do not focus on preventive treatments they are limited to the emergencies only.

Another study done in Canada revealed that individuals with dental insurance had more favourable oral health-related outcomes overall and across all income, education and age groups, after adjusting for covariates. Larger Marginal effects for dental insurance were observed for visiting the dentist for lower-income compared to higher-income quintiles, showing that the most financially disadvantaged groups would likely benefit the most if universal dental coverage were implemented [3]. So to benefit the Indian population's oral health, dental insurance will be the aiding source as the results from our study showed that people are open to the idea of having dental insurance in India if the premium rate is normalized and if the benefits of dental insurance are explained clearly to them.

Limitations of the study could be that participants did not represent equal gender and socio-economic status, also a study with a much larger sample representation would be better to conclude.

Legends Tables and Figures

Table 1: Demographic details of the participants

| S.N. | Variable Category | Frequencies | Percentage | Total N (%) |
|--------------------------|--------------------------|-------------|------------|-------------|
| Age in Years | 18-27(Group 1) | 127 | 51.8 | 245(100) |
| | 28-37(Group 2) | 44 | 18 | |
| | 38-47(Group 3) | 43 | 17.6 | |
| | 48-57(Group 4) | 23 | 9.4 | |
| | 58-67(Group 5) | 8 | 3.3 | |
| Gender | Male | 90 | 36.7 | 245(100) |
| | Female | 155 | 63.3 | |
| KP Classification (2019) | Class I (Upper) | 82 | 33.5 | 245(100) |
| | Class II (Upper Middle) | 155 | 63.3 | |
| | Class III (Lower Middle) | 8 | 3.3 | |
| | Class IV (Upper Lower) | 0 | 0 | |
| | Class V (Lower) | 0 | 0 | |

Table 2: Participants Response to Various Questions In Comparison With Age

| Questions | Responses | GR 1 N (%) | GR 2 N (%) | GR3 N (%) | GR 4 N (%) | GR 5 N (%) | Total N (%) | p value |
|---|-------------------------|---------------|---------------|--------------|---------------|---------------|----------------|--------------------|
| Q1. When was the last time that you visited a dentist? | Last Month | 32(64) | 6(12) | 6(12) | 5(10) | 1(2) | 50(20.4) | 0.352 [#] |
| | 3-6 Month Back | 28(50.9) | 10(18.2) | 11(20.0) | 6(10.9) | 0(0.0) | 55(22.4) | |
| | Last Year | 36(51.4) | 13(18.6) | 12(17.1) | 7(10.0) | 2(2.9) | 70(28.6) | |
| | Many Years Back | 22(44.9) | 11(22.4) | 9(18.4) | 2(4.1) | 5(10.2) | 49(20) | |
| | Never Visited | 9(42.9) | 4(19.0) | 5(23.8) | 3(14.3) | 0(0.0) | 21(8.6) | |
| Q2. What was the reason for your visit? | Pain | 30(35.7) | 19 (22.6) | 19(22.6) | 8(9.5) | 8(9.5) | 84(34.3) | 0.001* |
| | No Reply | 8(44.4) | 4(22.2) | 4(22.2) | 2(11.1) | 0(0.0) | 18(7.3) | |
| | Infection | 8(34.8) | 5(21.7) | 7(30.4) | 3(13.0) | 0(0.0) | 23(9.4) | |
| | For Cleaning the Teeth | 65(63.7) | 15(14.7) | 12(11.8) | 10(9.8) | 0(0.0) | 102(41.6) | |
| | Straightening the Teeth | 16(88.9) | 1(5.6) | 1(5.6) | 0(0.0) | 0(0.0) | 18(7.3) | |
| Q3. Do you agree that one should visit a dentist at least | Yes | 122(57.3) | 37(17.4) | 31(14.6) | 20(9.4) | 3(1.4) | 213(86.9) | 0.001* |
| | No | 5(16.1) | 7(22.6) | 11(35.5) | 3(9.7) | 5(16.1) | 31(12.7) | |
| | Maybe | 0(0.00) | 0(0.00) | 1(100) | 0(0.00) | 0(0.00) | 1(0.4) | |

| | | | | | | | | |
|--|-------------------------------------|-----------|----------|-----------|-----------|--------|------------|--------------------|
| once a year for regular check-ups? | | | | | | | | |
| Q4.If no, what is the reason? | Answered Yes | 119(59.5) | 26(13.0) | 30(15.0) | 19(9.5) | 6(3.0) | 200(81.3) | 0.001* |
| | It is unnecessary and waste of time | 5(27.8) | 6(33.3) | 5(27.8) | 1(5.6) | 1(5.6) | 18(7.3) | |
| | It is Expensive | 1(10.0) | 6(60.0) | 1(10.0) | 2(20.0) | 0(0.0) | 10(4.1) | |
| | I can take care of my Teeth | 3(16.7) | 6(38.9) | 7(11.1) | 2(8.3) | 0(0.0) | 18(7.3) | |
| Q5.Where do you prefer to go for your dental treatment? | Private Clinic | 97(55.7) | 33(19) | 25(14.4) | 14(8.0) | 5(2.9) | 174(71) | 0.179 [#] |
| | Public Institutions | 11(33.3) | 7(21.2) | 10(30.3) | 3(9.1) | 2(6.1) | 33(13.5) | |
| | Multispecialty Dental Hospitals | 19(50.0) | 4(10.5) | 8(21.1) | 6(15.8) | 1(2.6) | 38(15.5) | |
| Q6.What is the reason for getting treated there? | It is Convenient | 45 (47.9) | 20(21.3) | 13 (13.8) | 15 (16.0) | 1(1.1) | 94(35.9) | 0.046* |
| | Less Expensive | 7(58.3) | 1(8.3) | 4(33.3) | 0(0.0) | 0(0.0) | 12(4.6) | |
| | Less time Consumption | 3(15.8) | 5(26.3) | 4(21.1) | 5(26.3) | 2(3.3) | 19(7.3) | |
| | All Treatment under one roof | 35(58.3) | 9(15.0) | 10 (16.7) | 4(6.7) | 2(3.3) | 60(22.9) | |
| | Personalized Attention | 38 (49.4) | 13(16.9) | 18 (23.4) | 5(6.5) | 3(3.9) | 77(29.4) | |
| Q7.Do you have any public dental service available near you? | Yes | 62 (62.0) | 17(17.0) | 16 (16.0) | 4(4.0) | 1(1.0) | 100 (40.8) | 0.001* |
| | No | 37 (37.8) | 21(21.4) | 15 (15.3) | 18 (18.4) | 7(7.1) | 98(40.0) | |
| | Maybe | 28 (59.6) | 6(12.8) | 12 (25.5) | 1(2.1) | 0(0.0) | 47(19.2) | |

| | | | | | | | | |
|--|-------------|------------|-----------|-----------|-----------|---------|------------|--------------------|
| Q8.Are you aware of dental insurance policy? | Yes | 52 (53.6) | 19(19.6) | 13 (13.4) | 10(10.3) | 3(3.1) | 97(39.6) | 0.412 [#] |
| | No | 63(47.4) | 24(18.0) | 28 (21.1) | 13(9.8) | 5(3.8) | 133 (54.3) | |
| | Maybe | 12 (80.0) | 1(6.7) | 2(13.3) | 0(0.00) | 0(0.00) | 15(6.1) | |
| Q9.Do you think we need dental insurance in India? | Yes | 105 (54.7) | 33(17.2) | 30 (15.6) | 19(9.9) | 5(2.6) | 192 (78.4) | 0.007* |
| | No | 5(19.2) | 6(23.1) | 10 (38.5) | 2(7.7) | 3(11.5) | 26(10.6) | |
| | Maybe | 17 (63.0) | 5(18.5) | 3(11.1) | 2(7.4) | 0(0.0) | 27(11.0) | |
| Q10.How much | 0-500/Month | 81(47.4) | 32 (18.7) | 32 (18.7) | 18 (10.5) | 8(4.7) | 171(69.8) | 0.31 [#] |

| | | | | | | | | |
|--|-----------------|-----------|-----------|-----------|-----------|---------|------------|--------|
| premium will | 800-1000/Month | 39(68.4) | 8(14.0) | 6(10.5) | 4(7.0) | 0(0.0) | 57(23.3) | |
| you be ready to pay? | 1000-2000/Month | 6(37.5) | 4(25.0) | 5(31.3) | 1(6.3) | 0(0.0) | 16(6.5) | |
| Q15a.Do you give consent to be contacted by us in the near future? | Yes | 90 (65.2) | 22 (15.9) | 16 (11.6) | 8(5.8) | 2 (1.4) | 138 (56.3) | 0.001* |
| | No | 37(34.6) | 22 (20.6) | 27 (25.2) | 15 (14.0) | 6 (5.6) | 107 (43.7) | |

GR1=Group1(18-27years),GR2=Group2(28-37years),GR3=Group3(38-47years),GR4=Group4(48-57years),GR5=Group5(58-67 years); *statistically significant; # statistically not significant ;N(%)=Frequencies(%)

Table 3: Participant’s response to various questions in comparison with Gender

| Questions | Responses | Male N (%) | Female N (%) | Total N (%) | p value |
|--|---------------------------------------|------------|--------------|-------------|---------|
| Q1. When was the last time that you visited a dentist? | Last Month | 11(22.0) | 39(78.0) | 50(20.4) | 0.049* |
| | 3-6month Back | 18(32.7) | 37(67.3) | 55(22.4) | |
| | Last Year | 27(38.6) | 43(61.4) | 70(28.6) | |
| | Many Years Back | 23(46.9) | 26(53.1) | 49(20.0) | |
| | Never Visited | 11(52.4) | 10(47.6) | 21(8.6) | |
| Q2. What was the reason for your visit? | Pain | 38(45.2) | 46(54.8) | 84(34.3) | 0.004* |
| | No Reply | 10(55.6) | 8(44.4) | 18(7.3) | |
| | Infection | 12(52.2) | 11(47.8) | 23(9.4) | |
| | For cleaning the teeth | 24(23.5) | 78(76.5) | 102(41.6) | |
| | Straightening the teeth | 6(33.3) | 12(66.7) | 18(7.3) | |
| Q3. Do you agree that one should visit a dentist at least once a year for regular check-ups? | Yes | 67(31.5) | 146(68.5) | 213(86.9) | 0.001* |
| | No | 23(74.4) | 8(25.8) | 31(12.7) | |
| | Maybe | 0(0.0) | 1(100.0) | 1(0.4) | |
| Q4. If no, what is the reason? | Answered Yes | 62(31.0) | 138(88.5) | 200(81.3) | 0.001* |
| | It is unnecessary and a waste of time | 13(72.2) | 5(3.2) | 18(7.3) | |
| | It is Expensive | 4(40.0) | 6(60.0) | 10(4.1) | |
| | I can take care of my teeth | 11(12.2) | 7(38.9) | 18(7.3) | |
| Q5. Where do you prefer to go for your dental treatment? | Private Clinic | 58(33.3) | 116(66.7) | 174(71.0) | 0.192# |
| | Public Institutions | 16(48.5) | 17(51.5) | 33(13.5) | |
| | Multispecialty Dental Hospitals | 16(42.1) | 22(57.9) | 38(15.5) | |
| | Hospitals | | | | |

| | | | | | |
|--|------------------------------|-----------|-----------|-----------|--------------------|
| Q6. What is the reason for getting treated there? | It is Convenient | 40(42.6) | 54(57.6) | 94(35.9) | 0.125 [#] |
| | Less Expensive | 3(25.0) | 9(75.0) | 12(4.6) | |
| | Less Time Consumption | 10(52.6) | 9(47.4) | 19(7.3) | |
| | All treatment under one roof | 21(35.0) | 39(65.0) | 60(22.9) | |
| | Personalised Attention | 21(27.3) | 56(72.7) | 77(29.4) | |
| Q7. Do you have any public dental service available near you? | Yes | 32(32.0) | 68(68.0) | 100(40.8) | 0.355 [#] |
| | No | 41(41.8) | 57(58.2) | 98(40.0) | |
| | Maybe | 17(36.2) | 30(63.8) | 47(19.2) | |
| Q8. Are you aware of dental insurance policy? | Yes | 36 (37.1) | 61(62.9) | 97(39.6) | 0.704 [#] |
| | No | 50(37.6) | 83(62.4) | 133(54.3) | |
| | Maybe | 42(6.7) | 11(73.3) | 15(6.1) | |
| Q9. Do you think we need dental insurance in India? | Yes | 59(30.7) | 133(69.3) | 192(78.4) | 0.001* |
| | No | 19(73.1) | 7(26.9) | 26(10.6) | |
| | Maybe | 12(44.4) | 15(55.6) | 27(11.0) | |
| Q10. How much premium will you be ready to pay? | 0-500/Month | 70(40.9) | 101(59.1) | 171(69.8) | 0.191 [#] |
| | 800-1000/Month | 15(26.3) | 42(73.7) | 57(23.3) | |
| | 1000-2000/Month | 5(31.3) | 11(68.8) | 16(6.5) | |
| Q15a. Do you give your consent to be contacted by us in the near future? | Yes | 37(26.8) | 101(73.2) | 136(56.3) | 0.001* |
| | No | 53(49.5) | 54(50.5) | 107(43.7) | |

*statistically significant; #statistically not significant; N(%)=Frequencies(%)

Table 4: Participants' response to various questions in comparison with Kuppaswamy Score Classification

| Questions | Responses | Class I N (%) | Class II N (%) | Class III N (%) | Total N (%) | p value |
|--|------------------------|------------------|-------------------|--------------------|----------------|--------------------|
| Q1. When was the last time that you visited a dentist? | Last Month | 18(36.0) | 30(60.0) | 2(4.0) | 50(20.4) | 0.871 [#] |
| | 3-6month Back | 21(38.2) | 32(58.2) | 2(3.6) | 55(22.4) | |
| | Last Year | 24(34.3) | 43(61.4) | 3(4.3) | 70(28.6) | |
| | Many Years Back | 14(28.6) | 34(69.4) | 1(2.0) | 49(20.0) | |
| | Never Visited | 5(23.8) | 16(76.2) | 0(0.0) | 21(8.6) | |
| Q2. What was the reason for your visit? | Pain | 22(26.2) | 58(69.0) | 4(4.8) | 84(34.3) | 0.125 [#] |
| | No Reply | 4(22.2) | 14(77.8) | 0(0.0) | 18(7.3) | |
| | Infection | 5(21.7) | 17(73.9) | 1(4.3) | 23(9.4) | |
| | Cleaning of teeth | 41(40.2) | 59(57.8) | 2(2.0) | 102(41.6) | |
| | Straightening of teeth | 10(55.6) | 7(38.9) | 1(5.6) | 18(7.3) | |

| | | | | | | |
|--|-------------------------------------|----------|-----------|--------|-----------|--------------------|
| Q3. Do you agree that one should visit a dentist at least once a year for regular check-ups? | Yes | 75(35.2) | 130(61.0) | 8(3.8) | 213(86.9) | 0.381 [#] |
| | No | 7(22.6) | 24(77.4) | 0(0.0) | 31(12.7) | |
| | Maybe | 0(0.0) | 1(100.0) | 0(0.0) | 1(0.4) | |
| Q4. If no, what is the reason? | Answered Yes | 74(37.0) | 118(59.0) | 8(4.0) | 200(81.3) | 0.233 [#] |
| | It is unnecessary and waste of time | 3(16.7) | 15(83.3) | 0(0.0) | 18(7.3) | |
| | It is Expensive | 2(20.0) | 8(80.0) | 0(0.0) | 10(4.1) | |
| | I can take care of my teeth | 4(22.2) | 14(77.8) | 0(0.0) | 18(7.3) | |
| Q5. Where do you prefer to go for your dental treatment? | Private Clinic | 70(40.2) | 98(56.3) | 6(3.4) | 174(71.0) | 0.012 [*] |
| | Public Institutions | 6(18.2) | 26(78.8) | 1(3.0) | 33(13.5) | |
| | Multispecialty Hospital | 6(15.8) | 31(81.6) | 1(2.6) | 38(15.5) | |
| Q6. What is the reason for getting treated there? | It is Convenient | 27(28.7) | 65(69.1) | 2(2.1) | 94(35.9) | 0.489 [#] |
| | Less Expensive | 4(33.3) | 7(58.3) | 1(5.3) | 12(4.6) | |
| | Less Time Consumption | 5(26.3) | 13(68.4) | 1(5.3) | 19(7.3) | |
| | All treatment under one roof | 18(30.0) | 40(66.7) | 2(3.3) | 60(22.9) | |
| Q7. Do you have any public dental service available near you? | Yes | 31(31.0) | 64(64.0) | 5(5.0) | 100(40.8) | 0.375 [#] |
| | No | 31(31.6) | 64(65.3) | 3(3.1) | 98(40.0) | |
| | Maybe | 20(42.6) | 27(57.4) | 0(0.0) | 47(19.2) | |
| Q8. Are you aware of dental insurance policy? | Yes | 34(35.1) | 59(60.8) | 4(4.1) | 97(39.6) | 0.663 [#] |
| | No | 45(33.6) | 85(63.9) | 3(2.3) | 133(54.3) | |
| | Maybe | 3(20.0) | 11(73.3) | 1(6.7) | 15(6.1) | |
| Q9. Do you think we need dental insurance in India? | Yes | 69(35.9) | 115(59.9) | 8(4.2) | 192(78.4) | 0.194 [#] |
| | No | 5(19.2) | 21(80.8) | 0(0.0) | 26(10.6) | |
| | Maybe | 8(29.6) | 19(70.4) | 0(0.0) | 27(11.0) | |
| Q10. How much premium will you be ready to pay? | 0-500/Month | 52(30.4) | 112(65.5) | 7(4.1) | 171(69.8) | 0.571 [#] |
| | 800-1000/Month | 22(38.6) | 34(59.6) | 1(1.8) | 57(23.3) | |
| | 1000-2000 /Month | 8(50.0) | 8(50.0) | 0(0.0) | 16(6.5) | |
| Q15a. Do you give your consent to be contacted by us in the near future? | Yes | 60(43.5) | 71(51.4) | 7(5.1) | 138(56.3) | 0.001 [*] |
| | No | 22(20.6) | 84(78.5) | 1(0.9) | 107(43.7) | |

Class I -Upper, Class, II -Upper Middle, Class III -Lower Middle;*Statistically Significant; # Statistically not significant;

N(%)=Frequencies(%)

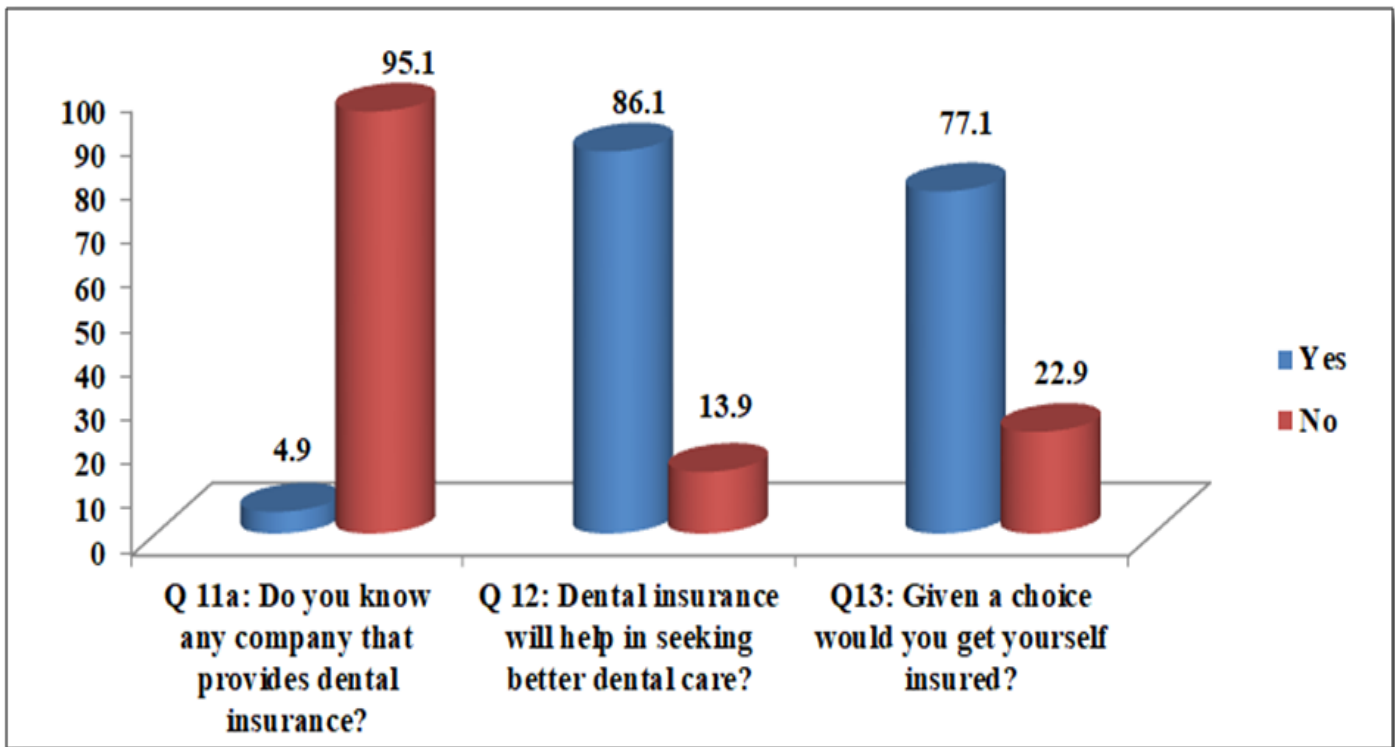


Fig 1: Graph showing responses to various questions about Dental Insurance

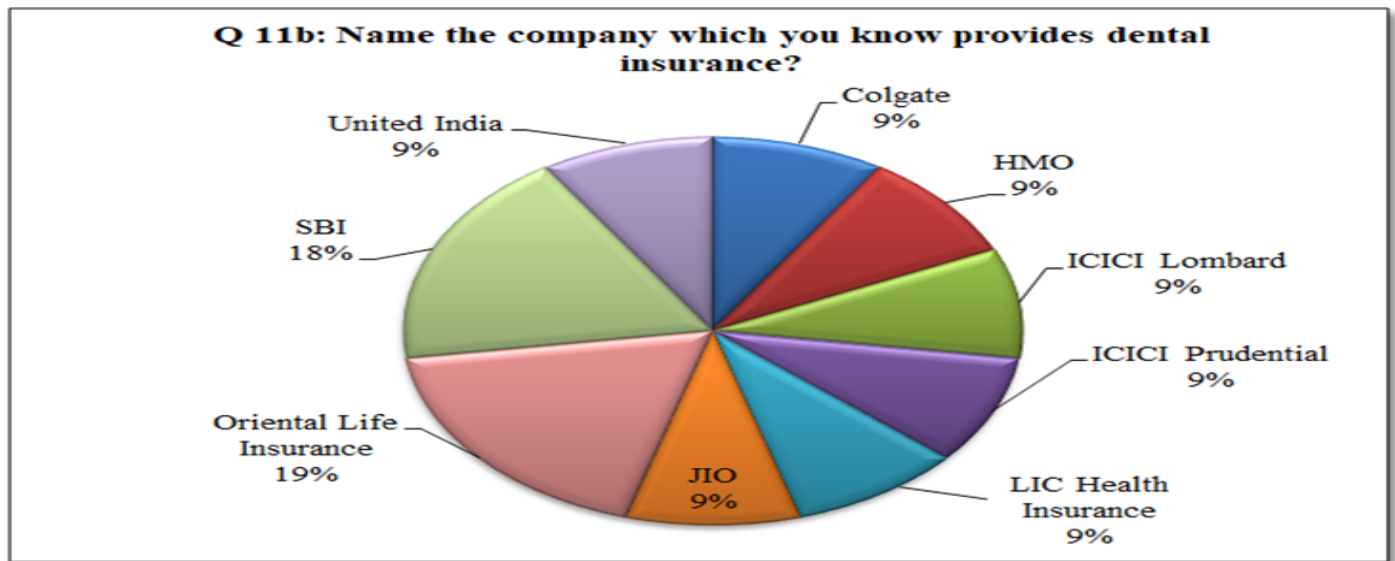


Fig 2: Percentage distribution of different Dental Insurance providers that respondents were aware of

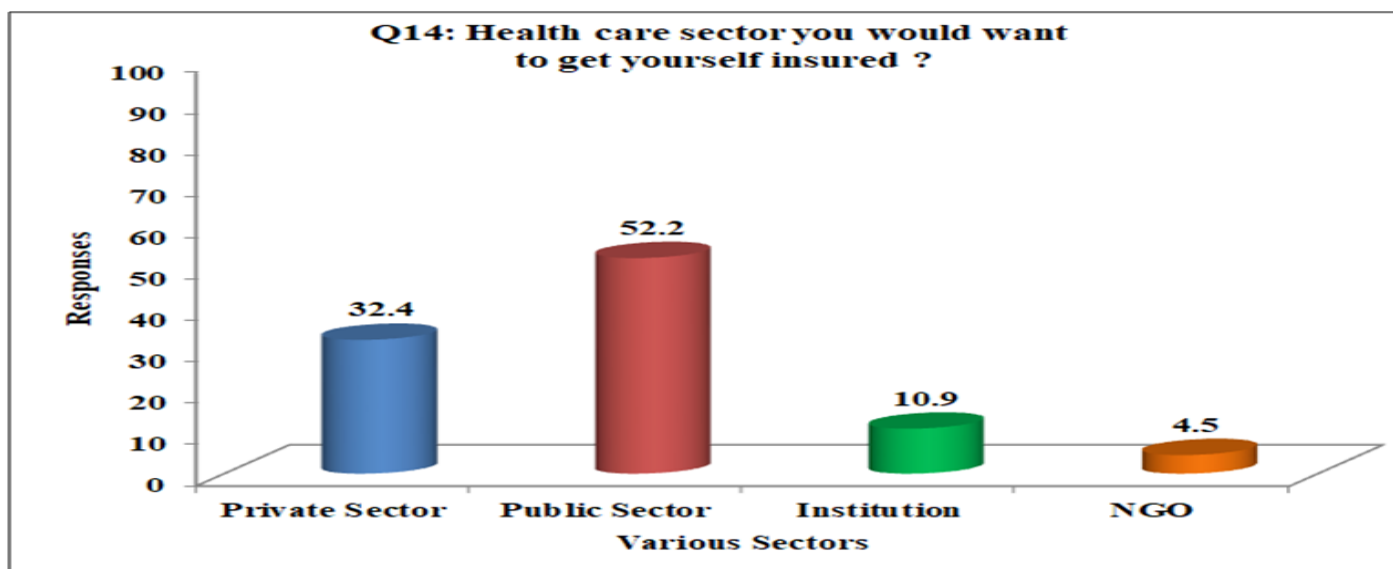


Fig 3: Graph showing preferences of respondents to various health insurance sectors

Conclusion

The present study showed us that though individuals had poor awareness regarding the dental benefits covered by their health insurance plans they showed a positive response for implementation of the dental insurance policy in India. This study has given food for thought to the policymakers for designing & implementing the dental insurance policy. If dental insurance is made available in India, people may start seeking the dentist for preventive and prophylactic treatments which have been neglected by people till date. It will also reduce the severity of oral diseases and future expenses for the complex dental treatments. It may help us make people aware about dental diseases and eradicate its negligence at the grass-root level.

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