

EVALUATION OF PROFILE AND TREATMENT SEEKING BEHAVIOR OF DENTAL PATIENTS

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Abstract

Background: Oral health is an important determinant of overall health.1 Diseases of the oral cavity affect individuals of all age groups irrespective of gender, race, ethnicity, educational level and socio-economical status. The current study aims to evaluate the profile and treatment seeking behavior of dental patients. **Materials and Methods:** The questionnaire was given to the patient / parents. The parents or the attendants were asked to fill the form wherever required. The questionnaire comprised of 03 parts – Part one evaluated the profile of the patients, Part two consisted of reason for seeking dental consultation and the part three of this questionnaire consisted of queries related to the important variables that affected the selection of dental facility. The data was tabulated in the Microsoft excel sheet, and the result was expressed as number and percentage. **Result:** Negligence towards early dental problem was seen at early age, decreases gradually till mid age and again increased towards elderly. Females found to show more negligence towards early treatment. Unmarried young adults were very conscious about the early treatment. Social, economic and educational factors were found have effect on willingness for early dental treatment. **Conclusion:** Dental disease is a multi-factorial disease. Early treatment is the key to success. The various socio-economical-educational reasons are the barriers to achieve optimum oral health.

INTRODUCTION

Oral health is an important determinant of overall health.^[1] Diseases of the oral cavity affect individuals of all age groups irrespective of gender, race, ethnicity, educational level and socio-economical status.^[2] Dental caries and periodontal disease comprise the most common diseases of the oral cavity followed by malocclusions.^[3] The spectrum of oral disease is also extended to birth defects like clefts and craniofacial anomalies as well as to some acquired diseases like Oral submucous fibrosis and some multifactorial diseases like carcinoma.^[4-6]

A good oral health is a major determinant to maintain good general health and enjoy a respectable quality of life. An altered oral health causes pain, disability, loss of self-esteem and compromised productivity.^[7-8]

Oral disease has direct effect on systemic health. The altered oral health not only causes digestive problem amongst elderly, but is also related to a many fold increased risk for cardiovascular disease, endocarditis, bacteremia, pneumonia and preterm delivery. Oral bacteria are considered to be the most potential source of infective endocarditis. There is also an established direct relationship between periodontitis and cardiovascular diseases. Periodontal disease concomitant with pregnancy is again associated with preterm birth and preeclampsia.^[9-16]

Access to quality oral healthcare services are limited and mostly restricted to urban areas.^[17] Previous studies have identified the lack in awareness as the major determinant for various oral diseases. National Oral Health Policy has been started in our country to fill the gap and to provide an accessible oral health service to the citizens of India.^[18]

The current study aims to evaluate the profile and treatment seeking behavior of dental patients.

MATERIALS AND METHODS

This was a prospective, descriptive, questionnaire study. The study was conducted over a period of 03 months from November 2021 to January 2022.

The study participants consisted of OPD patients. The subjects were described about the study. The subjects willing to volunteer were included in the study. An informed and written consent was obtained prior to the commencement of the study. Inclusion criteria were subjects willing to participate.

Exclusion criteria were subjects with co morbidity, psychological disorders and not willing to participate.

The study questionnaire was given to the patient / parents. The parents or the attendants were asked to fill the form wherever required. The questionnaire comprised of 03 parts –

Part one evaluated the profile of the patients, (age, sex, marital status, financial status, educational status and religion)

Part two consisted of reason for seeking dental consultation and the part three of this questionnaire consisted of queries related to the important variables that affected the selection of dental facility.

The data was tabulated in the Microsoft excel sheet, and the result was expressed as number and percentage.

RESULTS

This prospective study evaluated 400 subjects reporting to the various dental facility. The number of male (n=200) and female (n=200) participants were equal. The profile of these subjects is shown in [Table 1].

100 percent subjects below 10 years of age reported to the dentist for early treatment. The percentage of subjects willing for early treatment increased from the second decade till fourth decade and again reversed gradually. Similarly, the percentage population showing negligence towards early dental treatment was more in second decade, decreased gradually till fourth decade and was reverse again towards the later stage of life. The percentage of

negligence was found to be maximum amongst elderly, followed by young adults of second decade and was least in fourth decade age group.

In general, the majority of subjects were interested for professional dental consultation at the beginning of problem. Females usually had higher negligence towards the initial oral problems, as compared to males. Males on the other hand were keener to seek for dental treatment at the early stage of problem. The male proactive towards the dental problem was irrespective of marital, financial and educational status.

The majority of the participating subjects were married, followed by unmarried and least was divorced. Divorced subjects showed the maximum percentage of population not willing to take dental treatment at the initial stages of dental problem. In the hierarchy negligence towards initial dental treatment, widows were at the second position. The most alert population towards initial dental treatment was unmarried subjects.

The most common group of subjects visiting dental facility for the early symptoms of dental problems were either government employed or their families, this was followed by retired persons, self-employed and unemployed. The percentage of negligent subjects towards the problem was minimum in self-employed group and was maximum in retired group. The educated group of subjects was highly aware and alert towards the early dental treatment, this was shown by their maximum participation and least negligence at early stages. In contrast, the illiterate group of subjects showed exactly opposite behavior. The highest percentage of subjects showing keen behavior towards early treatment was amongst Hindu community, while the highest percentage of negligence for the same was amongst Muslim community.

[Table 2] shows the various reasons for which the study participants required dental consultation. Gum bleeding was the commonest problem for seeking dental treatment followed by dental pain. Cleaning of teeth was the third most common reason for visiting dental setup, while dissatisfaction with the appearance was the least priority reason seeking dental advice.

Table 1: Demographic characteristics of subjects.

Variables	Not willing to avoided treatment in early dental problem.		Willing to avoided treatment in early dental problem.	
	Number	Percentage	Number	Percentage
Age				
Below 10 Years (n=3)	3	100	0	0
11- 20 Years (n=139)	63	45.3	76	54.7
21-30 Years (n=88)	56	63.6	32	36.4
31-40 Years (n=55)	41	74.5	14	25.5
41-50 Years (n=39)	27	69.2	12	30.8
51-60 Years (n=64)	38	59.4	26	40.6
Above 60 Years (n=12)	5	41.7	7	58.3
GENDER				
Male (n=200)	182	91.0	18	9.0
Female (n=200)	147	73.5	53	26.5

MARITAL STATUS				
Married (n=176)	128	72.7	48	27.3
Unmarried (n=160)	132	82.5	28	17.5
Divorced (n=20)	12	60.0	08	40.0
Widow (n=44)	28	63.6	16	36.4
FINANCIAL STATUS OF FAMILY				
Govt. Employed (n=266)	222	83.5	44	16.5
Govt. Retired (n=59)	36	61.0	23	39.0
Self Employed (n=48)	45	93.7	03	6.3
Unemployed (n=27)	20	74.1	07	25.9
EDUCATIONAL STATUS				
Educated (n=245)	189	77.1	56	22.9
Illiterate (n=155)	92	59.4	63	40.6
RELIGION				
Hindu (n=201)	179	89.0	22	11.0
Muslin (n=183)	139	75.5	45	24.5
Sikh (n=07)	5	83.3	1	16.7
Christian (n=09)	8	88.9	1	11.1

Table 2: Main Reason for seeking dental consultation by the study participants.

	Number	Percentage
Routine Dental Check-Ups	26	06.50
For medicine Only	32	08.00
Dental Pain	69	17.25
Gum Bleeding	86	21.50
Dental Treatment / Follow-Up	41	10.25
Difficulty in Biting Food	13	03.25
Difficulty in Chewing Food	53	13.25
Cleaning Teeth	57	14.25
Dissatisfaction with Appearance	16	4
Others	7	1.75
Total	400	100

Table 3: Reason for selecting dental facility by the study participants. (YES / NO)

Characteristics	Number	Percentage
Geographical location of the facility	368	92.00
Convenience in taking appointment	291	72.75
Conditions of the doctor's clinic set up	252	63.00
Good treatment Results, reported by another patient	379	94.75
Treatment Cost paid towards the service	285	71.25
Hygiene and Safety of dental procedures	245	61.25
Doctor's and staff behavior towards patient	372	93.00
Clarity of information about dental problem and procedure	226	56.50
Overall patient's satisfaction	341	85.25
Unknown reason / Online search	65	16.25

[Table 3] shows the reason for which the study participant selected a particular dental facility. Good previous treatment experience by the relatives and friends (94.75 %) remained the prime reason for selecting a particular dental facility. The other reasons that scored over ninety percent response for selecting a particular dental set up was doctor and staff behavior (93.00 %), and Geographical location of the facility (92.00%). About two-third of the subjects selected the doctor based on their treatment charges (71.25%). Only 16.25 % patient reported to the clinic were unaware about the establishment / used online search.

DISCUSSION

Oral health is the gateway to general health. Oral diseases are the causative factors for the various systemic diseases. The prevalence of oral disease is reported to be very high both nationally and globally.^[1-3] Recently oral health mission is

established in India to estimate the oral disease burden of country and also to provide dental care services to the subjects with unmet needs.^[18] The limited availability of dental services in the government sector pushes the individual to look for desired and most suitable dental facilities in the private sector.^[17,19-20] The present study evaluated the profile, reasons to seek dental treatment and reasons to select a particular dental setup to fulfill their dental needs. A total of randomly selected 400 subjects were evaluated.

In the below 10 years age group, the present study found 100 percent patient / patient guardian reporting the dental office with an early problem, and none wanted to neglect the initial symptoms. This reporting may be considered as a bias, since clinically all were advanced cases of dental decay / early childhood caries. The negligence score for the early symptom was found to be zero, which may be because neither the patients nor the child noticed at an initial stage.^[21]

The increasing interest for early treatment from second to fourth decade may be due to gradually increasing awareness and intellectual with age together with income, increased paying capacity and willingness to pay. An another explanation for this could be self-esteem, peer pressure, and confidence.^[7-8,22]

The gradual decline in interest with ageing for early treatment may be due to limited income, reduced paying capacity, co morbidities, requirement of attendants, reduced physical strength, as well as socioeconomic conditions.^[23,24]

The present study found a higher percentage of overall subjects interested in early treatment. This may be due to increased awareness, self-esteem, online and offline advertisements, social media messages and gradually improving paying capacity of our society.^[25-27]

The higher percentage of females showing negligence towards early treatment may be attributed to social barriers, non-independent females, reduced self-esteem and time factor.^[28]

The highest percentage of subjects seeking early treatment was unmarried young adults. The most possible reason for this could be due to the self-earning, increased paying capacity, more of free time, and low family pressure as well as update with social media.^[25,27] The divorced and widows showed highest negligence towards early treatment, possibly due to low self-esteem, psychological factor, social barriers and possibly limited time and money.

This study was conducted in the post COVID era. This pandemic broke the backbone of financial status of individuals in general. Pupil with fixed salaries or pensioners were least affected financially in these times. The affordability and willingness to pay has direct impact on elective procedures like dental treatment.^[25-27] This was evident in the present study.

The educated group of subjects was found to be keen towards early treatment. This can be attributed to their knowledge, awareness, self-esteem and social media. In contrast, illiterate people were more negligent.^[28]

In the present study a frank difference in opinion for the early dental treatment was noticed. The higher percentage of negligence in Muslim population may be due to social barriers, large family size, and more dependence on other specialties of medicine like Unani and Homeopath. The present study found a very low percentage of Sikh and Christian participants because of limited population of these communities in the study area. These communities also showed a comparatively a lower incidence of negligence to early treatment possibly because of the better financial status and higher educational level in the Sikh and Christian community respectively.^[29,30]

In the current study, gum bleeding remained the most common reason for seeking dental treatment. The gum bleeding is associated with poor oral

hygiene, gingivitis and periodontitis of various grades. This high prevalence of the subjects with periodontitis is similar to the prevalence of periodontitis in India, as well as to the global prevalence of periodontitis.^[3]

Dental pain was the second most common reason for seeking dental consultation. This corresponds to the increasing incidence of dental caries and overall DMFT Score.^[3]

The National oral health Policy (India) is trying to assess the oral disease load and provide dental care service to the individuals with unmet needs. The unaffordable dental treatment charges also are a contributing factor for increased DMFT load worldwide. This trend was seen in our study eight percent of the subjects seeking dental consultation for medication only.

In contrast to the higher number of young adults visiting the dental facility, the prevalence of subjects seeking treatment for enhancing facial appearance was very low. This could be due to the lack of awareness, unaffordable dental charges, long treatment duration of orthodontic treatment, etc.^[31]

The increasing number of dental practitioners may pose danger to the existing dental practice. In contrast, the increasing dental graduates increases awareness, availability, and affordability to dental treatment for the patients.^[32] The increasing availability of dental facility also has opened the options to choose dental clinic. While evaluating the reason for selecting the dental facility, the highest score was observed for good previous treatment results. This indirectly refers to the patient satisfaction which has a direct effect on the patient response. The interpersonal behavior, quality of equipments, latest treatment facility and soothing ambience is again considered favorable for satisfaction of the patients. This trend was found in our study by over 90 % rating for the same.

CONCLUSION

Dental disease is a multi-factorial disease. Early treatment is the key to success. The various socio-economical-educational reasons are the barriers to achieve optimum oral health.

REFERENCES

1. Fiorillo L. Oral Health: The First Step to Well-Being. *Medicina (Kaunas)*. 2019 Oct 7;55(10):676. doi: 10.3390/medicina55100676.
2. Raphael C. Oral Health and Aging. *Am J Public Health*. 2017. May;107(S1):S44-S45. doi: 10.2105/AJPH.2017.303835.
3. Nazir M, Al-Ansari A, Al-Khalifa K, Alhareky M, Gaffar B, Almas K. Global Prevalence of Periodontal Disease and Lack of Its Surveillance. *ScientificWorldJournal*. 2020 May 28;2020:2146160. doi: 10.1155/2020/2146160.
4. Menegaz AM, Silva AER, Cascaes AM. Educational interventions in health services and oral health: systematic review. *Rev Saude Publica*. 2018;52:52. doi: 10.11606/s1518-8787.2018052000109.

5. Fraihat N, Madae'en S, Bencze Z, Herczeg A, Varga O. Clinical Effectiveness and Cost-Effectiveness of Oral-Health Promotion in Dental Caries Prevention among Children: Systematic Review and Meta-Analysis. *Int J Environ Res Public Health*. 2019 Jul 25;16(15):2668. doi: 10.3390/ijerph16152668.
6. Isola G. The Impact of Diet, Nutrition and Nutraceuticals on Oral and Periodontal Health. *Nutrients*. 2020 Sep 6;12(9):2724. doi: 10.3390/nu12092724.
7. Chaffee BW, Rodrigues PH, Kramer PF, Vítolo MR, Feldens CA. Oral health-related quality-of-life scores differ by socioeconomic status and caries experience. *Community Dent Oral Epidemiol*. 2017 Jun;45(3):216-224. doi: 10.1111/cdoe.12279.
8. Pazos CTC, Austregésilo SC, Goes PSA. Self-esteem and oral health behavior in adolescents. *Cien Saude Colet*. 2019 Oct 28;24(11):4083-4092. Portuguese, English. doi: 10.1590/1413-812320182411.02492018.
9. Poudel P, Griffiths R, Wong VW, Arora A, Flack JR, Khoo CL, George A. Oral health knowledge, attitudes and care practices of people with diabetes: a systematic review. *BMC Public Health*. 2018 May 2;18(1):577. doi: 10.1186/s12889-018-5485-7.
10. Winning L, Lundy FT, Blackwood B, McAuley DF, El Karim I. Oral health care for the critically ill: a narrative review. *Crit Care*. 2021 Oct 1;25(1):353. doi: 10.1186/s13054-021-03765-5.
11. Hajishengallis G, Chavakis T. Local and systemic mechanisms linking periodontal disease and inflammatory comorbidities. *Nat Rev Immunol*. 2021 Jul;21(7):426-440. doi: 10.1038/s41577-020-00488-6.
12. Kitamura M, Mochizuki Y, Miyata Y, Obata Y, Mitsunari K, Matsuo T, Ohba K, Mukae H, Yoshimura A, Nishino T, Sakai H. Pathological Characteristics of Periodontal Disease in Patients with Chronic Kidney Disease and Kidney Transplantation. *Int J Mol Sci*. 2019 Jul 11;20(14):3413. doi: 10.3390/ijms20143413.
13. Humphrey LL, Fu R, Buckley DI, Freeman M, Helfand M. Periodontal disease and coronary heart disease incidence: a systematic review and meta-analysis. *J Gen Intern Med*. 2008 Dec;23(12):2079-86. doi: 10.1007/s11606-008-0787-6
14. Schmalz G, Ziebolz D. Special Issue "Oral Health and Systemic Diseases". *J Clin Med*. 2020 Sep 29;9(10):3156. doi: 10.3390/jcm9103156.
15. Hartnett E, Haber J, Krainovich-Miller B, Bella A, Vasilyeva A, Lange Kessler J. Oral Health in Pregnancy. *J Obstet Gynecol Neonatal Nurs*. 2016 Jul- Aug;45(4):565-73. doi: 10.1016/j.jogn.2016.04.005.
16. Teshome A, Yitayeh A. Relationship between periodontal disease and preterm low birth weight: systematic review. *Pan Afr Med J*. 2016 Jul 12;24:215. doi: 10.11604/pamj.2016.24.215.8727.
17. Chaffee BW, Rodrigues PH, Kramer PF, Vítolo MR, Feldens CA. Oral health-related quality-of-life scores differ by socioeconomic status and caries experience. *Community Dent Oral Epidemiol*. 2017 Jun;45(3):216-224. doi: 10.1111/cdoe.12279. Epub 2017 Jan 12.
18. Operational guidelines national oral health program. <https://main.mohfw.gov.in/sites/default/files/Operational%20Guidelines%20National%20Oral%20Health%20Programme%20%28NOHP%29.pdf>
19. Rana RH, Alam K, Gow J. Selection of private or public hospital care: examining the care-seeking behaviour of patients with private health insurance. *BMC Health Serv Res*. 2020 May 6;20(1):380. doi: 10.1186/s12913-020-05253-y.
20. Mutiarasari D, Demak IPK, Bangkele EY, Nur R, Setyawati T. Patient satisfaction: Public vs. private hospital in Central Sulawesi, Indonesia. *Gac Sanit*. 2021;35 Suppl 2:S186-S190. doi: 10.1016/j.gaceta.2021.07.012.
21. BaniHani A, Tahmassebi J, Zawaideh F. Maternal knowledge on early childhood caries and barriers to seek dental treatment in Jordan. *Eur Arch Paediatr Dent*. 2021 Jun;22(3):433-439. doi: 10.1007/s40368-020-00576-0.
22. Hiratsuka VY, Robinson JM, Greenlee R, Refaat A. Oral health beliefs and oral hygiene behaviours among parents of urban Alaska Native children. *Int J Circumpolar Health*. 2019 Dec;78(1):1586274. doi: 10.1080/22423982.2019.1586274.
23. Gao SS, Chu CH, Young FYF. Oral Health and Care for Elderly People with Alzheimer's Disease. *Int J Environ Res Public Health*. 2020 Aug 7;17(16):5713. doi: 10.3390/ijerph17165713.
24. Li C, Yao NA. Socio-Economic Disparities in Dental Health and Dental Care Utilisation Among Older Chinese. *Int Dent J*. 2021 Feb;71(1):67-75. doi: 10.1111/idj.12600
25. Duncan L, Bonner A. Effects of income and dental insurance coverage on need for dental care in Canada. *J Can Dent Assoc*. 2014;80:e6.
26. Peres MA, Liu P, Demarco FF, Silva AER, Wehrmeister FC, Menezes AM, Peres KG. Income trajectories affect treatment of dental caries from childhood to young adulthood: a birth cohort study. *Braz Oral Res*. 2018;32:e36. doi: 10.1590/1807-3107bor-2018.vol32.0036.
27. Kaczmarczyk KH, Gray-Burrows KA, Vinal-Collier K, Day PF. Oral health promotion apps: an assessment of message and behaviour change potential. *Int J Qual Health Care*. 2021 Feb 20;33(1):mzaa112. doi: 10.1093/intqhc/mzaa112.
28. Calderón Larrañaga S, Expósito Ruiz M, Cruz Vela P, Cuadrado Conde A, Alquézar Villarroya L, Garach Gómez A, Ruiz Hernández A, Toral López I. Atención Primaria y promoción de la salud bucodental: evaluación de una intervención educativa en población infantil [Primary Care and oral health promotion: Assessment of an educational intervention in school children]. *Aten Primaria*. 2019 Aug-Sep;51(7):416-423. Spanish. doi: 10.1016/j.aprim.2018.05.003. Epub 2018 Oct 11.
29. Bhandari B, Newton JT, Bernabé E. Income Inequality and Use of Dental Services in 66 Countries. *J Dent Res*. 2015 Aug;94(8):1048-54. doi: 10.1177/0022034515586960.
30. Spinler K, Aarabi G, Walther C, Valdez R, Heydecke G, Buczak-Stec E, König HH, Hajek A. Determinants of dental treatment avoidance: findings from a nationally representative study. *Aging Clin Exp Res*. 2021 May;33(5):1337-1343. doi: 10.1007/s40520-020-01652-7.
31. Broomhead T, Baker SR. Systems science and oral health: Implications for Dental Public Health? *Community Dent Health*. 2019 Feb 25;36(1):55-62. doi: 10.1922/CDH_4470Broomhead08.
32. Bulgareli JV, Cortellazzi KL, Guerra LM, Ambrosano GMB, Kaieda AK, da Cunha IP, Vazquez FL, Pereira AC. Determinants of adherence to dental treatment of socially vulnerable adolescents: a cohort study. *BMC Res Notes*. 2021 Mar 25;14(1):116. doi: 10.1186/s13104-021-05525-8