

Assessment of Knowledge, Attitude, and Practices about Dental Home among Healthcare Professionals of Belagavi City: A Cross-sectional Study

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ABSTRACT

Aim and objective: The aim and objective of the study was to assess the knowledge, attitude, and practices about dental home among healthcare professionals of Belagavi city.

Materials and methods: A sample of 400 participants was divided into four groups (Ayurveda, Homeopathy, Nursing, and Medical) based on their healthcare specialty. A 20 item validated questionnaire containing four domains was distributed among the participants. The data was statistically analyzed.

Results: Descriptive analysis was used followed by Chi-square for association and one-way ANOVA for comparison followed by Karl Pearson correlation coefficient for determining the correlation between knowledge, attitude, and practices of healthcare professionals. The results of the study showed that the knowledge and practices were statistically not significant among all healthcare professionals ($p > 0.05$). However, the results were found to be statistically highly significant when correlation was done between knowledge, attitude, and practices ($p < 0.0001$).

Conclusion: The study concludes that there is a need to increase the level of knowledge, attitude, and practices among healthcare professionals about the concept of dental home.

Clinical significance: The clinical significance of our study is the implementation of the dental home concept in India, which can prove to be a source of coordinated care that emphasizes overall patient health and aids in rendering quality treatment. Through this initiative oral health can be incorporated as a primary healthcare entity. This can also provide an opportunity for dental professionals to take the lead in applying successful strategies to improve the provision of dental care. Moreover, treatment needs if taken care at the preliminary stages itself, can reduce a major oral healthcare burden from extensive debilitating oral pathologies in the pediatric population.

Keywords: Dental home, Healthcare professionals, Perception.

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INTRODUCTION

Oral health is the mirror of general health. It is essential for well-being and for maintaining the quality of a child's life. The foundation of good oral health must be built early in life and it is recommended that a child should have its first dental visit by one year of age, which can be accomplished by the establishment of Dental Home that can emerge as a locus for prevention, supervision of the oral health, provide emergency care, and can also serve as a repository of records.¹

For most dental professionals, the concept of Dental Home is new. However, the concept of Medical Home is well established and known among other healthcare professionals. The persistence of early childhood caries and meager use of oral healthcare services by the children recommends the use of the concept of "Dental Home" which could benefit in taking a closer look at the oral pathologies or conditions and can provide benefits of Oral Health care.²

The American Academy of Pediatric Dentistry advocates that a Dental Home provides comprehensive, unceasingly accessible, family-centered, compassionate, culturally sensitive, and efficient care for children.³ Promotion of oral health is essential. Multidisciplinary care and guidance through involving pediatricians is evident and proves to be indispensable as it not only educate the parents but also provides maintenance and promotion of their children's oral health.⁴

However, all the studies conducted to date assessed knowledge and awareness about Dental Home among pediatricians.

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When the literature search was carried out there were no data published regarding the knowledge, attitude, and practices on the concept of Dental Home among healthcare professionals. Hence, this study was conducted to test the knowledge, attitude, and practices about Dental Home among healthcare professionals.⁵

MATERIALS AND METHODS

A cross-sectional study was conducted in the Department of Pediatric and Preventive Dentistry. Ethical approval was obtained from the Institutional Review Board. Informed consent was obtained from all the Principals of the respective institutions (Ayurveda, Homeopathy, Nursing, and Medical).

A pilot study was conducted and Cronbach's alpha coefficient of 0.82 was calculated to test the reliability of the questionnaire. The responses to the questions were measured on five-point Likert scale.

Sample size of 380 was calculated in accordance with the standard sample size calculating formula which was rounded to 400. Samples were divided into four groups. Group A, B, C, and D included interns and postgraduate students of Ayurveda, Homeopathy, Nursing, and Medical, respectively. The questionnaires were distributed among the participants and were collected back once completed by them. The collected data was then statistically analyzed.

RESULTS

In the present study, there were no dropouts found. The study included 22% male and 78% female. Seventy five percent of the participants were interns; twenty five percent of the participants were postgraduate students. The mean age of the surveyed professionals was 24.49 ± 1.77 years (Fig. 1). The data was statistically analyzed using SPSS software (version 21.0 Chicago, IL, USA) and the p -value < 0.05 was taken as significant.

Association between the level of knowledge, attitude, and practices for the different healthcare professionals was determined using the Chi-square test and it was found that there is no statistically significant difference observed in the knowledge and practices among the study groups ($p = 0.1267$). However, the attitude regarding the concept of Dental Home was found to be statistically significant ($p = 0.0157$). When the association of knowledge was compared among the groups, the participants from the medical group showed a higher percentage of knowledge (45.37%) and the least knowledge being among the nursing professionals (70.37%). Attitude toward Dental Home was seen highest among Homeopathy group (53.85%) and the least being in Ayurveda group (73.85%).

With regards to referral practices, homeopathy professionals showed a higher level of practices accounting 51.65% whereas the least referral practices are seen among the nursing professionals which accounts for 62.96% (Fig. 2).

Also, the level of knowledge, attitude and practices regarding the concept of Dental Home was found to be statistically significant when comparison was done among undergraduates and postgraduates. Postgraduates participants showed a higher

level of knowledge, attitude and practices compared to the undergraduates. However, when compared based on the gender of the participants it was found to be statistically insignificant (Fig. 3).

The comparison of response among health professionals of different demographic profile for each question was determined by one-way ANOVA (Fig. 4). The results showed that when the knowledge about pathophysiology and associated risk factors of early childhood caries was assessed it was found to be statistically not significant. Knowledge and attitude about introducing the Dental Home at the earliest to reduce the anxiety of a child and the parents were found to be statistically insignificant. Also, perception of whether the Dental Home can provide restorative and rehabilitative treatment along with the elementary oral healthcare showed less significant values. Also, the implementation of Dental Home concept and initiating it at various healthcare levels, and introducing it in the curriculum of undergraduates of other healthcare professionals was found to be statistically not significant. However, when the knowledge, attitude, and practices about the importance of oral health, whether the treatment of primary teeth is as important as that of permanent dentition, and the eruption patterns of the teeth were assessed the results were found to be statistically significant ($p < 0.05$).

The correlation between the knowledge, attitude, and practices was done using Karl Pearson's correlation coefficient which was found to be highly statistically significant ($p = 0.0001$) (Fig. 5).

DISCUSSION

Initiation of dental care in all health service programs is essential in providing comprehensive health care. Benefits of establishment of Dental Home are substantial and intuitive which includes an increasing emphasis on prevention and disease management, advancements in tailoring care to meet individual needs, and providing better health outcomes at lower costs.⁶ The oral health promotion should be integrated into the existing preventive programs which have been implemented by other healthcare professionals. These can prove imperative in guiding and developing positive dental attitudes.

However, the results in this study showed that practitioners from other healthcare professions failed to impart higher knowledge, attitude, and practices with the concept of Dental Home where nearly 57.75% of the participants showed less

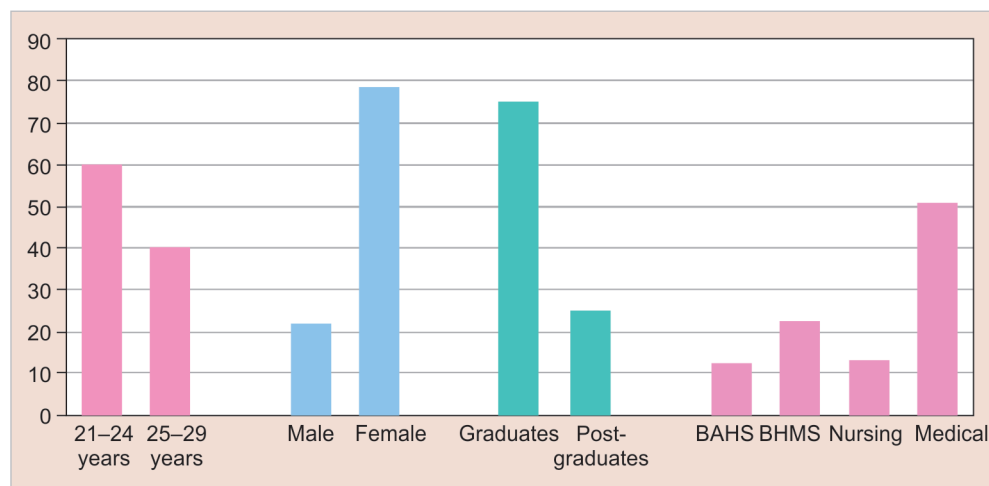


Fig. 1: Demographic profile of healthcare professionals

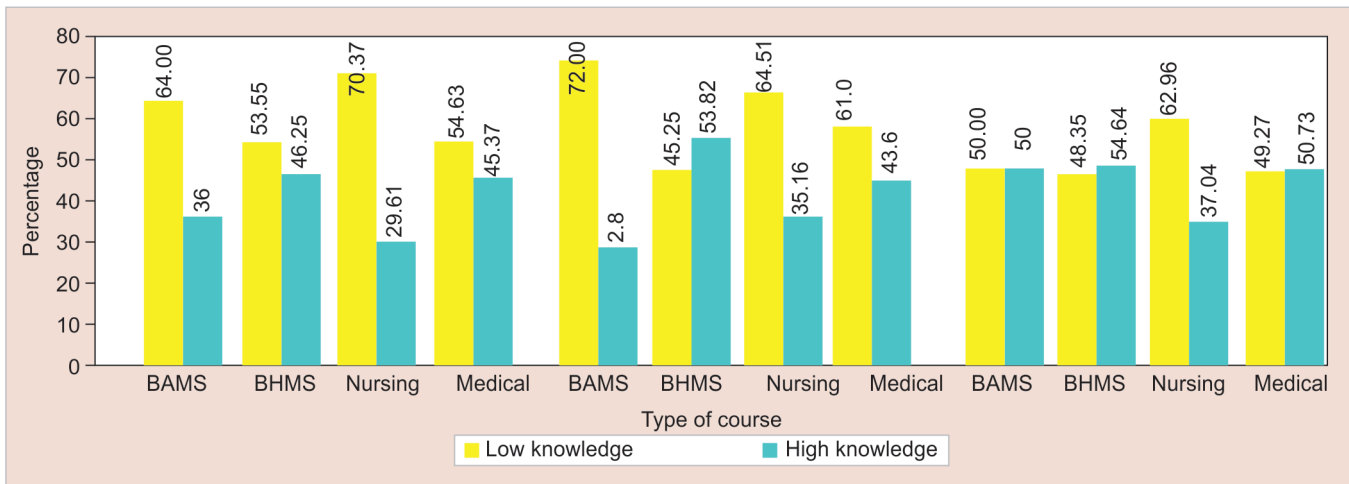


Fig. 2: Association between levels of knowledge, attitude, and practices of healthcare professionals about the concept of dental home care

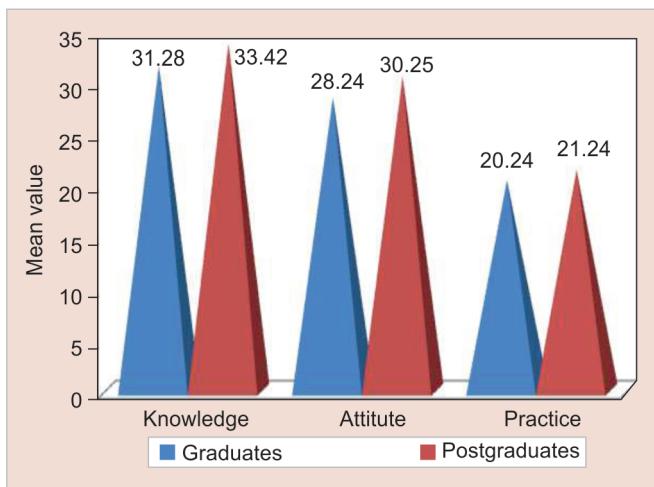


Fig. 3: Comparison of graduates and postgraduates students with mean knowledge, attitude, and practice scores about the concept of dental home

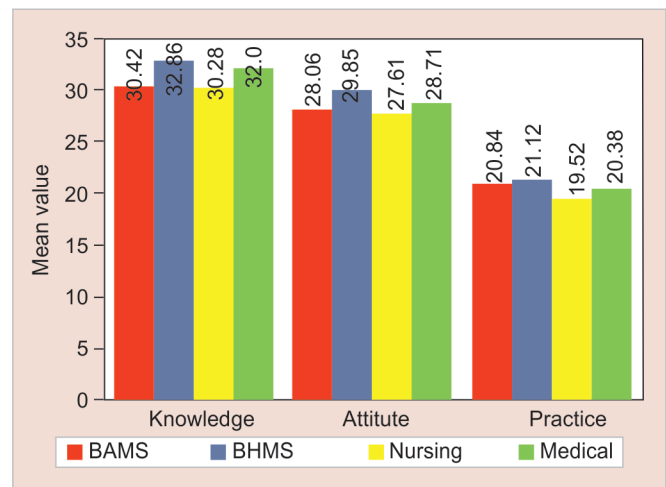


Fig. 4: Comparison of types of courses with mean knowledge, attitude, and practice scores about the concept of dental home care

knowledge, 57% showed low attitude and lower referral practices are seen in 57% participants.

In a cross-sectional study done by Sikliglar et al. on the knowledge, attitude, awareness of Pediatricians toward infant oral healthcare and treatment needs showed poor knowledge among 60% and average in the remaining 40%. The attitude was poor in about 20%, average in 60%, and good being among only 20% of the pediatricians emphasizing the need for the pediatricians to update their knowledge and change their attitude toward infant oral healthcare and Dental Home.⁴

Recently a similar study conducted by Vaidya et al. among pediatric residents in Vadodara city showed a lack of awareness regarding the Dental Home concept among the participants. Most of them reported that they are routinely assessing a child's oral health but merely a few pediatricians discuss about oral health status with their parents/guardians. The study also highlighted the importance of promotion of oral health by incorporating the Dental Home for timely referrals of pediatric patients for oral health needs.⁷ These results are in accordance with the study conducted in Ghaziabad city by Indushekar et al.⁸ and our study, where the importance of oral health and Dental Home is been acknowledged;

however, the referral practices regarding the same are found to be lesser in our study accounting only 20% among all the healthcare professionals.

It is been recommended by AAPD that the child should have its first dental visit no longer than 6 months of age or soon after the first tooth erupt and no later than 12 months of age. Traditionally, 3 years was thought to be the developmental age for initial dental visit. The rationale behind this was that treatment can be provided more efficiently and children can be better managed by the establishment of Dental Home, and early interventions can be made for parent's education on oral hygiene practices, preventing dental injuries and early childhood caries, hence recommending the first dental visit to be no later than one year of age.

In a study conducted by Shivaprakash et al. more than 50% of medical students responded correctly to the question asked on the first dental visit.⁹ However, the response was higher than the results obtained by Retna et al. who reported only 40%,¹⁰ and our study where only 30.78% of the participants responded correctly.

Elementary oral healthcare should be provided at various strata initiating from rural healthcare centers to the primary healthcare centers in all the parts of our country. In order to provide prenatal counselling, the dentist/allied healthcare professionals should

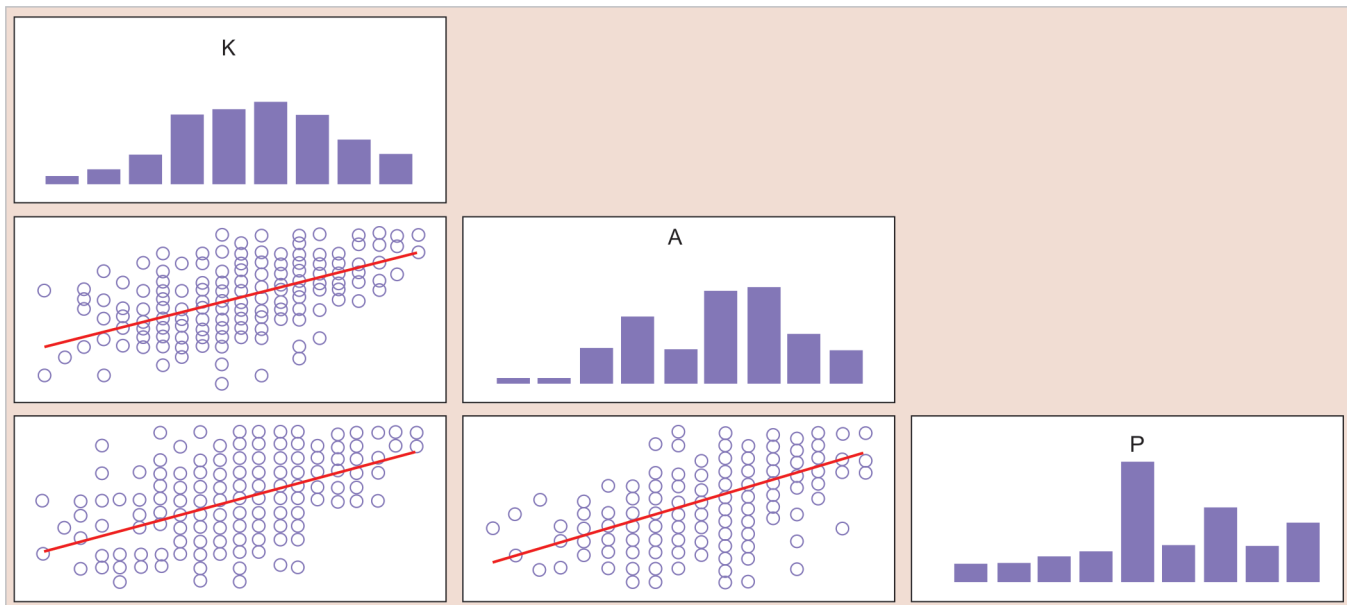


Fig. 5: Scatter diagram of correlation between knowledge, attitude, and practice scores about the concept of dental home

work cumulatively with the pediatricians, gynecologists, Auxiliary Nursing Midwifery (ANM), Accredited Social Health Worker (ASHA), and all other healthcare professionals. This can be achieved by the establishment of Dental Home which will aid in uplifting the oral health in upcoming generations or the pediatric population as a whole. Traditionally, other medical professions and dental care were separate streams of healthcare services in Indian medical systems. But the current training programs in the healthcare field present an unprecedented opportunity for the integration of other healthcare professionals and dental professionals. Hence, cumulative training programs need to develop which can prove to be an innovative training model that reflects evolving healthcare delivery, such as comprehensive oral health care.

CLINICAL SIGNIFICANCE

The clinical significance of our study is the implementation of the Dental Home concept in India, which can prove to be a source of coordinated care that emphasizes overall patient health and aids in rendering quality treatment. Through this initiative oral health can be incorporated as a primary healthcare entity. This can also provide an opportunity for dental professionals to take the lead in applying successful strategies to improve the provision of dental care. Moreover, treatment needs if taken care at the preliminary stages itself, can reduce a major oral healthcare burden from extensive debilitating oral pathologies in the pediatric population.

CONCLUSION

Based on the current study, it may be concluded that there is a lack of oral healthcare knowledge, attitude, and practices about Dental Home and pediatric dentistry as a whole. By visualizing the current Indian scenario and the results we got from our study, there is a need felt to include and introduce the concept of Dental Home in the curriculum of other healthcare professionals so as to inculcate in them, the importance of preliminary oral health care. To achieve this objective, there is a need felt to initiate the interdisciplinary referrals among various medical fields especially the pediatricians. Thus, Dental Home can serve as an analogue

to medical home where a child can be imparted preventive care along with the treatment. This includes assessment of oral diseases, management of acute and chronic oral pathologies, and provides anticipatory guidance for overall growth and development of the pediatric population.

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