

Dental Economics - Should This Be Included as a Chapter in Dentistry as Modification in Curriculum Design - A Questionnaire Based Survey Study

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ABSTRACT

BACKGROUND

Dental Economics is the discipline of economics applied to the topic of oral health care and addresses the perceptiveness of planning, budgeting and monitoring the economic evaluation relating to the cost and benefits of alternative ways of delivering oral health care. The Dental Practitioners, once they are out in a competitive Clinical World who opt for clinical set up, need to focus on growing their practices, thus maintaining a competitive edge. We wanted to assess the knowledge and attitude of dental students about business in dentistry and also about Black Book among dental students.

METHODS

An interventional cross-sectional descriptive baseline KAP (Knowledge, Attitude and Practice) study was conducted among 250 dental students from Western Maharashtra between May 2016 and July 2016. Pre- / post-test questionnaires applying open ended and close ended questions were designed and validated. A brief power point presentation on dental economics and introduction to the Black Book – Financial 2011 Business in Dentistry was presented. The Pre / Post data was collected and subjected to statistical analysis using SPSS version 10.

RESULTS

77.9 % - 88 % participants in pre-test said that they had not been taught about the art of setting up a clinic; whereas, the ratio increased to 98 % after the intervention and post-test. This indicated that the lack of knowledge about how to set up a clinic can be one of the reasons for poor satisfaction among dentists in India.

CONCLUSIONS

Hence, introduction of such topic in the curriculum can further improvise on earning and in turn improve the dentist satisfaction. This baseline KAP study reinforces the need to consider the business side of dental practice, in particular, the importance of quality, creativity and innovation, alongside the importance of meeting the needs of patients.

KEY WORDS

Dental, Economics, Black Book, Knowledge, Attitude, Baseline KAP Study, Business in Dentistry

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BACKGROUND

W.D. Weinberger, rightly said “a profession that is ignorant of its past experiences has lost a valuable asset because it has missed its best guide to the future”. As we all know the sum total of dental colleges in India being 290, there are over 1,80,000 dentists which include 35000 specialists practicing in this country. These young budding dental graduates, after completing the graduation opt for various different carrier options, one which can be initiating and setting up of dental practice and thus require the fundamental knowledge about art of setting and remodelling the dental office, once they are out in a competitive clinical world. Further, these graduates need the basic guidance to start up a clinic and have complete knowledge about business in dentistry - accounting, tax planning, retirement design, and wealth management.

Hence, the basic aim of this study was to assess the knowledge and attitude about inclusion of the topic “Dental economics” as a chapter in dentistry as a part of curriculum design among dental students, wherein the primary objective was to assess the knowledge and attitude about business in dentistry & the secondary objective was to assess the knowledge about Black Book among dental students. The detailed purpose of this baseline KAP study was to seek the target’s awareness levels about dental practice in India and identify gaps in knowledge about the same, followed by a brief introduction about the Black Book among dental learners.

METHODS

After the ethics committee approval with reference no KIMSDU/IEC/04/2016 Protocol no 191, the present interventional cross sectional survey study was conducted among 250 dental students (1st BDS - 4th BDS, interns and private practitioners) in Krishna institute of Medical sciences ‘Deemed to Be University’, Karad. The age group of the participants from both faculties ranged from 19 – 35 years. A self-administered, pre-structured and validated pre- and post-test questionnaire designed applying Cronbach’s analysis was prepared. (see Table 1) The questionnaire contained two phases. In the first phase, the demographic data of each participant was recorded and in the second phase, the questionnaire containing 8 question (7 close ended and 1 open ended) was distributed among the participants. The sample size selected was 250 participants based on the pilot study. The sample included 1st BDS, 2nd BDS, 3rd BDS, 4th BDS, Interns and practitioners from Karad. The informed consent was obtained from each participant before distributing the questionnaire. At first, the participants were given the pretest questionnaire and were allotted 10 mins of time to complete the same. This was followed by, the PowerPoint presentation introducing the Black Book – Financial 2011 Business in Dentistry book was presented for about 20 mins to the participants. Once done with the presentation, the posttest questionnaire were distributed and 10 mins were again allotted for the participants to complete the same. Score system was designated as 1 if the answer were right and 0 if the answer were wrong. The data was entered in Microsoft excel sheet 2007 and analyzed using SPSS version 10 software

(SPSS Inc; Chicago, IL, USA). The data was then subjected to statistical analysis using percentage and proportions.

RESULTS

In the present study, a total of 250 dental students participated, making 100 % response rate. 58 % of students were female and 42 % were males. Majority of the participants belonged to the age group of 19 – 35 years. 21 % (n = 58) participants were from 1st BDS, 10 % (n = 28) from 2nd BDS, 25 % (n = 68) from 3rd BDS, 20 % (n = 56) from 4th BDS, 17 % (n = 49) and 5 % practitioners (n = 15) participated in the study. (see Fig. 1) The scoring system was applied for both the pre and post-test questionnaire (according to number of correct answers opted).

Results of the baseline KAP study showed that 70 % (1st year), 55 % (2nd year), 41 % (3rd year), 61 % (4th year) and 44 % (interns) preferred to opt for MDS; 8 % (1st year), 14 % (2nd year), 12 % (3rd year), 11 % (4th year) and 16 % (interns) opted for dental clinic. 86.8 % of participants from all the groups want to opt for dental clinical set up and continue with the profession whereas 13.2 % wanted to opt for other degree like DDS, etc. This ratio was similar in both pre-test and post-test. 77.9 % - 88 % participants in pre-test said that they had not taught about the art of setting the clinic whereas the ratio increased to 98 % after the intervention and post-test. (Fig. 1) This indicated that the lack of knowledge about how to set the clinic can be one of the reasons for poor satisfaction among the dentist in India. Hence by introduction of such topic in the curriculum can further improvise on earning and in turn improve the dentist satisfaction.

Question No.	Questions (Open and Close Ended)
1	What would you prefer to do after BDS Graduation? 1. MDS 2. Dental practice 3. Dental practise & academics 4. Others - MBA in hospital management, Fellowship courses
2	Would you opt to set up a dental clinic and continue with your profession? 1. Yes 2. No If no, what else would you prefer to do?
3	Have you been taught about the art of dental economics while setting up a clinic in UG? 1. Yes 2. No
4	Have you heard about the following Milestones in Dental Economics? 1. Dr. Bill Blatchford 2. Dr. Roger B. Lenin 3. Raymond F “Rick” Willeford 4. None of the above
5	Are you familiar with any marketing skills to set up your clinic? 1. Yes 2. No
6	What according to you is more important for starting up a clinic? 1. Human capital 2. Space & equipment 3. Finances 4. Clinical skills 5. All of the above
7	Have you heard about the “Black Book”? 1. Yes 2. No
8	Do you think Dental Economics should be included as a chapter in Curriculum design of BDS? 1. Yes 2. No

Table 1. Designed, Formulated and Validated Questionnaire with 8 Open and Close-Ended Questions

Only 2 % of 3rd BDS students knew about the pioneers mentioned in Black Book. This clearly indicates that none of them was aware of the Black Book and the names of different pioneers with their contributions. (Fig. 2) About 50 - 60 % of all the respondents both pre and post-test knew about the basic marketing skills and since ethical issues were involved most of the Practitioners did not opt for open hand marketing techniques. 100% participants did not know about the Black Book on pre-test but after intervention 98 % respondents came to know about the same. (Fig. 3) 80 % of respondents agreed to introduce this topic as curriculum design but after intervention there was 17 % increase making a total of 97 % who wanted to introduce the same. (Fig. 4)

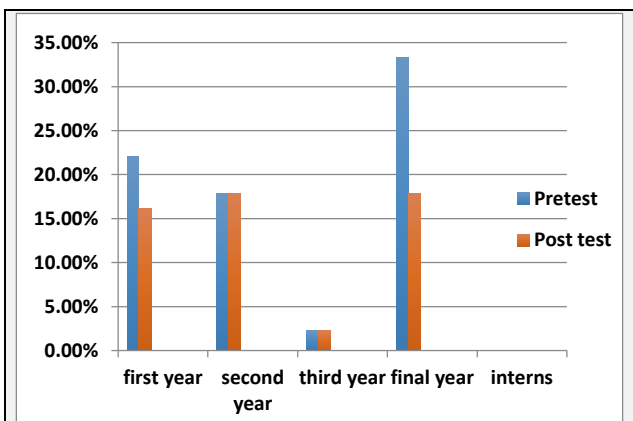


Figure 1. 77.9 % - 88 % participants in pre-test said that they had not been taught about the art of setting the clinic whereas the ratio increased to 98 % after the intervention and post test

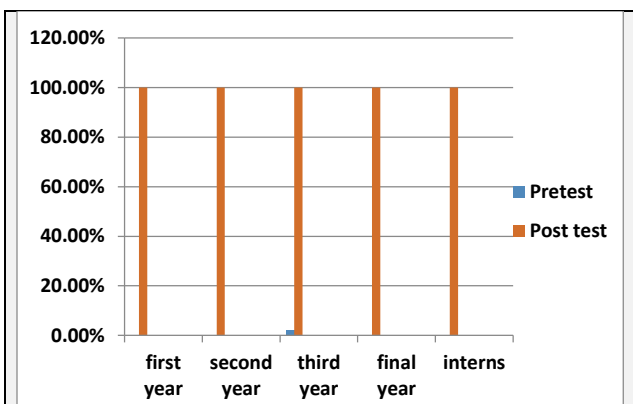


Figure 2. Only 2% of 3rd BDS students knew about the pioneers mentioned in the 'Black Book'. This clearly indicates that none of them was aware of the 'Black Book' and the names of different pioneers with their contributions

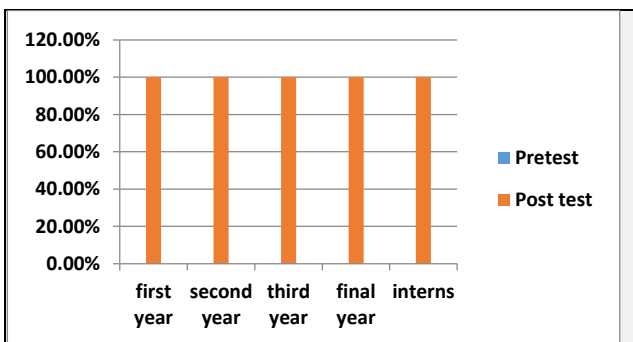


Figure 3. 100% participants did not know about the 'Black Book' on pre-test but after intervention 98% respondents came to know about the same

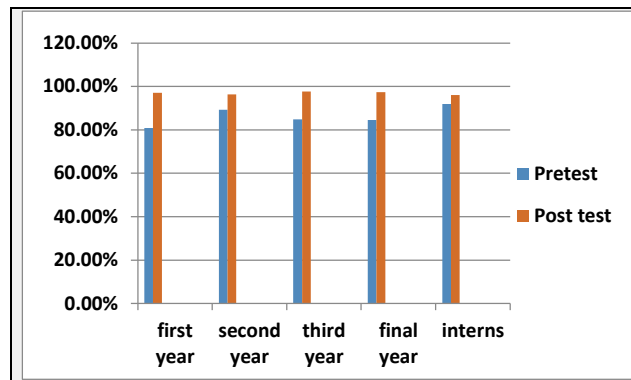


Figure 4. 80% of respondents agreed to introduce this topic as curriculum design but after intervention there was a 17% increase taking the total to 97 %

DISCUSSION

In the present scenario almost, 1,800,000 graduates pass out every year from around 300 dental colleges in India. Jobs for dental graduates and post graduates are gradually diminishing in India. Every dentist will aspire in setting up their private practice, which is a challenging task. Success in private practice is solely dependent on the economic outcome and benefits that lead to dentist satisfaction.^{1,2} Understanding the need of the society, mastering the treatment skills, communication skills, updating knowledge and new trends, patient satisfaction, mouth publicity, management of support staff, maintaining professional network, and financial viability are the major task to be accomplished by the young dentist. Hence the subject of how to set the clinic and manage its overheads should be considered as one of the teaching curriculum in dentistry.

The basic key factors that should be included in this are as mentioned in Black Book financial 2011 should be considered.^{3,4,5,6}

1. Leader ability.
2. The Operating Sector - Importance of high quality dentistry and practice profitability.
3. Dental office set up - things to do and avoid and management of overheads.
4. Radical Collaboration - Group practice vs. Solo practice.

This study is first of its kind, hence comparison with any previous data could not be possible. Achieving high quality state-of - the - art dentistry with good treatment creates a groundwork for excellent clinical set up. It has been hypothesized that there are certain prerequisites that need to be focused to enable entrepreneurship to flourish, especially in an uncertain conducive environment, and at the same time, re - allocation of resource ownership, to unit management level.⁷ Also this branch is different from health economics in the following aspects - health economics deals with the efficiency, effectiveness and functioning of the health care systems involving extensive government intervention and externalities whereas dental economics is solely related to business side of dental care in private clinical sector and not at institution level. To capitalize the momentum from this KAP study, the following recommendations should be followed-

1. Enhancing the knowledge about business side of dentistry to students by conducting workshop and seminars / webinars on topics like rebranding of clinics, radical collaboration vs solo practice, practice wellness wheel, etc by experts in this field.
2. Fostering partnerships with BBA / MBA to learn about marketing strategies.
3. Lack of awareness among public can be overcome by conducting awareness campaigns on television/radio stations,

Printing on newspapers and posts on Facebook / Instagram etc. importance of dentist satisfaction & Practice Wellness Wheel (PWW) - The level of being satisfied with the dental practice is also the subject of concern and one should pay utmost attention at as it affects the wellness wheel of individuals life that includes the basic dimensions, that is, physical, social, occupational, emotional, spiritual and intellectual (mind, body, soul) of one's life. Each practice setting has characteristics that could lead to dentists feeling more or less satisfied. It is unclear exactly which characteristics of practice settings cause dentists' satisfaction levels to differ as well as the degree to which the levels of satisfaction differ among dentists. Another purpose of the Practice Wellness Wheel is to ensure that every patient has at least one appointment.

The Wheel allows you to focus on those areas of your practice that need attention in order for you to achieve the objective of every patient having an appointment. Keep your patients within the Wheel. Follow the arrows and follow the path of your patients, use reactivation to put those patients who have fallen out of the Wheel back on the wellness track. Your practice cannot help but grow and be successful when you focus on the wheel. Your patients will benefit with health and well-being. Anthony T. Lo Sasso et al in 2015 conducted a study that provides the first glimpse into the relationship between dentists' career satisfaction and alternative practice settings in the United States. The aim of this study was to explore how job satisfaction among dentists is associated with dental practice setting.

This survey measured satisfaction with income, benefits, hours worked, clinical autonomy, work-life balance, emotional exhaustion, and overall satisfaction among dentists working in large group, small group, and solo practice settings in which a total of 2,171 dentists responded. The results concluded that Dentists working in small group settings reported the most satisfaction overall. Dentists working in large group settings reported more satisfaction with income and benefits than dentists in solo practice, as well as having the least stress.⁸

Implications of the Study

Conducting such research projects can create awareness and reveal the knowledge gaps among the dentist before the start-up of the clinical practice. Understanding the theories and basic key factors of business in dentistry can create an entrepreneurial approach which is a need of an hour in today's competitive world. Inclusion of such topics in academic

curriculum can open up a new gateway, thus achieving a high quality dental practice and dentist satisfaction among India.

Limitations of the Study

Consecutive sampling can be one of the limitations as all the participants who meet the inclusion criteria were included.

CONCLUSIONS

This survey study reinforces the need to consider the business side of dental practice, in particular, the importance of quality, creativity and innovation, alongside the importance of meeting the needs of patients. An entrepreneurial approach will be required in order to sustain dental practice in an increasingly competitive environment.

The findings of this baseline KAP study should be presented at all the institutional levels to all stakeholders of educational institute (management, staff members, students, alumni) to educate the dental students regarding new business strategies for setting up successful dental practice in the present world. The findings should be further published to increase its visibility and the published document should be made available and easily accessible in different platforms and digital repositories.

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