

Awareness of Senior and Specialist Dental Student Toward the Importance of Cost Analysis and Business Practice Management: Cross Sectional Study from a Public University in Indonesia

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Abstract

Background: Dental students not only develop practical skills but also management skills. Dental students must be able to understand how to determine cost analysis, which is a measure of the relationship between costs and output. **Objective:** to determine the awareness of senior dental student toward the importance of cost analysis and business practice management. **Materials and Method:** A cross-sectional study was conducted using a questionnaire with closed-ended questions. The study sample included 119 participants in Airlangga Dental College, Surabaya. Statistical analysis was performed by descriptive statistical analysis and chi square tests. **Results:** One hundred nineteen questioners were returned and analyzed. BDS 95 students while the specialist was 24 students. It was seen that there are 79% of specialist students who have a good level of confidence while in BDS students only 51% have a good level of confidence. BDS students (42%) and specialist students (33%) indicated that their knowledge was sufficient about the costs of practice management or business management. **Conclusion:** students have confidence in clinical skills but are not quite sure about practice management knowledge. Students are also interested in increasing the range of knowledge about business and practice management.

Keywords: Dental students, awareness, practice management, private practice, cost analysis.

Introduction

Dental students are challenged in the rapid development of knowledge in their fields, this shows the importance of graduate students not only preparing practical knowledge and skills but also practical skills and management¹. Houlberg² in the study stated that there was inadequate training in practice management and suggested for the future dentistry curriculum to discuss practice management training as an important

component in the curriculum. They also should be prepared to have competency in business of practice management to improve their readiness and confidence as a dentist³.

One of the important things that needs to be understood by dental student is how to determine cost analysis. In economics, the **Cost Analysis** refers to the measure of the cost – output relationship^{4,5}. In other words, the cost analysis is concerned with determining money value of inputs (labor, raw material)⁶, called as the overall cost of production which helps in deciding the optimum level of production⁷⁻⁹. In the study that conducted by Manakil et al¹⁰, graduate students feel they do not have enough knowledge in business management/ practice costs, including administration; advertisement; equipment costs; dental consumables; and maintenance of infrastructure¹¹; equipment overhead; ingredient¹²;

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staff¹³; etc. So it is important to calculate the value of the dental health treatment cost and balancing the income and outcome according to the performance of dentist and in accordance with the patient to produce an effective cost that could benefit the dentist and still affordable to patient¹⁴.

Awareness is the ability to directly know and perceive, to feel, or to be aware of events. More broadly, it is the state of being conscious of something. Another definition describes it as a state where a subject is aware of some information when that information is directly available to bring to bear in the direction of a wide range of behavioral processes¹⁵. The states of awareness are also associated with the states of experience so that the structure represented in awareness is mirrored in the structure of experience¹⁶. This study is conducted to determine the awareness of senior dental student toward the importance of cost analysis and business practice management.

Material and Method

This survey is a modification of work³ and is designed to study fiscal status; trust; learning preferences; career path; overall knowledge; and integration or management of dental practices among dentist graduates. The questionnaire used in this descriptive cross-sectional study was a closed-ended questionnaire. The subject of this study are the senior undergraduate dental students from fourth and fifth year and specialist students at Airlangga dental college, Surabaya. The total number of sample are 119 students. The survey will be conducted distributed and confidential through a third party, to maintain anonymity

The questionnaire was divided into four sections: the first section collected personal data such as age, gender and student income support throughout the program; the second part evaluates the confidence in the skills gained during the dental education program and the confidence to maintain a general private practice. The responses are measured on a five-point Likert scale with "1" being high confidence and "5" is low confidence. This section looks at perceived trust in operating skills, integrating into a dental practice, patient management skills, and business practice management skills.

The third part of the survey is analyzing student demographic work preferences such as private or public sector work, rural or city-based practices, the area of specialization of choice for practice, and the

preference for establishing an independent practice. The fourth part is assessing student awareness in cost analysis and managing an independent practice. Studies evaluate students perception about the importance of the determining unit cost for dental treatment.

Result

The survey was conducted on 140 students, among a total of 140 questionnaires were distributed of which 119 were obtained back. The details of participants are according to the age, gender, qualification and years of experience as shown in (Table 1). Out of the 119 students, (72.3%) were females and (27.3%) were male. It was seen that most of the individuals were undergoing their undergraduate in dental medicine (82.6%) while the specialist was (17.4%). Most of the subjects fell under the age group of 21-23 years (64.7%).

Table 1 Distribusi of the study according, gender, qualification, years of experience

Characteristic	Number	%
Gender		
Male	33	27.7
Female	86	72.3
Age		
21-23	77	64.7
24-26	17	14.2
27-30	14	11.7
31-35	11	9.4
Qualification		
BDS	95	82.6
SPDS	24	17.4

There are 79% of specialist students who have a good level of confidence while in BDS students only 51% have a good level of confidence. Significant P value (0.036) had observed in question about Major cost in running a private practice with gender in undergraduate student. Another significant P value (0.000) was observed in question about how to determine the rates for dental treatment with age.

In BDS students 55% of respondents chose to practice together, this result is different from specialist students whose 58% of respondents choose to open private practice. Almost all respondents, both specialist students and BDS students agree that calculating costs

first before setting rates is important. And almost most of the respondents (BDS students: 78% and specialist students: 75%) from both groups also agreed that the way to set the right dental treatment rates is to calculate the cost of materials and tools needed for each treatment. In BDS students, 42% of respondents felt that the knowledge provided was insufficient. For specialist students, the biggest answer is in the ordinary choice of 42%.

For specialist students, significant P value had observed in some question. The first between level of confidence and age (0.043), then the sort of practice that student visualize once graduate with age (0.050). Next is the strongest experience with gender (0.002) and how to determine rates for dental treatment with gender (0.050). The last one is confidence on practice management and finance with years of practice (0.024).

Discussion

This survey questionnaire has been modified from previous studies³ and broader topics such as student financial support, preferential career paths after graduation, awareness of cost analysis, and business practice management¹⁰. Self-perceived confidence is used to assess students' preparedness for practice¹⁷. From the results of this questionnaire, it can be seen that specialist students have a greater level of confidence when compared to undergraduate students. High self-confidence can be influenced by the length of experience in practice. The longer the practice, the more cases that will be faced, thus increase the confidence in the dental practice¹⁰.

Having personal practices is often projected as a symbol of social success in dentistry field². However, after graduating, many students from BDS want to be employed or practice together. There is a significant difference between the kinds of practice that specialist student visualizes once graduate with age (0.050). It is believed that with the increasing age of someone, the practice experience will increase with the more dental cases they are facing thus making more experienced dentist inclined to open their private practice.

For BDS students, mentoring following graduation was considered very important. Preference in geography practices shows city practices as the first choice without significant differences between genders, age or years of experience in their choice¹. Dental graduates are not only required to be proficient in the patient care but must

also be competent in business management or practice¹⁰. It was also reported from previous research that students felt their integration into general dentistry could be facilitated by more time for the clinical environment and more knowledge in practice management¹⁸. Houlberg², report that there is inadequate training in practice management and suggest that for future dental curriculum it should discuss practice management training as an important component in a curriculum¹⁹. In the study mentioned that BDS students (42%) and specialist students (33%) felt they did not have enough knowledge about the costs of business management or practice, such as administration; advertisement; dental consumables; infrastructure equipment and maintenance costs; overhead costs of equipment; ingredients; staffing; etc. However, students' assumptions about high-cost staffing and management in practice are wrong, they prefer to choose equipment and infrastructure as the biggest costs in carrying out dental practices¹.

This study supports suggestions for managing successful practices, training in management practices must be considered a module in the curriculum for graduate students and must be continued even after graduation¹⁹. In Indonesia, a multicultural society (Caucasian, Aboriginal, Asian, Indian, Arabic and European), it is important for students to be more prepared to accept a variety of cultures and beliefs. Duke et al.²⁰ argue that all health discipline practitioners must be culturally competent so that culturally safe care is obtained for patients.

Conclusion

This study shows that students feel confident about clinical skills that are developed but are not quite sure about management practice knowledge. Students are also interested in increasing the scope of knowledge about business and practice management. Improving students' work skills after graduation is a challenge in the increasingly competitive and competitive job market; the curriculum must consider the integration of clinical skills and knowledge of practice management skills

Acknowledgment: The authors acknowledge and thank all senior undergraduate and specialist dental students for participating in the study.

Conflicts of Interest : There are no conflicts of interest.

Source of Funding: Self-Funding

Ethical Clearance : Approved

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