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ORIGINAL ARTICLE

Core clinical competencies for dental graduates in Taiwan: Considering local and cultural issues

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Abstract *Background/purpose:* Depending on the educational institute to which they are associated, professors of dentistry differ in their objectives and ideals. Thus, reaching a common consensus regarding the requirements that are essential in this field has proven exceedingly difficult. This study sought to provide a reference for the design of clinical courses and the assessment of educational outcomes in the field of dentistry.
Materials and methods: This study used the nominal group technique with 12 volunteers recruited from the School of Dentistry, National Taiwan University (Taipei, Taiwan) to identify the essential core competencies required by dental students before graduation.
Results: The participants classified the core competencies into two categories, namely, operational and nonoperational, and then prioritized them according to importance. The three most important of nonoperational capabilities were patient–dentist discourse (querying patients and responding to questions), treatment planning, and the ability to deal with medically compromised dental patients. The three most important operational capabilities were cavity filling, infection control, and proper handling of needles.

Conflicts of interest: The authors have no conflicts of interest relevant to this article.

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Conclusion: Patient—dentist discourse was identified as the most important duty in dealing with patients on their first visit. Suitable discourse can help to identify the purpose of the current visit and obtain information related to a patient's dental and medical history. It also gives the dental staff an indication of the patient's personality traits and helps in the formulation of an initial treatment plan following the examination.

Introduction

The importance of education in the field of dentistry has recently gained attention.[1] However, professors of dentistry greatly differ in their objectives and ideals.[2—9] In 2011, the American Dental Education Association set up a clear set of core competencies required by graduates to practice independently.[10] Similar measures were taken by the Association for Dental Education in Europe in 2009,[11] the Australian Dental Council in 2010,[12] the Association of Canadian Faculties of Dentistry in 2007,[13] and the Dental Council of New Zealand in 2012.[14] Table 1 provides a comparison of the methods of editing and revision, common aims, and items of particular concern in each of these projects. These five publications came to similar conclusions in a number of areas regarding the core competencies of dentistry; however, they varied in other areas perhaps due to cultural differences.

Despite the homogeneous nature of Taiwanese culture, the goals of education display a notable lack of consistency. The purpose of this study was to establish a competency-based training program specifically for Taiwan, including a curriculum and tools for assessment.[15,16] It is hoped that a suitable training framework could help to develop the skills and instill the knowledge required to function independently in clinical practice.[15,16] In addition, existing programs and curricula could be assessed according to their effectiveness in meeting educational objectives.[17]

Materials and methods

Study object

This study recruited 12 participants (4 men and 8 women) between 24 and 45 years of age from the research unit of the School of Dentistry, National Taiwan University (Taipei, Taiwan). The participants included seven professors in various fields of dentistry (between 5 and 10 years of teaching experience), three resident dentists (2—3 years of experience), one professional in medical education, and one individual with no clinical experience. Basic background information related to the participants is listed in Table 2.

The participants had experience with dentistry procedures in Taiwan as well as of those in the United Kingdom, Japan, and the United States of America, which expanded the range of ideas proposed, and enabled a comparison of similarities and differences between the approaches taken in domestic and foreign universities. Our aim was to integrate the core competencies adopted from various countries with domestic clinical teaching experience in accordance with global standards. This would provide a reference for use in the design of courses in clinical dentistry as well as a means to evaluate the effectiveness of existing courses.

Steps

This study adopted the nominal group technique (NGT) as follows[18,19]:

1. An expert in medical education was assigned to be the moderator and describe the purpose of the meeting as well as the vision and goals of the project.[20]
2. Groups were assembled of sufficient size to enable each member a fair opportunity to speak and hopefully for the group to come to a consensus.[21]
3. Participants were given 5 minutes to compile a set of core competencies required by students of dentistry. All items were written down and divided into nonoperational (medical humanities education, attitudes, and literacy) and operational (practical technical skills) items.
4. In rotation, each member submitted his/her ideas to the group. A second cycle was also completed to ensure that every member had the opportunity to express himself/herself completely. Participants were encouraged to listen objectively to the other members and not to express any criticisms or other comments.
5. Each participant then assigned the proposed items either two points or one point to indicate the items they regarded as the most important and second most important, respectively. Scores were assigned separately for operational and nonoperational capabilities. Participants vote for items that they would like to include and the total results are tallied for all of the participants at the end.
6. The moderator combined ideas that appeared similar, before the compilation of results.

Data analysis

After data collection, frequencies and percentages were used for analyses.