



Correspondence

The importance of the dental education for the medical students: The viewpoints from a senior attending dentist who participates in the teaching of the dental course



KEYWORDS

Dental education;
Medical education;
Medical students;
Tooth-numbering
system

Currently, there are 13 medical schools in Taiwan. Among them, there are 8 medical schools with a dental school on the same campus. Of the 13 medical schools, 6 (46.15%) offered dental curriculum for their medical students in the 2022 academic year. Moreover, 4 (50%) of 8 medical schools with a dental school on the same campus and 2 (40%) of 5 medical schools without a dental school offered dental curriculum to their medical students.¹ Due to a system change, the medical school of National Taiwan University (NTU), which once had a nearly century-old history in the field of dental education for the medical students and also has a dental school on the same campus, performed its dental course entitled "Introduction to dentistry" for the medical students for the last time in 2011.² Although it is a pity, our medical education system rarely explores in depth what the dental education means for the medical students. In this article, we attempted to explore the importance of the dental education for the medical students through an interview with a senior attending dentist of National Taiwan University Hospital (NTUH) who was involved in the teaching of the dental course for the medical students of NTU.

In this study, we used purposeful sampling to select an attending dentist of NTUH who had extensive experience in the career of clinical and teaching work in dentistry to conduct an interview with him. Our questions for the dental

teacher and his answers during the interview are shown in Table 1. The interview outline had 4 major items related to the issues of the dental education for the medical students, including (A) the working experience of this interviewed attending dentist (B) the descriptions related to the dental course for the medical students, (C) the opportunity for the medical students or the physicians to learn about dentistry, and (D) the importance of the dental education for the medical students (Table 1).

This interviewed attending dentist started his career of the dental education since 1997. So far, he has been in this career for nearly 30 consecutive years. According to his viewpoint, due to the separation of medicine and dentistry, the medical students have relatively few opportunities to learn about the knowledge related to dentistry. Clinically, however, oral problems are those that all physicians may face. Thus, it is necessary for them to have a better understanding of the oral and dental-related knowledge. In the dental course entitled "Introduction to dentistry" for the medical students of NTU, his teaching content included the basic structure of the oral cavity, the description of tooth identification, the common problems in children's oral cavity, and the general treatment methods. This is helpful for the medical students to have a preliminary understanding of the clinical findings and treatments of the

Table 1 The questions for the attending dentist of National Taiwan University Hospital (NTUH) participating in the dental course entitled "Introduction to dentistry" for the medical students of National Taiwan University (NTU) and his answers during the interview in this study.

The questions for the senior attending dentist and his answers	
A	The working experience of this interviewed attending dentist
1	What is your teaching experience in dentistry? In 1997, I started to work as an attending dentist in the Department of Dentistry of NTUH. First, I participated in the teaching work of pediatric dentistry courses for the dental students of NTU. In 2008, I served as a lecturer in the School of Dentistry of NTU, starting the teaching work of other dental courses for the dental students of NTU. From 1997 to 2024, I have nearly 30 years of teaching experience in dentistry. Moreover, I had also been assigned to teach the dental course for the medical students of NTU.
2	What is your teaching experience in the dental course for the medical students? From 2009 to 2011, I was assigned to teach the dental course entitled "Introduction to dentistry" for the medical students of NTU. This course usually had 16 learning units, and each unit was a 1-h lecture. I was responsible for teaching one of these units.
B	The descriptions related to the dental course for the medical students
3	What kind of course is "Introduction to dentistry" for the medical students of NTU? Do the medical students taking this course need to have any prerequisite knowledge? The dental course entitled "Introduction to dentistry" is designed for the medical students, because the oral cavity is also a part of the human body. Due to the separation of medicine and dentistry, the medical students have relatively few opportunities to learn about the knowledge related to dentistry. Clinically, oral problems are those that all physicians may face. Whether they deal on oral problems by themselves or seek help from other dental departments, it is necessary for them to have a better understanding of the oral and dental-related knowledge. This course is mainly arranged for the sixth-year medical students. All of them have already taken courses related to anatomy and histology. Therefore, they have a preliminary understanding of the oral cavity.
4	What are your dental expertise and your teaching content in the course of "Introduction to dentistry"? I am a pediatric dentist, so I often encounter children with systemic problems or young patients who require special medical treatment in the outpatient medical clinic. Because I work in a teaching hospital, I often receive consultation from the wards to deal with or evaluate the oral and dental-related problems of pediatric patients. However, the content of the consultation note is sometimes so equivocal that the dentists do not know exactly the relevant problems they need to solve. It is speculated that the physician who issues the consultation note is not familiar with the relevant dental information. Therefore, in this course, I also mentioned this matter to the medical students in the class, hoping that they can have good communication with the dentists if they need dental assistance for their patients in the future. Thus, the patients' oral problems can be better dealt with. For my teaching content, the basic structure of the oral cavity and the description of tooth identification are first introduced, and then the common oral problems in children and the general treatment methods are introduced. This is helpful for them to have a preliminary understanding of the clinical findings and treatments of the pediatric dentistry.
5	According to your memory, what is the situation (such as classroom performance) of the medical students taking the course of "Introduction to dentistry", or what is the feedback that impresses you much? To be honest, the medical students usually have a good attitude to learn the dental knowledge in the class. They listen carefully and rarely doze off. However, after the class, they rarely ask questions. This may be the current situation for the ordinary students in Taiwan.
6	What are the benefits or effects of the medical students taking the dental course of "Introduction to dentistry"? Because the oral cavity is also a part of the human body, allowing the medical students to take the course of "Introduction to dentistry" has the benefits to fill in the last piece of the puzzle for their medical knowledge. In fact, dentistry also includes different sub-disciplines. Taking this course will allow the medical students to have a preliminary understanding of the various sub-disciplines of dentistry. When they encounter the oral and dental-related problems of their patients in the future, they can clearly find the best dental specialty to solve these dental problems. Based on my personal experience, after I participated in the teaching of this course for a few years, I found that the content of the dental consultation note is clear enough to understand, indicating that the physician has a better understanding of the dentistry. When discussing the patients' relevant dental treatments with the physicians, I felt very easy to communicate with them. Perhaps because this course has been deleted since 2011, the content of the recent consultation note is sometimes so unclear that the dentists do not know what the patients' oral problems are. Moreover, some of the patients' oral problems do not seem to fall within the scope of dentistry.
C	The opportunity for the medical students or the physicians to learn about dentistry
7	In addition to "Introduction to dentistry", do the medical students have the opportunity to acquire the dental knowledge (such as the oral part of anatomy) in other courses in the medical schools? In the courses of anatomy and histology (such as the sections of the oral cavity or digestive system), there may be the opportunity for them to learn about the dental knowledge. However, they are basic dental knowledge and hardly cover the professional knowledge related to dentistry.

(continued on next page)

Table 1 (continued)

The questions for the senior attending dentist and his answers	
8	After the dental course of "Introduction to Dentistry" was cancelled, in what situations the medical students or the physicians may have the opportunity to learn about the dental knowledge? When the physicians themselves encounter oral problems that need to be solved, they may acquire the dental-related information after contacting the dentists. In the past, I had the opportunity to go to an invited pediatric conference and introduce the dental clinical treatments for the children to the pediatricians. Therefore, I consider that the dental lectures held by the schools, hospitals or academic medical groups for the physicians may also be one of the channels for them to learn about the dental knowledge.
D	The importance of the dental education for the medical students
9	The dental course of "Introduction to dentistry" for the medical students of NTU was canceled after the last class in the 2011 academic year. What is the background of the cancellation of this course? Based on your experience, what are the impacts of the cancellation of this course on the medical education? In Taiwan, the medical education was changed from a 7-year system to a 6-year system in 2013 academic year. The reduction in the overall learning time of the medical students may be the reason for the cancellation of this dental course. As in the answer to question 6, I have quite good interactive experience in clinical communication with the medical residents, probably because they have taken the dental course of "Introduction to dentistry". However, this feeling became less and less after 2011. This may be due to the fact that the later medical students have no opportunity to learn about the dental knowledge.
10	Based on your experience, how important is it for the medical students or the physicians to learn about the dental knowledge? In addition to focusing on precision and certainty, the modern medical care also places more emphasis on the systemic health care. Oral health plays a very important role in the quality of life. Therefore, it is necessary for the medical students or the physicians to have a better understanding of the oral cavity. Taking the problems we encounter clinically as an example, when we treat children with congenital heart disease, we usually ask the patients to consult their cardiologists about the antibiotic prophylaxis prior to dental procedures. Sometimes the answer I get is that the tooth extraction and the endodontic treatment need the antibiotic prophylaxis prior to dental procedures, but the tooth fillings and the tooth scaling do not. This may be due to the patient's cardiologist who is not very knowledgeable about the specific dental treatments.
11	If you have the opportunity to plan a one-credit dental course for the medical students, within the limited learning time, what content should be prioritized in this course? I consider that the previous course schedule has included enough important issues related to dentistry. If there is more content to be added, I suggest that the introduction of dental imaging technology should be included, because this is a very important part in the dental clinical practice.
12	Do you have any other suggestions? In fact, I consider that it is relatively necessary for the dentists to have some preliminary understanding of the medical knowledge such as systemic diseases and their related treatments. However, it is gradually found that the dental students pay less and less attention to this important medical issue.

pediatric dentistry. Because the oral cavity is also a part of the human body, allowing the medical students to take the dental course of "Introduction to Dentistry" has the benefits to fill in the last piece of the puzzle for their medical knowledge. Taking this dental course allow the medical students to have a preliminary understanding of the various sub-disciplines of dentistry. When they encounter the oral and dental-related problems of their patients in the future, they can clearly find the best dental specialty to solve these oral and dental-related problems.

Although there may be the opportunity for the medical students to learn about the dental knowledge in the courses of anatomy and histology (such as the sections of the oral cavity or digestive system), these hardly cover professional knowledge related to dentistry. Moreover, the dental lectures held by the schools, hospitals or academic medical groups for the physicians may also be one of the channels for them to learn about the dental knowledge. The dental course of "Introduction to dentistry" for the medical students may have the benefits or effects of facilitating the

better communication between the physicians and the dentists in the future. In addition to focusing on precision and certainty, the modern medical care also places more emphasis on the systemic health care. Oral health plays a very important role in the quality of life. Therefore, it is necessary for the medical students or the physicians to have a better understanding of the structure and diseases of the oral cavity. Finally, the interviewer pointed out that it is also relatively necessary for the dentists to have some preliminary understanding of the medical knowledge such as important systemic diseases and their treatments. However, our dental students pay less and less attention to this important medical issue.

The benefits of studying dentistry by the medical students are not only for the medical education, but also for the medical students to gain a more comprehensive understanding of the dentistry and oral and maxillofacial diseases, and this knowledge is very helpful for the future medical practice.³ It contributes to the better communication between medicine and dentistry for the medical

students or the physicians by a better understanding of the oral and dental-related knowledge (such as the relationship between oral diseases and systemic diseases, the clinical oral manifestations in patients with systemic diseases, the understanding of various specialties of dentistry, and the tooth-numbering system for tooth identification). Especially, the tooth-numbering system is a common language of communication between the physicians and the dentists.

Furthermore, the medical education should not be the body without the mouth, while the dental education should not be the mouth only without the connection to the body.³ The problem of separation of the medical and dental educations is serious in Taiwan. Of the 13 medical schools, 7 (53.85%) did not offer any oral health courses for their medical students in the 2022 academic year. However, there are currently 8 dental schools with the comprehensive dental teaching faculty and a comprehensive dental specialist system implemented in Taiwan.^{4,5} Therefore, a well-planned dental curriculum for the medical students is an achievable goal.

Declaration of competing interest

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

Acknowledgments

None.

References

- Cheng FC, Wang YL, Chiang CP. Dental curriculum for medical students in Taiwan: a preliminary survey. *J Dent Sci* 2024;19:747–50.
- Cheng FC, Wang YL, Chiang CP. The evolution of dental teaching and research unit for the medical students from Taipei Imperial University to National Taiwan University (1939–2000). *J Dent Sci* 2024;19:1850–3.
- Lin HP, Wang LH, Lin TC, Cheng FC, Chiang CP. Oral medicine education for medical students - a retrospective evaluation of the course in Mackay Medical College from 2016 to 2021. *J Dent Sci* 2022;17:1292–9.
- Cheng FC, Wang YL, Wang LH, Chang JYF, Liu SY, Chiang CP. Overview of dental education system and gender distribution of

undergraduate dental students in Taiwan. *J Dent Sci* 2023;18:420–7.

- Cheng FC, Wang LH, Wang YL, Chiang CP. Overview of the dental specialist system in Taiwan. *J Dent Sci* 2023;18:1909–11.

Feng-Chou Cheng

Chia-Te Dental Clinic, New Taipei City, Taiwan
School of Life Science, College of Science, National Taiwan Normal University, Taipei, Taiwan

Science Education Center, National Taiwan Normal University, Taipei, Taiwan

Ling-Hsia Wang

Center for the Literature and Art, Hsin Sheng Junior College of Medical Care and Management, Taoyuan, Taiwan

Yin-Lin Wang^{**}

Department of Dentistry, National Taiwan University Hospital, College of Medicine, National Taiwan University, Taipei, Taiwan

Graduate Institute of Clinical Dentistry, School of Dentistry, National Taiwan University, Taipei, Taiwan

Chun-Pin Chiang^{*}

Department of Dentistry, National Taiwan University Hospital, College of Medicine, National Taiwan University, Taipei, Taiwan

Graduate Institute of Clinical Dentistry, School of Dentistry, National Taiwan University, Taipei, Taiwan

Graduate Institute of Oral Biology, School of Dentistry, National Taiwan University, Taipei, Taiwan

Department of Dentistry, Hualien Tzu Chi Hospital, Buddhist Tzu Chi Medical Foundation, Hualien, Taiwan

^{**}Corresponding author. Department of Dentistry, National Taiwan University Hospital, College of Medicine, National Taiwan University, No. 1, Chang-Te Street, Taipei, 10048, Taiwan.

E-mail address: wil1019@ntu.edu.tw (Y.-L. Wang)

^{*}Corresponding author. Department of Dentistry, Hualien Tzu Chi Hospital, Buddhist Tzu Chi Medical Foundation, No. 707, Section 3, Chung-Yang Road, Hualien, 970, Taiwan.

E-mail address: cpchiang@ntu.edu.tw (C.-P. Chiang)

Received 24 May 2024

Available online 1 June 2024