

Original Article**Investigation of Current Smoking Status of Dentistry Students
Among Smoke-Free Premises in Dental University Hospital**Nobutaka Okusa¹, Kazuya Masuno², Hidenori Matsumoto², Tetsunari Nishikawa², Pao-Li Wang²**SUMMARY**

The whole premise of the university hospital has become smoke-free since April 2018.

Anonymous self-administered questionnaire were taken in total of 296 dentistry program students, which includes 137 students from 5th year who underwent dental clinical practices and 159 students from 6th year who terminated the preparation course for National Medical Practitioners Qualifying Examination, to investigate the opinion about smoke-free premises in the university hospital. Main contents of the questionnaire contain age, gender, current smoking status, reason of starting tobacco smoking, reason to quit smoking for a former smoker, and opinion about smoke-free premises in the university hospital. Most students answered that they have start smoking since early age of middle school year with a reason of having their friends or senior year students influencing them. With the result of having 35.6% of students agreeing on having smoke-free premises, 37.5% of students without opinion or leaving the paper blank, and 13 out of 18 students with smoking habit have claimed to return the previous smoking area or newly setting complete separation of smoking area; majority of students did not have opinion about smoke-free area, in other word that most of students have no interest about the issue of secondhand smoke and hospital environment. In order to support student's future as being a medical expert, the repetition of anti-smoking education to expand the knowledge of the negative effects of smoking is suggested before graduation.

Key words: smoking, smoke-free premises, Dental University Hospital, Dental student

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INTRODUCTION

Several studies have reported that tobacco smoking can be a risk factor of cardiac diseases¹⁾, pulmonary diseases²⁾, cancers, genital disabilities, and periodontal diseases³⁾. Recently, a measure against secondhand smoke has been already taken based on the health promotion law since 2019. This enforcement is required immediately especially in educational institutions and hospitals by the upcoming date of July 2019. The environment of public area has improved in other countries (exp. US, UK, etc.), where smoking in public area is prohibited by the law. In Japan, public areas such as elementary school, middle school, high school and hospital are common smoke-free premises. However, it is still difficult to establish smoke-free premises in university because students and teachers with smoking habit are against the idea, although the number of university with smoke-free premises has increased yearly in Japan. Many cases about positive effects of having smoke-free premises were reported in the past⁴⁻⁷⁾. Since the Dental University is a place to educate students as future medical experts, it is necessary to provide an environment as educational purpose for the students to learn and understand the harmful effects of tobacco smoking against human body and environment. Smoke-free premises among university hospital were operated since April 2018, and opinions about it were investigated among students in dentistry program to consider the future foresight and approach for non-smoking environment.

METHODS

1: Subjects

In total of 296 dentistry program students were selected as participants of the investigation, which includes 137 students from 5th year who underwent dental clinical practices and 159 students from 6th year who terminated the preparatory course for National Medical Practitioners Qualifying Examination in the university dental hospital lecture hall.

2: Study method

In April 2018, anonymous self-administered questionnaire sheets were handed out to the students during their recess time and were collected afterward.

3: Study details

The questionnaire contains the age, gender, current smoking status, reason of start smoking, reason of quit smoking for a former smoker, and opinion about smoke-free premises in the university hospital. The questions were written in an open format to write student's free opinion.

RESULTS

The questionnaire sheets were handed out to 296 participants, and the total number of 216 sheets (73%) were returned with the result of average age of 25.8, 116 male and 100 female, 98 out of 137 students (71.5%) from 5th year and 118 out of 159 students (74.2%) from 6th year.

1: Current smoking status (Figure 1)

18 students out of 216 students who answered the questionnaire were current tobacco smokers. Out of these 18 students, 3 students were 5th year and 15 students were 6th year, with the ratio of 16 males and 2 females.



Figure 1. Current smoking status by the grade of students

2: Time of start smoking (Table 1)

A time of start smoking were answered by current and previous smokers in 5th and 6th year. The result shows that 7 students started to smoke since their middle school year (25%), 5 students from high school year (17.9%), 2 students from the year of preparatory school for University entrance exam (7.1%), 7 students since the first year of university (25%), 2 students since the second year of university (7.1%), 3 students since the third year of university (10.8%), and 2 students left the answer blank (7.1%).

3: Reason of start smoking (Table 2)

The reasons of start smoking were answered in a free text format. Most students answered that they have start smoking because of their friends or senior year students influenced them. Other minority reasons include curiosity, admiration, or for socialization. Some students started smoking without any specific reason.

Table 1. Time of start smoking (5th and 6th year students)

Middle school year	7 students
High school year	5 students
Preparatory school year	2 students
1st year of university	7 students
2nd year of university	2 students
3rd year of university	3 students
Blank	2 students

Table 2. Reason of current/previous smokers start smoking (Selected)

▪ Tobacco seemed tasty when other people were smoking
▪ Influenced by friends
▪ Curiosity
▪ Thought of gaining quality in life by smoking
▪ Admiration
▪ As a fashion

4: Reason of success to quit smoking (Table 3)

The reasons of success to quit smoking were answered in a free text format. Students answered various reasons such as increased price of tobacco, increased feeling of unwellness, difficulty of continuing activities in sport club, etc.

5: Opinions about smoke-free premises (table 4, 5, 6)

The opinions about smoke-free premises were answered in a free text format. 35.6% of students agreed and showed positive opinions about the smoke-free premises with many of them commenting on awareness against second hand smoking. 37.5% students handed back the questionnaire without any opinion or leaving the answer blank. 13 out of 18 students with smoking habit have claimed to return the previous smoking area or newly setting completely separated smoking areas. Current smoking student has also mentioned disappointment about the fact that people started to smoke tobacco just beside the area after having smoke-free premises.

Table 3. Reason and timing of quit smoking (Selected)

▪ Increased price of tobacco during 3rd year of university. (5th year student)
▪ Because of clinical practices at the hospital starting from 5th year. (5th year student)
▪ Quit smoking three years ago. It wasn't enjoyable to socialize with surrounding smokers. (5th year student)
▪ Quit smoking five years ago. Wanted to focus on studying. (6th year student)
▪ Quit smoking at the age of 27. Feeling of not being a trend of now a days, and because of becoming a dentist.

Table 4. Opinions about Smoke-Free Premises <Current smokers> (Selected)

▪ Opposite effect
▪ Alternative arrangement is required
▪ Want to have smoking area somewhere inside the premises
▪ Complete separation of smoking area
▪ Want previous smoking area to be set back
▪ It is bothering to go out of the premises every time to smoke
▪ There is no choice about having smoke-free premises but it is disappointing to see people start smoking just beside the premises.
▪ Increased littering of tobacco beside the smoke-free premises

Table 5. Opinions about smoke-free premises <non-smokers, previous smokers> (Selected)

▪ I think it is good to have smoke-free premises since I start to dislike the smell of tobacco after quit smoking
▪ It is understandable to have hospital as a smoke-free premises
▪ I was aware of second hand smoke so it is a glad thing to have smoke-free premises
▪ It is appropriate to have smoke-free premises in this time era
▪ Good to have smoke-free premises, especially as being a medical expert
▪ Now a situation is harsh on smokers but good for the hospital environment
▪ I agree of having smoke-free premises, but at the same time I see more people without a manner
▪ It is good to have smoke-free premises, but at the same time bad influences outside the premise is observed
▪ Smoking area has just changed to outside of premise
▪ <i>No comment</i>
▪ <i>Blank</i>

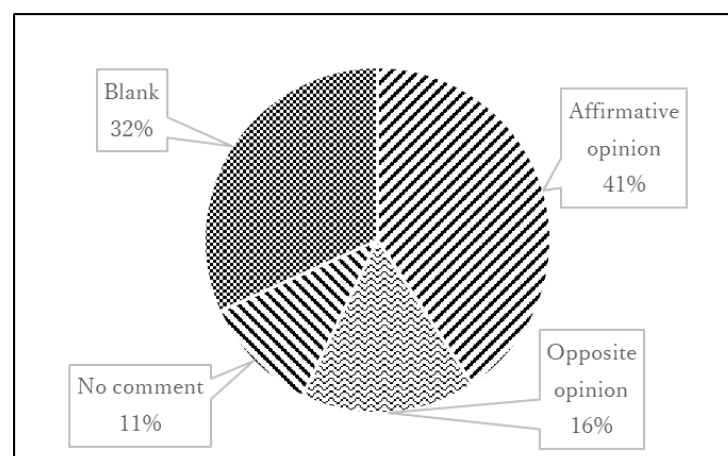


Table 6. Ratio of Opinions about Smoke-Free Premises

DISCUSSION

After having university hospital as a smoke-free premises, questionnaire targeting 5th and 6th year dentistry students were taken to figure out their opinion about it, which is important to investigate the current smoking situation among students and to consider the method to decrease the number of students smoking. The result of investigation shows percentage of smokers in 5th and 6th year dentistry students of the university were 8.3%, which is lower than percentage of smokers in 1st through 4th year dentistry students (10%)⁸⁾ and also indicates number below the national average. However, with the upcoming events such as Tokyo Olympic in 2020 and Osaka World Expo in 2025, the issue of second hand smoke and law against smoking prohibition is predicted to be immediately enforced. A recent measure against second hand smoke is already been taken based on health promotion law, and smoke-free premises in university hospital are scheduled from July 2019⁹⁾. Therefore, the fact of collecting students opinion against smoke-free premises through this investigation plays an important role of considering the future educational guidance.

As resulting more than 50% of students including current and previous smokers started to smoke tobacco in their early age of middle or high school, it indicates the importance of having anti-smoking education before the university entrance. Undergoing anti-smoking education immediately after the university entrance may be effective to decrease the smoking rate. Related areas such as periodontal disease, oral surgery and internal medicine often talk about the harm caused by smoking. Therefore, we have to secure time to spend on education.

However, scheduling the class for anti-smoking education is challenging due to the current dentistry curriculum that is already packed with compulsory subjects. Because of the importance of anti-smoking education, the distribution of time for anti-smoking education in the dentistry curriculum is considered as a future task.

Most of the students have answered that they started to smoke tobacco by the influence of their friends or senior year students, especially during second, fourth, or sixth year of university⁸⁾. The reasons for this could be predicted as students turning into 20 years old, which is a legal age to smoke during their 2nd year, increased stress and time for studying for the exams (CBT : Objectively evaluate the knowledge required for clinical training using a computer) (OSCE : Objectively evaluate basic clinical ability by simulated medical treatment) during the 4th year, and National Medical Practitioner Qualifying Exam at the end of 6th year. As it is written above, the importance of anti-smoking education is suggested and it must be done not only at the time of university entrance but should be repeated each time when students move up to senior classes.

Majority of students can be predicted to have no interest about smoke-free premises in university hospital as the result of questionnaire showed more students without opinion or leaving the answer blank are present than students who agreed on smoke-free premises in university hospital. According to this fact, there could be a high risk of students not warning other students who are smoking on the sly in smoke-free premises or smoking on the street¹⁰⁾. A factor of not having done proper anti-smoking education program to students from the time of university entrance can be a cause of this situation.

However, it may be able to change the university environment by approaching those students who are uninterested by teaching correct knowledge about negative effects of tobacco smoking causing on the human body, which lead them to understand the merits of non-smoking and to change their opinions to agree on smoke-free premises. In order to do this, it is necessary to perform anti-smoking education as a curriculum immediately after students move up to the senior year. The investigation was done on 1st year students of dental hygienist college and dental technician college by taking questionnaire before and after the anti-smoking education. The result showed more students answered questionnaire with clearer description about the importance of abstention from tobacco smoking after completing anti-smoking education than before undergoing the anti-smoking education. Therefore, anti-smoking education can be said to play an important role for students to obtain correct knowledge and awareness against tobacco smoking¹¹⁾. Nakajima et al.¹²⁾ have also reported that because smoke-free premises play major role of promoting tobacco smoking abstentions, and it can enhance awareness of students against smoking. No support for smokers has been established at our university. The goal is to establish the direction of support. In order to achieve this goal, it is

important to keep smoke-free premises in the university hospital and academic faculty members should make an effort for student's education about smoking before the graduation.

Health care providers should become a good role model for the society¹³⁾ because they have a knowledge about the negative effects of tobacco smoking on human body. Therefore, dentistry students and faculty members¹⁴⁾ should also understand and share their awareness against tobacco smoking as being a part of health care providers¹⁵⁾. From the point of medical experts, and as the university being a training institution for future dentists, the university must first set the goal of producing quality dentists, who can also support people not to smoke tobacco by satisfying the anti-smoking education program. Spreading awareness against smoking to people will probably be the first step of creating future tobacco-free society.

CONCLUSION

With the result of collecting opinions from 5th and 6th year dental students about smoke-free premises by the use of questionnaire, setting university hospital as a smoke-free premises can be said to be effective guidance for non-smokers and previous smokers to continue non-smoking, but was turned out to be less effective for smokers to quit tobacco. I think that it is the cause of the lack of explanation of smoking cessation to the student in the university. Therefore, the importance of carrying out anti-smoking education as a program each year when students move up to senior grade and reconstructing supportive care system for the smokers were suggested from the result of investigation.

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