

## COMMENTARY

## Oral Health Education Courses for University Students: Why Not?

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Oral health status can be maintained or enhanced through prevention-oriented practices of individuals and an environment conducive to oral health. Practicing good oral health habits is a fundamental necessity to maintain oral health. Recently, this kind of thinking was reinforced in a study showing long-term oral hygiene behaviors reduce the risk of tooth loss (1). Developing and maintaining proper personal oral health habits may be more difficult than implementing programs that are provider dependent. The former faces huge individual variance related to values and environments and it also requires continuous effort from individuals.

Proper oral health habits are developed through the traditional K-A-B (knowledge-attitude-behavior) model of education. There are several different health education models suggesting different ideologies and methods. But whatever the model is, having correct knowledge and understanding that is scientifically supported information and facts, namely oral health literacy, is a common cardinal first step of oral health education for changing oral health behaviors.

Oral health education is important not only for educating individuals about how to achieve oral health, but also for raising their critical consciousness. This is necessary for encouraging public opinion toward developing and implementing proper oral health policy (2).

The need for oral health education is great in South Korea. DMFT of 12-year-old Koreans is over 3, which is high compared to other developed countries. In Korea, the entire population is covered by the health security system and 97 percent of the popula-

tion is covered by the compulsory National Health Insurance Program. Compared to the United States, the financial burden for Koreans for periodic dental examinations is negligible. The insured pay 30 percent of total costs as out-of-pocket expenses. Although primary prevention, such as pit and fissure sealants and topical fluoride application is not covered, this insurance covers dental examinations, amalgam restorations, and endodontic treatment. This fact suggests that the cost, per se, is not a barrier for early dental caries treatment. Nevertheless, 20 percent to 30 percent of decayed teeth are untreated.

Periodontal disease is also a serious problem for Koreans. More than 80 percent of people need scaling or further periodontal treatments (%TN2). Periodic scaling is uncommon and periodic dental examinations are not usual among Koreans. More than 40 percent of the population has not visited a dentist for more than two years. And among children under 5 years of age, about 75 percent have never visited a dentist (3). This situation implies that Korean adults need to be informed about the importance of oral health and how to achieve it, not only for themselves, but also for their children.

A recent study showed that almost all Korean adults (99.4%) think oral health is important (4). Yet they do not seek routine dental care. What accounts for this gap between their alleged value for oral health and their oral health behavior? One possibility is the lack of opportunity for oral health education. In fact, there is little or no opportunity for oral health education in Korea.

The passion of Korean parents for

educating their children is high. Students engage in intense study efforts to enter prestigious universities. It is called a war and this war starts in elementary school. In Korea, every curriculum is oriented toward the Korean Scholastic Aptitude Test (SAT), in which Korean, English, and mathematics are the main components. However, health education is essentially neglected. There are no independent health subjects taught in grades kindergarten to 12. Health education is partially addressed in physical education classes, but these rare opportunities are allocated mainly to sex education. Some Korean universities offer cultural courses related to health. But, as in K to 12, their contents are mainly focused on sex education.

The lack of opportunities for college or university students to learn about oral health is a common international situation. When we searched for study results with the key words "health education AND (college student OR university student)" on PubMed, we found more than 800 reports. Those reports deal primarily with AIDS, drug abuse, and smoking. When we searched for oral health education, however, we found fewer than 20 reports, and the subjects in those studies were mainly medical or dental students. Studies involving general students were rare and were mainly reported in the mid-1970s and early 1980s (5-7).

Freed and Goldstein (5) analyzed the content of college- or university-level health textbooks regarding preventive dentistry. They concluded that students are not receiving consistent, adequate information from their textbooks, and that college health educators and textbook authors do not



consider dental care to be of great importance. Thirty years after their remarks, we still do not have adequate opportunities to deliver appropriate, consistent, and adequate information about oral health at the college or university level.

If we are fortunate enough to have the opportunity to educate college students, what should we teach them? Dennison et al. (6) allocated 10 classroom hours of instruction on dental hygiene skills to 158 students majoring in elementary education. They also measured pre- and postintervention plaque and gingivitis scores. Though scores in the experimental group improved significantly, those improvements showed a regression pattern toward baseline level at three-month follow-up. That result implies the effect of such instruction will not be maintained in the long-term, and also suggests the need to continue the instruction longer and/or to try different teaching approaches.

Cohen et al. (7) collected data from 528 university students by dental examination and questionnaire. The authors suggested that dental health education and prevention programs that rely on influencing students' attitudes, values, and perceptions are not likely to be successful. But if we cannot rely on perceptions and attitudes, what can we use as a leverage to improve oral health of the public? Public opinion is a mirror of attitudes of the public, and it is a critical engine for oral health promotion. So, we should not underestimate the importance of oral health education at all age levels. Emphasis needs to be placed on raising critical consciousness in the oral health education course. This raised consciousness will help public opinion become more supportive toward oral health and has the potential to encour-

age individuals to cooperate and participate in implementation of oral health policies. This effort could be especially important in implementing community water fluoridation.

Kangnung National University in Korea initiated a course entitled "Oral Health Management" in 1997 for non-dental students; the course lasts for 15 weeks, with 2 hours of lecture per week for 2 credit hours. The main emphasis is on the importance of prevention. This course became so popular for students that administrators had to limit the number of students enrolled. Through this course, we found gaps between what should be taught and what students wanted to learn. Though the title of the course was "Oral Health Management," students' main interests were esthetics-oriented, not health-oriented. In an open-ended questionnaire before starting the course, their main concerns focused on extraction of wisdom teeth, bleaching, dental implants, orthognathic surgery, and orthodontics. They thought their daily oral hygiene practices were good, but in fact their oral hygiene was deficient. If these students do not have proper oral health courses, they may not recognize the importance of prevention and will likely disagree with the necessity of prevention-oriented public oral health programs. This, in turn, will lower the possibility of implementing oral health policies. However, when the same questionnaire was given at the end of course, their concern about prevention increased greatly. We are planning to study the impact of this course on behaviors and attitudes for a longer time period.

In the paradigm of evidence-based dentistry and the traditional health education K-A-B model, the value of an oral health education course at the college or university level may be chal-

lenged by the lack of evidence on the long-term effects of oral health education trials. But a modified health education model based on health promotion theory that puts emphasis on raising critical consciousness conducive to oral health policy making and implementation dictates that we rethink this area. This effort could be important not only for Korea, but also for many Asian countries struggling to promote oral health for their people. Finally, this approach could be one way of changing perceptions of oral health, one of the actions suggested by the Surgeon General to promote oral health in the United States (8).

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