

Catalyzing a Preventive Approach in Korea

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First of all, I would like to express my heartfelt appreciation to the late Dr. Herschel S. Horowitz and his wife, Dr. Alice M. Horowitz, for their long-lasting familial friendship with me and all the disciples of mine, and for catalyzing a preventive approach for prolonging people's tooth life in Korea. At the same time, I would like to extend my thanks to Dr. Dushanka V. Kleinman for giving me this opportunity to express my sincere condolences.

In Korean rural communities, various waterborne communicable diseases were prevalent before the 1950s. In response, wells were dug in many rural villages during the 1950s as a drinking water source to prevent these diseases. Subsequently, the various waterborne communicable diseases were efficiently prevented since the 1950s in all Korean rural villages. On the other hand, endemic dental fluorosis occurred in four rural communities of Korea (Figure 1). It was floated as a dental health problem, primarily esthetic, by the villagers in the late 1970s and the early 1980s, before I had ever met Herschel. As a young faculty member of Seoul National University, I encountered dental health problems that should have been prevented in every Korean rural community. The endemic dental fluorosis had been easily prevented by me in the past because I had read several papers written by Dr. Herschel S. Horowitz at that time. Therefore, before meeting him, I had already recognized Herschel as a catalyst for a preventive approach in Korea by means of his scientific legacies.

In the early 1970s, I was one of the examiners of the first national dental survey in the 4,300 years of Korean history, after being trained in Korea by Dr. John W. Knutson, who was invited for the survey. Since the early 1970s, a remarkable decrease in dental caries has been achieved in the advanced

countries. Contrarily, DMFT has been on the increase in Korea during the past three decades (Figure 2). Dental caries is, moreover, the main cause for

extraction of teeth in Korean people (Figure 3). Therefore, the major dental disease has to be conquered in Korea. To achieve that goal, dental caries

FIGURE 1
Dental Fluorosis

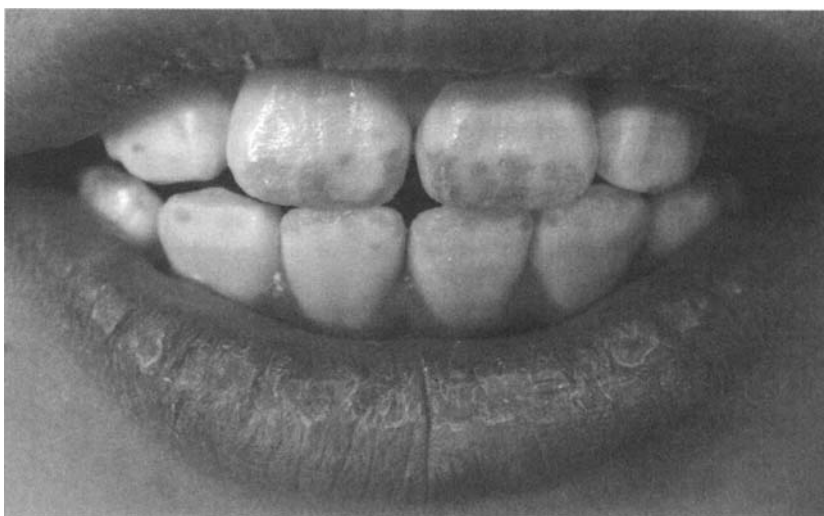


FIGURE 2
DMFT of Korean Youths 12 Years of Age

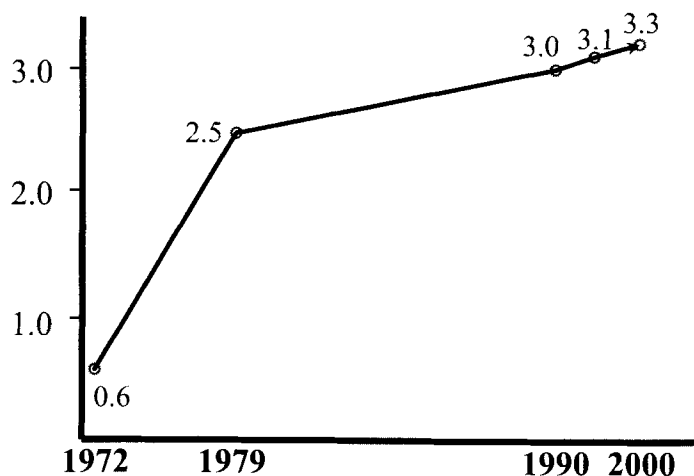


FIGURE 3
Causes of Extraction of Teeth in ROK

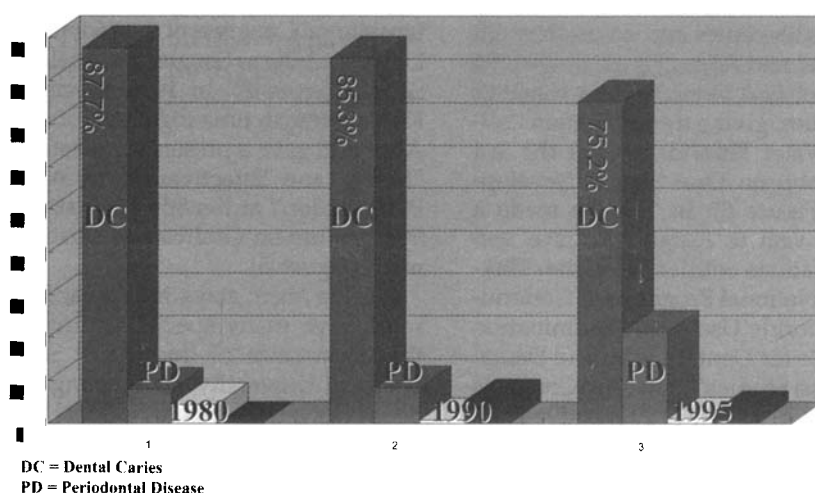


FIGURE 5
NIDCR, Bethesda, MD, 1993



should be maximally prevented and the initiated carious lesions should be treated at the early stage. In this context, I have always emphasized the aims of dental science, the rule in controlling oral disease and the coexistence of private and public dental sectors in my position of professor of Seoul National University for the past three decades.

As all of us know, the aims of dental science are to prolong people's tooth life and to promote oral health. The rule in controlling oral disease is that primary prevention should be practiced first, secondary prevention second, and tertiary prevention third. In general, dental science is practiced without aiming at the private sector. On the other hand, dental science aims

to prolong people's tooth life in the public sector. For preventing dental caries, school-based fluoride mouth-rinsing programs and community water fluoridation have been developed since the mid-1970s as a safe and effective fluoride supplementation in the Korean public sector. Pit and fissure sealant programs also have been developed. In addition, periodic dental care programs have developed in the Korean public sector, too (Figure 4). The late Dr. Herschel S. Horowitz and Dr. Alice M. Horowitz have contributed much to dental health development in Korea by means of catalyzing a preventive approach. Above all, they have catalyzed community water fluoridation programs in Korea since 1992.

FIGURE 4
Dental Health Regimens
Implemented in ROK

- School-based fluoride mouth-rinsing
- School-based toothbrushing drill
- Community water fluoridation
- Pit and fissure sealants
- Periodic dental care

I first met Herschel and Alice at the 3rd World Congress of Preventive Dentistry, held in Fukuoka, Japan, in 1991, and traveled over Kyushu Island with them. They were very kind, warm, and generous to me and all my disciples. Dr. Horowitz studied the caries prevention efficacy of self-applied fluoride toothpastes and mouthrinses and professionally applied topical fluoride agents and the systemic benefits of school-based fluoride supplements and water fluoridation in a career that spanned more than four decades. He was a tireless advocate of community water fluoridation both nationally and internationally. It was an honor to meet Dr. Herschel S. Horowitz, who had been a luminary in the field of public health dentistry all over the world.

In 1992, I asked him to help one of my disciples who wanted to study preventive and public health dentistry at the National Institutes of Health. Thanks to Herschel and Alice's help, Professor Paik Dai-il was able to study at NIH. Thereafter, many of my disciples also studied preventive and public health dentistry at NIH and other institutes in the United States through Herschel and Alice's help. Professor Paik Dai-il, now incumbent chairman of my department and my successor, Professor Moon Hyuck-soo, Dr. Kim Kwang-soo, Prof. Shin Seung-chul, Dr. Chang Duk-soo, Dr. Kim Hyun-duck, Prof. Ma Deuk-sang, and Dr. Park Deok-young studied preventive and public health dentistry in the United States and have made every effort to develop the preventive programs for prolonging people's tooth life in Korea.

In 1993, 24 dental professionals—including my department—visited Washington, DC, Richmond, New York, and other places in the United States. We learned many things from

FIGURE 6
Seoul, Korea, 1994



looking at dental research activities in NIH, water fluoridation programs, periodic dental care programs using dental trolleys, dental services in community health center and so on through Herschel and Alice (Figure 5). In 1994 Herschel first visited Korea together with Alice, giving a presentation entitled "Water Fluoridation" at the 3rd Workshop on Oral Health Development (Figure 6). In 1996 he made a second visit to Korea and gave two presentations entitled "Decision Making for National Programs of Community Fluoride Use" and "Examination Methods for Dental Caries and Dental Fluorosis Studies" at the 2nd Congress of Asian Academy of Preventive Den-

FIGURE 7
Seoul, Korea, 1996



FIGURE 8
Seoul, Korea, 1999



tistry, held in Seoul. In 1997 he made a third visit to Korea and gave a presentation entitled "Community-based Caries Prevention Program" at the International Congress of the Fédération Dentaire Internationale, also held in Seoul (Figure 7). In 1999 he visited Korea a fourth time together with Dr. Alice and gave a presentation entitled "Safety and Effectiveness of Water Fluoridation" at the 8th International Symposium on Oral Health Development (Figure 8).

During their stays in Korea, Herschel gave many special lectures on the importance of fluoride in Seoul National University, Gangneung National University, Busan National University, Jeonbuk National University, Chosun University, Gyeongbuk National University, Dankook University, Gyeongbuk Junior Technical College, and Dongwoo Junior Technical College for the dental students and the dental hygiene students. In addition, he and Alice received a group of civilians influencing the acceptance of water fluoridation programs in Korea; taught the group members the concept, effectiveness, efficiency, practicability, necessity, and safety of community water fluoridation at NIH; and gave them an overview of water fluoridation programs in the United States. As a result, all the group members were convinced that community water fluoridation is an effective, efficient, practical, necessary, and safe public health program for preventing dental caries and prolonging tooth life in Korea.

After talking about what I have done in Korea for disease prevention, I surely recognize Dr. Herschel S. Horowitz as the catalyst for a preventive approach in Korea. His expertise, knowledge, and ability to persuade people about the benefits of fluoridation will be tremendously missed by the Korean dental profession. Receiving news of Dr. Horowitz's death, we all felt deep grief. He and Alice have consistently shown us kindness, warmth, and hospitality since first meeting in 1991. Moreover, they have been unforgettably supportive and helpful as luminaries in the field of public health dentistry all over the world, in particular to us in our endeavors to prolong Korean people's tooth life and promoting Korean people's oral health. As a result, we have always appreciated what they have

done for us and wished them health and longevity. I have, moreover, believed that much more still remains to be done by Herschel. Besides, we had so looked forward to seeing him again in Korea. Now we feel like orphans.

As all of us know, Dr. Herschel S.

Horowitz has made every effort to prolong people's tooth life not only in the United States, but also throughout the international communities. In particular, he has made every endeavor to develop water fluoridation programs all over the world. I recognize again

the late Dr. Herschel S. Horowitz for catalyzing a preventive approach in Korea. I would like to express my deepest condolences. I pray to God for help for Dr. Herschel S. Horowitz in Heaven.