

# Chapter LI

## Interactive Communication Tool for Health Education

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### ABSTRACT

*This chapter introduces an interactive communication tool, the 'HRA System'. The recent rapid penetration of the Internet has made it a leading mode for gathering and sharing health information. People who access information on the Internet differ considerably in their 'health literacy', or the ability to understand and act on health information. The HRA System was developed in an effort to promote health education among people with inadequate health literacy. The system was designed in accordance with the clients' health literacy skills, as well as the clients' computer skills. A number of healthcare providers have registered with our research group to provide health education using the HRA System to the general public. The authors provide some ideas regarding how to apply interactive communication technology to health education successfully.*

### INTRODUCTION

Cardiovascular disease is the leading cause of morbidity and mortality globally. The most common reason for cardiovascular disease is arteriosclerosis — arteries become narrower and less flexible due to fatty deposits. In order to prolong healthy life expectancy, effective preventive measures

should be taken against cardiovascular disease. Arteriosclerosis often occurs in people who live unhealthy lifestyles. As stated in clinical practice guidelines, it is important to educate people on the health hazards of tobacco use, unhealthy diet, and physical inactivity, and encourage behavior changes that enhance health (Pearson, 2002; Pearson, 2003; Graham, 2007).

Health education is usually conducted face to face with trained nurses and dietitians at healthcare facilities. This approach has many practical difficulties if there are limits to funds and manpower. People who do not go to healthcare facilities have no opportunity to receive health education. The recent rapid penetration of the Internet has made it a leading mode for gathering and sharing health information (Eng, 2001). The application of interactive communication technology has great potential to improve health (Robinson, 1998; Cline, 2001; Akesson, 2006). Both healthcare providers and clients have great hopes of interactive communication tools for health education.

A number of investigators have attempted to apply interactive communication technology to health education. The development of interactive communication tools for health education would dramatically increase the number of people who have opportunities to receive health education. It would become possible to provide health education to the general public. People who access information on the Internet differ considerably in their 'health literacy', or the ability to understand and act on health information (Ad Hoc Committee on Health Literacy for the Council on Scientific Affairs, American Medical Association, 1999). Even if high-quality health information is available using interactive communication tools, people with inadequate health literacy would not assimilate the health information well. Interactive communication tools should be designed in accordance with the clients' health literacy skills, as well as the clients' computer skills (McCray, 2005).

Our research group developed an interactive communication tool, the 'HRA System', in an effort to promote health education among people with inadequate health literacy. The HRA System corresponds to the national health promotion system, and meets the needs of the times. A number of healthcare providers have registered with our research group to provide health education using the HRA System to the general public. In

this chapter, we describe the HRA System with a case example, and discuss ongoing plans to make it more convenient and useful for health education.

## **HEALTHCARE ENVIRONMENT IN JAPAN**

### **National Health Promotion System**

The lifestyles of the Japanese have been westernized since the 1960's. Consequently, the incidence of cardiovascular disease has increased; currently accounting for two thirds of the deaths in Japan. The prevention of cardiovascular disease is important for people's well-being. The current health promotion measure called 'Healthy Japan 21' includes the prevention of cardiovascular disease among the national healthcare priorities.

The Japanese Ministry of Health, Labour, and Welfare has established a health promotion system where all adults are supposed to undergo a health checkup and receive health education annually. Following a health checkup, people at high risk of cardiovascular disease — having obesity, diabetes, hypertension, hyperlipidemia, and other risk factors — are urged to take part in a health education session that aims to motivate behavior changes. Health education is usually conducted face to face with trained nurses and dietitians at healthcare facilities. This approach is acceptable in theory, but it does not work out in practice due to limited funds and manpower.

### **Penetration of the Internet**

In Japan, the number of Internet users was estimated at about 87.5 million in 2006. The penetration rate of the Internet was 68.5%, which ranked among top 3 in the world. For connecting to the Internet, 69.7% used both personal computer and mobile phone, 18.6% used only a personal computer, and 7.9% used only a mobile phone.

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