

# Chapter 14

## Physical Health Promotion through Modern Technologies: Challenges to Concerns

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### ABSTRACT

*Health promotion and the maintenance of the quality of life are realized recently. Advancement in technologies offer new possibilities for both the promotion of positive health behaviors that were unimaginable even a decade ago. Though promoting physical activity has been proven an important component of health promotion by many researchers, still a lot of efforts on how to improve physical activity being provided by group of researchers. Technology such as pedometers, accelerometers, and heart rate monitors have been used to promote physical activity for years. Newer technologies such as global positioning system (GPS), geographic information systems (GIS), interactive video games, and persuasive technology, Internet-based physical activity interventions have been used recently to promote and change exercise behavior. This chapter seeks to provide a complete insight of technologies used to changing health behaviors especially physical health promotion and will take a forward to analyses all the issues while using these technologies and future research directions.*

### 1. INTRODUCTION

#### 1.1 Life Style and Health

Quality of Life as individuals' perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns. It is a broad ranging concept affected in a complex

way by the person's physical health, psychological state, level of independence, social relationships, personal beliefs and their relationship to salient features of their environment (De Vries & Van Heck, 1997). The significance of quality of life and well-being as a public health concern is not new. Since 1949, the World Health Organization (WHO) has noted that health is "a state of complete physical, mental, and social well-being and

not merely an absence of disease and infirmity” (WHO, 1946). Life expectancy and causes of death have traditionally been used as key indicators of population health. While these indicators provide critical information about the health status of populations, they do not offer any information about the quality of the physical, mental, and social domains of life. Increasing life expectancy has also highlighted the need for other measures of health; especially those that capture the quality of the years lived. In 2005, WHO recognized the importance of evaluating and improving people’s quality of life in a position paper (WHOQOL, 2005). Because people are living longer than ever before, researchers have changed the way they examine health, looking beyond causes of death and morbidity to examine the relationship of health to the quality of an individual life. By selecting a lifestyle, an individual tries to maintain and promote his/her health and avoid diseases through having a proper diet, rest/activity, exercising, controlling body weight, not smoking and drinking alcohol and immunizing body against diseases; this set of activities constitutes the lifestyle. Health requires promoting healthy lifestyle (Tol, Tavassoli, Shariferad, & Shojaezadeh, 2013). It is essential to promote and correct lifestyle in order to maintain and promote health. Promoting health and providing public health are of the most important bases for the development of communities (Seyed Nozadi, 2002).

## **1.2 Essence of Health Promotion**

Health promotion is the key tool to maintain or improve quality of life. Health promotion and the maintenance of the quality of life, of a good health status of the population, the adopting of a healthy lifestyle, with great implications in the long term at social and economic levels, are realized by a health care providers (Earnshaw & Vnce, 1997), (Mocean, 2007). Health promotion has been defined by the WHO in 2005 and Bangkok Charter

for Health Promotion in a Globalized World as “the process of enabling people to increase control over their health and its determinants, and thereby improve their health” (WHO, 2005). Health promotion is more relevant today than ever in addressing public health problems. The health scenario is positioned at unique crossroads as the world is facing a ‘triple burden of diseases’ constituted by the unfinished agenda of communicable diseases, newly emerging and re-emerging diseases as well as the unprecedented rise of non-communicable chronic diseases. Health promotion efforts can be directed toward priority health conditions involving a large population and promoting multiple interventions. This issue-based approach will work best if complemented by settings-based designs. The settings-based designs can be implemented in schools, workplaces, markets, residential areas, etc. to address priority health problems by taking into account the complex health determinants such as behaviors, cultural beliefs, practices, etc. that operate in the places people live and work. Settings-based design also facilitates integration of health promotion actions into the social activities with consideration for existing local situations (WHO, 2008).

In brief, it encompassed primordial prevention for healthy population to curative and rehabilitative care of the population with disease. Primordial prevention aspires to establish and maintain conditions to minimize hazards to health. It consists of actions and measures that inhibit the emergence and establishment of environmental, economic, social and behavioral conditions, cultural patterns of living known to increase the risk of disease (Last JM, 2000). Health promotion component needs to be strengthened with simple, cost-effective, innovative, culturally and geographically appropriate models, combining the issue-based and settings-based designs and ensuring community participation. It has become more and more necessary to develop and make more efficient electronic public services (e-Government, e-Education, e-Health)

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