In this report, we will discuss about the issues, related work, and approach of the solution of “Health Promotion and Wellness” out of the general topics of proactive health service.

1. What is the issue being addressed?

In their report Workplace Health Promotion, WHO (World Health Organization) emphasized that the workplace is a priority setting for health promotion [1]. The workplace directly influences the physical, mental, economic and social well being of workers. WHO argues that Worksite Health Promotion can improve the health and well being of people at work with combing efforts of employers, employees, and society.

People promote the notion of “Prevention is better than cure”. This also influences onsite health centers in companies. In order to meet the growing needs of health promotion and wellness in Onsite Health Centers, companies try to develop worksite weight management program, smoking cessation or hire a nutritionist for consultation. In the Art of Health Promotion article, Chapman studied meta-evaluation of worksite health promotion economic return studies. This study strongly provides the evidence of reductions in sick leave, health plan costs, and worker’s compensation and disability costs. Interestingly, most recent studies discussed about a newer prevention technologies such as games, management systems for individual health controls.

However, there is not a systematic way to design and implement wellness and health promotion programs for companies. Different worksites have different environments as well as their employees. Furthermore, an individual has different desires for his or her own health issues. Health issues, even though it is all about promotion and wellness, are very broad topic to make a systematic one-shot solution.

2. What have others done?

We explored this issue from two different disciplinary approaches: Health Promotion and Wellness and Psychology.

First, Researches in Public Health, Health Promotion and Wellness, and Occupational Health studied the effectiveness of worksite intervention programs [2], [3], [4]. Mainly the studies show that worksite intervention, either through health promotion or through wellness education works. Their approach is based on strong statistical analysis. Therefore, it is pretty sure that prevention or management programs provided by worksite are one of the good ways for individual health changes. Seeing a strong statistic evidence can help to plan the deployment of the programs. However, it does not talk about the process of behavior changes.

Second, studies from psychology focused on how people change their health related behavior and attitude. If they had gotten some diagnosis, they deliberately tried to change
their bad habits such as taking less sugar or salt. However, it would be better for them to prevent their disease by changing their routine unhealthy behaviors. Most psychologists try to understand deeply the process of behavior changes. One of the most popular theoretical models is the Transtheoretical Model (TTM) [5]. TTM model provides the steps of how individuals change their behaviors. Especially, TTM shows well to change undesirable behaviors such as alcoholism, smoking and domestic violence. However, TTM is time and money consuming because individuals really need to meet a special therapist for their health issues. Therefore, we need to design innovative cost-effectiveness programs.

3. What is the remaining gap?

We learned that worksite health promotion and wellness are effective. Individuals try to develop healthy behaviors by changing bad habits or learning new knowledge of their concerns. The main gap would be how to deploy the programs in an appropriate way and in time. Furthermore, how do we encourage people to better healthy behaviors? Our approach is to use technology to change what people think and do. Fogg coined the term, persuasive technology [6]. Persuasive technology strongly shows that how technology can be used just-in-time support for individuals’ behaviors changes. We believe that this is the right approach for us to tackle this issue: Designing technology for people to encourage changing their (usually undesirable) behaviors.

4. What approach can be taken to solve the problem?

In order to investigate available technologies or tools, we looked at the field of Human Computer Interaction (HCI). Here is some examples of how researchers in HCI to solve the issues.

- Breakaway: An Ambient Display Designed to Change Human Behavior
  Breakaway is an ambient display that encourages people to take break more frequently. They designed a small sculpture placed on the desk of stationary office workers. This sensor driven ambient sculpture that takes information from the user’s chair and suggest when it is time to take a break. The study shows that ambient displays making use of aesthetic and may promise for changing human behavior positively. [7]

- Design requirement for Technologies that Encourage Physical Activity
  Consolve et al. studied technology to encourage physical activity using a pedometer. Based on the results of the experiment, they proposed four design requirements for technologies that encourage physical activity:
    1. Give users proper awareness for activities
    2. Provide personal awareness of activity level
    3. Support social influence, and
    4. Consider the practical constraints of users’ lifestyles. [8]

- Just-in-Time Technology to Encourage Incremental Dietary Behavior Change
Intille et al. studied about just-in-time technology to encourage incremental dietary behavior change. They argued that computing software using “just-in-time” presentation of information motivates behavior change. [9] Unlike others, they tried to understand the relationship between the-point-of decision for most food eaten at home and the-point-of purchase (point-of-selection). In their studies, they designed a prototype tool, PDA with barcode scanner. When shopping, people can really get useful information interacting with the real grocery items.

Our approach would be similar. However, unlike others, we will focus designing technologies with the principles of Patient Centered Design and Evidence-Based Design. This also considers the relationship of build environments and human behaviors. One example can be designing a game for encouraging people to walk using large display with some intriguing game components. We can use a pet or flower as a metaphor for their daily steps.

Reference