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Development of the Home-Based Multimedia System for Mental Health Management in Adolescents via Information Superhighway

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Abstract

The purpose of this study was to develop a web-based multimedia system for mental health management in adolescents using principals of user centered design. Research process includes needs assessment, needs analysis, design, development/testing, and application release. With this computerized system, adolescents can improved their mental health states. In addition, adolescents who have minor mental health problems can manage it by oneself.

Keywords:

mental health, information system, internet, adolescents

Introduction

World Health Organization's warning last year that the fastest-growing mental health problem in the world, and particularly in the developed world, was among adolescents. According to the rapid socio environmental change In Korea, many adolescents suffer from their identity confusion. Most of Korean adolescents are under pressure to study hard for an examination. The failure to examine the possible causes of rising levels of mental ill health amongst adolescents provoked much critical commentary, even from those who welcomed efforts to draw attention to the problem. One of the solutions to this problem can be a web based intervention.

Worldwide, about 4.5% of all Internet searches are for health-related information [1]. Several Internet interventions have emerged in recent years to treat mental and behavioral health problems. Computers and Internet-based programs have great potential to make psychological assessment and treatment more cost-effective [2]. In Korea, the Internet has become a most favored source to find health information. About 44.5% of all Internet searches are for health-related information [3]. Thus this project was conducted to develop a health information service system for mental health care in adolescents via internet.

Methods

This study used user-centered design model including needs assessment needs analysis, design, development/ testing, and application release.

To identify users' information needs, the investigator will conduct a descriptive study by performing surveys, interviews, and workshops in major cities in Korea. 3487 Korean adolescents participated in this study.

Investigator attempted to meet the needs of population who have various backgrounds including age, education, and knowledge in computer and mental health. The target population was identified as Korean adolescents between 13-18 years old. Minimum hardware requirements were determined to be Pentium III 1.0 GHz computer, 128mb of RAM, sound card, and a network card. Minimum software requirements were a browser capable of supporting Macromedia Flash and JavaScript; Microsoft Internet Explorer and other popular browsers support these two requirements. Task requirements were determined to be: ability to access web site, explore each intervention, read and post messages on the discussion board, enter self-assessment data, and understand tailored advice.

As we created the storyboards, we tried to make it engaging, accessible, interactive, and informative. First, we focused on the most effective and interesting way to deliver the information based on issues found through our preliminary research.

Results

The web site was released using the URL: http://www.baejy.com/youth. This system will go through individual data and will be utilized to screen those who have mental health problems. In addition, this system includes intervention programs to relieve mental health problems such as education, exercise, relaxation, visualization, music therapy, family therapy and counseling with researcher or psychiatrist. Using this system, every adolescent who has minor mental health problems can manage it by oneself.

Figure 1 - Main page

Discussion and conclusion

This research interested in the telemedicine and developing home-based multimedia system for management of the adolescent's mental health problems. Therefore, through these system adolescents can save time and cost. And it could be adequately applied to assessing mental health problems and as an intervention strategy for not only adolescents who have mental health problems but also normal adolescents. It is expected that this management system will contribute to the mental health promotion as well as community for the mental health related researchers, professionals and experts to share information on the adolescent's mental health.

We will revise this web site through these research results and through the continuous feedback that we have received from users. The second phase of this project will evaluate the effectiveness of this web intervention for further development of the program.

This research interested in the telehealth, especially information service system for more efficient psychiatric mental health care. Therefore, this system will be a new way of nursing intervention and contribute to the psychiatric mental health promotion in adolescents.

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