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## Web-based health education in pediatric nursing

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### Abstract

The internet, which provides the access, share and communication information of people worldwide and is regarded as a revolution, has an increasingly important role in health education, research and applications. Health professionals search for new ways to facilitate and improve the provision of effective health education to individuals and communities. The developments in computer and internet technologies and high priority of finance for nursing studies in technological terms lead researchers to develop, use and test different types of web-based initiatives. In addition, a large amount of quality evidence that shows the success of health education attempts carried out on the web draws the attention of health professionals responsible for providing health education. This study aims to analyze web-based health education and provide health professionals with a point of view regarding its use in pediatric nursing.

Keywords: Web-based education; pediatric nursing; health education.

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## **1. Introduction**

The internet, which provides the access, share and communication information of people worldwide and is regarded as a revolution, has an increasingly important role in health education, research and applications. Health professionals search for new ways to facilitate and improve the provision of effective health education to individuals and communities (Mo, 2012). The developments in computer and internet technologies and high priority of finance for nursing studies in technological terms lead researchers to develop, use and test different types of web-based initiatives (Im & Chang, 2013). In addition, a large amount of quality evidence that shows the success of health education attempts carried out on the web draws the attention of health professionals responsible for providing health education. As internet use has become increasingly widespread, it has begun to be used in different areas, including education. Its intense use, especially by adolescents, indicates that it will be useful for health promotion with this age group (Dougherty et al., 2014). This study aims to analyze web-based health education and provide health professionals with a point of view regarding its use in pediatric nursing.

## **2. Internet Use in Society**

In January 2014, the Pew Research Center reported that 87% of adults in America use the internet, and 80% of them use the internet to search for health information (Pew Research Center, 2014). Another study conducted by the same institution in April 2015 revealed that 92% of the adolescents between the ages of 13 and 17 go online daily using mobile devices (especially smart phones). Of them, 24% are almost always online, 56% go online a few times daily, 12% go online once a day, 6% go online once a week, and 2% go online less frequently (Pew Research Center, 2015).

In Turkey, the scope of the Information and Communication Technology (ICT) Usage in Households and by Individuals, conducted in April 2013, was expanded for the first time to include children between the ages of 6 and 15. During this research, the children were divided into two groups as age group of 6-10 and the age group of 11-15 to better observe the differences, with the age group of 6-15 remaining as the main group. Their use of computers, internet and mobile phones and the frequency and purpose of using them, as well as their relationship with the media were investigated. It revealed that computer use starts at the age of 8 on average in the age group of 6-15, at the age of 6 on average in the age group of 6-10, and at the age of 10 on average in the age group of 11-15 (TurkStat, 2013).

The average age of starting to use the internet is 9 among the children between the ages of 6 and 15. The average age of starting to use the internet is 6 in the age group of 6-10, and 10 in the age group of 11-15. Of the children in the age group of 6-15, 38.2% use the internet for about two hours, 47.4% for three to ten hours, 11.8% for eleven to twenty-four hours, and 2.6 for over twenty-four hours a week (TurkStat, 2013).

## **3. Internet Use for Obtaining Information about Health**

Internet use is rapidly increasing in health education (Mo, 2012). It is estimated that 4.5% of all searches on the internet are about health-related issues (Eysenbach & Kohler, 2004). The internet is a changing way of obtaining and using information about health. A study carried out by the Pew Research Center in 2013 indicated that of internet users, 34% read others' comments or experiences on their health or medical status, 24% ask for opinions online regarding certain drugs or treatments, and 18% try to find people who might have similar health problems to their own (Pew Research Center, 2013).

While the internet is mostly used for the diagnosis of recent diseases, it has also been increasingly used for the issues of diet, fitness and exercise, as well as for the issues not related to a certain symptom or disease (Mo, 2012). Especially parents use web-based education to obtain information about their children's health status. Web-based education is different from digital libraries for informative purposes only; it is interactive and collaborative. Some education programs focus on

groups in a certain population (such as asthmatics or high risk newborns). These web-based education programs have been found to increase parents' knowledge levels, the quality of care, and to improve the ability to prevent certain complications and make early interventions (HRSA, 2016).

#### **4. The Advantages of Internet Use in Health Education**

Studies have clearly revealed that providing health education using the internet has various advantages (Griffiths et al., 2006).

- It is easy-to-use and cost-efficient.
- It allows to provide health education and support to large numbers of people at a lower cost.
- Specific information can be provided for the health status of each individual.
- It potentially enables to spread health information to populations that cannot be reached through traditional methods or that are difficult to reach.
- It reduces the cost of health services.
- It reduces users' isolation.
- People can obtain information whenever they want.
- It can reach a groups that are isolated or stigmatized due to disease.
- Increasing users is under the control of the people who do the intervention.
- It removes geographical and physical obstacles (Griffiths et al., 2006; Mo, 2012).
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#### **5. The Disadvantages of Internet Use in Health Education**

- None or limited face-to-face education and communication
- Limited role of health professionals
- Difficulties in immediately asking questions to the administrator of the website
- Inability to follow the web-based education by advisees with little technological knowledge
- Postponing health education since one can always be access the internet
- Using old information when it is not updated
- Inability to reach to the people who live in settlements without access to the internet (Demir & Gozum, 2011).

#### **6. Web-Based Health Education in Nursing**

Web-based interventions in nursing can be categorized as web-based education programs, decision support systems, support groups and games. Web-based education programs provide users with the content of traditional education programs by internet. Web-based decision support systems facilitate the process of making decisions about the health or disease status of users. Web-based support groups are traditional support groups transferred to the internet. Peers share their experiences and opinions in chat rooms, bulletin pages, e-mails, online discussion forums and/or text messages. Web-based games usually help users improve their cognitive and social abilities and participate in decision-making processes (Im & Chang, 2013). Some studies have used different types of web-based education together (Ryan et al., 2009; Weinert et al., 2011).

It is important for health education to have a large variety of communication channels such as the worldwide web, e-mail, newsgroups, online forum sites, chat rooms, instant messaging and online

social media (Mo, 2012). The internet allows individuals with similar health history and problems to establish social interactions in online support groups. Online support groups positively affect parameters such as mental health, positive perspectives and effective use of coping strategies (Houston et al., 2002; Mo & Coulson, 2012).

## **7. Internet Use in Health Education for Children**

The fact that the internet has rapidly become a part of adolescents' lives is related to the fact that adolescents regard the internet as a tool for communication with their friends in social networks, as a source of entertainment and as a tool for obtaining information (Bleakley et al., 2004). As internet use has become increasingly widespread, it has begun to be used in different areas, including education. Its intense use, especially by adolescents, indicates that it will be useful for health promotion with this age group (Dougherty et al., 2014).

The developments in computers and internet technologies also enable psychoeducational interventions to become widely applicable and generalizable. It allows the provision of an easily updated standardized education programs by providing social interaction appropriate for specific age groups and levels of development (Whittemore et al., 2016). As suggested by Piaget in his theory on children's learning, when children can control their environment, learning occurs at the optimum level. Interactivity in the structure of multimedia education encourages children to play active roles in their own learning process (Hardin and Reis, 1997). In addition, the theoreticians of attention found that children can better focus their attention when music and animation is used (Conrick, 1998; Leung, 2003; Chewey, 2011). The positive results of the studies of web-based health education conducted with children and their parents show that web support can be used in this field (Maher et al., 2010; Gustafson et al., 2012).

## **8. Conclusion**

The internet has rapidly become a part of daily life. The advantages and disadvantages of the internet, the rates of its use and its effectiveness indicate that it can be preferred in health education. It can be used especially in health promotion and chronic disease management interventions for children and parents.

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