Does Technology Based Media Provide A More Satisfaction Health Education Than Conventional Method?

Nilawati Soputri1 and Rivai Orin Valentine Sianipar 2

1Faculty of Nursing, Universitas Advent Indonesia, Parongpong, Bandung, West Java, Indonesia; nilasolai@gmail.com; 2Faculty of Nursing, Universitas Advent Indonesia, Parongpong, Bandung, West Java, Indonesia.

Abstract: The types of media used in health teaching are one of the most important tools to help patients understand the material given to them. High technology media such as tablet computer and conventional media such as leaflet are often used as media in bedside health teaching. Both medias have advantages and disadvantages. However, various literatures recommend health educators to use tablet computer because it is considered more effective and satisfying.

The purpose of the study is to prove whether the use of tablet computer will satisfy patients more than the conventional method leaflet in explaining the details of health teaching to diabetics type II patients.

30 patients were involved in this study. They were divided into two groups. 15 patients were assigned as group one that received health teaching through tablet computer media, while the other 15 patients received health teaching through leaflet as media.

The result of the study shows that group one who received health teaching through the media of tablet computer feels satisfied with the explanation given to them, and the group with leaflet feels satisfied. Independent sample test shows that there is no significant difference in level of satisfaction between the two groups. Therefore it is not necessary for health care providers and health educators to spend money, buying expensive high technology media for bedside teaching.

Keywords: Health teaching, instructional media, leaflet, tablet computer

One of the important factors that influence patients' satisfaction level is clear information and effective communication that is given by nurses providing the education. These factors are related to the patients’ perceptions toward the quality of nursing care that they received during their stay in the hospital (Hartono, 2010). Therefore, it is important for health educators to create a well designed health education, one that will not only improve patient's satisfaction while in the hospital, but also improve their knowledge, change their way of thinking and guide them to have a better health behaviors (Mubarak, Chayatin, Rozikin, & Supradi, 2012).

Indonesia have several organized institutions who organizes seminars and training for health professionals, they can design and conduct good health education to clients or patients with diabetes mellitus. Three well-known institutions are Perkumpulan Endokronologi Indonesia, Persatuan Diabetes Indonesia, and Perhimpunan Edukator Diabetes Indonesia. Persatuan Diabetes Indonesia currently has representatives in hospitals, offices, health centers, and has spread throughout the country. The health education provided by this agency focuses on helping diabetic patients to have optimal health, educating families and communities to support patients, and to participates in preventive, curative and rehabilitative stages of the patient's life. The various health education programs provided by the above institutions are supported by the Indonesian Ministry of Health (Departemen Kesehatan, 2012; Dinas kesehatan. D. I. Yogyakarta, 2012; & Neraca, 2012).
The purpose of providing a detailed health education, according to Mubarak et al (2012), is to empower people to have a greater responsibility on their health, environment and community. In addition, to awaken a community to take precautions so that a disease does not worsen, and prevent the state of dependencies through rehabilitation of disabilities caused by the disease. Another goal is for a person to learn what he or she can do and how on their own to support good health, without asking for help in a formal health care system.

Nurse educator have to consider several things before providing health education such as the health status of patients. Health education should be provided when patients are relieved of pain, in a good level of awareness, relaxed and ready to follow the health education. Other considerations include culture, age, literacy rate, educational level and socioeconomic conditions. Culture influences the patient's health behavior. It will affect the pattern of individual food and what assumptions should be consumed and should not be consumed at all age levels and at times of illness or to maintain health. It also affective the individual sexual behavior, gender roles, personal hygiene, and to decide whether a sick person will be taken to the health center or to traditional medicine (DeYoung, 2003).

Health education will be more effective and efficient when delivered using a media as a tool to convey learning. Instructional media will help patients accept the health message presented. Although instructional media is useful to enhance understanding of the health material being taught, however, nurses need to have some consideration in choosing the right media, so the selected tools can support the learning objectives and help nurses to be more practical and efficient in carrying out their daily tasks. Other considerations are the cost, availability including health learning materials and types of technology and technical assistance, and the health institutions culture (DeYoung, 2003).

Various traditional and modern learning media are available today. Soekidjo (2012) classifies instructional media into three: print media, media boards, and electronic media. Print media and boards are known as traditional instructional media, while electronic instructional media are known as modern or technology media.

Print media include booklets, leaflets, flyers, flipcharts, rubrics and posters. Print media have several advantages and disadvantages. Some advantages of printed media are: It can be given to many people easily, cheap, it can be used even though there is no electricity, easy to carry, facilitates understanding, and enhanced learning. The disadvantages are: no sound effects, no movement, and easily damaged. Billboards are boards installed in public places containing messages or health information. Media boards can also be attached to buses and taxis (Soekidjo, 2010).

Electronic instructional media are generally technology-based that convey health messages to individuals, groups, and communities. This tool is generally in the form of television, radio, video, slide, and computer based technology. In general, the advantages of electronic instructional media are: involves the senses of sight and hearing with moving images and sounds that make learning more interesting and easier to understand. Another advantage is that the presentation can be controlled, it could be present to a large audiences, and can be used repeatedly. The disadvantages of electronic instructional media are that it is expensive, more complicated, need electricity to operate, need advanced tools to produce learning materials, needed careful preparation to provide health lessons, equipment needs to be updated frequently, need skills to store learning materials and skills to operate them (Soekidjo, 2010).
One of the electronic media that can be used as instructional media is a tablet computer. Tablet computer is a complete computer in the form of a flat touch screen. This touch screen is used as an input device using finger, stylus, or digital pen, without the use of an external keyboard. Inside the tablet computer there is hardware that can synchronize without cables (Pratama, 2014).

Tablet computers can display images and sounds, display videos, pictures, and slides. Tablet computer stimulates more senses. Learning will be easier to understand when it involves more senses (DeYoung, 2003). Each of the senses of the body gives different capacities to convey information to the brain. The most dominant senses in transmitting a knowledge and information to the brain is through the eyes of about 75% to 87%, while 13% to 25% of information is conveyed through other senses. Theoretically, the electronic instructional media is helpful in the learning process, however this medium are expensive, need electricity to operate, and should always be updated (Soekidjo, 2010).

Suratun, Manurung, dan Sumartini (2014) conducted a researched related to the level of diabetic patients satisfaction about health education delivered orally in a hospital in Jakarta. 50% of the patients stated feeling satisfied and 50% expressed less satisfaction with the health education they received. The result was under the hospital standard which is set on 90% satisfaction. Sianipar (2016) observed that health education for diabetic patients in a private hospital in Bandung city, Wst Java, is often only delivered orally. This may affects the understanding of patients and families about their health problems. Other study conducted by Ambarwati, Khoirutul, Kurniawati, Diah, and Darojah (2014) about Health education with the topic on the effects of smoking in one primary school in Surakarta, Central Java. The study wanted to find out whether instructional media leaflet is more effective compared with video. The results showed that using leaflets is significantly more effective compared to video.

The purpose of this study is to compare the diabetic inpatients satisfaction toward the health education given using the traditional instructional media leaflet with modern technology instructional media tablet computer at RumahSakit Advent, Bandung, West Java. The method of the study is quasi experiment with post test only non equivalent control group design. In this study, several factors that can affect the main variables were controlled. Posttest data from two different groups were compared, but the selection of participants was not done randomly.

The study was conducted from January 23, 2016 to March 3, 2016. 30 diabetic type II inpatients were involved in this study. There were divided into two equal groups of 15 patients. Instructional media in group one used technology instructional media tablet computers, while group two used traditional method leaflet. The characteristics of participants were: Diabetic type II inpatients, high school graduate, male, compos mentis, and voluntary participates in the study. The health education materials are the same, and are provided by the same personnel and the same delivery procedures. The instrument used to collect data consists of 16 items with five options about the level of satisfaction of participants to health education provided, with Cronbach’s Alpha 0,88.

The results showed that the level of satisfaction in group 1, the group who received health education using the tablet as a medium of learning is 4,27, in the category of very satisfaction. Group 2, the group received health education by using instructional leaflet is 4,08, in the category of satisfaction. Although both groups have different level of satisfaction, however comparison of the mean by independent sample t test show that probability value is 0,394, which is higher than 0,05. This means there are no differences in the level of patients’ satisfaction to health education given by using leaflet or tablet computer.
The conclusion and discussion of the study are: health education using instructional media whether traditional or high technology instructional contributes to the higher level of diabetic type II inpatients' satisfaction. Therefore, it is important for nurse’s educators to employed instructional media in teaching patients.

Although instructional media tablet computer had higher level of inpatients level of satisfaction, but because the independent sample t test showed no significant difference, so, health educators can use the result of this study as a clue or considerations in deciding the type of instructional media that will be provided. They do not have to force themselves or institutions where they work to provide learning media technology that is expensive, and costly, in terms of increasing the level of satisfaction inpatients feels toward health education. For health institutions under development stage, the funds can be used to develop other sectors, instead of being used to buy technology-based instructional media. They can use traditional instruction media leaflet that is cheap, but still make patients feel satisfied with the health education provided.

REFERENCES


Ilmiah Widya, 2(1), 41-47.