

4th Asian Academic Society International Conference (AASIC) 2016

Globalizing Asia: Integrating Science, Technology and Humanities for Future Growth and Development

HEA-OR-112

HEALTH EDUCATION INTERVENTION DELIVERED BY VIDEO TO IMPROVE KNOWLEDGE AND ATTITUDE TOWARD BREAST SELF EXAMINATION AMONG WOMEN AGED 30-50 YEARS AT PETET VILLAGE TUNTANG SUB-DISTRICT IN 2014

Yulinda Laska, **Rati Purnama Sari**, Dewi Susanti

Semarang Health Polytechnic, Semarang, Indonesia

Corresponding author's email: leo.linda@rocketmail.com

Breast Self-Examination (BSE) is an important step for early detection of a tumor or lump in the breast in order to reduce the mortality rate of breast cancer. In Indonesia, this screening focused on women aged 30-50 years old. Video is an interesting media in delivering information because it uses auditory and visual sense of its viewers. This study aims to find the influence of health education with video to improve knowledge and attitude toward Breast Self Examination (BSE) in early detection of breast cancer among women aged 30-50 years old at Petet Village Tuntang Sub-district. This was a true-experimental study with control group pre-post test design. The samples in this study were 36 women aged 30-50 years old who randomly assigned into two groups: intervention group and control group. The results indicate, prior the intervention, respondents' knowledge was poor and their attitude toward BSE was categorized as neutral. After the health education intervention using video, respondents' knowledge and attitude was improved. Statistical analysis also confirmed that health education intervention using video influencing the respondents' knowledge ($p\text{-value} = 0,000 < 0,05$) and attitudes ($p\text{-value} = 0,002 < 0,05$).

Keywords: Health Education, Video, Knowledge, Attitude, Breast Self-examination, Early Detection, Women Aged 30-50 Years Old

1. INTRODUCTION

Globally, 25 million people living with cancer in 2010. Among them, 11 million new cases were identified whereas deaths from cancer counted for 7 million people. It is estimated that by 2030, cancer deaths rose to 17 million, with 27 million new cases and 75 million people living with cancer. Of the 75 million, about 70 percent live in developing countries, including Indonesia (Azwar, 2013). In almost all countries, the incidence of breast cancer and invasive cervical cancer are very few among women under the age of 25 years. The incidence will increase by about the age of 35 years upwards and decreased in the menopausal age. In Indonesia, cancer prevention program is focused on the early detection (screening) among women aged 30-50 years old (Brunner, 2001).

Breast cancer is second leading cause of death among women in Indonesia after uterine cancer, followed by lymphoma, skin cancer, and rectal cancer (Fratidhina, 2009). In Central Java province, 11,341 cancer cases were found in 2012; comprised of 2,259 cervical cancer (19.92 %); 4,206 cases of the mammary cancer (37.09 %); 2,755 liver cancer (24.29 %); and 2,121 lung cancer (18.70 %) (Dinkes Jateng, 2013). Breast cancer is the most common cancer among women (American Cancer Society, 2009). This should be a concern since breast cancer actually can be prevented by early detection by women themselves. Nevertheless, only 25 % to 30 % of women

know and able to do self-examination properly and regularly each month (Kemenkes RI, 2013). Dharmais Cancer Hospital reported, the number of breast cancer patients who come in early stage (stage I and II) was only 13.42 %, stage III by 17 % and more comes with advanced stage (stage IV) amounted to 29.98 %. The delay to cancer diagnostic was reported because of the women's ignorance against breast self-examination (Wahyuningsih, 2012). In most cases, their ignorance was due to the limited knowledge and awareness related to early detection of breast cancer.

Health knowledge will affect the behavior as a result of medium-term (intermediate impact) of health education. Health education is one way to approach the public and effective in order to provide or convey messages or health information with the aim to increase the knowledge which will change the perception of society towards a positive direction in the form of attitudes and influence behavior. The process of health education as an effort to improve knowledge and attitudes are influenced by several factors, namely, delivery methods, educators and media/ demonstration equipment. Through the media, health messages can be conveyed more clearly and the target will receive these messages clearly and precisely. In addition, the public will be able to understand the medical facts easily. Uses of the media can also generate interest, motivation and stimulus of learning activities, and even bring psychological influences on changes in knowledge and attitudes of target (Kemenkes RI a, 2010).

A person or community in the educational process can gain experience/ knowledge through a variety of educational tools (Fratidhina, 2009). Video media is media that is used in providing health education which has the advantage of involving auditory and visual of the receptors. It is easier to understand and more interesting compared to the print media where only stimulate the visual sense and cannot stimulate the sound and motion effects. The more senses used, the better the public acceptance of health education given (Notoadmodjo, 2007). Therefore, this study aims to determine the effect of health education with video media in improving knowledge and attitude of breast self-examination (BSE) among women aged 30-50 years in the Petet Village Tuntang Sub-district in 2014.

2. RESEARCH METHODS

This research uses research true-experimental with randomized control group pre-post test design. Populations in this study were women aged 30-50 years in Petet Village Tuntang Sub-district in 2014, counted for 255 people. The sample size in this study was obtained by using the Isaac and Micheal's formula:

$$s = \frac{\lambda^2 \cdot N \cdot P \cdot Q}{d^2 \cdot (N - 1) + \lambda^2 \cdot P \cdot Q} = \frac{(1,96)^2 \cdot 255 \cdot 0,5 \cdot 0,5}{(0,05) \cdot (255 - 1) + (1,96)^2 \cdot 0,5 \cdot 0,5}$$
$$= \frac{3,84 \cdot 255 \cdot 0,25}{(0,05) \cdot 254 + 3,84 \cdot 0,25} = \frac{979,2 \cdot 0,25}{12,7 + 0,96} = \frac{244,8}{13,66} = 17,9 \text{ (18 people per group)}$$

Two groups (intervention and control) consisted of 18 participants were randomly assigned using a lottery draw. The treatment group consisted of one group with health education using video media as the intervention, whilst the control group was not receiving any treatment. Sampling was carried out of a population, based on inclusion and exclusion criterias. Inclusion criterias are women who can read and write and who are not being or have had breast cancer. Women who have received

health education about breast self-examination and are health workers were excluded from the study. This research was conducted in the District Tuntang Petet village for 2 days, from 9 to 10 February 2014.

Pre-test and post-test was performed to measure the knowledge improvement and attitudes changes in both groups. Health education delivered by video developed by who student PSIK UB and using in this research. was given for 30 minutes after a 15 minutes lecture by the health educator and ended by discussion session for 15 minutes. The content of the video messages included information of breast cancer, etiology of breast cancer, risk factor of breast cancer, how to screening breast cancer, and BSE movement. The control group did not receive any health education and only had the blood pressure measurement. Measurement of knowledge and attitudes use questionnaire, that questionnaire is developed new one using test validity and reliability test..

3. RESULT AND DISCUSSION

The educational attainment of participants in control group are relatively higher compared to the intervention group. Almost half (44 percent) of respondents in the intervention group completed elementary schools whilst less than a fifth (16 percent) in control group completed the level. About a third of respondents in intervention group finished secondary, whilst in the control group, the proportion of women who completed secondary school is slightly higher (38 percent).

Before the health education was given, 50% of participants in intervention group and 66% in control group had a poor knowledge. The initial knowledge score of participants in the intervention group was slightly higher ($11.78 \pm SD 2.602$) compared to their counterparts in control group ($11.50 \pm SD 2.149$). In terms of attitudes toward BSE, before the intervention taken place, 55% of women in the intervention group and 77% in the control group had a neutral attitude. Mean score of attitudes of women in the intervention group was slightly better ($31.61 \pm SD 4.354$) than women in control group ($31.22 \pm SD 4.138$).

Both groups are homogenous and showed relatively similar background in terms of their knowledge and attitudes toward BSE before the intervention. F-test on knowledge confirmed there was no significant difference of mean score between intervention and control group before intervention ($p\text{-value } 0.253 > 0.05$). F-test result on the attitudes also showed there was no significant difference of attitudes toward BSE between intervention and control group before the health education was given ($p\text{-value } 0.489 > 0.05$).

To determine the effect of health education with video media on knowledge and attitudes about BSE before and after treatment, *paired t-test* was employed when the data distributed normally. *Independent t-test* was also performed to determine differences in the effect of health education with the video media in the treatment group and the control group.

3.1. Knowledge differences before and after health education with video media

After the provision of health education with video, respondents knowledge toward Breast Self Examination was improved. Mean score of knowledge of participants in the intervention group was increased from $11.78 \pm SD 2.602$ to $14.89 \pm SD 2.298$. Paired t-test showed a p-value of 0.001 which mean there was a significance mean difference of knowledge before and after the treatment in the intervention group. Although participants in the control group also showed a slight improvement in their knowledge score from $11.50 \pm SD 2.149$ to $11.83 \pm SD 2.333$, nevertheless,

statistical test showed there was no difference of mean score knowledge before and after intervention (p-value 0.302).

Table 1 Effect of health education delivered by video to knowledge and attitudes

	Treatment Group (N=16)	Control Group (N=16)
<i>Knowledge</i>		
Before intervention (mean score ± SD)	11,78±2,602	11,50±2,149
After intervention (mean score ± SD)	14,89±2,298	11,83±2,333
P-value (pre-post)	0,001 ^c	0,302 ^c
P-value (intervention vs control)		0,000 ^d
<i>Attitudes</i>		
Before intervention (mean score ± SD)	31.61±4.354	31.22±4.138
After intervention (mean score ± SD)	35.94±4.412	31.83±2.995
P-value (pre-post)	0.000 ^c	0.335 ^c
P-value (intervention vs control)		0.02 ^d

c. Paired t-test d. Independent t-test

The findings of the study corresponds to Rivai’s study in 2013 at the State Elementary School 01 Krenceng which revealed that video media can enhance learning outcomes of elementary school students. Similarly, Kumboyo in 2011 also reported that audio-visual media such as video can increase patients' knowledge of tuberculosis (Riva’i. 2013).According Notoatmodjo, knowledge is the result of the idea, and this occurred after people commit to something specific such as object sensing. Therefore, providing health education to women aged 30 to 50 years using video media is very helpful in conveying the teaching material. The new information will be stored and provide a foundation for the formation of new cognitive knowledge and attitudes of individuals.

3.2. Attitude differences before and after health education with video media

The video message was not only improved respondents’ knowledge, but also their attitudes. Prior to the intervention, mean score of attitude toward BSE of women in the intervention group was slightly better (31.61± SD 4.354) compared to women in the control group (31.22± SD 4.138).After being exposed with health education using video, women in the intervention group showed a changed in their attitudes score, from 31.61 to 35.94. Statistical analysis employing paired t-test provided a p-value of 0.000 indicates that there is a significant difference in attitude score before and after the health education video was displayed.

In the control group, the respondents also showed an attitude change. The mean score of attitudes was slightly changed from 31.22 to 31.83. Being tested with paired t-test, the study indicates that there was no significant attitude changes among women in control group, before and after intervention using video (p-value 0.335).

According to Rosenberg, attitudes will always be associated with affective and cognitive components such as relationships in a consistent state. It is stated that if a person has a positive attitude towards something, then the cognitive index is also high, and vice versa (Suiraoaka, 2012). With the provision of health education with a video media educational process and can affect the level of cognitive and affective then able to change the attitude from negative to positive. Attitude can change because education with video process make a fast to intervention group easy to understand what benefit and lose from BSE and can change the attitude from negative to positive.

Attitude is not inborn but rather formed or studied all the developments in relation to the object and attitudes may change in everyone and can be influenced by circumstances and factors

that influence it, one of the factors that are important in the formation of an attitude that is the experience factor (Suiraka, 2012). This is supported by Notoatmodjo that the predisposing factors for the provision of information through the media support changing health knowledge and provide the experience, so that health education using the video of BSE is considered to increase the knowledge and attitudes in preventing breast cancer (Notoatmodjo, 2007).

The attitude of a person can be influenced by experience, such as health education. When one's experience was gained through educational tools / media education, it is normally received or captured by the human senses. This study showed that video can be an effective media in shaping an attitude.

The importance of video or any media in health education is widely acknowledged. Health education itself is defined as a learning process of an individual, group or community, from the stage of do not know about health (include screening, prevention and treatment) become aware, and eventually being able to overcome health problems (Kemenkes RI a, 2010). The process of information delivery through media then may help people to have better knowledge and attitudes toward BSE. Theoretically, knowledge acquired through information received from the senses. Scholars found, approximately 75% to 87% of the human knowledge acquired / channeled through the eyes whilst 13% to 25% is channeled through other senses. In other words, the more the senses are used to receive messages, the more and more clear understanding / knowledge acquired. From this it can be concluded that the audiovisual media further simplify the delivery and reception of information or educational material (Kemenkes RI a, 2010). The findings of the study also consistent with the result of previous studies (Rahmawati, 2007). Both researchers found that audio visual media was found to be effective in providing health education information and able to improve knowledge and attitudes of the respondents (Wawan, 2011). Video as an audio-visual media stimulates auditory and visual senses of its viewers. Compared to other media, video perhaps is the most effective media to be used for health education, because it has a high intensity compared to writings and recordings (Kemenkes RI a, 2010.).

In this study has limitation like can't to follow up the respondent to know this video media can change attitude for all intervention group. Follow up already do in after 1 week intervention but not continue. Is there any limitation of the study?

4. CONCLUSIONS AND RECOMMENDATIONS

The result of the study confirmed that after the health education was given through video media, respondents' knowledge and attitudes was improved. The study indicates that video maybe used as an effective media in providing health education related to Breast Self Examination to its viewers especially considering the nature of the audio-visual media with high intensity.

REFERENCES

1. American Cancer Society, 2009. *Breast Cancer Facts & Figures, 2009-2010*. Atlanta: American Cancer Society. Accessed on 17/09/2013 from <http://ww5.komen.org/KomenPerspectives/Breast-cancer-statistics-made-easy.html#sthash.7FuK1ycj.dpuf>
2. Azwar. 2013. *Sikap Manusia Teori Dan Pengukurannya*. Yogyakarta: PUSTAKA PELAJAR
3. Brunner, Suddarth. 2001. *Buku Ajar Keperawatan Medikal Bedah*. Jakarta: EGC
4. Dinkes Jawa Tengah, 2013. *Profil Kesehatan Provinsi Jawa Tengah tahun 2012*. Jawa Tengah: Dinkes Jateng.
5. Fratidhina, 2009. *Promosi Kesehatan Untuk Mahasiswa Kebidanan*. Jakarta: Trans Info Media
6. Kemenkes RI, 2013. *Profil Kesehatan Indonesia 2012*. Jakarta.

4th Asian Academic Society International Conference (AASIC) 2016

Globalizing Asia: Integrating Science, Technology and Humanities for Future Growth and Development

7. Kemenkes RI a, 2010. *Keputusan Menteri Kesehatan Republik Indonesia Nomor 769/MENKES/SK/VII/2010*. Jakarta.
8. Notoadmodjo, 2007. *PromosiKesehatandanIlmuPerilaku*. Jakarta: RinekaCipta
9. Notoadjmojo, 2010. *IlmuPerilakuKesehatan*. Jakarta: RinekaCipta
10. Rahmawati, Sudargo, Paramastri (2007). *Pengaruhpenyuluhandengan media audio visual terhadappeningkatanpengetahuan, sikap, danperilakuibu balitagitakuranganburuk di kabupatenkotawiringinbaratprovinsi Kalimantan Tengah*. *Jurnalklinikgizi Indonesia*. Vol. 4, No. 2.
11. Riva'i, 2013. *PerbedaanEfektivitasPenggunaan Media Video Dan Media Flipchart KartunDalamMeningkatkanPengetahuan Dan SikapCuciTanganPakaiSabunSiswaSekolahDasarNegeri 01 Krenceng*. Skripsi yang tidakdipublikasikan.
12. Suiroaka, Supriasa, 2012. *Media PendidikanKesehatan*. Yogyakarta: GRAHA ILMU
13. Wahyuningsih, 2012. *JumlahPenderitaKanker di DuniaNaik*. Accessed on 17/09/2013 from Health.Detik.com/read/2012/08/30/165020/2003530/763/jumlah-penderita-kanker-di-dunia-naik-300-persen-pada-tahun-2030
14. Wawan, 2011. *Teori dan Pengukuran Pengetahuan, Sikap, Dan PerilakuManusiaDilengkapiContohKuesioner*. Yogyakarta: NuhaMedika