

The Effectiveness of Edutainment toward Pregnancy Care on Knowledge, Attitude, and Action in Pregnant Women

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ABSTRACT

Background: Playing or studying in a pleasant atmosphere is an important factor in education. Through edutainment, pregnant women can facilitate understanding and be able to influence and motivate people's behavior. Learning with the Edutainment method should be able to provide positive benefits to pregnant women so that they can make learning right on target not only cognitive but also affective. Health promotion using a learning method called Edutainment which is expected to provide new solutions in the process of providing education to pregnant women.

Subjects and Method: This was an experimental study using pretest and posttest control group design with a randomized controlled trial (RCT). In this design, two groups were randomly selected so that an experimental group was formed with a sample size of 100 pregnant women who were treated with the edutainment method on pregnancy care and a control group with a sample size of 100 pregnant women who were treated with the conventional method. The dependent variable was the knowledge, attitude, and action. The independent variable was Edutainment. Data were collected by questionnaire and analyzed using different test analysis on STATA 13.

Results: Knowledge about self-care before pregnant women after receiving edutainment (Mean = 40.54; SD = 2.18) was better than not getting edutainment (Mean= 39.32; SD= 2.26),

and the difference was statistically significant ($p < 0.001$). Because there are differences before the intervention (baseline), to determine the effect of edutainment on knowledge, it is necessary to compare the difference in knowledge scores between before and after edutainment in the edutainment group compared with the control group. Attitudes about self-care among pregnant women after receiving edutainment (Mean = 44.15; SD = 1.40) were better than those without edutainment (Mean= 42.28; SD= 2.87), and the difference was statistically significant ($p < 0.001$). Self-care measures for pregnant women after receiving edutainment (Mean= 45.53; SD= 0.74) were better than those without edutainment (Mean= 42.57; SD= 2.58), and the difference was statistically significant ($p < 0.001$).

Conclusion: Edutainment is effective to increase the knowledge, attitudes, and practices (behavior, actions) of pregnant women about self-care for pregnancy.

Keywords: edutainment, pregnancy care, health education

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BACKGROUND

Treatment during pregnancy is better known as Antenatal Care (ANC). ANC is

able to adequately detect and handle high-risk cases, clean and safe delivery

assistance, and affordable midwifery or perinatal referral services when needed are a form of prevention. Taking precautions through regular pregnancy care means taking promotive and preventive action. Promotional efforts in the form of health promotion can provide health education that is able to increase the knowledge of pregnant women and improve their health (Qomariah and Salmiati, 2018).

Permenkes No. 43 of 2016 concerning Minimum Service Standards (SPM) in the health sector, it is explained that the standard of pregnancy examinations is 14 T, one of which is a discussion meeting/counseling. In the dialogue session, counseling will be carried out with the IEC (Communication, Information and Education) approach which is used in the scope of reproductive health to raise awareness, increase knowledge, change attitudes and motivate to change behavior towards pregnancy and delivery planning. There are many government programs, one of which is to provide health promotion to pregnant women with counseling (KemenKes, 2017).

The results of Suriani's research (2017) stated that many other factors affecting pregnant women lack of information, including lack of socialization and the role of health workers, both public health centers and private practice clinics, lack of health promotion on pregnancy care and pregnancy danger signs so that pregnant women knowledge about risks. pregnancy rate is still very low.

From the results of the preliminary study, it was found that the highest MMR (Maternal Mortality Rate) in DIY from 2015 to 2017 was obtained from Bantul Regency. According to the Bantul District Health Office (2018), the number of MMR in 2017 was 72.85/100,000 live births, namely 9 cases, decreased compared to 2016 as many as 12 cases of 97.65/100,000. MMR in 2016

has increased compared to 2015 as many as 11 cases amounting to 87.5/100,000. MMR in 2015 was better than in 2014, this was indicated by a decrease in MMR in 2014 of 104.7/100,000 live births, namely 14 cases. The highest cause of maternal death in 2017 was bleeding by 17% (2 cases), in 2016 was Severe Pre-Eclampsia (PEB) as much as 33% (4 cases), in 2015 was PEB and bleeding together as much as 36% (4 case) (Yogyakarta health office, 2018).

There are still many pregnant women who do not realize the importance of antenatal care so that pregnant women cannot detect high risk factors leading to death, due to low levels of education, knowledge and lack of information. Does not recognize danger signs so it is too late to take the mother to a health facility. Most of these deaths could have been prevented through Antenatal Care (ANC) services. It is undeniable, the more information provided, the better the memory of pregnant women. Knowledge is an important factor for the formation of pregnant women's behavior and behavior will be more positive than behavior that is not based on knowledge (Johariyah, 2016).

According to Rahma (2013), the shortcomings in conducting counseling in general are that many pregnant women do not pay attention to counseling because they talk to their friends beside them, some seem bored and end up playing cellphones, so the material provided is not fully understood when applied for a day -the day. From this problem, health promotion can be applied with a learning method called edutainment which is expected to provide new solutions in the process of providing education to pregnant women.

Edutainment is a combined word for education and entertainment. Edutainment is a concept of organizing an event that combines elements of entertainment and

health education. The elements of learning in education or health education are packaged with various forms of entertainment, fun attractions and actions that attract attention, are honest, useful and have clear added value for health.

Several types of edutainment are talk-shows on electronic media, games of snakes and ladders and games of ludo with health messages, entertainment plays, competitions with prizes for pregnant women and among cadres. The advantage of edutainment is that the target group does not feel compelled to study a health problem because in this activity the element of entertainment is quite prominent, the target group can learn while enjoying entertainment, is a better way of learning with new fun methods, involving the active role of the target (interactive), benefits are more tangible, and have challenges. Playing or studying in a pleasant atmosphere is an important factor in education. Through edutainment, pregnant women can facilitate understanding and be able to influence and motivate people's behavior (Yuliati et al., 2014).

Learning with the Edutainment method should be able to provide positive benefits to pregnant women in order to make learning right on target not only cognitive but also affective because it is presented with a process that takes into account the cognitive, psychological, and social abilities of pregnant women.

Based on the existing phenomena and the still high MMR, health promotion action is an effort to prevent pregnant women with health education using edutainment learning, so the researchers are interested in examining the effectiveness of edutainment about pregnancy care on the knowledge, attitudes and actions of mothers in dealing with pregnancy at the Bantul

District Health Center. , Special Region of Yogyakarta.

SUBJECTS AND METHOD

1. Study Design

This was an experimental research in the form of a Pretest-Posttest Control Group Design with a Randomize Controlled Trial (RCT). In this design, there were two groups randomly selected so that an experimental group was formed which was given treatment with the edutainment method on pregnancy care for pregnant women and a control group that was given treatment with the lecture method (conventional) about pregnancy care in pregnant women.

2. Population and Sample

The population in this study were pregnant women who examined in the working area of the Banguntapan I Community Health Center, Bantul Regency, DIY in 2020. The sampling technique in this study was carried out using simple randomized. This technique is used because the researcher uses two groups, one as the control group and one as the experimental group. The number of samples required for each control group is 100 respondents and the experimental group is 100 respondents.

3. Study Variables

The independent variable is Edutainment. The dependent variable is the knowledge, attitudes and actions of mother's care in facing pregnancy.

4. Operational Definition of Variables

The edutainment method is a combination of education and entertainment, a way to make the educational process fun. The edutainment method does not only provide material with lectures but can be done with games. The measurement scale was categorical, and for the purposes of data analysis, the categorical was changed to a dichotomy. The code for the favorable statement is 0=

disagree, 1= agree while for unfavorable statement is 0= agree, 1 = disagree.

Knowledge about pregnancy is the respondent's ability to answer questions about pregnancy including an understanding of pregnancy care. The measurement scale was categorical, for the purposes of data analysis, the categorical was changed to a dichotomy. Codes for favorable statements are 0= false, 1= true and for unfavorable statements 0 = true, 1 = false.

The attitude of pregnant women, reactions or responses in the readiness of pregnant women to act consistently on the behavior of mothers in pregnancy care. The measurement scale was categorical, and for the purposes of data analysis, the categorical was changed to a dichotomy. The code for the favorable statement is 0 = disagree, 1 = agree while for unfavorable statement is 0 = agree, 1 = disagree.

Actions of mothers in antenatal care definition of measuring instruments scale the results of measuring everything that is done in connection with the knowledge and attitudes of pregnant women to the importance of antenatal care during their pregnancy. The measurement scale was categorical, for the purposes of data analysis, the categorical was changed to a dichotomy. Codes for favorable statements are 0= no, 1= yes, while for unfavorable statements are 0 = yes, 1 = no.

Age is a measuring instrument for measuring the data scale of the respondent's life time which is calculated based on the last birthday. The division of categories is based on the ideal age for pregnancy. The measurement scale was categorical, and for the purposes of data analysis, the categorical was changed to a dichotomy. The code is as follows, 0 = High Risk Age (<20 years and > 35 years) 1 = Ideal Age (20 -35 years).

The education level is a measuring instrument for measuring the results of the

learning process that has been taken until it is declared to have passed or received a diploma through formal education. The measurement scale was categorical, and for data analysis, the categorical was changed to a dichotomy. The code is 0= Low Education and 1= Higher Education.

Employment status is a measuring tool for measuring the data scale of formal activities or activities carried out by respondents (pregnant women) that can generate wages or salaries. The measurement scale was categorical, and for the purposes of data analysis, the categorical was changed to a dichotomy. The code is 0= Housewife while code 1= Work.

Family income is a measuring tool for the scale of data measuring a situation that describes the income of husbands and wives obtained through work which is calculated using the average income of the last 6 months before data collection. The questionnaire was continuous, and for the purposes of data analysis, continuous was converted into a dichotomy. The code is 0 = Low, 1 = High.

Frequency of ANC - Health checks the mother underwent during her pregnancy. the number of ANC visits made by the mother at least 4 times during her pregnancy. The measurement scale was categorical, and for the purposes of data analysis, the categorical was changed to a dichotomy. The code is 0= irregularly while 1= regularly.

5. Instruments

The data was collected using a questionnaire that has been tested for validity and reliability testing. The reliability test was carried out using the Kuder-Richardson 20 (= KR 20) test on 50 research subjects.

6. Data Analysis

The results of the analysis of the characteristics of the research subjects in the form of categorical/dichotomous data were

described in terms of frequency (n) and percentage (%), and the analysis of different tests was carried out using the independent t test with the Stata 13 software program.

7. Research Ethics

Research ethics was obtained from the Research Committee at the Faculty of Medicine, Universitas Sebelas Maret, Surakarta. Research ethics include informed consent, anonymity, and confidentiality. Research ethics protocol ID is 735/V/HREC/2019.

Table 1 Characteristics of sample

Characteristics	n	%
Pregnant woman’s age		
(< 20 years old or > 35 years old)	29	14.50
(20 -35 years old)	171	85.50
Family Income		
≥ Rp 1,790,500	53	26.50
< Rp 1,790,500	147	73.50
Maternal Education		
Primary school, junior high school	10	5.00
Senior high school, College	190	95.00
Working Status		
Not working	194	97.00
Working	6	3.00
ANC frequency		
(ANC < 4 times)	0	0.00
ANC ≥ 4 times)	200	100.0

2. t-test

a. Test on knowledge of pregnant women (pretest) experiment group and control group

Table 2 shows that knowledge about self-care before pregnant women after getting edutainment (Mean= 40.54; SD= 2.18) is better than not getting edutainment (Mean= 39.32; SD= 2.26), and the difference

Table 2 Difference in mean of knowledge before edutainment

Group	n	Mean	SD	p
Edutainment	100	40.54	2.18	<0.001
Control	100	39.32	2.26	

RESULTS

1. Characteristics of Study Subjects

Table 1 shows that of the 200 study subjects, most of the pregnant women were of ideal age (20-35 years), namely 171 people with a percentage of 85.50%. Most of them have low income <Rp 1,790,500, namely 147 people with a percentage of 73.50%. Most of them have higher education, as many as 190 people with a percentage of 95.00%. Most of them are housewives (97%). All of pregnant women had routine ANC visit ≥4 times.

rence is statistically significant (p <0.001). Because there are differences before the intervention (baseline), to determine the effect of edutainment on knowledge, it is necessary to compare the difference in knowledge scores between before and after edutainment in the edutainment group compared to the control group.

b. Knowledge of pregnant women (post-test) experiment group and control group

Table 3 shows that the post-before difference in self-care knowledge among pregnant women after getting edutainment (Mean = 3.99; SD = 2.14) is better than not

getting edutainment (Mean= 2.87; SD= 1.91), and the difference is statistically significant ($p < 0.001$). It can be concluded that edutainment is effective for increasing knowledge about self-care in pregnant women.

Table 3. Difference in the mean of post-edutainment knowledge

Group	n	Mean	SD	p
Edutainment	100	3.99	2.14	<0.001
Control	100	2.87	1.91	

c. Attitude of pregnant women in experiment group and control group

Table 4 shows that the attitude about self-care among pregnant women after getting edutainment (Mean= 44.15; SD= 1.40) is better than not getting edutainment

(Mean= 42.28; SD= 2.87), and the difference is statistically significant ($p < 0.001$). It can be concluded that edutainment is effective for increasing positive attitudes about self-care in pregnant women.

Table 4. Difference in mean attitude after edutainment

Group	n	Mean	SD	p
Edutainment	100	44.15	1.40	<0.001
Control	100	42.28	2.87	

d. Actions of mother in pregnancy care experiment group and control group

Table 5 shows that self-care measures for pregnant women after receiving edutainment (mean= 45.53; SD= 0.74) were better than those without edutainment (Mean=

42.57; SD= 2.58), and the difference was statistically significant ($p < 0.001$). It can be concluded that edutainment is effective for increasing healthy actions regarding self-care in pregnant women.

Table 5 Difference in mean measures after edutainment

Group	n	Mean	SD	p
Edutainment	100	45.53	0.74	<0.001
Control	100	42.57	2.58	

DISCUSSION

1. The effectiveness of Edutainment in increasing the knowledge of pregnant women

Before pregnant women were given edutainment treatment with image media along with games of snakes and ladders for the experimental group and conventional treatment with lectures for the control group, a pretest was carried out first to determine the knowledge of pregnant women on pregnancy care both the experi-

mental group and the control group. This study showed that knowledge about self-care before pregnant women after getting edutainment (Mean= 40.54; SD= 2.18) was better than not getting edutainment (Mean= 39.32; SD= 2.26), and the difference was statistically significant ($p < 0.001$). Because there are differences before the intervention (baseline), to determine the effect of edutainment on knowledge, it is necessary to compare the difference in knowledge scores between before

and after edutainment in the edutainment group compared with the control group.

After pregnant women were given edutainment treatment with picture media along with snake and ladder games, post-test was carried out especially in the experimental group to determine the progress and differences in the knowledge of pregnant women on pregnancy care in the previous pretest. Likewise, the control group was treated in a conventional way, namely lectures. The results in this study indicate that the difference between self-care knowledge in pregnant women after getting edutainment (Mean= 3.99; SD= 2.14) is better than not getting edutainment (Mean= 2.87; SD= 1.91), and this difference is statistically significant ($p < 0.001$). It can be concluded that edutainment is effective for increasing knowledge about self-care in pregnant women. Difference between usages. Things related to edutainment are the same as other researchers conducted by Putri (2019) who state that the use of learning media can enhance the learning process, can enhance knowledge and learning outcomes achieved by respondents, because learning using game media edutainment is something fun to do. Conducted and entertained so as to increase the active participation of respondents in the learning process.

2. The effectiveness of Edutainment in improving the attitude of pregnant women

Education is not only known or realized (knowledge) but will also be addressed (attitude). By providing edutainment treatment with image media and games of snakes and ladders, it can increase the knowledge of pregnant women as well as improve the attitudes of pregnant women related to pregnancy care. The data showed that attitudes about self-care among pregnant women after receiving edutainment

(Mean= 44.15; SD= 1.40) were better than those without (Mean= 42.28; SD= 2.87), and the difference was statistically significant ($p < 0.001$). It can be concluded that edutainment is effective for increasing positive attitudes about self-care in pregnant women. With an increase in the attitude of pregnant women in caring for themselves during pregnancy, it is expected that there will be an increase in the actions of pregnant women towards pregnancy care and reduce maternal mortality due to a lack of understanding of the importance of pregnant women taking care of their pregnancy. The results of the above research are in line with the research conducted by Lila (2012) which shows that there are differences and improvements in the attitudes of respondents after being given health education using the snake and ladder game. In addition, the results of research conducted by Ratana (2014) show that there are differences in attitudes after being given health education with edutainment using audiovisuals. Edutainment media with audio visual is suitable for school-age children because it can develop children's imagination and learning activities in a fun atmosphere so that it can stimulate children's interest in learning because it is displayed in an attractive and easy-to-understand animation.

3. Relevant research results about the effectiveness of edutainment in improving the knowledge, attitude and practice (behavior, action) of pregnant women

The action in this study is the health skills of pregnant women in carrying out proper pregnancy care. This can affect the ability of pregnant women to practice on pregnancy care in every experience they get. Providing health education about pregnancy care using the edutainment method with media images along with snake and ladder games

and lecture methods. The data showed that self-care measures for pregnant women after receiving edutainment (Mean= 45.53; SD= 0.74) were better than those without edutainment (Mean= 42.57; SD= 2.58), and the difference was statistically significant ($p < 0.001$). It can be concluded that edutainment is effective for increasing healthy actions regarding self-care in pregnant women.

Based on the study, it is known that edutainment about pregnancy care has a high influence on the knowledge, attitudes and actions of pregnant women. The results of the increase in knowledge, attitudes and actions of pregnant women from the two groups showed that the increase in knowledge, attitudes and actions of pregnant women using the edutainment method with media images and games of snakes and ladders was more increased than the lecture method, this happened because the edutainment method had the advantage of being interesting and made the material more interesting. easy to accept. While the weakness of the lecture method is that pregnant women are passive and easily bored. The game serves as an escape from a feeling of excessive pressure towards positive things, because pregnant women will feel bored, such as a lecture process where pregnant women just sit listening to the material presented. This research is in line with the research conducted by Siwi (2014) on the effect of providing edutainment media on the practice of healthy snacking, which shows that there are differences and improvements in practice after being given health education using audio visual (edutainment). This shows that the media can improve respondents' practices in selecting snacks for school children.

AUTHOR CONTRIBUTION

Shalsabilla Tiara Firdausia, Uki Retno Budihastuti, and Yulia Lanti Retno Dewi measured self-care, knowledge, attitude, and behavior in pregnant women, did data analysis, and wrote the paper.

CONFLICT OF INTEREST

None.

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