

## The Effectiveness of Pregnancy Training Class towards the Childbirth Preparation in Kendal Regency

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### Abstract

The mortality number of women (AKI) is one of the indicators which shows the maternal health degree. In Kendal Regency, this class has been socialized and conducted since the late 2009, but the decrease of AKI has not been significant yet. This study was aimed at analyzing the effectiveness of a childbirth preparation training in pregnant women class. By such objective, this study belongs to quasi-experiment with non-randomized control group pretest-posttest design. This design used purposive sampling and involved 60 pregnant women in trimester III who were divided into three groups as the sample, namely: two as experimental groups, and one as control group. Their data were analyzed by using one way ANOVA and Tamhane's Post Hoc test. The results showed that there was a significant difference in the improvement of childbirth preparation of pregnant women viewed from the post-test and pre-test of the experimental group of A, B and control group showed by the result of one way ANOVA test with the p value of  $(0.000) < 0.05$ . According to the above findings, this study concludes that the giving of pregnancy training class with the slide media is more effective than the flipchart media in improving the childbirth preparation of pregnant women. It was showed by the result of Tamhane's Post Hoc test, namely  $0.000 < 0.05$  and N-gain value of  $0.70 > 0.71$ .

## INTRODUCTION

Maternal mortality is the indicator of state health status, because maternal mortality rate (MMR) shows the ability and quality of health services (Zakina, 2014).

The closing of Millennium development goals (MDGs) in the end of 2015 shows many unattainable targets. The number of MMR from 390 (1992) can only be reduced to 356 per 100,000 births in 2012 (Novitasari, 2015).

Efforts to decrease MMR should be focused on the direct cause of maternal death, which is occurred 90% at the time of labor and immediately after labor. Beside direct cause, there are indirect cause which is people behavior factor that are affected by low levels of education, especially mothers, low socioeconomic level and socio-cultural background, low nutritional status and also limited access of mother and baby in rural areas to obtain health services (Meilani, Setiyowati, Estiwidani, & Sumarah, 2009).

Various efforts to improve the quality of services and management of MMR program have been implemented, but there is still a need for increased community involvement. Efforts to accelerate the decline in maternal mortality rates require cross-sectoral support in the women empowerment, families and communities in labor planning and preparedness to deal with obstetric and neonatal complications (Ministry of Health of the Republic of Indonesia, 2009).

In 2013, Central Java was ranked 4th largest contributor of MMR in Indonesia (Ministry of Health Republic of Indonesia, 2014). The maternal mortality rate (MMR) in Central Java in 2014 was 126.55 / 100,000 KH (711 cases), an increase if compared to MMR in 2013 of 118.62 / 100,000 KH (668 cases) (Provincial Health Office Central Java, 2014).

In 2014, the Maternal Death Case in Kendal Regency was ranked 14th out of 35 regencies / cities in Central Java (Central Java Provincial Health Office, 2014). According to the annual report of the incidence of maternal mortality in 2012 amounting to 22 (132.52 per 100,000 KH), in 2013 of 21 (121.62 per 100,000 KH), 2014 of 19 (111.40 per 100,000 KH), 2015 23 (122, 80 per 100,000 KH) and in 2016 a total of 19 (117.93 per 100,000 KH). The direct causes of 19 cases of maternal deaths in Kendal Regency in 2016 were 3 cases of bleeding during childbirth (15.78%), 2 cases of Hypertension in

pregnancy (10.52%), 5 cases of Pregnancy with heart disease (26.31%), and 9 other cases (47.36%).

The data shows fluctuations of maternal mortality cases in Kendal regency. This condition indicates that there are still problems that require good cooperation from health workers with other related parties, and supported by adequate facilities and infrastructure.

Currently, maternal and child health counseling is generally still done through individual consultation given during pregnancy check or posyandu. This are useful for case-by-case treatment but have limited knowledge only on health issues experienced during consultation, no work plan so that there is no cross-sectoral and cross-program monitoring or coaching and unscheduled and non-continuous extension services (Ministry of Health of the Republic of Indonesia, 2011).

One of the efforts to decrease the MMR is to implement pregnant mother's class to learn together about the health of pregnant women, in the form of face-to-face in groups to improve the knowledge and skills of pregnant women. The target of pregnant women's classes is the study group of pregnant women with gestational age between 4 weeks to 36 weeks with a maximum number of 10 people per class (Ministry of Health Republic of Indonesia, 2011).

The conclusions from qualitative studies in Australia shows that "awareness-based maternity education has the potential to empower women to be active participants in childbirth process, which can overcome general worries about lack of control and job satisfaction and facilitating peer support until postnatal period" (Fisher, Hauck, Bayes, & Byrne, 2012).

The conclusions of the research conducted in Denpasar City Region, Gianyar Regency and Badung Regency and Denpasar Polytechnic Practice Post 2012 are "there is influence of implementation of antenatal class on behavior (knowledge and attitude about pregnancy, childbirth, newborn and contraception as well as preparatory action of labor) pregnant women" (NW Ariyani, NN. Suindri, 2012).

In Kendal regency, the maternal class training has been socialized and since the end of 2009 by all Puskesmas in Kendal regency, 30 Puskesmas. Pregnant women class is delivered by midwives by lecture & discussion method, the main learning media used is flipchart for maternal class training, but also MCH, food model, baby doll and other tools as needed. Mothers who have attended maternal class

training are expected to increase their knowledge, changes in attitude and behavior (Ministry of Health of the Republic of Indonesia, 2011).

Initial survey conducted in December 2016 at 5 Puskesmas Kendal regency showed some pregnant women have not prepared the labor well that trigger the occurrence of several complications in pregnancy and labor process so that necessary referenced to higher facilities.

According to Hovland (1953) the determinants of the success of behavioral change consisted of the ability of communicators to communicate & attract attention, the media used is fit with the characteristics of communicant to ease delivery of messages, and characteristics of communicant social status, education level, cultural characteristics and ethnic / race (Effendy , 2003).

From these data and phenomena indicate that the preparation of labor is very important for the process of pregnancy until labor goes well and can minimize the occurrence of complications. Preparation of labor aims to prepare the needs during pregnancy as well as the labor process, including the birth plan. Having birth plans will reduce confusion during labor, and increase the chance that mothers will receive appropriate and timely care (Marmi, 2014).

Based on the description and the problem, the researcher is interested to do research which aims to analyze the effectiveness of giving pregnancy class training with *flipchart* and slide media to the preparation of labor in pregnant mother in Kendal Regency.

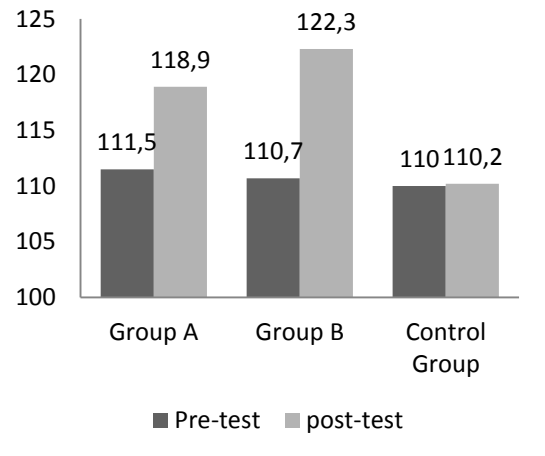
## METHODS

This research is a quantitative research of quasi-experiment design with non-randomized control group pretest-posttest method. Population of trimester pregnant women III (gestational age 28 - 40 weeks) at Kendal regency in May 2017 are 4,084 pregnant women. Samples were taken by purposive sampling of 60 people divided into three groups: group A (given maternity class training with back flip media), group B (given maternal class training with slide media) and group C (not given treatment / control). Data taken in this study is pregnant women's preparation which is measured through pre-test and post-test by using questionnaire. Quantitative data analysis used N-Gain calculations to find out the significance of increased labor preparation and one-

way ANOVA and Tamhane's Post Hoc test to determine differences in the improvement of labor preparation in each group.

## RESULT AND DISCUSSION

### Average of Childbirth Preparation



**Picture 1.** Frequency Distribution Average of Childbirth Preparation pretest and posttest between Group A, B and control.

The results showed that there was an increase in childbirth preparation on pregnant women from the difference of post-test score and pre-test group A is 7,4, group B 11,6 and control group 0,2.

To know the significance of the increase of childbirth preparation in pregnant women in each group was calculated with N-gain formula and the result of group A was included in high significance category ( $N\text{-gain} > 0.70$ ), group B was in moderate category ( $0.3 \geq N\text{-gain} \geq 0.70$ ), while the control group was in the low category ( $N\text{-gain} < 0.30$ ).

### Differences in improving childbirth preparation

Based on the results of the one way anova test analysis between post-test score difference and pre-test childbirth preparation in pregnant women of experimental group A, B with control obtained p value ( $0.000 < 0,05$ ). This means it can be seen that there is a significant difference in childbirth preparation in pregnant women between post-test and pre-test of experimental group A, B with control. In order to know the intergroup that had differences, Tamhane's post hoc test was performed. Here is Tamhane's post hoc test result.

**Table 1.** Result of Post Hoc Tamhane's test

Group	Value p
Difference of <i>post-test</i> and <i>pre-test</i> score on childbirth preparation group A and control	0.000
Difference of <i>post-test</i> and <i>pre-test</i> score on childbirth preparation group B and control	0.000
Difference of <i>post-test</i> and <i>pre-test</i> score on childbirth preparation group A and B	0.000

Based on Table 1 it was found that between experiment A and control group, experiment group B with control and experiment group A with experiment B showed that there was a difference of significant increase in childbirth preparation with the result of Tamhane's post hoc test on all three obtained p value (0.000) <0.05 .

#### **The effectiveness of providing pregnancy training class with flipchart media on childbirth preparation**

The result of post hoc Tamhane's test analysis between post-test score difference and pre-test of childbirth preparation of experimental group A with control obtained p value (0.000) <0,05 and obtained value of N-gain of experiment group A that is 0,70 and control group that is 0,03. This means that there is a significant difference improve of labor preparation between the experimental group A and the control and the N-gain of the experimental group A is higher than the control group. That is, that the provision of pregnancy training class with the flipchart media effective in improving childbirth preparation in pregnant women.

Pregnancy training class is effective in improving childbirth preparation in pregnant women because pregnant women's classes are an effort to improve knowledge, change attitudes and behaviors of mothers. In this class, pregnant women will learn together, discuss and exchange experiences about mother and child health as a whole and systematic and can be carried out on a scheduled and continuous basis (Ministry of Health Republic of Indonesia, 2011).

This is also correspond with research conducted by Arfiah Eliana and Warni Fridayanti at Puskesmas Wangon II Banyumas Regency in 2012 shows that the average knowledge of pregnant women after attending the class of pregnant women increased from 11 to 14 (Eliana & Fridayanti, 2012).

Class is given by lecture and discussion methods using easy-to-understand language, so

information is easily understood by pregnant women. The lecture method takes the form of an explanation of concepts, principles and facts closed with question and answer between the speaker and the individual. Discussion methods are interactions between individuals or individual interactions with the material giver, to analyze, solve problems, explore or debate specific topics or issues (Arsyad, 2013).

The main learning media used is a back flip. Learning media is used to facilitate the delivery of messages. A back flip is a media delivery message or health information in the form of a sheet where each sheet contains a picture of the demonstration and in the back of sheet containing sentences relating to the image (Arsyad, 2013).

The image media has several advantages, such as concrete that is more realistic showing the subject matter than the verbal media alone, the image can overcome the limitation of space and time and can clarify a problem to prevent misunderstanding (Hamdani, 2011).

The results of this study are in line with research on the effect of image-based concept mapping on students' learning outcomes and cognitive processes in Taiwan showing groups using image-based mapping show higher levels of understanding and creation compared to text-based groups (Yen, Lee, & Chen, 2012).

From the description above can be seen that pregnant women who attended maternal class training get information in the form of materials provided by the midwife and the experience of discussion with other participants. After getting further information can be applied in the labor preparation.

Based on these advantages, it is very reassuring if the maternal class training with the back flip media is effective in improving labor preparation in pregnant women.

#### **The effectiveness of providing Pregnancy training class with slide media on childbirth preparation in pregnant women.**

The same results were also shown in Tamhane's post hoc test between the difference between pre-test score and post-test preparation of experimental group B with control with p value (0.000) <0,05 and obtained experimental group gain value of B is 0.71 and group control is 0.03. This means that there is a significant difference in maternal labor preparation between experimental

group B and N-gain group B experiments is higher than control group. That means giving and training the class of pregnant women with slide media is effective in improving childbirth preparation in pregnant women.

Pregnancy training class with slide media featured with effective projectors improves delivery preparation in pregnant women because the maternity class is one of the efforts to improve knowledge, change the attitude and behavior of the mother (Ministry of Health of the Republic of Indonesia, 2011).

This is corresponding with the results of a study conducted in 2016 about the model of maternal class training for mapping the risks of the pregnancy and prevention of childbirth complications in Singorojo Subdistrict, Kendal Regency is "the knowledge of pregnant class participant is improving, the attitude of the pregnant mothers to be better, pregnancy prevention risk and pregnancy complication by pregnant mother to be better, pregnant class participant becomes more intensive ANC visit every month to the local Village Midwife" (Fibriana & Azinar, 2016).

Class is given by lecture and discussion method using easy-to-understand language, so that information is easy to be understood by pregnant mother. Implementation of lecture method that is by presenting the material through speech and explaining verbally of material to the individual. This method is not bad if properly prepared, supported by tools and media, and taking into account and keep the limits of its use (Arsyad, 2013).

Based on research on descriptive survey in preparation and practice of pregnancy counseling in Ireland shows in general pregnant women class, large class scales are an obstacle to providing a participatory educational approach (Sullivan & Connell, 2014).

While the Ontario-Canada study of diabetes education through the class in the classroom leading to better treatment and outcomes than individual counseling in adults showed that group self-management education was associated with fewer acute complications and some improvement in the treatment process (Hwee, Cauch -dudek, Victor, Ng, & Shah, 2014).

In this study, the number of participants per class is 10 people, so that the participants can participate in the discussion. Discussion method is a way of mastery of the material through the exchange of opinions and information based on knowledge and

experience has been obtained to solve a problem, clarify a material and reach an agreement (Arsyad, 2013).

Learning media used is a slide that is created by software Ms. Power point and displayed with projector. Ms. Power point is a software that helps in crafting an effective, professional and easy presentation. Ms. Power point will help an idea become more interesting and clear its purpose if presented as Ms. Power point helps in making slides, outline presentations, displays dynamic slides, including attractive clip art that is easily displayed on the computer monitor screen. Benefits of using power point applications in making presentation slides include learning materials will become more interesting, delivery of learning will be more effective and efficient and learning materials delivered in full and concise through the material pointer (Arsyad, 2013).

From the description can be seen that pregnant women attending maternity class training with slide media get information in the form of material and discussion experience. After obtaining further information can be applied in the labor preparation.

Based on these advantages, it is very convincing if the provision of maternal class training with slide media is displayed with projectors effective in improving labor preparation in pregnant women.

### **Effectiveness of pregnancy training class with flipchart and slide on the preparation of childbirth in pregnant women.**

As for the results of Tamhane's post hoc test between the difference between pre-test score and post-test preparation of childbirth group A with B was obtained p value (0.000) <0,05 and obtained experimental group A, 70 and experimental group B is 0.71. This means that there is a difference in the improving of labor preparation in pregnant women between experimental group A and experimental group B, N-gain value of experimental group B gain is higher than experiment group A. It means that giving maternal class training with slide media is more effective than giving pregnancy training class with flipchart media in improving childbirth preparation in pregnant women.

Both groups are given the material and use the same learning method, the lecture and discussion, so that pregnant women can easily receive the material, but there are differences in the implementation of the media used.

Study on comparing the effectiveness of prenatal in group and individual on excess body weight in pregnancy in the USA shows that in prenatal care the group has a statistically significant and clinically beneficial effect to reduce excessive weight gain in pregnancy compared with traditional individual prenatal care.

Logically the prenatal care model of the group shows that cognitive restructuring can occur during interventions, where group problem solving, social support, peer influence, and increased education time can change how pregnant women think and manage nutrition, diet and exercise during pregnancy. This cognitive shift, together with the promotion of healthy group norms, can encourage healthy maternal behavior (Gesell, 2014).

Hamalik (1986) bring up that the use of instructional media in the learning process can arouse new desires and interests, generate motivation and stimulation of learning activities and even bring psychological influence on the individual. In addition to generate motivation and individual interest, learning media can also help improve understanding, present data interestingly and reliable, facilitate interpretation and condense information (Arsyad, 2013).

In group A main learning media used in pregnancy classroom training is flipchart while in group B using the slide shown with the projector.

Slide created with Ms.Power point software and projected using projector so that appear on screen. Preparation with Ms.Power point software make learning material will become more interesting, delivery of learning will be more effective and efficient and learning material delivered in whole and concise through material pointer (Arsyad, 2013).

In this study the slides are composed by writing, charts, pictures and video. Density of writing on each slide is not more than 3 points and maximum 20 words. The use of the chart is able to provide a summary of the key points of a presentation, while the image media has more realistic advantages than just verbal media, the images can overcome the limits of space and time and clarify a problem to prevent misunderstanding.

The video is perfect for teaching material in the realm of behavior or psychomotor. The video describes the real state of a process, phenomenon or event so as to enrich the exposure (Hamdani, 2011).

Based on the selection of media according to learning objectives, visual media provides moderate factual information, medium concept principles,

moderate procedures, low skills and low attitudes. While the video / films provide moderate factual information, high concept principles, high procedures, medium skills and moderate attitudes (Sadiman, 2010).

The results of this study are in line with research on facilitating the learning of animated instruction (the effectiveness of questions and inputs as a directing attention strategy) at Taiwan showed that students who received visual animation treatment significantly scored higher in all posttest criteria than students who received static visual treatment. In addition, students who received questions plus feedback or questions, significantly scored higher than those who did not accept strategies on selection criteria criteria (Lin, 2011).

Other studies on power point empowerment (slide and teaching effectiveness) in New York show that the number of slides in the presentation does not affect the effectiveness of learning but the content density of each slide relates to the effectiveness of the learning. The use of low words in the slideshow (3 points and 20 words or less per slide) and additional non-text elements can stimulate feedback from participants. These findings indicate that power points can increase or decrease interest from participants because slides with excessive use of words do not increase the effectiveness of learning (Brock, 2011).

The determinants of successful behavioral change consist of the ability of communicators to communicate & attract attention, the media used in accordance with characteristics of communicant to facilitate the delivery of messages, and the characteristics of the communicant, among others, social status (related to the economic level of communicant), level of education, cultural characteristics and ethnic / race (Effendy, 2003).

In this study the characteristics of trainees have homogenized that is normal pregnant women Trimester III (gestational age 28-40 weeks) with the last education junior high / high school per capita expenditure  $\geq$  expenditure per capita Kendal Regency.

Pregnant women who have attended pregnancy training class get stimulus in the form of factual knowledge, conceptual, procedural and metakognitif. With the use of learning media and interesting delivery can cause the attention of the individual and the stimulus effectively, after that the organism processes the stimulus so that there is willingness to act (behave) and finally with the

support of facilities and encouragement from the environment then the stimulus has the effect of action (change of act) of the individual (Notoatmodjo, 2012).

The results of this study are also in correspond with the study of the comparison of power point media with the flip chart in improving the knowledge of oral and dental health in Semarang shows that the power point media is effective in improving the knowledge of oral and dental health on the students (Nurhidayat, Tunggul P & Wahyono, 2012).

Mentioned above, convincing if the pregnancy training class with slide media is more effective in improving childbirth preparation. So it can be concluded that there is a difference between giving pregnancy training class with flipchart media and slide media to improve childbirth preparation of pregnant women.

## CONCLUSION

Based on research results it can be concluded that the provision of pregnancy training class with slide media is more effective than flipchart media in improving delivery preparation in pregnant women as indicated by Post Hoc Tamhane's which is  $0.000 < 0,05$  and N-gain value is  $0.70 > 0,71$ .

Pregnancy training class with slide media provide knowledge & skills about pregnancy and childbirth in pregnant women through an attractive & compact electronic media. The use of visual media slides containing charts, pictures and videos provides conceptual principles, procedures, skills and attitudes higher than back flip media that contains only static images, so that information can be absorbed and applied more effective in childbirth preparation.

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