

# THE IMPACT OF OYOG TO IDENTIFY DANGER PREGNANCY SIGNS IN CIREBON DISTRICT INDONESIA

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## THE IMPACT OF OYOG TO IDENTIFY DANGER PREGNANCY SIGNS IN CIREBON DISTRICT INDONESIA

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### ABSTRACT

**Background** : One of the cultures in pregnancy in Cirebon Regency that can be an educational medium about pregnancy danger signs is oyog, a massage for pregnant women which is generally carried out by traditional birth attendants. The oyog procedure has been considered safe by experts and is not harmless. Previous research conducted by researchers has proven that examining Leopold with oyog modification will provide benefits to mothers, namely reducing anxiety and increasing midwife empathy. The aspects of excellence are the elements of effective communication, suggestion and affirmation on leopold examination with oyog modification making the patient comfortable and easy to receive information about danger signals.

**The purpose** of this study was to determine the effect of oyog on the knowledge of pregnant women about the danger signs of pregnancy in Cibogo Health Center, Cirebon District Indonesia using a *quasi experimental design, non-controlled pre-test and post-test with control group design* on 80 pregnant women with inclusion and exclusion criteria. Data analysis included univariable and bivariable with *dependent t-test*.

**Results of the study**: there were significant differences in the knowledge scores *pre-test* and *post-test* in the two groups with a mean difference of 2.95 for the oyog intervention group and 1.23 for the control group. The difference *mean* between the two groups was 1.72 with a *p value* of 0.01, which means that the **Conclusion**: The intervention of leopold examination with oyog modification was more effective towards increasing the knowledge of pregnant women about the danger signs of pregnancy so that oyog could be implemented as a culture-based policy in Cirebon District .

**Keywords**: Oyog, Knowledge, Danger Signs, Pregnancy

### 1. INTRODUCTION

Based on Data on the 2015 Intercensal Population Survey (SUPAS) in Indonesia's Health Profile in 2017, the Maternal Mortality Rate of 305 / 100,000 live births (Ministry of Health of the Republic of Indonesia, 2018). The causes of maternal death in Indonesia are still dominated by three main causes of death, namely bleeding, hypertension in pregnancy, and infection (Ministry of Health, Republic of Indonesia, 2015). In addition there are indirect causes of maternal death are 4 and 3 Too Late is late to recognize danger, too late to take the decision to refer, late getting transport and late to get help at a health facility. This is similar to three delays related to maternal mortality in Myanmar (Win, Vapattanawong, & Vong-ek, 2015), as well as delays that occur in Mozambique (Chavane et al., 2018) and Brazil (Pacagnella et al., 2014)

Based on the profile of the West Java Provincial Health Service in 2017, Cirebon Regency ranks the 4th highest maternal mortality in West Java (West Java Provincial Health Office, 2018). In the Region of Cirebon there were 37 maternal

deaths and 189 infant deaths in 2017. The direct cause of maternal deaths in Cirebon District is still dominated by pre-eclampsia and eclampsia. However, there is an indirect cause for delay in decision making (Cirebon District Health Office, 2018). Maternal deaths that occur in the Cirebon District area are evenly distributed in almost the puskesmas area. However, in 2017 the Cibogo Puskesmas and the Kedawung Puskesmas became the health department's attention because only this year both puskesmas contributed to maternal deaths (Dinkes Cirebon District, 2018).

Delay in decision making is an indirect causative factor that must be addressed from the family. Delay in making decisions to refer to the family due to adat and being late in recognizing the high risk of maternity are the main causes of maternal death in Sumedang, Indonesia (Wulandari, Susanti, & Mandiri, 2016). The results of the study are in accordance with research conducted in Bangladesh (Asm, Ms, Rahman, Halim, & Biswas, 2017). Therefore there needs to be an effort related to culture to overcome this problem.

One culture that is close to the community and is desirable in pregnancy care is oyog, a massage for pregnant women which is generally performed by a dukun with the aim to "*mbenerke*" (justify) the fetal position, has been considered safe to do and will not endanger the mother and fetus (Yuhandini, Karlina, Suratni, Subarniati, & Suharmiati, 2017). The basic elements included in the Leopold examination are elements of effective communication, suggestions and affirmations (Kuswandi, 2012) that make patients comfortable (Yuhandini et al., 2017) so that they are expected to easily receive information about danger signals (Ministry of Health Republic of Indonesia, 2016).

## 2. MATERIALS AND METHODS

### 2.1. Research Design

This research is a quasi-experimental analytic study with design *experimental* that uses *non-standardized pre-test and post-test with control group design*. This type of experimental design, using a parallel design, by making comparisons between groups consisting of 2 groups. This study compared the group of pregnant women who received antenatal care by midwives who had been trained to modify oyog with a focus on recognizing the danger signs of pregnancy and hereinafter referred to as the experimental group, with the pregnancy check group according to the Ministry of Health's standards, hereinafter referred to as the control group.

### 2.2. Research Population and Sample The study

Population was all pregnant women in Cirebon District, Indonesia, from January to July 2019. The sample in this study was taken using a *purposive sampling method*. In the experimental group were pregnant women in the area of Cibogo Health Center, Cirebon Regency. The reason for choosing the area was because this year there was only maternal death (Cirebon District Health Office, 2018). While the control group was pregnant women at the Kamarang Health Center. The selection of the Kamarang Health Center was based on geography which was almost the same as the experimental group. The number of samples needed for each group is based on a sample size of 35 people. To anticipate *loss of follow-up*, a sample of 10% was added so that the sample became 40 people for each group. Inclusion criteria are pregnant women with 28-30 weeks gestation, willing to be the subject of research by signing *informed consent*. The exclusion criterion is complications of antepartum bleeding.

### 2.3 Materials and Research Tools

Instruments used in this study were the Leopold examination module with oyog modifications and recognition of pregnancy danger signs, observation sheets and knowledge questionnaires.

## 2.4 Collection/ research stages

The first step is to train midwives in the intervention group using the Leopold examination module with modification of oyog to skillfully assessed using skills assessment observation sheets. The module is the output of the 2014 Health Ethnographic Research (Yuhandini et al., 2017) and the 2015 Health Intervention Research (Suratmi, 2015) and was modified again by researchers in 2019. After being skilled, midwives will carry out midwifery care for pregnant women i.e. applying Leopold inspection with oyog modification. After completing oyog intervention, then given education about the danger signs of pregnancy. Each respondent gets interventions done 3 times, at 7.8 and 9 months of gestation.

Midwives in the control group will get a refresher on pregnancy examination standards according to the Indonesian Ministry of Health, including providing education on pregnancy danger signs to pregnant women. After that the midwife will conduct a pregnancy check up in the control group according to the Ministry of Health Republic of Indonesia standards. Both groups will receive a pregnancy check-up by a consultant. Before the intervention was given, the two groups were given a pre test about the knowledge of danger signs and after the intervention was given a post test.

## 2.5 Data Analysis

Processing techniques in this study include *editing* to determine the completeness of the data. Then the done *coding is* to make it easier to tabulate data. After that the data is tabulated according to the variables that have been studied to facilitate the analysis. The analysis used was univariable and bivariable analysis with *t-test dependent test* to determine the effect of leopold with oyog modification on the knowledge of pregnant women about the danger signs of pregnancy.

## 3. RESULTS AND DISCUSSION

After the normality test can be seen the distribution of data normally distributed, so that the data analysis uses *paired t-test* for each group and *independent t-test* to compare the knowledge of the two groups.

**Table 1 Analysis of respondents' knowledge about pregnancy danger signs (pre-test and post-test 1)**

Knowledge	<i>Pre-test</i>	<i>Post-test</i>	Mean different (CI 95%)	<i>P</i>
	Mean (SD)	Mean (SD)		
Oyog	14,03 (2,75)	16,98 (2,44)	2,95 (-3,76 s.d -2,13)	0,000
Control	13,33 (2,49)	14,55 (4,08)	1,23 (-2,42 s.d -0,02)	0,046

Table 1 shows that there are significant differences in the first knowledge scores *pre-test* and *post-test* in the intervention and control groups, with a greater mean difference in the intervention group oyog

Knowledge is the result of human sensing, or the result of knowing someone about an object from their senses. Human sensing processes through the five senses,

namely seeing, hearing, feeling, smelling and feeling. The domain of the human senses lies in the eyes and ears. While the danger sign of pregnancy is a symptom that appears in pregnancy resulting in complications. This study shows that the knowledge of danger signs before the intervention between pregnant women in the intervention group and the control group has almost the same knowledge. This is because the two groups have carried out various programs in accordance with the standards. For knowledge after the intervention, both groups showed increased knowledge about the danger signs of pregnancy. However, increased knowledge of pregnancy danger signs was higher in the intervention group than in the control group.

**Table 2 Comparative Analysis of Changes in respondents' knowledge in both groups**

Independent <i>t</i> test	Mean (SD)	Mean different (CI)	<i>P</i>
Oyog	2,95 (2,55)	1,72 (-3,15 – (-0,295))	0,01
Control	1,23 (3,75)		

In table 2, the value of changes in respondents' knowledge scores in *pre-test* and *post-test* 1 for the oyog intervention group was 2.95 while in the control group was 1.23. The mean difference between the two groups was 1.72 with a *p* value of 0.01. This shows that there is a significant difference in the average change in respondents' knowledge scores in *pre-test* and *post-test* 1 between the oyog and control intervention groups, which means that oyog interventions are more effective in increasing respondents' knowledge.

Oyog is a massage for pregnant women which is generally done by a dukun with the aim to "*mbenerke*" (justify) the position of the fetus, has been considered safe to do and will not endanger the mother and fetus (Yuhandini et al., 2017). Previous research that has been done has proven that oyog modification will benefit mothers, which can reduce anxiety (Pebriyatie, Suratmi, & Suharmiati, 2016). Besides the other benefits of this procedure is the increasing empathy of midwives who carry out the Leopold examination procedure with oyog modifications (Suratmi, Pebriyatie, & Suharmiati, 2017).

Relaxation through oyog touch and massage as well as giving positive affirmations, is one of techniques *mindfulness-based intervention* that can reduce maternal anxiety in facing and undergoing pregnancy and preparing the mother's mentality to face labor (Vieten & Astin, 2008). Other studies on massage in pregnancy have been shown to reduce anxiety in Miami (Filed, 2011). Supporting research was carried out also in Australia (Woolhouse, Mercuri, Judd, & Brown, 2014). The basic elements included in the Leopold examination are elements of effective communication, suggestion and affirmation (Kuswandi, 2012) (Guardino & Schetter, 2014). The aspects of excellence are the elements of effective communication, suggestion and affirmation on leopold examination with oyog modification to make the patient comfortable (Yuhandini et al., 2017) so that it is easy to receive information about danger signs of pregnancy (Ministry of Health Republic of Indonesia, 2016). The importance of effective communication in health care has long been recognized in the extensive literature. This includes decision

making. Likewise in midwifery services. Client experience can have an impact on clinical safety and effectiveness of results (Doyle, Lennox, & Bell, 2013). In midwifery care, the role of communication in as part of good care (Vogel, Bohren, Tuncalp, Oladapo, & Gulmezoglu, 2015).

In this study communication will proceed throughout the Leopold modification process with the communication content not restricted and preferably in the form of suggestions about a smooth and normal pregnancy, so that the mother feels comfortable and relaxed. In such conditions the delivery of information about danger signs of pregnancy will be easily accepted and remembered.

#### **4. CONCLUSION**

Intervention Leopold inspection with modifications oyog more effectively to increase knowledge of pregnant women about pregnancy danger signs

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