

Prenatal health education using expository method as a prevention of stunting

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ABSTRACT--- *As a global Issue since 2017, stunting is seen as a serious problem that should be solved immediately to reduce the prevalence of stunting. The incidence of stunting in Indonesia continues to increase, it is due to socio-ethnic conditions food belief especially in pregnant women in some regions. The aim of this study is to explain the influence of health education on pregnant women in preventing stunting. A quasy experiment with pre-post test design was conducted on 60 pregnant women in Bangkalan. A systematic simple random sampling technique was used to choose pregnant women with pregnancy <7 months and regularly perform antenatal care. Structured questionnaire was used to collect the data and analyzed using Wilcoxon and Mann Whitney test with a significance level of $\alpha < 0.05$. The result showed that there were the effectiveness of expository method using media booklets and card game on increasing knowledge ($p=0,000$), attitudes ($p=0,000$) and ability ($p=0,000$) in the treatment group. There were significant differences between the treatment and control group on knowledge ($p=0,001$), attitude ($p=0,000$), and ability ($p=0,000$) after the intervention. Prenatal education using expository methods effectively improves the knowledge, attitudes and ability of pregnant women as an effort to prevent stunting.*

Keywords--- *Prenatal, Health Education, Prevention Stunting, Expository method.*

I. INTRODUCTION

Stunting is a chronic malnutrition in children under five years characterized by height that is shorter than his age. Stunting associated with delayed children growth and development (Onis et al., 2013). Stunting is a health problem which is highlighted by the world that become target intervention of Sustainable Development Goals (SGD) and as a Global Nutrition Target in 2025, which is to reduce 40% of children with stunting under 5 years (WHO, 2018). Stunting results from a complex interaction of household, environmental, socioeconomic and cultural influences which affects nutrition during pregnancy and the first 1000 lives of children (Onis & Branca, 2016). The condition of socio-ethnic food belief is the most common causes of stunting in Indonesia one of them in the Bangkalan district, Madura (Kemenkes RI, 2018b). Stunting leads to deleterious effects on the child's short-term and long-term health, including increased susceptibility to infection, impaired brain development and child development and growth problems that affect productivity when becomes adults (Bata et al., 2017).

The prevalence of short toddlers in Indonesia has increased, from 27.5% in 2016 to 29.6% in 2017 (Pusat Data dan Informasi Kementerian Kesehatan, 2018). The government set 160 districts priority in stunting, in this incident one of them was East Java with a prevalence of 27.5%. Bangkalan is one of the districts in East Java that has the highest stunting prevalence. Bangkalan occupies the highest prevalence of stunting toddlers in East Java in 2015 which is 53.2% and in 2017 is 43% (Kemenkes RI, 2018a). Total six of villages in the Kwanyar Bangkalan sub-district are included in the 1,000 stunting priority villages by the government, namely Tebul village, Dlemer village, Batah timur, Morombuh, Gunung Sereng and Duwek Buter (Tim Nasional Percepatan Penanggulangan Kemiskinan, 2018).

Stunting results from non-fulfilment of nutrients during the first 1000 days of life. The first 1000 days of life are determined during the conception period until the child aged 2 years old which is a critical period or golden period for cognitive and physical development (Djauhari, 2017). Foodbelief in several regions in Indonesia causes a lack of fulfilment of nutrition during pregnancy. One of the restrictions on pregnant women in the Bangkalan is the prohibition of consuming squid, stingrays and poultry. Surrounding communities and pregnant women assume that consuming squid and stingrays will complicate the birth process and cause protein deficiency (Ilaihi & Muniroh, 2016). In fact, protein is a substance that is needed by the body especially during pregnancy because consuming protein reduces the prevalence of short nutritional status in infants (Ernawati et al., 2013). Knowledge held by pregnant women is very influential on the prevalence of stunting . Mothers who have good knowledge about the nutrients needed during pregnancy and when children under five the less the risk of children affected by stunting (Ni'mah & Nadhiroh, 2010).

Programs that have been made by the government to support and prevent stunting are implementing the intervention of the first 1000 Days of life, Integrated Antenatal Care and programs feeding in high calories of protein and macronutrients (Dharmawan et al., 2016). However, these efforts are not enough to reduce the prevalence of stunting in Indonesia. Health providers have an important role in preventing the occurrence of stunting, by providing counselling or education to the community for prenatal health education. Prenatal health education is needed so pregnant women are able to know the actions that need to be taken in order to meet nutritional needs during pregnancy and not affected by beliefs or myths in the community about the prohibition of consuming certain foods that have an impact on the lack of nutritional intake during pregnancy which causes babies born with low weight. Babies who born with low weight, have a high risk of stunting (Soetjiningsih, 2012). Therefore prenatal health education needs to be done as an effort to prevent stunting.

II. METHODOLOGY

This study was quasy-experimental with a pre-post test design approach. The population in this study was 330 pregnant women in the working area of the Kwanyar Community Health Center unit. Samples were obtained by simple random sampling technique with 60 people consisting of 30 people in the treatment group and 30 people in the control group. The inclusion criteria in this study were pregnant women with less than seven months of pregnancy and doing antenatal care routine. The independent variable in this study is health education with expository methods while the dependent variable is knowledge, attitudes, and actions in pregnant women. The instrument used in this study was SAP (Teaching Event Unit) which contained stunting materials and questionnaire that had been tested for validity and reliability using the Cronbach Alpha test.

The questionnaire used demographic data and questionnaires of knowledge, attitudes and actions towards stunting. The demographic data questionnaire contained about characteristics of the respondent's data including maternal age, education, income, counselling experience and information sources. Knowledge questionnaire contains an understanding of concepts possessed by pregnant women to prevent stunting since pregnancy, adopted from the Suryagustina study (Suryagustina et al., 2018). Attitude questionnaire contains the response or assessment of pregnant women related to stunting prevention adopted from the Suryagustina study (Suryagustina et al., 2018). The ability questionnaire was adopted from the Waode study (Sriandriani et al., 2017) and contains actions or behaviours that have been carried out during pregnancy related to stunting prevention. All the questionnaires used were tested for validity and reliability using the Cronbach Alpha test with a result of 0.769 for the knowledge questionnaire, 0.932 for the attitude questionnaire and 0.556 for the action questionnaire. Questionnaires were

administered prior to intervention and were given 1 week after the intervention to the treatment and control groups.

Prenatal education intervention with expository methods is conducted in the treatment group. The mechanism used is divided 30 pregnant women into 5 groups and deliver material to participants regarding stunting for 15 minutes after filling the questionnaire. The material is delivered using the Booklet media which contains the understanding of stunting, risk factors for stunting, the impact caused and ways to prevent stunting. After that, followed by a 30-minute discussion session using card media where participants will pair up each other and play rock paper scissors. The winning participant will get an envelope containing the question card and the losing participant will get the answer card. The winning participant will give a question card to the losing participant, then the losing participant will answer using the answer card that matches the question. At the end of the game, there will be a question and answer session between the researcher and the participants regarding the material that has been delivered. This prenatal education intervention was conducted during 2 meetings in a two week to increase the knowledge of pregnant women about stunting. The control group after filling the pretest questionnaire, divided into 5 groups and only given health education without using media booklet and card games. Post-test questionnaire given into the treatment and control group 2 weeks after the intervention was given.

Data were analyzed using the Wilcoxon test to determine differences in knowledge, attitudes and ability before and after the intervention. The Mann Whitney test was performed to analyze differences in the behaviour of respondents before and after the intervention was given to the control group and the treatment group. Wilcoxon and Mann Whitney tests were performed with a significance of p-value <0.05. This research has passed the ethical test by the Ethics Committee of the Faculty of Nursing, Airlangga University.

III. RESULTS

Socio-demographic characteristic

Table 1. Socio-Demographic Characteristic

| No. | Socio-Demographic Characteristic | Treatment group | | Control group | |
|-----|----------------------------------|-----------------|------------|---------------|------------|
| | | N | % | N | % |
| 1. | Maternal Age | | | | |
| | 17 – 25 | 3 | 10 | 3 | 10 |
| | 26 – 35 | 7 | 23,3 | 10 | 33,3 |
| | 36 – 45 | 20 | 66,7 | 17 | 56,7 |
| | Total | 30 | 100 | 30 | 100 |
| 2. | Education | | | | |
| | No school | 2 | 6,6 | 2 | 6,7 |
| | Primary School | 20 | 66,7 | 18 | 60 |
| | Junior High School | 4 | 13,3 | 6 | 20 |
| | Senior High School | 2 | 6,7 | 2 | 6,6 |
| | Collage | 2 | 6,7 | 2 | 6,7 |
| | Total | 30 | 100 | 30 | 100 |
| 3. | Income | | | | |
| | <1.801.406 | 28 | 93,3 | 16 | 53,3 |
| | >1.801.406 | 2 | 6,7 | 14 | 46,7 |
| | Total | 30 | 100 | 30 | 100 |
| 4. | Counselling Experience | | | | |
| | Ever followed | 18 | 60 | 19 | 63,3 |

| | | | | |
|------------------------------|------------|------------|------------|------------|
| Never followed | 12 | 40 | 11 | 36,7 |
| Total | 30 | 100 | 30 | 100 |
| 5. Information source | | | | |
| Nothing | 12 | 40 | 11 | 36,7 |
| Television | 0 | 0 | 0 | 0 |
| Radio | 0 | 0 | 0 | 0 |
| Print Media | 0 | 0 | 0 | 0 |
| Health Providers | 18 | 60 | 19 | 63,3 |
| Total | 100 | 100 | 100 | 100 |

Most maternal age is middle adulthood in the treatment group (66.7%) and in the control group (56.7%). The majority of mothers have low education, that is primary schools with a prevalence of 66.7% in the treatment group and 60% in the control group. Both groups of participants mostly have a low income, which is below the minimum wage, with a prevalence of 93.3% and 53.3%. All respondents mostly had experience of counselling in the treatment group (93.3%) and in the control group (63.3%). Most respondents in the treatment group (60%) and the control group (63.3%) received health information through health workers.

Knowledge of pregnant women before and after prenatal health education with expository methods

Table 2: Levels of knowledge about stunting prevention in the treatment and control groups

| No | Knowledge Level | Treatment group | | | | Control group | | | |
|--------------------------|-----------------|-----------------|------|------|------|---------------|----|------|----|
| | | Pre | | Post | | Pre | | Post | |
| | | F | % | F | % | f | % | f | % |
| 1 | Good | 18 | 60 | 20 | 66,7 | 3 | 10 | 6 | 20 |
| 2 | Enough | 4 | 13,3 | 4 | 13,3 | 12 | 40 | 15 | 50 |
| 3 | Less | 8 | 26,7 | 6 | 20 | 15 | 50 | 9 | 30 |
| Wilcoxon | | 0,000 | | | | 0,000 | | | |
| Mann-Whitney Pre - Pre | | | | | | 0,009 | | | |
| Mann-Whitney Post – post | | | | | | 0,001 | | | |

The results showed that the knowledge of pregnant women in the treatment group during the pre-test and post-test had good knowledge with a prevalence of 60% and 66.7%. Wilcoxon analysis test results in the treatment group $p = 0,000$ which indicates that there are significant differences in knowledge before and after health education is given. Mann-Whitney test results $p = 0.001$ which indicates that there is a significant difference in knowledge in the treatment group with the control group.

Knowledge of pregnant women after being given health education about stunting prevention at the Kwanyar Health care unit has increased especially in the aspect of understanding. Significant increase in knowledge shows that health education has an effect on mothers' knowledge about stunting prevention. This is supported by the results of research conducted by Nurhasanah (Nurhasanah et al., 2012), stating that there is an influence of health education on the level of knowledge. Knowledge is a guideline in shaping one's actions (over behaviour). According to Budiman (Budiman & Rianto, 2013), behavior based on knowledge is stored longer in memory than behavior that is not based on knowledge. Health education can have an effect on increasing knowledge. The method and media in delivery are essential factors in the success of information transfer. This research was conducted by providing health education using a combination of expository methods using booklet media and games in delivering information to pregnant women. Significant increase in knowledge occurs in pregnant women after being given an

intervention, especially on the indicator of understanding. When compared between the treatment group and the control group. There are significant differences in the results of this study. The indicator of this knowledge variable is knowing and understanding. In the treatment and control group, the results of the indicator know or understand were obtained. This proves that the participants better understand the material by knowing more than in understanding the material presented. So it can be seen that the expository method and booklet media and games are effective as health education media to increase the knowledge of pregnant women related to prevention stunting.

The attitude of pregnant women before and after prenatal health education with expository methods

Table 3: Levels of attitude about stunting prevention in the treatment and control groups

| No | Level of Attitude | Treatment group | | | | Control group | | | |
|--------------------------|-------------------|-----------------|----|------|------|---------------|------|------|----|
| | | Pre | | Post | | Pre | | Post | |
| | | F | % | f | % | F | % | F | % |
| 1 | Positive | 15 | 50 | 20 | 66,7 | 13 | 43,3 | 12 | 40 |
| 2 | Negative | 15 | 50 | 10 | 33,3 | 17 | 56,7 | 18 | 60 |
| Uji Wilcoxon | | 0,000 | | | | 0,000 | | | |
| Mann-Whitney Pre-Pre | | | | | | 0,020 | | | |
| Mann-Whitney Post – Post | | | | | | 0,000 | | | |

The results showed that the attitude of pregnant women in the treatment group at the pre-test mostly had a negative attitude about stunting prevention (50%), while at the post-test most of participants had a positive attitude about stunting prevention (66.7%). In the control group, when pre-test (56.7%) and post-test (60%) pregnant women had a negative attitude towards stunting prevention. Wilcoxon analysis test results in the treatment group $p = 0,000$ which indicates that there are significant differences for the treatment group in attitude. Mann-Whitney test results known p -value = 0,000 which indicates that there are significant differences in attitude in the treatment group with the control group when the results of the post-test

The attitude of pregnant women after being given health education about prevention of stunting at the Kwanyar Health Center has increased. A significant increase in knowledge shows that there is an effect of health education on pregnant women's knowledge about stunting prevention. This is supported by the results of research conducted by Iftikar (Iftikhar & Abaalkhail, 2017), stating that after being given health education, most participants have a positive attitude. Attitudes are evaluative statements about objects, people, or events. Attitude is also a predisposition that is learned to respond positively or negatively to an object, situation, concept, or person (Budiman & Rianto, 2013). Factors that influence attitudes are personal experiences. Personal experience is the basis for forming attitudes. Various factors including knowledge, information exposure and the environment affect changes in attitude. Environmental conditions and situations affect the statement of attitude (Suharyat, 2009). Attitudes start from being learned, then become stronger through experience. Attitudes can change by obtaining additional information about the object and can be influenced by knowledge, beliefs, values and so on. Most of the participants who experienced an increase in the attitude aspect experienced changes based on external factors, that is health education using booklet media. So it can be seen that there is a change in attitude experienced by participants before and after given the intervention in the form of health education, especially in aspects of antenatal care examination which can be caused also due to an increase in the aspect of knowledge. Significant attitude differences occur in pregnant women after being given an intervention. Precisely on the antenatal care examination indicators when compared between the treatment group and the control group.

The ability of pregnant women before and after prenatal health education with expository methods

Table 4: Levels of ability about stunting prevention in the treatment and control groups

| No | Levels of ability | Treatment group | | | | Control group | | | |
|--------------------------|-------------------|-----------------|-----|------|-----|---------------|------|------|------|
| | | Pre | | Post | | Pre | | Post | |
| | | f | % | f | % | F | % | f | % |
| 1 | Good | 30 | 100 | 30 | 100 | 23 | 76,7 | 3 | 76,7 |
| 2 | Less | - | - | - | - | 7 | 23,3 | 7 | 23,3 |
| Wilcoxon | | 0,000 | | | | 0,083 | | | |
| Mann-Whitney Pre – Pre | | | | | | 0,001 | | | |
| Mann-Whitney Post – Post | | | | | | 0,000 | | | |

The results showed that the ability of pregnant women regarding the prevention of stunting in the treatment group during the pre-test and post-test were all good (100%). Wilcoxon analysis test results in the treatment group $p = 0,000$ which indicates that there are significant differences in ability after being given an intervention. The control group $p = 0.083$ which means that there is no significant difference in ability. The results of the Mann-Whitney test $p = 0,000$ which indicates that there is a significant difference in the ability to prevent stunting in the treatment and control group about prevention stunting.

The ability of pregnant women after being given health education about prevention stunting at the Kwanyar Health Center did not increase in the control group but increased in the treatment group. A significant increase in knowledge shows that there is an effect of health education on pregnant women's ability to stunting prevention. Ability is a person's ability to do something, there are many aspects that can increase the ability variable, including cognitive, affective and psychomotor abilities (Suryagustina et al., 2018). Ability levels can be increased if someone motivated to improve their abilities. McClelland's theory (motivational theory that is closely related to the learning process) suggests that individual needs are something that is learned from the cultural environment. Therefore motivation, which comes from efforts to meet needs, is something that can be learned. The interventions carried out in this study did not bring differences in improvement in the control group, but there were changes in the ability in the treatment group. This is because almost all pregnant women have had good enough ability before intervention. Significant differences in ability occurred in pregnant women in the treatment group after being given an intervention proving that this expository method had a lot of effects to be applied to society.

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