

Article

## Audio Visual Media about The Importance of Vulva Hygiene Increases The Knowledge of Pregnant Women

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Pregnant women tend to experience vaginal discharge more often than when they are not pregnant. This disorder is caused by poor hygiene of the genital organs. Knowledge is an important component in shaping a person's behavior. This research aims to determine the effectiveness of audio-visual media in increasing pregnant women's knowledge about vulva hygiene. This research uses a quantitative method, pre-experiment, one group pre-posttest. The sample used was 36 respondents using an accidental sampling technique. Bivariate analysis used the Wilcoxon test. There was an increase in the average knowledge score of pregnant women after being given audio-visual media about vulva hygiene with a p value <0.001. This educational media can be used by health facilities to provide education to pregnant women. Suggestions from researchers for research sites can utilize audio-visual media during health education, especially to pregnant women regarding vulva hygiene.

## I. INTRODUCTION

Pregnancy is an important event in a woman's life cycle. The process that begins with conception until the birth of the baby from the womb brings changes that require adjustments from the pregnant mother and those closest to her. (Tariani & Mamnu'ah, 2013). Pregnancy causes various changes in a woman's body. Pregnant women will experience changes in the form of anatomical, physiological and psychological changes (Walyani, 2015; Yuliani et al., 2021) (Nurlan, 2013). According to data from the World Health Organization (WHO), reproductive health problems that are often encountered include 31.6% of vaginal discharge in pregnant women caused by the fungus *Candida albicans* (Dagason et al., 2014; Constance, 2014).

Pregnant women tend to experience fungus around the vagina, vaginal discharge and blisters in the groin area. This disorder is caused by poor hygiene of the genital organ area, so that pregnant women tend to experience vaginal discharge (Mahanani & Natalia, 2015). The genital organs of non-pregnant women are kept moist by uterine secretions, whereas during pregnancy there are large amounts of genital organ secretions which are acidic. There are more *Lactobacillus* *doderlein* bacteria in pregnant women than in non-pregnant women, thereby increasing secretion production. Increased production of these secretions causes vaginal discharge in pregnant women (Marhaeni, 2016). Ibu Pregnant women with poor personal hygiene practices, especially maintaining the cleanliness of their genital organs, will have a 2.36 times greater risk of experiencing vaginal discharge (Prianti et al., 2021).

The incidence of genitalia infections in pregnant women is 75% due to the use of vaginal douches and poor external genitalia hygiene. Infections that arise due to poor hygiene of external genital organs have an impact on 10-20% of premature births, 50% of cases of premature labor and premature rupture of membranes up to 36% of deaths in neonates (Zisova et al., 2016). The impact of this vaginal discharge will be felt by pregnant women, ranging from discomfort, infection, to bad outcomes for newborn babies (Sunyoto, 2014; Mahanani & Natalia, 2015; Nurlan, 2013; Marhaeni, 2016).

Various methods are used to increase pregnant women's knowledge of the importance of preventing infections in their genital areas, especially during pregnancy, by providing optimal midwifery services (Nurlan, 2013; Marhaeni, 2016). Efforts to increase pregnant women's knowledge regarding the cleanliness of external genital organs by providing education and health counseling by midwives who act as educators (Haghdoost et al., 2021). Health education can be provided individually or in groups using audiovisual media, print media such as leaflets, posters, banners, and mass media in the form of print media such as newspapers, magazines, and electronic media such as radio and television (Chan & Chen, 2019). Suhaeni's research (2020) shows that there is an increase in young women's knowledge about vulva hygiene after receiving health education in the form of counseling, discussions and simulations (Suhaeni et al., 2020).

Audio visual media conveys information or messages audio-visually (Yulistasari et al., 2015). Audio visuals make a huge contribution to changing people's behavior, especially in the aspects of information and persuasion. This media provides stimulation for hearing and vision to maximize the results obtained. This result can be achieved because the eyes are the five senses that send the most information to the brain (around 75–87%), while the other senses only contribute 13–25% of knowledge (Herawati et al., 2022).

Providing education to increase pregnant women's knowledge about preventing vaginal discharge and other infections in the genitalia through vulva hygiene is currently limited to educational media in written form such as posters, leaflets and flip sheets. Educational media in the form of audio visuals is still very rarely found in midwifery services. Meanwhile, audio visual educational media is stated to be effective in increasing a person's knowledge (Novaeni et al., 2018). Based on the above phenomenon, researchers are interested in knowing the effectiveness

and influence of audiovisual media as a health education method on increasing pregnant women's knowledge regarding vulva hygiene.

## II. METHODS

This research uses a pre-experimental research method with a one group pretest and posttest research design which provides a pretest before the intervention and provides a posttest after the intervention in one group without a control group. The population in this study were pregnant women who underwent ANC at independent practice midwives in the DKI Jakarta Province area who came to visit for pregnancy check-ups during the research period, namely 81 people. The sample used in this study was 36 pregnant women calculated using a sample size formula that met the inclusion criteria in this study, namely pregnant women who were willing to become research respondents after filling out informed consent and pregnant women who had a smartphone connected to the internet. The exclusion criteria in this study were pregnant women who had attended counseling about vulva hygiene.

The sampling technique in this research used an accidental sampling technique. This sampling technique is carried out based on spontaneity or chance, so anyone can be used as a sample (Masturoh & T, 2018). The tool or instrument for collecting data in this study used a pre-test questionnaire sheet given before the intervention and a post-test given after the intervention. The questionnaire prepared has been tested for validity and reliability. Research data collection took place for 4 days starting from the pre-test and 3 days of intervention and post-test on the last day of intervention. The pre-test was given directly on the first day. The intervention and post-test stages were carried out online via WhatsApp and Google Form. Each respondent was contacted via WhatsApp to be given a YouTube link containing information about vulva hygiene. This information is made in the form of audio-visual media with a duration of 3 minutes. After that, respondents were asked to fill out a post-test questionnaire via Google Form. Media testing is carried out by testing it on respondents who meet the same criteria as research respondents and also on media experts before being used in the research process. Data analysis used the Wilcoxon test to see the influence of media on pregnant women's knowledge about vulva hygiene using SPSS. This research has been approved and passed the ethical test by the Prima Indonesia University Health Research Ethics Commission with letter number 012/KEPK/UNPRI/III/2023

## III. RESULT

- a. Distribution Frequency Characteristics Respondent
- b. Table 1 Distribution Frequency Characteristics of Pregnant Mother

| Characteristics      | Number |                |
|----------------------|--------|----------------|
|                      | N      | Percentage (%) |
| <b>Age</b>           |        |                |
| < 20 years           | 1      | 2.8            |
| 20 – 30 years        | 26     | 72.2           |
| >30 years            | 9      | 25.0           |
| <b>Age Pregnancy</b> |        |                |

|   |    |      |
|---|----|------|
| Trimester 1 (1-13 weeks)                        | 14 | 38.9 |
| Trimester 2 (14-26 weeks)                       | 16 | 44.4 |
| Trimester 3 (27-40 weeks)                       | 6  | 16.7 |
| <b>Parity</b>                                   |    |      |
| Never giving birth (nulliparous)                | 21 | 58.3 |
| Own child 1 (primipara)                         | 10 | 27.8 |
| Having more than equal 2 children (multiparous) | 5  | 13.9 |
| <b>Education</b>                                |    |      |
| Elementary Education-Junior High School         | 2  | 5,6  |
| Secondary Education (SMA)                       | 15 | 41.7 |
| Higher Education (Diploma, Bachelor)            | 19 | 52.8 |
| <b>Work</b>                                     |    |      |
| Work  | 21 | 58.3 |
| Doesn't work                                    | 15 | 41.7 |

Table 1 shows that of the 36 research respondents, most pregnant women were aged 20 – 30 years, 26 people (72.2%). Most pregnant women were in the second trimester of pregnancy, with gestational age ranging from 14 to 26 weeks, with as many as 16 people (44.4%). 21 respondents had never given birth (nulliparous) (58.3%). The highest level of education possessed by pregnant women was in tertiary education, equivalent to a Diploma or Bachelor's degree, in as many as 19 people (52.8%). A total of 21 people (58.3%) of pregnant women were still working even though they were pregnant.

### c. Knowledge Respondent Before and after Intervention

Table 2 Pregnant Women's Knowledge Scores Before and After Providing Audio Visual Media About Vulva Hygiene

|                 | <b>N</b> | <b>Min</b> | <b>Max</b> | <b>Mean</b> | <b>elementary school</b> |
|-----------------|----------|------------|------------|-------------|--------------------------|
| <i>Pretest</i>  | 36       | 45         | 95         | 80.42       | 13,059                   |
| <i>Posttest</i> | 36       | 80         | 100        | 96.67       | 5,477                    |

The average knowledge before the intervention was 80.42, with the lowest score being 45 and the highest score being 95. After being given the intervention, there was an increase in the average score to 96.67, with the lowest score being 80 and the highest score being 100. Respondents experienced an increase in the average score. Pretest with posttest scores up to 16.

Table 3. The Influence of Audio-Visual Media on Pregnant Women's Knowledge About Vulva Hygiene

|                  |                | N  | Mean Rank | P Value |
|------------------|----------------|----|-----------|---------|
| Pretest-Posttest | Negative Ranks | 0  | 0.00      | < 0.001 |
|                  | Positive Ranks | 35 | 18.00     |         |
|                  | Ties           | 1  |           |         |

Based on the results of statistical tests using the Wilcoxon test, it is known that the frequency of positive ranks is 35, with a mean rank of 18.00. This result shows an increase in knowledge scores for 35 respondents after treatment. If the p-value is <0.001, then the working or alternative hypothesis is accepted because the p-value is smaller than 0.05. Therefore, it can be concluded that there is an increase in pregnant women's knowledge before and after being given intervention with audio-visual media uploaded on YouTube.

#### IV. DISCUSSION

The research results showed that there was an increase in pregnant women's knowledge after being given audio-visual media about vulva hygiene. Respondents experienced an increase in the average pretest and posttest scores of up to 20.2%. This proves that audio-visual media about vulva hygiene influences increasing pregnant women's knowledge about vulva hygiene. This research is in line with previous research, which shows that there is a significant influence of providing audio-visual educational media on the good behavior of other people (Scull et al., 2017).

Efforts to increase pregnant women's knowledge regarding the cleanliness of external genital organs by providing education and health counseling by midwives who act as educators (Tajmiati et al., 2016). Pemahaman ibu hamil mengenai *vulva hygiene* merupakan hal penting karena dapat berpengaruh pada sikap ibu hamil dalam upaya menjaga kebersihan dan memelihara kesehatan organ genitalia Efforts to increase pregnant women's knowledge regarding the cleanliness of external genital organs by providing education and health counseling by midwives who act as educators (Juwitasari et al., 2020). Knowledge is part of the attitude function, where attitudes that are based on the level of knowledge will be better than attitudes that are not based on knowledge (Andini, 2022). Knowledge is the result of knowing after someone tries to understand the object by sensing through sight, hearing, smell, taste and touch of a particular object. The knowledge possessed by humans is mostly obtained from the eyes and ears from sources of information in the form of writing and sound (L et al., 2019; Nurmala et al., 2018; Rachmawati, 2019)

Providing information through health education will enable a person to apply values and knowledge that can influence thought patterns and actions (Yulfitria, 2017). Supported by research by Suhaeni (2020), there is a significant increase in knowledge after being given health education about vulva hygiene (Suhaeni et al., 2020).

From the results of statistical tests that have been carried out, there is a difference in the knowledge scores of pregnant women before being given intervention using audio-visual media and the knowledge scores after the intervention. Statistical tests show that there is an increase in the average knowledge score of pregnant women regarding vulva hygiene after being given audio-visual media uploaded on YouTube. The results of this research prove that audio-visual media uploaded on YouTube can influence the level of knowledge of pregnant

women. This research is in line with research conducted by previous research regarding the provision of multimedia video learning on vaginal hygiene knowledge showing a significant effect with  $p$  value = 0.000 ( $p < 0.05$ ) (Dinengsih & Hakim, 2020). Someone who has more sources of information will be in line with the breadth of knowledge they have. One source of information that plays a role in contributing knowledge is audio-visual media. Audio visual media is one of the media that is used as an educational process by presenting information or messages audio-visually. The advantage of audio-visual media is that it can convey information or messages in two types, namely sound (audio) and images (visual) so that the message received will be even. Information presented using audio-visual media can provide a more complete, clear, varied, interesting and repeatable learning experience. (Jatmika et al., 2019).

The majority of pregnant women experience increased knowledge about vulva hygiene. This happened after being given intervention in the form of audio-visual media about vulva hygiene. In line with several studies which show that audio-visual media is one of the media for conveying health information which is able to increase knowledge of external genital hygiene behavior (Hubaedah, 2020). Audio-visual or video media is able to make material memory last longer, because it involves the five senses of sight and hearing (Jatmika et al., 2019).

The audio-visual media used in this research is considered effective in conveying information about vulva hygiene because the media has gone through feasibility testing with users and content experts. Therefore, respondents can understand and be interested in watching the video. Providing health education using audio-visual media to convey information about vulva hygiene to pregnant women is very important so that more information is obtained in line with increasing knowledge of pregnant women. The knowledge gained is influenced by the information received, the less information received, the less understanding you have (Suhaeni et al., 2020)(Juwitasari et al., 2020).

## V. CONCLUSION

Audio-visual educational media has proven effective in increasing pregnant women's knowledge about vulva hygiene, as indicated by the difference in the average knowledge score before and after being given audio-visual media intervention about vulva hygiene. Health worker need to use this media as a health promotion tool to increase pregnant women's knowledge about vulva hygiene.

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