ABSTRACT

Background: Increased health status has in impact on the age of women which causes the number of menopause women to also increase. In wundudopi sub district, Kendari city, there are 2,055 women. When entering menopause women will be faced with a new problem that is the change in the body’s metabolism. Purpose: This research is aims to compare the effectiveness of health education through poster and video media on improvement of climacterium mother knowledge in facing menopause in wundudopi sub district in Kendari city. Method: The type og this research uses a quasi-experimental method by comparing counseling knowledge groups through poster and video. The sample in this research was 34 women in wundudopi sub-district. Data collected by measuring knowledge using a questionnaire pre and posttest counseling and statistical analysis paired at a 95% confidence level with α = 0.05. Result: The finding of paired and independent data t-tests conducted that the provision of health education through poster media to increase knowledge with t=14.503 with sig 0.000<0.005 health education trough video media t=2.257 with sig 0.000<0.05. And there are differences in the knowledge of health education through poster and video media before and after counseling t= 15.993 with sig 0.000<0.05. Conclusion: This research concluded that there is a comparison of the effectiveness of health education through poster and video media on the increased knowledge of climacterium mother in the face of menopause in the wundudopi sub-district of Kendari city.

Keywords: Health education, Poster, Video, Knowledge, Menopause
Introduction

Health is the well-being of body, soul, social which allows everyone to live productively socially and economically. The health development carried out has succeeded in increasing the public health status quite significantly, but there are still problems affecting the implementation of health development (Ministry of Health RI, 1999).

Furthermore, the goal of health development in the 2010 Healthy Indonesia formula is to create a society that has the highest degree of health throughout Indonesia, the community is expected to be proactive in maintaining, and improving health, preventing the risk of disease, and participating actively in the health movement (Ministry of Health RI, 1999).

The cessation of menstruation in medical terms is called "Menopause", which is the phase where biological activity begins, the end of menopause, in fact, menopause begins when women are aged 40-45 years, which is called premenopause, which is characterized by irregular menstruation, pain during menstruation, and this condition usually occurs for 6 years. The next phase is peri menopause, which is the transitional phase between pre and post menopause. At this time there are many problems that arise as described above and finally the postmenopausal phase which lasts 6-7 years too, and after that there are no more complaints. The existence of the sufferings that will be experienced makes some women feel afraid of facing the arrival of menopause (Kumalaningsih, 2008).

In Asia, according to WHO data, by 2025, the number of older women will soar from 107 million to 373 million. From data from the Central Statistics Agency (BPS) with population projections in 2008 that 5,320,000 Indonesian women enter menopause each year. At that age, women are actually still productive in income generating activities or supporting the family economy.

Unfortunately, in this productive age, many women experience natural problems, namely decreased activity of the hormones estrogen and progesterone which results in cessation of menstruation followed by various changes in physical and psychological conditions such as wrinkled skin, dry eyes, dry vagina, insomnia, depression, dizziness, continuous bleeding, uterine and breast cancer, irritability or offense and various other degenerative diseases and if allowed to continue will greatly interfere with their activities (Kumalaningsih, 2008).

Climacterium is a period that starts from the end of the reproductive stage, ends at the beginning of senium and occurs in women aged 40-65 years. This period is marked by various kinds of endocrinological and vegetative complaints, the climacteric period is marked by a decrease in estrogen levels and increased release of gonadotropins. This lack of the hormone estrogen causes a decrease in various degenerative or endocrinological functions of the ovaries which causes anxiety in most women. During the climacteric period, women will experience certain changes that can cause mild to severe disturbances (Prawiroharjo, 2001). Most climacteric women do not know that these changes are a natural process before menopause. This is influenced by several factors including age, occupation and education.

The word "menopause" literally means the cessation of the menstrual cycle. However, this word is often applied to climacteric, namely the decline in reproductive activity 2 to 3 years, usually between the ages of 45-55 years (median 51 years). Climacteric begins when fertility has decreased rapidly and continues until the ovaries stop secreting estrogen (Coad & Dunstall, 2007). Every year around 25 million women worldwide experience menopause, the number aged 50 years and over is expected to increase from 500 million today to more than 1 billion in 2030 Factors causing menopause in line with age, the ovaries become less responsive to
stimulation by LH and FSH which are produced by the pituitary gland. As a result, the ovaries release less estrogen and progesterone and eventually the ovulation process (release of an egg) stops. Possible causes are heredity, autoimmune disease, smoking, socio-economic, stress, culture and environment (Saraswati, 2010). The high number of menopausal women, the many complaints about menopause and the lack of public knowledge of facing menopause, as well as the selection of appropriate methods, the researchers wanted to compare the effectiveness of health education through posters and videos on increasing the knowledge of women in dealing with menopause in Wundudopi kelurahan, Kendari city. Health media are the tools used by educators in conveying educational/teaching materials. These aids are more often called props because they function to help and demonstrate something in the teaching process. This teaching aid is structured based on the principle that the knowledge that exists in every human being is received or captured through the five senses as much as possible to objects so as to facilitate understanding (Notoatmodjo, 2010).

Based on the initial data survey, there were 2,055 women, and some of the ages of women entering menopause were in the Wundudopi sub-district, Kendari city. Some women do not know and lack information about menopause so they have complaints about the onset of menopause. Looking at the existing data, researchers are looking for solutions regarding the comparison of the effectiveness of health education through posters and videos on increasing the knowledge of climacteric mothers in dealing with Menopause in Wundudopi Kendari Village.

Methodology
This study uses an experimental research design, namely a research design that conducts experiments aimed at knowing a symptom or effect that arises, as a result of certain treatments. The experimental research design in this study used a quasy experimental design where the design used was a two group pretest-posttest design. The design of this research is as follows:

<table>
<thead>
<tr>
<th>Tabel 1. Research Design Scheme</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-test</td>
</tr>
<tr>
<td>O1</td>
</tr>
<tr>
<td>O3</td>
</tr>
</tbody>
</table>

Information:
XP1 : One treatment given
O1 : A pre-test was held to find out the knowledge of the experimental group before being given treatment one.
O2 : A post-test was held to determine knowledge in the experimental group after being given treatment one.
XP2 : Second treatment given
O3 : A pre-test was held to find out the knowledge of the experimental group before being given the second treatment.
O4 : A post-test was held to increase knowledge in the experimental group after being given two treatments.

The population is all subjects or objects with certain characteristics to be studied (Nursalam, 2013). In this study, the population was all of the Climacteric Mothers who were recorded in the Wundudopi Village, Kendari City, totaling 50 people. The research sample is the object under study and is considered to represent the entire population(Notoatmodjo, 2005). The sample is part of the Climacterium women who are recorded in the Wundudopi Village, Kendari City, totaling 34 people. the size or size of the sample in this study, namely:

\[ n = \frac{N}{1 + N(e^2)} \]

\[ n = \frac{50}{1 + 50(0,1^2)} \]
$n = 34$

The sampling method was carried out by simple random sampling, namely random sampling of menopausal women in the Wundudopi Village, Kendari City, who met the specified inclusion criteria. The sample size studied was 34 people.

Based on the above formula, the sample size used in this study was 34 people for each group, which met the following outcome criteria; active woman aged between 36-40 years old, minimum education is elementary school, junior high school and maximum senior high school, physically and mentally healthy, willing to participate in research

Result

Wundudopi Village is one of the villages located in Baruga District, Kendari City, Southeast Sulawesi. Wundudopi sub-district has an area of 416.40 ha/m2. Characteristics of respondents based on maternal age, climacteric and education in the Wundudopi Village, Kendari City. All respondents were 34 people (100%) aged 36-40 years.

Table 1 Distribution of Respondents by Age of Mother Climacterium in Wundudopi Village, Kendari City

<table>
<thead>
<tr>
<th>NO</th>
<th>Age</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>36</td>
<td>6</td>
<td>17,6</td>
</tr>
<tr>
<td>2</td>
<td>37</td>
<td>5</td>
<td>14,7</td>
</tr>
<tr>
<td>3</td>
<td>38</td>
<td>6</td>
<td>17,6</td>
</tr>
<tr>
<td>4</td>
<td>39</td>
<td>9</td>
<td>26,5</td>
</tr>
<tr>
<td>5</td>
<td>40</td>
<td>8</td>
<td>23,6</td>
</tr>
<tr>
<td>total</td>
<td>34</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

Table 2 The distribution of respondents according to education is shown in the following table:

<table>
<thead>
<tr>
<th>NO</th>
<th>Education</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Elementary school</td>
<td>2</td>
<td>5,9</td>
</tr>
<tr>
<td>2</td>
<td>Junior high school</td>
<td>10</td>
<td>29,4</td>
</tr>
<tr>
<td>3</td>
<td>High school</td>
<td>17</td>
<td>50</td>
</tr>
<tr>
<td>4</td>
<td>College</td>
<td>5</td>
<td>14,7</td>
</tr>
<tr>
<td>total</td>
<td>34</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

Table 2 shows that of the 34 respondents, the most were 39 years old, namely 9 respondents (26.5%) and the smallest was 37 years old, namely 5 people (14.7%).

Table 3 shows that counseling through poster media in treatment 1 was 34 respondents before treatment the average level of knowledge was 7.00 and after being given treatment the average level of knowledge was 8.00 (44.1%), while counseling through video media in treatment 2 was 34 respondents before treatment the average knowledge was 5.00 and after...
being given treatment the average knowledge was 6.00 (32.3%).
The distribution of changes in knowledge before and after being given counseling through the media of posters and videos about the readiness of climacteric mothers in facing menopause can be seen in the following table:

### Tabel 4. Distribution of changes in respondents’ knowledge before and after being given counseling through posters and videos

<table>
<thead>
<tr>
<th>NO</th>
<th>Perkataan</th>
<th>N</th>
<th>Waktu</th>
<th>P Value</th>
<th>α</th>
<th>Keputusan</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Penyuluhan melalui media poster</td>
<td>34</td>
<td>Sebelum</td>
<td>0.002</td>
<td>0.05</td>
<td>Normal</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Sesudah</td>
<td>0.000</td>
<td>0.05</td>
<td>Normal</td>
</tr>
<tr>
<td>2</td>
<td>Penyuluhan melalui media video</td>
<td>34</td>
<td>Sebelum</td>
<td>0.009</td>
<td>0.05</td>
<td>Normal</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Sesudah</td>
<td>0.000</td>
<td>0.05</td>
<td>Normal</td>
</tr>
</tbody>
</table>

The results of the research were carried out the Normality test and the level of knowledge before knowledge counseling was carried out to respondents using the Kolmogorov-Smirnov Test statistic with a significant level that was applied was p> 0.05 so that the p level of counseling knowledge through the media poster before counseling was carried out was 0.002 and the result p for knowledge level after counseling through media posters was 0.000 while p about counseling knowledge before counseling through video media was obtained a value of 0.009 and the result p about knowledge after counseling through video media obtained a value of 0.000. Therefore the normality test of the data after counseling is p> 0.05, it is concluded that the distribution of the data groups is normal.

### Tabel 5 Statistical test of the effectiveness of providing counseling through poster media

<table>
<thead>
<tr>
<th>NO</th>
<th>Treatment</th>
<th>Time</th>
<th>Sig</th>
<th>α</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Penyuluhan poster</td>
<td>Before</td>
<td>0.00</td>
<td>0, 05</td>
<td>0,00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>After</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

After the paired sample-test statistical test was carried out with a significant level that was determined to be p <0.05 in the counseling group respondents through poster media before and after counseling, it was obtained p: 0.000. Because the data value is p <0.05, the conclusion Ha is accepted and Ho is rejected, which means that there is a difference in increasing counseling knowledge through posters and videos in the community before and after being given health education through posters and videos on increasing the knowledge of Klimacterium women in dealing with Menopause in Wundudopi Kelurahan, Kendari City.

### Effectiveness of counseling through video media

Statistical Test The effectiveness of providing counseling on increasing health knowledge through video media for climacteric mothers in facing menopause can be seen in the following table:

### Tabel 6. Uji Statistik efektivitas pemberian penyuluhan melalui media video

<table>
<thead>
<tr>
<th>NO</th>
<th>Treatment</th>
<th>Time</th>
<th>Sig</th>
<th>α</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Video counseling</td>
<td>Before</td>
<td>0.031</td>
<td>0, 05</td>
<td>0,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>After</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

After the paired sample-test statistical test was carried out with a significant level that was determined to be p <0.05 in the counseling group respondents through video media before and after counseling, it was obtained p: 0.031. Because the data value is p <0.05, the conclusion Ha is
accepted and Ho is rejected, which means that there is a difference in increasing counseling knowledge through posters and videos in the community before and after being given health education through posters and videos on increasing the knowledge of Klimacterium women in dealing with Menopause in Wundudopi Kelurahan, Kendari City.

Differences in the effectiveness of health education through posters and videos
Statistical Test the average difference in the level of knowledge of counseling through posters and video media before and after counseling is carried out can be seen in the following table:

<table>
<thead>
<tr>
<th>NO</th>
<th>Treatment</th>
<th>Mark</th>
<th>T</th>
<th>Sig(2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Counseling through poster media</td>
<td>8.00</td>
<td>15.993</td>
<td>0.000</td>
</tr>
<tr>
<td>2</td>
<td>Counseling through video media</td>
<td>6.00</td>
<td>15.993</td>
<td>0.000</td>
</tr>
</tbody>
</table>

So the researchers drew the conclusion that providing health education can increase knowledge in providing counseling through posters and video media to the community about the readiness of Mrs. Klimacterium's knowledge in dealing with Menopause in Wundudopi Village, Kendari City. From the data table above between groups of health education through posters and video media on the independent t-test \( t = 15.993 \) with Sig 0.000 <0.05; then Ha is accepted and Ho is rejected. Which means there are differences in the level of knowledge before and after health education through posters and videos to the community.

Discussion
1. Descriptive Analysis

Descriptive statistics are used to analyze data by describing or describing the data that has been collected as it is without intending to make general conclusions or generalizations. From the percentage increase in the knowledge of the respondent group before and after being given counseling through posters and video media with treatment I in counseling through posters there were 34 respondents before being treated the knowledge level was 7.00 and after being given the treatment the knowledge level was 8.00 (44.1%). While counseling through video media in treatment 2 was 34 respondents before being treated the knowledge was 5.00 and after being given the treatment the knowledge was 6.00 (32.3%).

2. Inferential Analysis

Normality test
The results of the Normality Test and the level of knowledge before knowledge counseling was carried out to respondents using the Kolmogorovsmirnov statistical test. The test with a significant level that was applied was \( p > 0.05 \) so that the \( p \) level of counseling knowledge through the media poster before counseling was carried out was 0.002 and the result \( p \) for knowledge level after counseling through media posters was 0.00 while \( p \) about counseling knowledge before counseling through video media obtained a value of 0.009 and the result \( p \) about knowledge after counseling through video media obtained a value of 0.000. Therefore the normality test of the data after counseling is \( p > 0.05 \), it is concluded that the distribution of the data groups is normal.

Hypotesis test
a. Effectiveness of counseling through poster media

The results of this study indicate that the level of knowledge before counseling through poster media is sufficient respondent knowledge and there is no respondent's knowledge that is lacking, after being given counseling through poster media the respondent's knowledge...
has increased more than before being given counseling. From the paired sample–test statistical test with a significant level set that is $p < 0.05$ in the counseling group respondents through poster media before and after counseling is obtained $p = 0.000$ because the data value is $p < 0.05$ then the conclusion $H_a$ is accepted and $H_0$ is rejected, money means there is a difference in increasing counseling knowledge through posters and video media in the community before and after being given health education.

According to Maulana (2009) health counseling is very influential in the aspect of selecting methods, tools/media and the number of target groups. The media used is determined by the intensity of the media in providing learning experiences, posters with display pictures so that they involve the senses more when receiving counseling material, then the level of knowledge in capturing messages or counseling material will be more effective. (RI Ministry of Health, 2008)

Poster media will be more effective as a media for counseling because it is more able to stimulate the sense of sight, aspects of images on posters and makes it easier to receive information or counseling material (Notoadmojo, 2004) Saptarini (2005) posters in the form of pictures are more easily embedded in the minds of respondents than words so health education through poster media about menopause to maintain women's health can be more effective if using media that displays more pictures.

b. Effectiveness of counseling through video media

The results of this study indicate that the level of knowledge before counseling through video media has sufficient respondent knowledge of 31 people and 3 respondents who lack knowledge. From the statistical test results of the paired sample-test with a significant level that was determined to be $p < 0.05$ in the counseling group respondents through video media before and after counseling was obtained $p: 0.031$. Because the data value is $p < 0.05$, the conclusion $H_a$ is accepted and $H_0$ is rejected, which means there is a difference in increasing counseling knowledge through posters and videos in the community before and after being given health education. Efforts to use video media in counseling are integration in the learning system to streamline the process of storing information. According to Dale (2010) that the effectiveness of the media can be seen from the extent to which these achievements increase knowledge. It can be seen from the results of research that there is an increase in counseling knowledge through the media.

In accordance with the opinion of Green and Johnson, (1996) subjectivity affects the formation of a person, depending on experience and environment. This increase in knowledge about menopause is inseparable from other factors that also influence it such as media facilities, interesting facilitators in delivering material (cit, winda, 2000) intelligence has a significant contribution to one's learning achievement even though the level of intelligence is not examined.

c. Differences in the effectiveness of health education through posters and videos

In the concept of health behavior (Notoatmodjo, 1997) it is stated that knowledge in the level of change in the behavior of respondents in the treatment group has significantly increased knowledge. Counseling can also increase knowledge because counselors and respondents think about solving problems together. It contains cognitive and effective elements that lead to increased knowledge in a person (Ngestiningrum 2010). The results of this study indicate that the level of knowledge after counseling through poster media is an increase in respondents' knowledge which is sufficient and there is no respondent's knowledge that is lacking, while after counseling through video media there is also an increase in knowledge which is lacking but
there are 2 respondents who lack knowledge after being given counseling. The results of this study indicate that the knowledge of women before and after counseling through video media is 32.3. Statistical test results paired sample-test for group respondents before and after counseling through poster media obtained p: 0.000 with p <0.05 and for group respondents before and after counseling through video media obtained p: 0.31 with p <0.05.

From the results of the independent t-test t = 15.993 with a Sig of 0.000 <0.05; then Ha is accepted and Ho is rejected. Which means there are differences in the level of knowledge of health education through posters and video media of the community before and after being given health education. This proves that posters and videos are equally effective in increasing women's knowledge after counseling about menopause. Counseling through posters and videos was carried out 2 times for each respondent for 4 weeks, from the results of the questionnaire there were 2 respondents who were less knowledgeable due to not being able to understand some of the questions in the questionnaire about menopause, including questions such as: what is the meaning of menopause (stopping menstruation), what are the causative factors of menopause (stopping menstruation), in a few years we will enter the premenopause stage (before stopping menstruation) - menopause (stopping menstruation)

From the results of the comparison descriptions in the two groups, it can be seen that after being given counseling there is a difference in knowledge between posters and video media. This shows that after being given counseling through poster and video media that it is more effective to use poster media, respondents are more interested in reading, simple, motivated and can be enjoyed individually compared to watching videos with a very long duration so that respondents do not understand the material from the video display.

According to Maulana (2009) health counseling is very influential in the aspects of selecting methods, tools/media and the number of target groups. The media used is determined by the intensity of the media in providing learning experiences, posters with display pictures so that they involve the senses more when receiving counseling material, then the level of knowledge in capturing messages or counseling material will be more effective. (RI Ministry of Health, 2008) Saptarini (2005) posters in the form of pictures are more easily embedded in the minds of respondents than words so that health education through the media of posters about menopause to maintain women's health can be more effective if using media that displays more pictures. Poster media will be more effective as a media for counseling because it is more able to stimulate the sense of sight, aspects of the image on the poster and makes it easier to receive information or counseling material (Notoadmodjo, 2004) Efforts to use video media in counseling are integration in the learning system to streamline the process of conveying information, according to Dale (2010) that the effectiveness of the media can be seen to what extent these achievements increase knowledge. This can be seen from the results of research that there is an increase in counseling knowledge through the media.

Gren and Johson, (1996) subjectivity affects the formation of a person, depending on experience and environment. This increase in knowledge about menopause is inseparable from other factors that also influence it, such as media facilities, attractive facilitators in delivering material.

CONCLUSIONS AND SUGESTION
A. Conclusions
1. Health education through the media of posters is effective in increasing
the knowledge of climakterium in dealing with menopause in Wundudopi Village, Kendari City.

2. Health education through video media is effective in increasing the knowledge of Mrs. Klimakterium in dealing with menopause in Wundudopi Village, Kendari City.

3. There is a difference in the effectiveness of health education through posters and videos on increasing the knowledge of the climacterium Mother in dealing with Menopause in Wundudopi Village, Kendari City.

**B. Suggestion**

1. **For Society**
   By increasing good knowledge about the readiness of the Climacteric Mother in facing Menopause, it is likely that she will avoid the risks of facing Menopause afterwards.

2. **For Health Workers**
   It is hoped that this will be used as input material by providing health education to Climacteric Mothers in dealing with Menopause.

3. **For the Village of Wundudopi**
   By conducting/providing health education about the knowledge of Klimakterium mothers in dealing with Menopause.

4. **For Further Researchers**
   Further research needs to be done by increasing the research time and the number of respondents in order to get maximum results.

**FUNDING**

Independent Research

**CONFLICT OF INTEREST**

The authors declare no conflict of interest.

**DAFTAR PUSTAKA**


Lestari, L., 2018. Efektivitas health education menopause dan relaksasi otot progreif terhadap perubahan tingkat kecemasan premenopause di Desa B...