Science Biology Digital Video: Reproductive Health Education for Pre-School Children

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Abstract: The purpose of this study was to determine the effectiveness of the video method and fairy tales on changes in knowledge about reproductive health of sexual violence in pre-school children in TK District in 2023. The research method conducted was to use quasi experimental with purposive sampling with a sample of 120 people. Data techniques included in univariate analysis using frequency distribution and bivariate analysis using statistical calculations of the SPSS program. At Al-Hanif Islamic Kindergarten, the sig value was obtained. (2-tailed) 0.001 in video intervention and 0.000 in fairy tale intervention. In Kartini Kindergarten, the sig. (2-tailed) 0.000 on video intervention and 0.000 on fairy tale intervention. At RA Al-Barokah Kindergarten, the sig. (2-tailed) 0.001 in video intervention and 0.001 in fairy tale intervention. At Az-Zahra Kindergarten, the sig. (2-tailed) 0.001 in video intervention and 0.001. From the significant results in the four kindergartens, it is known that the significant value is less than 0.05. Thus it can be seen that there is an influence in using video and fairy tale methods on pre-school children's knowledge about sexual violence. Based on the results of the Independent sample t-test, the four kindergartens have a sig. (2-tailed) which is <0.05. This shows that there is a difference in effectiveness between video and fairy tale methods on the level of knowledge of pre-school children.

Keywords: Biology; Education for Pre-School Children; Health; Reproductive; Video.

Introduction

The importance of Sex Education in Early Childhood in the Digital Age is increasingly triggered by the reality regarding sexuality in them which is increasingly astonishing (Pauweni et al., 2022). The growth of sexual violence against minors is very alarming at this time, and can be said to be in a precarious and urgent situation so that it is very concerning, therefore special and serious handling is needed from various groups, especially families, education activists, legal experts, religious leaders and also the government to treat and prevent these conditions (Lestari & Jangkung, 2014).

Child sexual abuse does not only cause death and injury. Girls and boys who experience violence often face a number of short- and long-term negative consequences for their mental, physical, sexual and reproductive health and well-being (Hartman & Burgess, 1989). Sexually abused boys and girls are at increased risk of experiencing lifelong PTSD (Post Traumatic Stress Disorder), anxiety, depression, externalizing symptoms, sleep disorders, and suicidal thoughts and self-harm (Lansing et al., 2018). They are more likely to have unsafe sex, abuse drugs and alcohol, increase their risk of STDs (Sexually Transmitted Diseases) and HIV infection and other negative health effects that persist into adulthood. Girls also have a greater risk of becoming pregnant and developing gynecological diseases (Wahyuni, 2016).

Driven by great curiosity, children seek answers to their questions from other sources of information that may not be appropriate, such as friends or the internet. Today's media is very close to children's daily lives

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(Pradikto et al., 2022). All of these media penetrate children and are packaged in such a way that sex is considered normal and fun. Starting from kissing, free sex (premarital sex, selling virginity, exchanging partners and so on), group sex, gay/lesbian to incest, everything is available in various media (Lansing et al., 2018). Therefore, providing sexual education to preschool children is very important.

The use of media in health education provides several benefits such as stimulating the interest of advice, overcoming the limitations of space, time, language and sensory power in the process of receiving education, overcoming the passive attitude of the target, providing stimulation, experience and creating the same perception (Bohr & Memarzadeh, 2020). This encourages the target's desire to know more, explore, and understand it which ultimately provides a positive understanding of the health message in question (Ellaway & Masters, 2008).

Other teaching methods can use the story method or use videos. Storytelling is an activity that describes a real or fictional event (Lugmayr et al., 2017). Learning through the story method makes participants learn to receive information through listening and participants can interpret what they hear according to their own understanding, listening also develops children's reading skills, besides that it can improve social skills, intellectual skills, language skills and concentration (Alterio & McDrury, 2003). Meanwhile, using video media has the advantage of being able to provide a fun and non-boring atmosphere for preschool children so that their attention is focused on the information provided. Video media can also present events that are physically impossible to present in videos so that children can find out more about these events (Halim et al., 2022).

**Method**

**Research Design**

This research is a quantitative research with Quasi Experiment method with pre-test and post-test with control group design. This researcher conducted a trial of two different interventions to two different groups (Stratton, 2019). The reason for using this quasi experimental method is so that this research can take place naturally, and children do not feel they are being experimented on, so that this situation is expected to contribute to the level of validity of the research. The sampling technique in this study was purposive sampling and the type of statistical test used to test the effect of video media and fairy tales by paying attention to the results of the pre-test and post-test which used paired t-test and independent sample t-test (Yuliana & Putri, 2021).

**Place and Time of Implementation**

This research was conducted in 4 different kindergartens, including Al-Hanif Islamic Kindergarten which is located in Suradita, Kec. Cisauk, Kab. Tangerang, Banten Province. The second kindergarten is Kartini Kindergarten which is located in Joharan Village, Putra Rumbia District, Central Lampung Regency, Lampung Province. The third kindergarten is RA Al-Barokah Kindergarten which is located at Perum Cijujung Permai, RT 01/07 Cijujung Village, Sukaraja District, Bogor Regency. And the fourth kindergarten is Az-Zahra Kindergarten which is located at Kp. Serang RT 09/05 Village. Mekarjaya, Purwasari sub-district, Karawang district.

**Population and sample**

The population and sample used in this study were taken from the number of children in each class and also children who fit certain criteria, including children aged 4 to 6 years, children who have never received education about sexuality and children who get permission from their parents and are present when data collection is carried out. The total sample used in this study was 120 samples, where each kindergarten took 30 samples to be given the fairy tale intervention. In the diagram can be described as the flow of research as follows, namely as follows:

![Figure 1. Flow of Research](image)

**Result and Discussion**

This study was conducted using a quasi experiment in which there were 2 stages of tests (pre-test and post-test) with the scale used was a guttman scale formed on a nominal scale. The total sample used was 120 samples from all kindergartens, with a division of 30 samples in each kindergarten (Asghari et al., 2023).
Based on the research, it was found that before the video media intervention, most of the children had answered each questionnaire item correctly, but there were several statement items whose answers were not appropriate. At Al-Hanif Islamic Kindergarten, the statement item with the highest number of correct answers was X5 with a percentage of 87% while the statement item with the least correct answers was X10 with a percentage of 40%. At Kartini Kindergarten, the statement items with the highest number of correct answers were X5, X9 and X11 with a percentage of 80% while the statement item that was answered the least correctly was X13 with a percentage of 27%. At RA Al-Barokah Kindergarten, the statement items with the highest number of correct answers were X1, X2, and X13 with a percentage of 80% while the statement item with the least number of correct answers was X10 with a percentage of 47% (Strouse et al., 2013).

Based on the research, it was found that after the video media intervention, most of the children had answered each questionnaire item correctly, but there were several statement items whose answers were not appropriate. At Al-Hanif Islamic Kindergarten, the statement items with the highest number of correct answers were X5 and X7 with a percentage of 100% while the statement item with the least correct answers was X4 with a percentage of 73%. At Kartini Kindergarten, the statement items with the highest number of correct answers were X1, X7 and X9 with a percentage of 100% while the statement item that was answered the least correctly was X4 with a percentage of 73%. At RA Al-Barokah Kindergarten, the statement items with the highest number of correct answers were X8 and X9 with a percentage of 100% while the statement items with the least number of correct answers were X3 with a percentage of 33%. At Az-Zahra Kindergarten, the statement items with the highest number of correct answers were X1 and X11 with a percentage of 80% while the statement item with the least number of correct answers was X5 with a percentage of 60% (Foppolo et al., 2012) & (Davies, 2013).

After the intervention of fairy tale media, most children have answered each questionnaire item correctly, but there are several statement items whose answers are not appropriate. At Al-Hanif Islamic Kindergarten, the statement items with the highest number of correct answers were X1 and X9 with a percentage of 93% while the statement item that was answered the least correctly was X11 with a percentage of 53%. At Kartini Kindergarten, the statement items with the highest number of correct answers were X10 and X11 with a percentage of 87%. In Az-Zahra Kindergarten, the statement item with the highest number of correct answers is X1 with a percentage of 93% while the statement item with the least number of correct answers is X8 with a percentage of 67% (De Villiers & De Villiers, 2014).

Normality test of the data results that have been obtained previously. For each pre-test and post-test result carried out with video and fairy tale interventions, the Shapiro-wilk sign value > 0.05. This indicates that for each data the pre-test and post-test results of video and fairy tale interventions have normally distributed data (Yemenici & Güzel, 2021; Kim, 2021).

The results of paired t-test processing from the four kindergartens, can be known significant value (2-tailed) which will be used to determine whether there is an effect of the video method on pre-school children's knowledge about sexual violence in children from the pre-test and post-test results. At Al-Hanif Islamic Kindergarten, a significant value (2-tailed) of 0.001 was obtained. At Kartini Kindergarten, a significant value (2-tailed) of 0.000 was obtained. At RA Al-Barokah Kindergarten, a significant value (2-tailed) of 0.001 was obtained. At Az-Zahra Kindergarten, a significant value (2-tailed) of 0.001 was obtained. This shows that there is a significant difference between the pre-test (before the
approach through the video method) and the post-test results (after being given an approach through the video method) because the significant value (2-tailed) < 0.05. Thus it can be concluded that there is a difference between children's knowledge after doing the pre-test (no intervention) and after doing the post-test (there is a video intervention) (Romantika et al., 2020; Pradita et al., 2018).

The results of paired t-test processing from the four kindergartens, can be known significant value (2-tailed) which will be used to determine whether there is an effect of the fairy tale method on pre-school children's knowledge about sexual violence in children from the pre-test and post-test results. At Al-Hanif Islamic Kindergarten, a significant value (2-tailed) of 0.00 was obtained. At Kartini Kindergarten, a significant value (2-tailed) of 0.001 was obtained. At RA Al-Barokah Kindergarten, a significant value (2-tailed) of 0.001 was obtained. At Az-Zahra Kindergarten, a significant value (2-tailed) of 0.001 was obtained. This shows that there is a significant difference between the pre-test (before the approach through the fairy tale method) and the post-test results (after being given an approach through the fairy tale method) because the significant value (2-tailed) < 0.05. Those it can be concluded that there is a difference between children's knowledge after doing the pre-test (no intervention) and after doing the post-test (there is a fairy tale intervention) (Rahmiwati et al., 2019).

We only focus on the significant results (2-tailed) which are the results of the independent sample t-test. At Al-Hanif Islamic Kindergarten, a significant value (2-tailed) of 0.000 was obtained. At Kartini Kindergarten, a significant value (2-tailed) of 0.034 was obtained. At RA Al-Barokah Kindergarten, a significant value (2-tailed) of 0.029 was obtained. At Az-Zahra Kindergarten, a significant value (2-tailed) of 0.004 was obtained. This shows that there is a significant difference between learning with video and fairy tale methods, because the significant value (2-tailed) in the four kindergartens <0.05. From the interventions given between videos and fairy tales, the use of the video method is better than the fairy tale method. This is shown from the average post-test score of the video method which is higher than the fairy tale method (Salma & Kurniasari, 2022; Sari et al., 2015).

Figure 2. Demonstration with undressed dolls, identification of body parts.

Based on the results of research that has been processed by researchers. In the video intervention group, there was an increase in the average score of children's knowledge about sexual violence between before and after being given intervention with the video method (Simaibang et al., 2021) & (Aisah et al., 2021). The results of statistical tests using the Paired t-test showed that there was a significant difference between the pre-test (before the approach using the video method) and the post-test (after being given an approach using the video method), with the significance value (2-tailed) of the four kindergartens <0.05. Therefore, it can be concluded that there is a significant difference between preschool children's knowledge about sexual violence before and after the video intervention (Aprilaz, 2016). This is in accordance with the researcher's assumption, there was a considerable increase due to the materials and media provided.

Based on the results of the study in the group that received sexual education with fairy tale intervention, there was an increase in the average score of children's knowledge about sexual violence between before and after being given intervention with the fairy tale method. The results of statistical tests with Paired t-test showed a significant value (2-tailed) of the four kindergartens studied <0.05. This shows that there is a significant difference between the pre-test (before the approach through the fairy tale method) and the post-test results (after being given an approach through the fairy tale method). From these results have in common with research conducted by Sofi & Praheto, (2023) & Gusman, (2020) which discusses the ability to listen to children by using fairy tale media hand puppets and children without using fairy tale media dolls.
There is a significant difference in effectiveness between video and fairy tale methods on increasing preschool children's knowledge about sexual violence. This is also shown by the average post-test score of the video method which is higher than the storytelling method from the four kindergartens studied (Aliyah & Wahjudi, 2021).

**Conclusion**

From the results of the research that has been carried out, the conclusions are as follows: Based on taking the results of research and discussion, it can be concluded that there is a significant difference in preschool children's knowledge about sexual violence before being given a video approach (pre-test) and after being given a video approach (post test). Based on the results of research and discussion, it can be concluded that there is a significant difference in pre-school children's knowledge about sexual violence before being given a fairy tale approach (pre-test) and after being given a fairy tale approach (post test). From the results of research and discussion, it can be concluded that there is a difference in effectiveness between video and fairy tale methods on increasing preschool children's knowledge about sexual violence.

**Acknowledgments**
Thank you to the informants, and the other persons for giving permission to researchers to complete this academic task.

**Author Contributions**
This research was supported by all participants that conducted equal roles and contributions of this research.

**Funding**
This research is an empirical research funded fully by us (research team) and absolutely called with the independent research.

**Conflicts of Interest**
There is no interest conflict in this research.

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