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Effect of Video-Based Health Education on PCOS Knowledge Among First-Year Female Nursing Students at STIKES RSPAD Gatot Soebroto

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Abstract

Polycystic Ovary Syndrome (PCOS) is one of the hormonal disorders commonly occurring in women of reproductive age, including female students. Knowledge about PCOS is very important so that female students can recognize signs, symptoms, and early prevention of complications. However, the basic knowledge of first-year students is generally still low, requiring effective education methods. The research design used a pre-experimental approach with a one-group pretest-posttest design and a sample of 65. The pretest average score of respondents knowledge was 50.00. After being given education, the respondents average score increased to 66.92. Results from the Kolmogorov-Smirnov normality test showed a p-value of 0.200 > 0.05, indicating normally distributed residuals. The hypothesis test using the Simple Paired T-test yielded a p-value of 0.001 < 0.05, accepting H1. Conclusion: The implication of developing health promotion through educational videos, such as short videos and distributing them via social media to reach a wider and more interactive educational program. Health education using video media proved effective in increasing knowledge among female students at STIKES RSPAD Gatot Soebroto.

Keywords: Health Education, Female Students, Video Media, PCOS, Knowledge

INTRODUCTION

Various health problems remain major public health concerns today, one of which involves the female reproductive system due to its significant impact on overall health. One common reproductive health disorder caused by hormonal imbalance in women of reproductive age is Polycystic Ovary Syndrome (PCOS). This condition often begins in adolescence, with symptoms that may worsen over time. [1][2]

Globally, the prevalence of PCOS is estimated to range from 6% to 13%. In the United States, PCOS affects approximately 6–12% of women of reproductive age, equivalent to about 5 million individuals.[3][4]

In Indonesia, data from the Central Statistics Agency (BPS) show that the prevalence of PCOS among women aged 15–40 years ranges from 5.5% to 16%.[5]A study conducted at Cipto Mangunkusumo Hospital in Jakarta identified 105 patients diagnosed with PCOS.

PCOS results from hormonal imbalance and can cause menstrual irregularities and abnormal cyst formation in the ovaries. These conditions disrupt egg production and ovulation, leading to difficulties in achieving pregnancy. If left untreated long-term, PCOS may result in serious complications such as type 2 diabetes, endometrial cancer, infertility, and psychological disorders.[6][7]

The exact causes of PCOS remain unclear. However, several studies suggest that PCOS is influenced by multiple factors, including genetic and

environmental factors. The Reproductive Endocrinology Fertility Association (HIFERI) in 2016 stated that PCOS is a hormonal disorder caused multifactorial influences rather than a single cause. Environmental factors are often linked to unhealthy lifestyles, such as high sugar consumption, lack of physical activity, and limited access to health-related knowledge. [8]

A study by [9] found that many women have limited understanding of PCOS, including its definition, signs, symptoms, causes, and consequences. As a result, PCOS is often diagnosed late due to low awareness of its symptoms and risks. Therefore, adequate reproductive health information is essential, as insufficient knowledge may prevent individuals from recognizing their own reproductive health conditions.[10]

One effective approach to preventing and managing PCOS is through education or counseling. [11]Health education is a learning process aimed at improving knowledge and shaping attitudes to promote better health outcomes. It is conducted through, by, and for individuals or groups to enhance overall health status.[12]

The implementation of health education relies heavily on media to support communication and knowledge absorption. Media serve as tools to deliver information from communicators to audiences and may include mass media, such as newspapers, or interpersonal media, such as direct communication via telephone.[13]The use of media in health education aims to make information more engaging, accessible, and easier to understand.[12]

With rapid technological advancements, health education media have become increasingly diverse. Audiovisual media, such as videos, are widely used and effective for health counseling. These media are easily accessible, flexible in time and place, and considered more engaging and effective than conventional methods such as lectures or leaflets. By combining visual and auditory elements, audiovisual media facilitate better understanding of health information. [14]

This study has several limitations, including technical constraints, research design, and intervention duration. Technical limitations were encountered as some respondents experienced difficulties accessing the Google Form due to limited internet data. In addition, the study employed a pre-experimental one-group pretest–posttest design without a control group for comparison. The relatively short intervention duration, conducted only once at a single time point, limits the ability to assess long-term changes in respondents' knowledge.

RESEARCH METHODS

This study uses a quantitative approach with the Pre-Experimental method and one group pre-test and post-test design, namely by measuring knowledge before and after the intervention is given without a control group and only once at a time (simultaneously). The population in this study is first-level students of the STIKES Nursing S1 study program at RSPAD Gatot Soebroto for the 2025/2026 academic year. The population in this study amounted to 65 female students with a sample of 65 female students who were selected using *the purposive sampling method.* The inclusion criteria for this study were first-year nursing students actively enrolled in the Bachelor of Nursing program at STIKES RSPAD Gatot Soebroto during the 2025/2026 academic year, willing to participate as respondents and complete the entire health education program, have never received special education on PCOS, and have completed the pretest and posttest questionnaires completely. Exclusion criteria included students who were

unwilling to participate in the study, did not fully attend the education session or did not watch the video material to completion, had previously participated in PCOS counseling or education, and completed the questionnaire incompletely or in an invalid manner.

Data collection was carried out through questionnaires. The questionnaire used in this study was adapted and modified from previous research conducted by [15] namely a PCOS knowledge questionnaire consisting of 20 computerized items that had been tested for validity using the Pearson product-moment correlation. The results of the validity and reliability tests showed that all 20 items were valid, as the correlation values exceeded the r-table value of 0.361; therefore, the questionnaire was considered appropriate for use in this study. Furthermore, the calculation of the 20 PCOS knowledge items yielded a Cronbach's alpha value of 0.872 (> 0.60), indicating that the instrument was reliable and suitable for use in this research. The data analysis was carried out using the Paired Sample T-Test, which is to find out the difference in the mean results of knowledge of level 1 female students before and after being educated. This research has received ethical approval from STIKES RSPAD Gatot Soebroto with serial number No:005004/STIKES RSPAD Gatot Soebroto/2025.

Overall, the research methodology has been clearly described and systematical implemented. Nevertheless, future research is recommended to consider the inclusion of a control group or the application of a randomized research design in order to strengthen causal inferences and enhance the internal validity of the findings. The use of such designs would allow for a more rigorous comparison between intervention and non-intervention groups, thereby reducing potential bias and confounding factors. In addition, future studies may benefit from increasing the sample size and involving participants from diverse educational or demographic backgrounds to improve the generalizability of the results. Employing longitudinal follow-up assessments could also provide valuable insights into the long-term effectiveness and sustainability of the intervention outcomes.

RESULTS AND DISCUSSION

Table 1. Frequency Distribution of Respondents Base on Age of STIKES Students of RSPAD Gatot Soebroto (n=65)

Age	Frequency	Percentage (%)
18 Tahun	31	47,7
19 Tahun	27	41,5
20 Tahun	5	7,7
21 Tahun	2	3,1
Total	**65**	**100.0**

Source : Primary Data November 2025

Based on table 1, the average age of the respondents is 18.66 years, with the youngest age being 18 years and the oldest age being 21 years.

Polycystic Ovary Syndrome (PCOS) is a common endocrine disorder that affects not only adult women but also adolescent girls during late adolescence (around 15–19 years of age). According to [12] shows that PCOS can be diagnosed in late adolescence, with prevalence estimates ranging from approximately 6% to over 20% depending on the diagnostic criteria and the population studied, suggesting that PCOS often manifests during the later years of adolescent development rather than only in adulthood. This suggests that the hormonal imbalances characteristic of PCOS often appear around age 18, especially in individuals with irregular menstrual cycles, hyperandrogenism, or obesity, making late adolescence a critical period for early detection and treatment.

Furthermore, according to [15] population-based studies have shown that the risk of developing PCOS increases in late adolescence (15–19 years), especially in groups with obesity or central adiposity, which are common risk factors in the adolescent population. These findings support the notion that PCOS is not limited to older reproductive ages, but is increasingly being identified among adolescents approaching 18 years of age.

Table 2. Knowledge Before and After PCOS Education through Video in STIKES Students of RSPAD Gatot Soebroto (n=65)

Knowledge	Mean	SD	Min-Max	95%CI
Pretest	50.00	11.285	30-75	47.20-52.80
Posttest	66.92	14.299	40-100	63.38-70.47

Source : Primary Data November 2025

Based on table 2, it shows that at the time of the pretest, the average value of the respondent's knowledge was 50.00 after being given education, showing the average value of the respondent which was 66.92. These results show an effective improvement before and after providing PCOS education via video. With a standard deviation value of 11,285 before education was provided and after education was given to 14,299, this shows that PCOS education through videos has an effective change in student knowledge.

This shows that audiovisual media plays an effective role in improving students' understanding of the basic concepts of PCOS, starting from the definition, symptoms, risk factors, to how to prevent it. This is in line with research conducted by , which states that most information is easier to understand through visual stimulus so that the use of video media is able to improve the understanding of female students. This is strengthened by research, which explains that video is an educational medium that is able to accommodate various learning styles, both visual, auditory, and kinesthetic, so that the delivery of material becomes more comprehensive. In addition, research shows that education through video results in a higher increase in knowledge than conventional lecture methods[12][16][17].

Table 3. Paired T-Test Test results before education and after education is given to female students at STIKES RSPAD Gatot Soebroto

	Mean	SD	95% CI		P–value
			Lower	Upper	
Pre test – Post test	-16.92	14.134	- 20.425	- 13.421	< 0.001

Source: Primary Data November 2025

Based on table 3, the results of *the paired t-test* from 65 respondents were obtained *with a P-value* = 0.001 smaller than 0.05, a statistically significant difference in knowledge. The average score difference of -16.923 indicates an increase in knowledge after being educated. This shows that there is an influence of health education on the knowledge of STIKES students of Gatot Soebroto Hospital.

The results of this study are in line with showing that audiovisual media is able to meaningfully increase participants' knowledge after being given health education interventions. These results are in line with research that says that most information is more easily received through the senses of sight, as well as research that explains that videos can accommodate a wide range of students' learning styles, making the material easier to understand. [18][12][16]

CONCLUSION

Based on the results of the research and discussion on the influence of education about PCOS through videos on

the knowledge of female students at STIKES RSPAD Gatot Soebroto, this study was able to answer the research questions. The results showed that at the time of the pretest, the average value of respondents' knowledge was 50.00 and during protests, the average value of respondents' knowledge was 66.92. This proves that there is an influence of health education about PCOS with video media on the knowledge of level I students of the S1 nursing study program at STIKES RSPAD Gatot Soebroto. The results of this study show that health education about *polycystic ovary syndrome* (PCOS) through video media has been proven to be effective in increasing the level of knowledge of level I students of the S1 Nursing Study Program. This result provides an implication that video media can be optimally utilized by educators and health workers, especially in health education institutions, as one of the methods of reproductive health education. The use of video media as part of the curriculum in the Midwifery Nursing course or as part of the reproductive health orientation program for new students at STIKES RSPAD Gatot Soebroto. Increasing students' knowledge about PCOS is expected to encourage increased awareness and understanding related to signs and symptoms, risk factors, and PCOS prevention efforts, so that early detection and management of PCOS can be carried out better.

BIBLIOGRAPHY

[1] I. S. Septadina, "An Overview of the Female Reproductive System: A Narrative Literature Review," *Sriwijaya Journal of Obstetrics and Gynecology*, vol. 1, no. 1, pp. 16–23, 2023.

[2] S. Singh *et al.*, "Polycystic Ovary Syndrome: Etiology, Current Management, and Future Therapeutics," Feb. 01, 2023, *MDPI*. doi: 10.3390/jcm12041454.

[3] World Health Organization, "Polycystic Ovary Syndrome," https://share.google/NBwPG9qgxtaXvmTO1.

[4] J. Bulsara, P. Patel, A. Soni, and S. Acharya, "A review: Brief insight into Polycystic Ovarian syndrome," Jun. 30, 2021, *Elsevier Ltd*. doi: 10.1016/j.endmts.2021.100085.

[5] M. E. Fortuna and J. Herdiman, "Knowledge and Attitudes of Non-Medical Faculty Students Batch 2020 about Polycystic Ovarian Syndrom (PCOS) at Tarumanagara University," Mar. 2023.

[6] S. F. Witchel, S. E. Oberfield, and A. S. Peña, "Polycystic Ovary Syndrome: Pathophysiology, Presentation, and Treatment with Emphasis on Adolescent Girls," Jun. 26, 2019, *Oxford University Press*. doi: 10.1210/js.2019-00078.

[7] Sari et al., "Skrining dan Determinan Kejadian Sindrom Ovarium Polikistik (SOPK) Pada Remaja," *Jurnal Ilmu Kebidanan Poltekkes Ummi Khasanah* , 2023.

[8] Rasquin Leon LI, Anastasopoulou C, and Mayrin JV, "Polycystic Ovarian Disease," *StatPearls*, Jan. 2022.

[9] Dewi Surani, Perdy Karuru, Udi Iswadi, and Marthen Semry, *Basic Concepts of Learning Media*. Cendikia Mulia Mandiri , 2021.

[10] Senja et al., "The Level of Knowledge Adolescent About Reproductive Health," *Jurnal Keperawatan Sekolah Tinggi Ilmu Kesehatan Kendal*, vol. 12, no. 1, pp. 85–92, 2020.

[11] Komang et al., "The Influence of Video-Based Health Education in Modifying Early Screening Efforts for Polycystic Ovary syndrome (PCOS) ," *Asian J Heal Res*, vol. 1, no. 3, pp. 24–30, 2022.

[12] Adventus, Merta Made, and Mahendra, "Health Promotion Module Book", 2019.
[13] Prawesthi et al., "Comparison of Leaflets and Animated Videos as Educational Media in Increasing Knowledge About the Importance of Using Dentures Among Students of Poltekkes Jakarta II," *Cakradonya Den J*, vol. 13, no. 2, pp. 144–150, 2021.
[14] S. Emma, D. Jatmika, and M. Kes, *Development of Health Promotion Media*. 2019.
[15] Sisy Andi Putrisia, "Knowledge Level of Polycystic Ovary Syndrome (PCOS) And its Risk Factors Among Students of The Faculty of Medicine, Hasanuddin University," December. 2024.
[16] A. O. Azis *et al.*, "Audio-Visual Media: Efforts to Overcome Differences in Students' Learning Styles in Biology Lessons Audio-Visual Media: Efforts to Overcome Differences in Student Learning Styles in Biological Learning," 2019.
[17] Pipin Nurhayati, Yeni Isnaeni, and Sri Nur Hartiningsih, "Increasing SADARI Knowledge Through Health Education Using Videos," *Jurnal Penelitian Perawat Profesional* , vol. 3, no. 4, 2021.
[18] M. Mulyadi Isra, M. STIKES Suaka Insan Banjarmasin, and D. STIKES Suaka Insan Banjarmasin. The Effectiveness of Health Education Using Video Media on the Level of Knowledge of Clean and Healthy Lifestyle Behaviors. 2018.

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