International Journal of Preventive, Curative & Community Medicine
Volume 12, Issue 4 - 2026, Pg. No. 20-27
Peer Reviewed & Open Access Journal

Research Article

Effectiveness of a Digital Storytelling Intervention on Knowledge, Risk Assessment and Self-Management Regarding Polyendocrine Metabolic Ovarian Syndrome Among Adolescent Girls

Nithya N[1], Neha Tiwari[2], Muskan[3], Priya[4], Prachi[5], Tushar[6]

[1]Principal, [2]Vice-Principal, [3,4,5,6]B Sc Nursing Students, NIMT Institute of Medical and Paramedical Sciences, Atal Bihari Vajpayee University, Lucknow, Uttar Pradesh, India
DOI: https://doi.org/10.24321/2454.325X.202620

I N F O

Corresponding Author:
Muskan, NIMT Institute of Medical and Paramedical Sciences, Atal Bihari Vajpayee University, Lucknow, Uttar Pradesh, India
E-mail Id:
muskannisha344@gmail.com
Orcid Id:
https://orcid.org/0009-0003-4565-1034
How to cite this article:
Nithya N, Tiwari N, Muskan, Priya, Prachi, Tushar. Effectiveness of a Digital Storytelling Intervention on Knowledge, Risk Assessment and Self-Management Regarding Polyendocrine Metabolic Ovarian Syndrome Among Adolescent Girls. Int J Preven Curat Comm Med. 2026;12(4): 20-27.

Date of Submission: 2026-09-21
Date of Acceptance: 2026-10-22

A B S T R A C T

Background: Polyendocrine Metabolic Ovarian Syndrome (PMOS), the terminology adopted in the present study for the endocrine-metabolic disorder internationally indexed as polycystic ovary syndrome (PCOS), is associated with hormonal, ovarian, and metabolic concerns. Adolescence is an important period for health education because knowledge, risk awareness, and self-management practices are developing. Digital storytelling combines narration, visual material, text, and multimedia elements and may provide an engaging method of health education for adolescent girls.

Objectives: The study aimed to assess the pre-test level of knowledge, risk assessment, and self-management regarding PMOS; evaluate the effectiveness of a digital storytelling intervention on these outcomes; determine the relationship among the study variables; and examine their association with selected demographic variables.

Methods: A quantitative evaluative approach with a pre-experimental one-group pretest and post-test design was used. Eighty adolescent girls studying in classes IX–XII at selected schools of Gautam Buddha Nagar, Uttar Pradesh, were selected through nonprobability convenience sampling. Data were collected using a demographic proforma, structured knowledge questionnaire, risk assessment checklist, and self-management questionnaire. A digital storytelling intervention was administered after the pre-test, and the post-test was conducted after seven days. Data were analyzed using frequency, percentage, mean, standard deviation, paired t-test, Pearson correlation, and chi-square test.

Results: Baseline findings showed inadequate knowledge in 44 (55.0%) participants, moderate risk in 45 (56.3%), and high risk in 35 (43.8%), while 29 (36.3%) had poor self-management and 51 (63.7%) had moderate self-management. After the intervention, adequate knowledge was observed in 35 (43.8%), low risk in 22 (27.5%), and good

Copyright (c) 2026: Author(s). Published by Advanced Research Publications

self-management in 41 (51.2%) participants. Knowledge increased from 13.44 ± 3.38 to 20.71 ± 3.79 (mean difference 7.28; t = 37.812; p < 0.001), risk score decreased from 39.05 ± 6.20 to 26.84 ± 8.12 (mean difference 12.21; t = 29.442; p < 0.001), and self-management increased from 16.70 ± 4.57 to 28.03 ± 5.60 (mean difference 11.33; t = 35.004; p < 0.001).

Conclusion: The findings indicate that the digital storytelling intervention was associated with significant improvement in knowledge and self-management and a significant reduction in assessed risk among the adolescent girls. The findings support the potential use of engaging digital health education approaches within school health programs, while the one-group design and immediate post-test limit causal and long-term conclusions.

Keywords: Digital Storytelling, Polyendocrine Metabolic Ovarian Syndrome, Polycystic Ovary Syndrome, Adolescent Girls; Knowledge, Risk Assessment, Self-Management, Health Education

Introduction

Adolescence is a critical stage of human development marked by rapid physical, hormonal, psychological, cognitive, and social changes. In adolescent girls, puberty and reproductive maturation are accompanied by changes in menstrual, ovarian, and metabolic health. The present study addresses Polyendocrine Metabolic Ovarian Syndrome (PMOS), the terminology adopted in the supplied article (write about this paper and not a thesis) for the disorder internationally indexed as polycystic ovary syndrome (PCOS). Current evidence-based guidance emphasizes the importance of appropriate assessment, health education, and management of PCOS-related concerns during adolescence.[1–4]

Adolescent girls may have limited knowledge regarding hormonal and metabolic risk factors, warning signs, and preventive practices. Menstrual irregularities, excess androgen-related features, obesity, sedentary behavior, unhealthy dietary practices, and metabolic abnormalities may be relevant to risk assessment. Early awareness can support timely health-seeking, healthy lifestyle practices, and appropriate professional referral.[4,6–11]

Digital storytelling is an educational approach that combines narration with images, text, audio, animation, or other multimedia elements. It can present complex health concepts in a relatable form and may improve engagement and understanding. Systematic reviews have described digital storytelling and electronic media-based interventions as useful approaches in health-profession education and youth health behavior interventions.[22–24]

Need of the Study

The need for adolescent-focused health education is strengthened by the persistence of knowledge gaps concerning PCOS/PMOS and by the importance of lifestyle-related risk factors. Previous studies cited in the article (discuss this paper and not thesis) have reported inadequate awareness among adolescent girls and have recommended structured educational interventions.[9–14]

Evidence also indicates that lifestyle modification, including healthy diet, physical activity, sleep, and other self-management behaviors, has an important role in adolescent PCOS care.[15–18] However, health education needs to be understandable and engaging for school-aged learners. The present study therefore evaluated a digital storytelling intervention designed to communicate information about PMOS, its risk factors, complications, prevention, and self-management.

The study was undertaken with the objectives of assessing baseline knowledge, risk assessment, and self-management; evaluating the effectiveness of the digital storytelling intervention; determining the relationship among the three study variables; and examining associations with selected demographic characteristics.[1]

Methods

Research design and setting. A quantitative evaluative approach and a pre-experimental one-group pre-test and post-test design were used. The study was conducted among adolescent girls in selected schools of Gautam Buddha Nagar, Uttar Pradesh. The intervention was administered after the pre-test, and the same tools were used for post-test assessment seven days later.[6,7,8]

Participants and sampling. The sample comprised 80 adolescent girls studying in classes IX to XII. At least calculate the sample size using a previous study as a reference, and then convenience sampling comments can be considered. Participants were selected using non-probability convenience sampling. The inclusion criteria included enrollment in the selected schools, ability to understand Hindi and/or English, and availability during data collection. Those outside the selected educational setting or unavailable during data collection were excluded.[20,21]

Data collection instruments. The data collection tool comprised four main components: a demographic proforma; a structured knowledge questionnaire covering meaning, causes, signs and symptoms, risk factors, complications, prevention and management of PMOS; a risk assessment checklist; and a self-management questionnaire covering diet, physical activity, stress management, menstrual monitoring and preventive practices. The digital storytelling

ISSN: 2454-325X
DOI: https://doi.org/10.24321/2454.325X.202620

intervention included information on causes, symptoms, risk factors, complications, prevention, and self-management of PMOS.

Validity, pilot study, and ethics. The tools and intervention were reviewed by experts from nursing specialties, including obstetrical and gynecological nursing, community health nursing, child health nursing, and medical-surgical nursing. A pilot study involving eight adolescent girls was conducted to assess feasibility, clarity, and procedure. Ethical clearance and administrative permission were obtained. Participation was voluntary, confidentiality and privacy were maintained, and informed consent/parental consent requirements were followed as described in the article (the thesis is not described in this study, so concentrate on this paper and not the thesis). What about assent from the participants? Also consent from the participants above 18 years

Data collection and analysis. A pre-test was administered before the intervention. The digital storytelling intervention was then delivered, followed by a post-test after seven days. Data were coded and analyzed using Microsoft Excel and SPSS version 29.0. Frequency and percentage described demographic variables; mean and standard deviation summarized study scores; the paired t-test compared pre-test and post-test scores; Pearson's correlation coefficient examined relationships among the study variables; and the chi-square test assessed associations with selected demographic variables. Significant statistical significance was set at $p < 0.05$.[21,22,23]

Results

Demographic characteristics. Among the 80 participants, 37 (46.3%) were aged 14–15 years, 26 (32.5%) were aged 16–17 years and 17 (21.3%) were aged 18–19 years. The largest class group was grade 10 (22, 27.5%). Thirty participants (37.5%) were from rural areas and 47 (58.8%) belonged to joint families. Fifty-four (67.5%) were vegetarian, 70 (87.5%) had attained menarche at 12–13 years, and 50 (62.5%) belonged to families with a monthly income of ₹16,000–20,000.

Before the intervention, 44 (55.0%) participants had inadequate knowledge and 36 (45.0%) had moderate knowledge; none had adequate knowledge. After the intervention, inadequate knowledge decreased to 6 (7.5%), while 35 (43.8%) achieved adequate knowledge.

At baseline, 45 (56.3%) participants were classified as moderate risk and 35 (43.8%) as high risk, with none in the low-risk category. At post-test, 22 (27.5%) were classified as low risk, 50 (62.5%) as moderate risk and only 8 (10.0%) as high risk.

In the pre-test, 51 (63.7%) participants had moderate self-management and 29 (36.3%) had poor self-management. After the intervention, 41 (51.2%) demonstrated good self-management, 37 (46.3%) moderate self-management and only 2 (2.5%) poor self-management.

The paired t-test showed statistically highly significant pre-test to post-test differences for all three outcomes. Knowledge increased by 7.28 points, risk assessment score decreased by 12.21 points, and self-management increased by 11.33 points (all $p < 0.001$). These findings indicate significant within-participant changes after the digital storytelling intervention.

No statistically significant relationship was found among the three variables at baseline. Knowledge and risk assessment were almost unrelated ($r = -0.002$, $p = 0.988$), while knowledge and self-management ($r = 0.123$, $p = 0.276$) and risk assessment and self-management ($r = 0.136$, $p = 0.229$) showed weak, non-significant positive correlations.

Outcomes (N = 80)

Chi-square analysis showed a significant association between post-test knowledge and nature of food ($\chi^2 = 7.079$, $df = 2$, $p = 0.029$). Post-test risk assessment was associated with age in years ($\chi^2 = 9.508$, $df = 4$, $p = 0.050$) and class ($\chi^2 = 13.363$, $df = 6$, $p = 0.038$). No selected demographic variable was significantly associated with post-test self-management. The thesis notes that the age association was borderline at $p = 0.050$.

Table 1.Core knowledge of antibiotic use and antimicrobial resistance (N = 103)

Variable	Category	f	%
Age	14–15 years	37	46.3
	16–17 years	26	32.5
	18–19 years	17	21.3
Class	9th grade	19	23.8
	10th grade	22	27.5
	11th grade	21	26.3
	12th grade	18	22.5

ISSN: 2454-325X
DOI: https://doi.org/10.24321/2454.325X.202620

Address	Rural	30	37.5
	Sub-urban	21	26.3
	Urban	29	36.3
Family	Nuclear	33	41.3
	Joint	47	58.8
Religion	Hindu	29	36.3
	Muslim	21	26.3
	Christian	12	15.0
	Sikh	18	22.5
Siblings	One	18	22.5
	Two	32	40.0
	Three	27	33.8
	Four	3	3.8
Birth order	First	44	55.0
	Second	34	42.5
	Third	2	2.5
Diet	Vegetarian	54	67.5
	Non-vegetarian	26	32.5
Age at menarche	10–11 years	4	5.0
	12–13 years	70	87.5
	14–15 years	6	7.5
Monthly income	₹11,000–15,000	30	37.5
	₹16,000–20,000	50	62.5

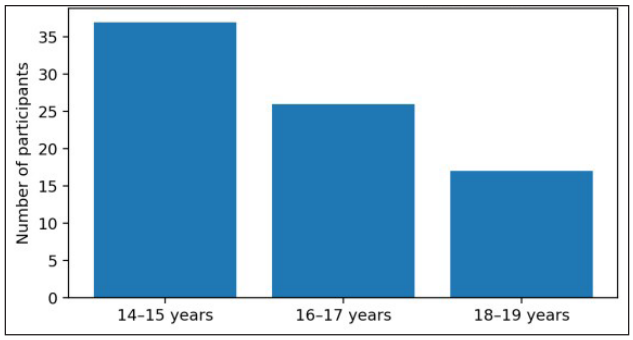


Figure 1.Core knowledge of antibiotic use and antimicrobial resistance (N = 103)

Table 2.Pre-test and Post-test Knowledge Level Regarding PMOS (N = 80)

Knowledge level	Pre-test f (%)	Post-test f (%)
Inadequate	44 (55.0)	6 (7.5)
Moderate	36 (45.0)	39 (48.8)
Adequate	0 (0.0)	35 (43.8)
Total	80 (100)	80 (100)

ISSN: 2454-325X
DOI: https://doi.org/10.24321/2454.325X.202620

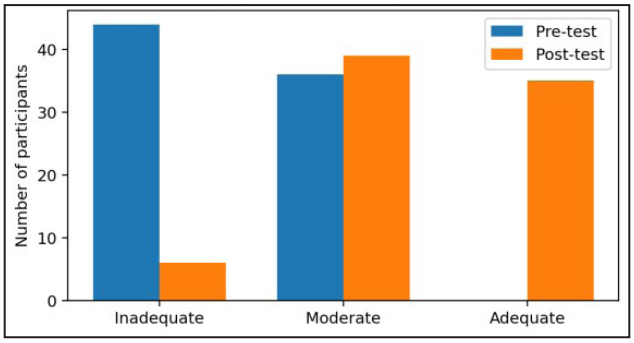


Figure 2.Pre-test and post-test knowledge level

Table 3.Pre-test and Post-test Risk Assessment Level Regarding PMOS (N = 80)

Risk level	Pre-test f (%)	Post-test f (%)
Low	0 (0.0)	22 (27.5)
Moderate	45 (56.3)	50 (62.5)
High	35 (43.8)	8 (10.0)
Total	80 (100)	80 (100)

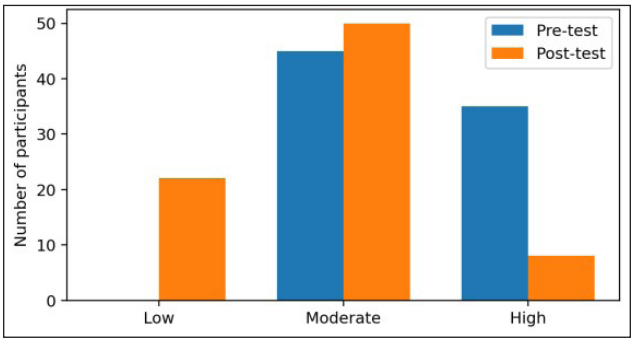


Figure 3.Pre-test and post-test risk assessment level

Table 4.Pre-test and Post-test Self-Management Level Regarding PMOS (N = 80)

Self-management level	Pre-test f (%)	Post-test f (%)
Poor	29 (36.3)	2 (2.5)
Moderate	51 (63.7)	37 (46.3)
Good	0 (0.0)	41 (51.2)
Total	80 (100)	80 (100)

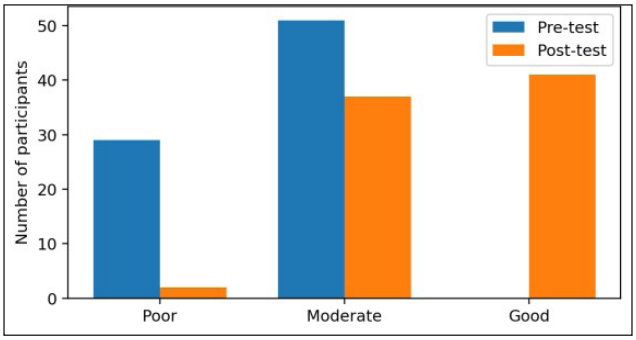


Figure 4.Pre-test and post-test self-management level

ISSN: 2454-325X
DOI: https://doi.org/10.24321/2454.325X.202620

Table 5.Comparison of Pre-test and Post-test Scores Following Digital Storytelling Intervention (N = 80)

Study variable	Pre-test Mean ± SD	Post-test Mean ± SD	Mean difference	Paired t	p
Knowledge	13.44 ± 3.38	20.71 ± 3.79	7.28	37.812	<0.001***
Risk assessment	39.05 ± 6.20	26.84 ± 8.12	12.21	29.442	<0.001***
Self management	16.70 ± 4.57	28.03 ± 5.60	11.33	35.004	<0.001***

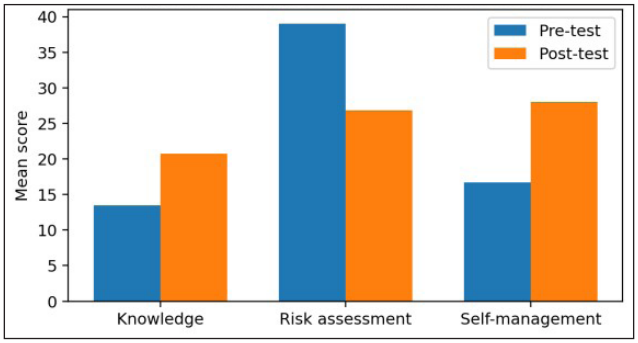


Figure 5.Comparison of pre-test and post-test mean scores

Table 6.Relationship Between Pre-test Knowledge, Risk Assessment and Self-Management (N = 80)

Variable pair	Pearson r	p value	Interpretation
Knowledge vs. risk assessment	−0.002	0.988	Very weak negative; NS
Knowledge vs. self management	0.123	0.276	Weak positive; NS
Risk assessment vs. self management	0.136	0.229	Weak positive; NS

Table 7.Significant and Non-significant Associations with Post-test Outcomes (N = 80)

Post-test outcome	Demographic variable	χ^2	df	p value	Result
Knowledge	Nature of food	7.079	2	0.029	Significant
Knowledge	Age / Class / others	—	—	>0.05	Not significant
Risk assessment	Age in years	9.508	4	0.050	Borderline/significan t at 0.05
Risk assessment	Class	13.363	6	0.038	Significant
Risk assessment	Other selected variables	—	—	>0.05	Not significant
Self management	All selected variables	—	—	>0.05	Not significant

Discussion

The present study found substantial improvement in knowledge following the digital storytelling intervention. The proportion of participants with inadequate knowledge decreased from 55.0% to 7.5%, while 43.8% achieved adequate knowledge at post-test. The mean knowledge score increased from 13.44 ± 3.38 to 20.71 ± 3.79, with a mean difference of 7.28 and a highly significant paired t-test ($t = 37.812$, $p < 0.001$). These findings are consistent with the educational literature cited in the article (it is not appropriate to mention thesis work; the discussion is based on the work presented in this paper), which reports persistent knowledge gaps among adolescent girls and improvement following structured teaching approaches.[9–14]

The risk assessment findings also changed substantially. Before the intervention, no participant was categorized as low risk, and 43.8% were in the high-risk category. After the intervention, 27.5% were categorized as low risk, and the high-risk category declined to 10.0%. The mean score decreased from 39.05 ± 6.20 to 26.84 ± 8.12. The article interprets this change as an improvement in risk status following the intervention. Previous evidence cited in the article (the discussion is based on this paper published and not the whole thesis) identifies obesity, menstrual irregularity, family history, sedentary behavior, and dietary factors as relevant risk considerations.[8–11]

Self-management showed a marked improvement. The proportion with poor self-management decreased

ISSN: 2454-325X
DOI: https://doi.org/10.24321/2454.325X.202620

from 36.3% to 2.5%, while 51.2% achieved good self-management at post-test. The mean score increased from 16.70 ± 4.57 to 28.03 ± 5.60. This pattern is consistent with literature emphasizing healthy diet, physical activity, sleep, stress management, and active participation in self-care as important components of adolescent PCOS/PMOS management.[15–18]

The baseline correlations were weak and non-significant. This suggests that knowledge, risk assessment, and self-management were not closely coupled in the pre-intervention assessment. The article discusses this finding as an indication that information alone may not automatically translate into behavioral practice, supporting the value of interventions that address knowledge together with risk awareness and self-management.

The association analysis showed limited demographic influence. Nature of food was associated with post-test knowledge, while age and class were associated with post-test risk assessment; self-management was not significantly associated with any of the selected demographic variables. The article appropriately notes that some findings should be interpreted cautiously because the sample size was 80 and several contingency tables may have had small expected cell frequencies.

The intervention findings should also be interpreted in relation to the study design. Because the study used a one-group pre-test post-test design without a control group, changes cannot be attributed exclusively to the intervention with the same confidence as a controlled experimental design. Testing effects, maturation, and response bias remain possible explanations. In addition, the post-test occurred after seven days, so long-term retention of the gains was not established.[23,24]

Conclusion

Among the 80 adolescent girls studied, baseline knowledge regarding PMOS was predominantly inadequate, risk assessment was predominantly moderate-to-high, and self-management was predominantly poor-to-moderate. Following the digital storytelling intervention, knowledge and self-management scores increased significantly, while risk assessment scores decreased significantly. The findings indicate that digital storytelling was associated with favorable changes in all three study outcomes. School-based digital health education may therefore be a useful approach for communicating PMOS-related information and supporting healthier self-management practices. Controlled studies with larger samples and longer follow-up are warranted to establish comparative effectiveness and retention of outcomes.

Limitations

The study used a pre-experimental one-group pre-test post-test design, did not include a control group, used a relatively small sample of 80 participants, relied on non-probability convenience sampling, and assessed outcomes after a short seven-day interval. These factors limit causal inference, external generalizability, and conclusions about long-term sustainability.

Implications for Nursing Practice

Nurses working in school and community settings can incorporate age-appropriate digital health education to improve adolescent awareness of reproductive and metabolic health. Digital storytelling can be used as a structured teaching aid alongside counselling, risk screening, lifestyle education, and referral when clinically indicated.

References

1. Teede HJ, Khomami MB, Morman R, Laven JS, Joham AE, Costello MF, Patil M, Rees DA, Berry L, Cree MG, Zhao H. Polyendocrine metabolic ovarian syndrome, the new name for polycystic ovary syndrome: a multistep global consensus process. The Lancet. 2026 Jun 6;407(10545):2329-39. [Google Scholar]
2. Teede HJ, Tay CT, Laven JJ, Dokras A, Moran LJ, Piltonen TT, Costello MF, Boivin J, Redman LM, Boyle JA, Norman RJ. Recommendations from the 2023 international evidence-based guideline for the assessment and management of polycystic ovary syndrome. European journal of endocrinology. 2023 Aug;189(2):G43-64. [Google Scholar]
3. Peña AS, Witchel SF, Boivin J, Burgert TS, Ee C, Hoeger KM, Lujan ME, Mousa A, Oberfield S, Tay CT, Teede H. International evidence-based recommendations for polycystic ovary syndrome in adolescents. BMC medicine. 2025 Mar 11;23(1):151. [Google Scholar]
4. Azziz R, Carmina E, Chen Z, Dunaif A, Laven JS, Legro RS, Lizneva D, Natterson-Horowtiz B, Teede HJ, Yildiz BO. Polycystic ovary syndrome. Nature reviews Disease primers. 2016 Aug 11;2(1):16057. [Google Scholar]
5. Legro RS, Arslanian SA, Ehrmann DA, Hoeger KM, Murad MH, Pasquali R, Welt CK. Diagnosis and treatment of polycystic ovary syndrome: an Endocrine Society clinical practice guideline. The Journal of clinical endocrinology and metabolism. 2013 Nov 20;98(12):4565. [Google Scholar]
6. Ibáñez L, Oberfield SE, Witchel S, Auchus RJ, Chang RJ, Codner E, Dabadghao P, Darendeliler F, Elbarbary NS, Gambineri A, Garcia Rudaz C. An international consortium update: pathophysiology, diagnosis, and treatment of polycystic ovarian syndrome in

ISSN: 2454-325X
DOI: https://doi.org/10.24321/2454.325X.202620

adolescence. Hormone research in paediatrics. 2017 Jun 1;88(6):371-95. [Google Scholar]
7. Witchel SF, Oberfield S, Rosenfield RL, Codner E, Bonny A, Ibáñez L, Pena A, Horikawa R, Gomez-Lobo V, Joel D, Tfayli H. The diagnosis of polycystic ovary syndrome during adolescence. Hormone research in paediatrics. 2015 Apr 1;83(6):376-89. [Google Scholar]
8. Naz MS, Tehrani FR, Majd HA, Ahmadi F, Ozgoli G, Fakari FR, Ghasemi V. The prevalence of polycystic ovary syndrome in adolescents: A systematic review and meta-analysis. International journal of reproductive biomedicine. 2019 Sep 3;17(8):533. [Google Scholar]
9. Sharma M, Khapre M, Saxena V, Kaushal P. Polycystic ovary syndrome among Indian adolescent girls–A systematic review and metanalysis. Nepal Journal of Epidemiology. 2021 Sep 30;11(3):1063. [Google Scholar]
10. Joshi B, Mukherjee S, Patil A, Purandare A, Chauhan S, Vaidya R. A cross-sectional study of polycystic ovarian syndrome among adolescent and young girls in Mumbai, India. Indian journal of endocrinology and metabolism. 2014 May;18(3):317. [Google Scholar]
11. Jahnavi N, Harshitha T, Adithi J, Durdana F, Indracanti M. Prevalence and knowledge levels of polycystic ovarian syndrome among female adolescents in educational institutions in Hyderabad, India: a cross-sectional study. Ethiopian Journal of Health Sciences. 2024 Nov 1;34(6). [Google Scholar]
12. Brar K, Kaur T, Ramanadin PV. Knowledge regarding Poly Cystic Ovarian Syndrome (PCOS) among the Teenage Girls. Int. J. Nur. Edu. and Research. 2016 Jun 28;4(2):136-40. [Google Scholar]
13. Babanrao GP. A Pre-Experimental Study to Evaluate the Effectiveness of Self Instructional Module (SIM) on Knowledge regarding Polycystic Ovarian Syndrome (PCOS) among Adolescent girls at selected Junior Colleges, Kolhapur. A and V Pub International Journal of Nursing and Medical Research. 2025 May 26;4(2):77-81. [Google Scholar]
14. Talaat WE, Elsayed HF, Osman SA. The Effect of a Video-Assisted Teaching Programme on Adolescent Girls' Awareness Regarding Early Detection of Polycystic Ovarian Syndrome. Helwan International Journal for Nursing Research and Practice. 2026 Jun 1;5(14):199-214. [Google Scholar]
15. Abdolahian S, Tehrani FR, Amiri M, Ghodsi D, Yarandi RB, Jafari M, Majd HA, Nahidi F. Effect of lifestyle modifications on anthropometric, clinical, and biochemical parameters in adolescent girls with polycystic ovary syndrome: a systematic review and meta-analysis. BMC endocrine disorders. 2020 May 19;20(1):71. [Google Scholar]
16. Long JR, Parker M, Jumani S, Ahmed A, Huynh V, Gomez-Lobo V. Effect of lifestyle modifications on polycystic ovary syndrome in predominantly young adults: a systematic review. Journal of pediatric and adolescent gynecology. 2025 Apr 1;38(2):139-47. [Google Scholar]
17. Young CC, Rew L, Monge M. Transition to self-management among adolescents with polycystic ovary syndrome: parent and adolescent perspectives. Journal of pediatric nursing. 2019 Jul 1;47:85-91. [Google Scholar]
18. Young CC, Monge M, Minami H, Rew L, Conroy H, Peretz C, Tan L. Outcomes of a mindfulness-based healthy lifestyle intervention for adolescents and young adults with polycystic ovary syndrome. Journal of pediatric and adolescent gynecology. 2022 Jun 1;35(3):305-13. [Google Scholar]
19. Ofoegbu TO, Otu MS, Christopher I, Uche A, Nwabuko LO, Ebere I, Dike IC, Ngozi O, Chinedozie U, Muhammed A. Impact of an educational digital storytelling intervention on HIV risk perception among Nigerian adolescents. Journal of International Medical Research. 2020 Jan;48(1):0300060519854635. [Google Scholar]
20. Ezegbe B, Eseadi C, Ede MO, Igbo JN, Aneke A, Mezieobi D, Ugwu GC, Ugwoezuonu AU, Elizabeth E, Ede KR, Ede AO. Efficacy of rational emotive digital storytelling intervention on knowledge and risk perception of HIV/AIDS among schoolchildren in Nigeria. Medicine. 2018 Nov 21;97(47):e12910. [Google Scholar]
21. Moreau KA, Eady K, Sikora L, Horsley T. Digital storytelling in health professions education: a systematic review. BMC medical education. 2018 Sep 10;18(1):208. [Google Scholar]
22. Mojtahedzadeh R, Mohammadi A, Emami AH, Zarei A. How digital storytelling applied in health profession education: a systematized review. Journal of Advances in Medical Education & Professionalism. 2021 Apr;9(2):63. [Google Scholar]
23. Fedele DA, Cushing CC, Fritz A, Amaro CM, Ortega A. Mobile health interventions for improving health outcomes in youth: a meta-analysis. JAMA pediatrics. 2017 May;171(5):461-9. [Google Scholar]
24. Hieftje K, Edelman EJ, Camenga DR, Fiellin LE. Electronic media–based health interventions promoting behavior change in youth: a systematic review. JAMA pediatrics. 2013 Jun 1;167(6):574-80. [Google Scholar]

ISSN: 2454-325X
DOI: https://doi.org/10.24321/2454.325X.202620