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A study to assess the effectiveness of structured video assisted teaching programme on knowledge regarding pubertal changes among pre-Adolescent girls in selected rural school at Mysore

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Abstract

Puberty is a critical phase in life, characterized by fast growth, development, and maturation in physical, psychological, physiological, and social settings. It frequently begins with the appearance of visible secondary sexual traits, such as breast augmentation and pubic hair growth in girls. The study sought to evaluate the impact of a structured video-assisted teaching approach on pre-adolescent girls' understanding of pubertal changes at a rural school in Mysore. The research design was pre-experimental, comprising pretests and post-tests. The study included 60 pre-adolescent girls, of whom 76.67% had inadequate knowledge scores, 23.33% had moderate scores, and none had adequate knowledge scores. Following the intervention, no one had insufficient knowledge scores, 30.0% had intermediate scores, and 70% had adequate scores. Pre-adolescent girls improved 41.06% on their knowledge score. The study discovered no significant relationship between pretest knowledge score and pre-adolescent girls' demographic factors, with nuclear family girls, better educated parents' daughters, and first-order birth girls having higher moderate knowledge scores.

Keywords: Puberty, pre-adolescent girls, video-assisted teaching, knowledge improvement, rural school

Introduction

The word puberty comes from the Latin "pubertyas," which translates to "age of manhood." Growth, development, and maturation in terms of physical, psychological, physiological, and social factors occur quickly during puberty, a time between childhood and adulthood. External secondary sexual features, such as breast augmentation and pubic hair growth in girls, are often the first signs of the transition to puberty. Early in adolescence, growth acceleration and peak height velocity take place, while menarche, or the start of monthly flow, occurs later.

Girls' knowledge of the location and function of the reproductive structure was poor, and they had no idea how they were related. Despite without learning the biology of menstruation, girls linked menstruation to a number of detrimental physical and psychological changes. They were already familiar with and had accepted the myths and cultural prejudices around menstruation.

Puberty is the process that results in sexual maturity or fertility. Puberty may be a biological time frame involving both the kid and the adult, characterized by physical body changes that lead to sexual maturity. Adolescence undergoes a growth surge, acquires secondary sex characteristics, and reaches reproductive system maturity. The onset and progression of puberty vary from person to person, and are thus heavily influenced by heredity. Sex maturation in women begins with menarche; the emergence of breast buds, which occurs between the ages of 9 and 11 years, is the earliest indicator of ovarian function. This is followed by the formation of pubic hair. During menarche, there is an increase in height. The first menstruation occurs roughly twelve months after the height increases. That usually occurs between the ages of nine and fourteen; the average age group is twelve years.

According to various researches, young females have insufficient awareness about puberty. A lack of understanding may result in a negative attitude toward pubertal changes, as well as

appropriate emotions like anxiety and low self-esteem. Knowledge of reproductive health is vital for adolescents' healthy sexual conduct, even if it does not always transfer into behavior. There is a lack of proper information on pubertal changes, as well as parental guidance to cope with these changes. This causes worry and misconceptions in the minds of young adolescents, particularly females, which hampers their healthy development.

According to Professor Sawyer and Patton (Murdoch Children's Research Institute Melbourne and the University of Melbourne), "puberty is increasingly recognized as a significant physiological event that catapults adolescents into a higher risk for a range of health-related behaviors such as mental disorders and substance use." Even more than half of adolescent girls experience mild to severe stress due to pubertal changes.

Teaching puberty in schools can help young people better understand themselves and deal with the changes they are going through; giving them the self-esteem they need to confront daily problems with teachers and classmates at school. Major hormonal processes associated with menarche include the production of follicle stimulating hormone by the pituitary gland. FSH stimulates the ovaries to initiate follicular preparation and to create more estrogen. The continued development of these secondary sexual features begins around the ages of 11 to 13.

As children enter puberty, they become more concerned with their looks and physical attractiveness as a result of teenage body image. Teaching adolescent health ideas impacts people's views toward different areas of their bodies. Throughout the puberty period, girls may undergo a variety of physical and emotional changes; changes in system image and interpersonal connections are common. Menarche is a time of mixed feelings.

Materials and Methods

The research technique describes the overall procedure for acquiring relevant and trustworthy data for a study. This chapter contains a brief description of the procedures used by the investigator in this investigation. It comprises the research methodology, design, setting, sample, and sampling procedure.

It goes on to discuss the development of the data gathering tool and technique, as well as the data analysis plan. The

current study was conducted to investigate the efficacy of a structured video-assisted teaching program on understanding of pubertal changes among pre-adolescent girls in a rural school in Mysore.

Research Approach

The research design refers to the overarching strategy that we use to combine the many components of the study in a cohesive and logical manner, guaranteeing that we effectively address the research problem; it serves as the blueprint for data collecting, measurement, and analysis. The framework used to answer research questions is known as research design. The current study's research design was pre-experimental with one group pretest and post-test, in which a pre-test was conducted, followed by a structured video-assisted training program on pubertal changes, and then a post-test for the same group.

The research design refers to the overall strategy that we use to integrate the various components of the study in a coherent and logical manner, ensuring that we effectively address the research problem. It also serves as the blueprint for data collection, measurement, and analysis. The research design is the framework that has been developed to seek answers to research questions.

Results

The study's results were gathered through a pre-experimental study to assess the efficiency of a structured video-assisted teaching curriculum in terms of pubertal change knowledge among pre-adolescent girls in a selected rural school in Mysore. The term "analysis" describes "categorizing, ordering, manipulating and summarizing the data to obtain answer to research question"

Presentation of data

Table 1: Pretest level of knowledge score

Level of knowledge score	Number of pre-adolescent girls	Percentage
Inadequate	46	76.67
Moderate	14	23.33
Adequate	0	0.00
Total	60	100.0

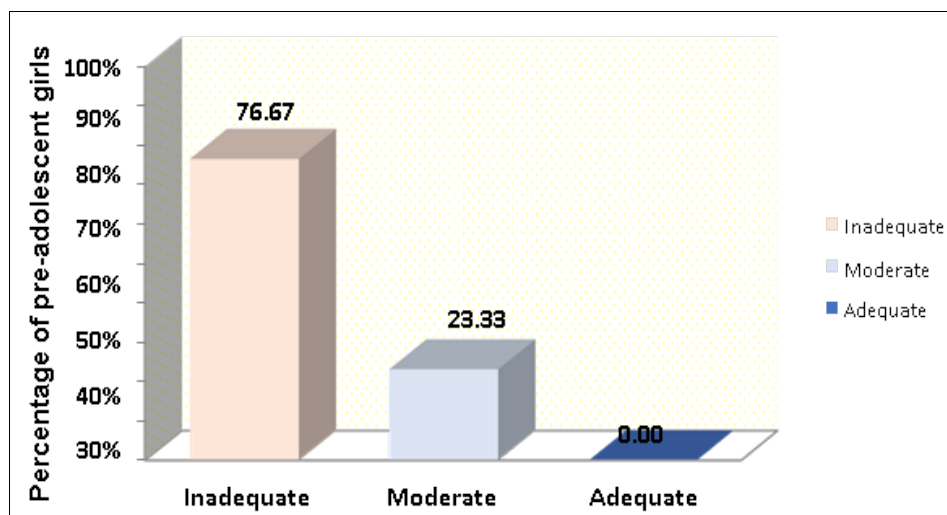


Fig 1: Pretest level of knowledge score

Table No. 1 The pretest level of knowledge regarding pubertal changes among pre-adolescent girls in selected rural school. In general, 76.67% of them are having inadequate level of knowledge score, 23.33% of them having moderate level of knowledge score, and none of them having adequate level of knowledge score.

Table 2: Post Test Level of Knowledge Score

Level of knowledge score	Number of pre-adolescent girls	Percentage
Inadequate	0	0.00
Moderate	18	30.00
Adequate	42	70.00
Total	60	100.0

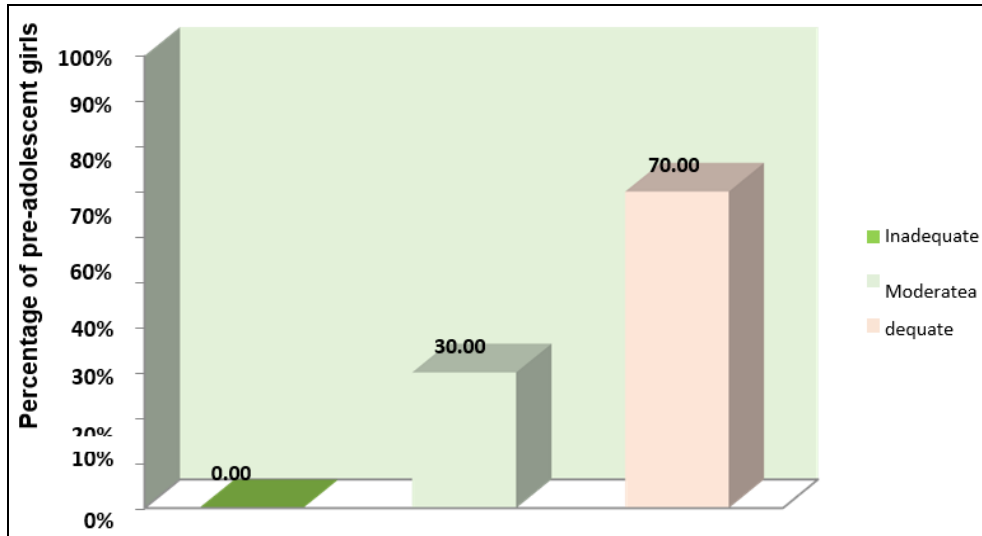


Fig 2: Posttest level of knowledge score

Table No. 2 The post test level of knowledge regarding pubertal changes among pre-adolescent girls in selected rural school. In general, none of the mare having inadequate level of knowledge score, 30.00% of them having moderate level of knowledge score and 70% of the m having adequate level of knowledge score.

Comparison of Pre Test and Post Test Level of Knowledge Score

Table 3: The pre test and post test level of knowledge score

Level of Knowledgescore	Pretest		Posttest		McNemar's test
	n	Percentage	n	Percentage	
Inadequate	46	76.67	0	0.00	$\chi^2=48.60$ $P=0.001^{***}(NS)DF=2$
Moderate	14	23.33	18	30.00	
Adequate	0	0.00	42	70.00	
Total	60	100	60	100	

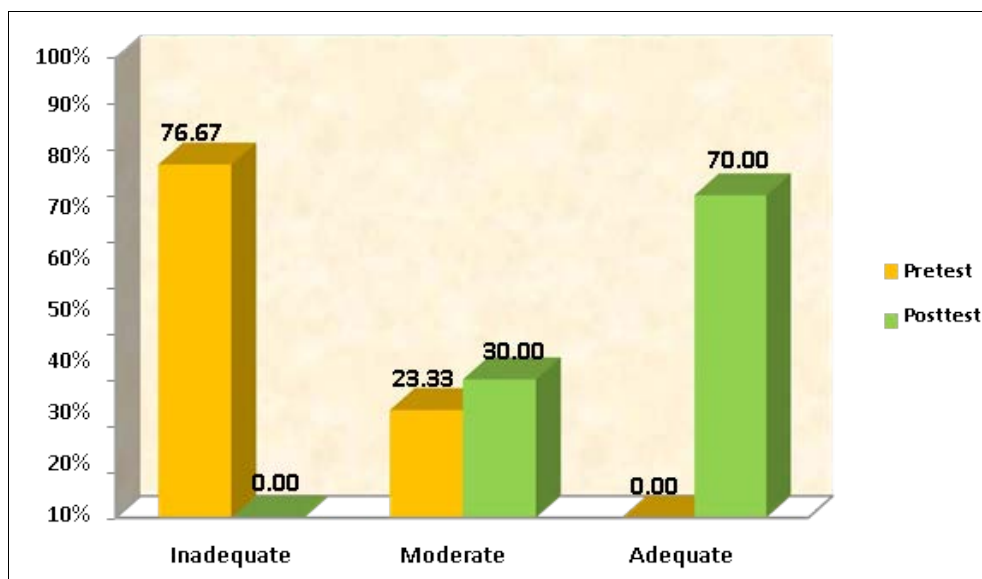


Fig 3: Pretest and Posttest Level of Knowledge Score

Conclusion**Limitations**

- The researchers had no control over extraneous variables such as age at menarche, parents' education, occupations, birth order, religion, information source, and location.
- Due to time limits, 60 samples were chosen as a sample. Therefore, generalization is limited.
- The convenience sampling technique limits generalization to large groups with similar characteristics.

Recommendation

- This study could be reproduced with a larger sample size.
- A research could measure school teachers' knowledge of puberty.
- Conduct a research to compare knowledge of puberty between menarche-aged females and pre-adolescent girls.
- A study might compare the knowledge and expectations of puberty among pre-adolescent girls in rural and urban settings.

Implications

Puberty is a fundamental physiological transition that occurs in pre-adolescent girls. To prepare adolescent girls for this significant moment in their lives, it is critical to teach them about pubertal changes and menstruation hygiene. There is a need for health personnel to play an active role in preparing pre-adolescent girls for puberty. Health education programs and menstrual hygiene for adolescent females promote good menstrual practices while also providing psychological support.

References

1. Manimegalai K. Effectiveness of video assisted teaching programme on knowledge regarding sexual exploitation among adolescent girls at selected higher secondary school, Dharmapuri [dissertation]. Dharmapuri: OmSakthi College of Nursing; [date unknown]. Available from: <https://www.semanticscholar.org/paper/Effectiveness-of-video-assisted-teaching-programme-Manimegalai/dd4c01968da72a1f0d4424bd905305c484ce55bd>
2. Anusha L, Radhika M, Indira S. Effectiveness of structured teaching programme on knowledge regarding pubertal changes among pre-adolescent girls. IJAR. 2015 Oct;1(12):679-82. Available from: https://ajner.com/HTML_Papers/Asian%20Journal%20of%20Nursing%20Education%20and%20ResearchPID2018-8-4-15.html
3. Prasad JL, Abishek A, Ananthi CC, Banu R, Lakshmi L. A study to assess the knowledge on pubertal changes and menarche among adolescent girls residing in a selected rural community, Kanchipuram District, Tamilnadu. Medico Legal Update. 2020 Jul 1;20(3):102-4. Available from: <https://ijop.net/index.php/mlu/article/view/1376>
4. Samson SA, Singh CD, Paliwal HA. A study to evaluate the effectiveness of a planned teaching program on the knowledge regarding menarche among pre-pubertal girls at selected high schools in urban area at Udaipur. Innovare J Med Sci. 2021;9(1):14. Available from: https://www.researchgate.net/publication/350417632_A_STUDY_TO_EVALUATE_THE_EFFECTIVENESS_OF_A_PLANNED_TEACHING_PROGRAM_ON_THE_KNOWLEDGE_REGARDING_MENARCHE_A_MONG_PRE-PUBERTAL_GIRLS_AT_SELECTED_HIGH_SCHOOLS_IN_URBAN_AREA_AT_UDAIPUR
5. Yao J, Ziapour A, Abbas J, Toraji R, NeJhaddadgar N. Assessing puberty-related health needs among 10-15-year-olds: a cross-sectional study approach. Arch Pediatr. 2022 May 1;29(4):307-11. Available from: <https://pubmed.ncbi.nlm.nih.gov/35292195/>
6. López-Miralles M, Lacomba-Trejo L, Valero-Moreno S, Benavides G, Pérez-Marín M. Psychological aspects of pre-adolescents or adolescents with precocious puberty: a systematic review. J Pediatr Nurs. 2022 May 1;64:e61-8. Available from: <https://www.sciencedirect.com/science/article/pii/S0882596322000136>
7. Anitha R. The effectiveness of video assisted teaching program on knowledge regarding puberty among girls in selected school at Manamadurai, Sivagangai District, Tamilnadu. Available from: <https://core.ac.uk/reader/235663492>
8. Farid M, Barandouzi ZA, Valipour NS. Knowledge, attitudes, and coping strategies regarding pubertal changes among adolescent girls: Risks and compliances for health promotion in puberty. J Educ Health Promot. 2019 Jan 1;8(1):176. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6796310/>
9. Omovie LC, Agbapuonwu NE, Makata NE. Effectiveness of structured-teaching-programme on adolescents' knowledge of early pubertal changes and menstrual hygiene in selected secondary schools in Sapele, Delta State, Nigeria. Int J Res. 2021;6:1625. Available from: https://www.researchgate.net/publication/356005384_Effectiveness_of_Structured-TeachingProgramme_on_Adolescents'_Knowledge_of_Early_Pubertal_Changes_and_Menstrual_Hygiene_in_Selected_Secondary_Schools_in_Sapele_Delta_State_Nigeria
10. Shrestha S, Neupane B. Knowledge and attitude regarding pubertal changes among secondary level students of selected schools of Dhulikhel municipality. Kathmandu Univ Med J. 2020 Dec 31;18(4):386-90. Available from: https://www.researchgate.net/publication/356005384_Effectiveness_of_Structured-TeachingProgramme_on_Adolescents'_Knowledge_of_Early_Pubertal_Changes_and_Menstrual_Hygiene_in_Selected_Secondary_Schools_in_Sapele_Delta_State_Nigeria
11. Yao J, Ziapour A, Abbas J, Toraji R, NeJhaddadgar N. Assessing puberty-related health needs among 10-15-year-old boys: a cross-sectional study approach. Arch Pediatr. 2022 May 1;29(4):307-11. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6796310/>
12. Mahalakshmi M. A study to assess the effectiveness of

- structured teaching programme on knowledge and attitude regarding pubertal changes among pre-adolescent girls aged between 11-12 years in selected government schools at Dindigul District [dissertation]. Dindigul: Sakthi College of Nursing; [date unknown]. Available from:
https://www.researchgate.net/publication/356005384_Effectiveness_of_Structured-TeachingProgramme_on_Adolescents'_Knowledge_of_Early_Pubertal_Changes_and_Menstrual_Hygiene_in_Selected_Secondary_Schools_in_Sapele_Delta_State_Nigeria
13. Patel Priyankat, Mathew MB. A study to assess the effectiveness of video assisted teaching on knowledge regarding menstrual health among the adolescent girls in selected areas of Dadra and Nagar Haveli. Available from:<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6796310/>
 14. Prasad JL, Abishek A, Ananthi CC, Banu R, Lakshmi L. A study to assess the knowledge on pubertal changes and menarche among adolescent girls residing in a selected rural community, Kanchipuram District, Tamilnadu. Jinu M, Thankamma P. George, NABalaram, Sujisha SS2. Profile of burn deaths: A study based on postmortem examination of burn cases at RNT. *Medico Legal Update*. 2020 Jul;20(3):115. Available from: <https://core.ac.uk/reader/235663492>
 15. George M. Preparing girls for menarche. Available from:<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5333382/>
 16. Anusha L, Radhika M, Indira S. Effectiveness of structured teaching programme on knowledge regarding pubertal changes among pre-adolescent girls. *IJAR*. 2015 Oct;1(12):679-82. Available from: <https://www.allresearchjournal.com/archives/?year=2015&vol=1&issue=12&part=J&ArticleId=1154>
 17. Shrestha S, Neupane B. Knowledge and attitude regarding pubertal changes among secondary level students of selected schools of Dhulikhel municipality. *Kathmandu Univ Med J*. 2020 Dec 31;18(4):386-90. Available from: <https://www.kumj.com.np/issue/72/386-390.pdf>
 18. Dhakal B. Knowledge and attitude regarding pubertal health among adolescent girls. *J Nepal Health Res Counc*. 2019;17(4):437-2. Available from: <https://pubmed.ncbi.nlm.nih.gov/32001845/>
 19. Coast E, Lattof SR, Strong J. Puberty and menstruation knowledge among young adolescents in low- and middle-income countries: a scoping review. *Int J Public Health*. 2019 Mar 1;64:293-304. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6439145/>
 20. Farid M, Barandouzi ZA, Valipour NS. Knowledge, attitudes, and coping strategies regarding pubertal changes among adolescent girls: Risks and compliances for health promotion in puberty. *J Educ Health Promot*. 2019 Jan 1;8(1):176. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6796310/>
 21. Ray K, Bhattacharjee S, Biswas R, Mukhopadhyay DK, Sarkar TK. Awareness regarding pubertal changes and reproductive health in school-going adolescent girls of a border area of Darjeeling district: a cross-sectional study. *Indian J Matern Child Health*. 2011;13:1-8. Available from:
https://www.researchgate.net/publication/283986779_Awareness_regarding_pubertal_changes_and_reproductive_health_in_school_going_adolescent_girls_of_a_border_area_of_Darjeeling_district_-_A_cross_sectional_study
 22. Prasad JL, Abishek A, Ananthi CC, Banu R, Lakshmi L. A study to assess the knowledge on pubertal changes and menarche among adolescent girls residing in a selected rural community, Kanchipuram District, Tamilnadu. *Medico Legal Update*. 2020 Jul 1;20(3):102-4. Available from:
<https://ijop.net/index.php/mlu/article/view/1376>
 23. Farid M, Barandouzi ZA, Valipour NS. Knowledge, attitudes, and coping strategies regarding pubertal changes among adolescent girls: Risks and compliances for health promotion in puberty. *J Educ Health Promot*. 2019;8. Available from:
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6796310/>
 24. Ajong AB, Tankala NN, Yakum MN, Azenoi IS, Kenfack B. Knowledge of peri-menarcheal changes and a comparative analysis of the age at menarche among young adolescent school girls in urban and rural Cameroon. *BMC Public Health*. 2020 Nov 4;20(1):1661. Available from:
<https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-020-09787-y>
 25. Fernando AN, Sharp G. Genital self-image in adolescent girls: the effectiveness of a brief educational video. *Body Image*. 2020 Dec 1;35:75-83. Available from: <https://pubmed.ncbi.nlm.nih.gov/33011539/>
 26. Mariana I. Development of animated video-based interactive media as learning media in introduction to reproductive health. *J Asian Stud Cult Lang Art Commun*. 2024 Jun 25;5(1):23-37. Available from: <https://journal.haqipub.com/index.php/jas/article/view/382>
 27. Mohammed Gena H. Menstrual hygiene management practices and associated factors among secondary school girls in East Hararge Zone, Eastern Ethiopia. *Adv Public Health*. 2020 Nov 12;2020:17. Available from:
<https://onlinelibrary.wiley.com/doi/10.1155/2020/8938615>
 28. Jyoti K, Lal M, Mahajan S, Singh T. Assessing the impact of information, education and communication activities regarding menstrual hygiene practices among adolescent girls 13-17 years in the rural area of Amritsar. *Int J Community Med Public Health*. 2020 Apr;7(4):1470. Available from:
https://www.researchgate.net/publication/340230557_Assessing_the_impact_of_information_education_and_communication_activities_regarding_menstrual_hygiene_practices_among_adolescent_girls_13-17_years_in_the_rural_area_of_Amritsar
 29. Belayneh Z, Mekuriaw B. Knowledge and menstrual hygiene practice among adolescent school girls in southern Ethiopia: a cross-sectional study. *BMC Public Health*. 2019 Dec;19:1-8. Available from:
<https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-019-7973-9>
 30. Bulto GA. Knowledge on menstruation and practice of menstrual hygiene management among school

adolescent girls in Central Ethiopia: a cross-sectional study. Risk Manag Health Care Policy. 2021 Mar 5;9:11-23. Available from: <https://pubmed.ncbi.nlm.nih.gov/33707977/>

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