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Evaluating a Multimedia Educational Intervention on Preconception Care Awareness Among Female College Students

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Abstract: ***The study aimed to assess the effectiveness of a multimedia educational package in improving knowledge and attitudes regarding preconception care among college students. Using a quasi-experimental one-group pre-test post-test design, the researchers evaluated 170 students from selected colleges through structured questionnaires and a modified Likert scale. Following a 20–25-minute multimedia intervention, post-test assessments were conducted after 14 days. The findings revealed a statistically significant improvement in both knowledge ($t = 25.6$, $p < 0.001$) and attitude ($t = 18.08$, $p < 0.001$) scores. These outcomes suggest that multimedia-based educational tools can play a valuable role in promoting reproductive health awareness among young women. The study recommends integrating such interventions into broader public health strategies to inform women during their reproductive years.***

Keywords: preconception care, multimedia education, college students, reproductive health, health intervention

1. Introduction

Preconception care refers to the biological, behavioral, and social services that are given to a woman or couple either prior to conception or during their reproductive years. Every society places a high value on maternal health. In 2015, 2.6 million women worldwide lost their babies in stillbirths that occurred in the final trimester of pregnancy or during childbirth. Medical issues also have an impact on the health of mothers and children. Not every developing country has superior conditions with regard to maternal and child health. In the absence of a clear plan and activity involvement in public health, the challenges have been disregarded globally[1].

The World Health Organization (WHO) as of late expressed that all-inclusive four out of 10 women report that their pregnancies were impromptu[2]. Factors such as age at first birth, wealth index, birth order, poor nutritional status and quality of life, mother's age, underweight, delayed pregnancies are contributing to adverse pregnancy outcomes[3]. Preconception care (PCC) increases the likelihood of couple's being healthy and having a healthier baby. It is an important strategy to prevent maternal and perinatal complications[4].

2. Need and Significance of the Study

The first menstrual cycle, known as menarche, and the menopause, which is the cessation of menses for a period of 12 consecutive months, mark a woman's reproductive years. 1.9 billion women in the world in 2021 are between the ages of 15 and 49[5]. In India, women of reproductive age (15-49 years) constitute approximately 30% of the total population, which translates to around 365 million women. Kerala, is a state known for its positive sex ratio. Approximately 52% of Kerala's population consists of women, and the overall sex ratio is 1,084 females per 1,000 males[6]. As a signatory to the Sustainable Development Goals (SDGs) of the United Nations (UN), the Government of India has set a target for the worldwide maternal mortality ratio (MMR) of less than 70 deaths per 100,000 live births by the year 2030[7]. From 2000 to 2020, the global maternal mortality ratio (MMR) is 223 deaths per 100,000 live births[8]. Kerala has registered an incredible maternal mortality ratio (MMR) of 19 (per one lakh live births) according to the latest Sample Registration System[9]. In India the MMR stands at 97 per 100,000 live births[10].

Unintended pregnancies have a negative impact on women's personal life, their families, and society. Globally, 74 million women had unintended pregnancies in low and middle-income countries, and every year around 25 million unsafe abortions and 47 thousand maternal deaths occur.

In many nations, women fall pregnant far earlier than they would like to have more children and pregnancies than they would like. In recent decades, women have generally spent more time avoiding unintended or mistimed pregnancies since social and economic advancement, as well as urbanization, have made many couples want fewer children[12].

The investigator during her clinical postings in SAT hospital, found that most women did not receive any preconception care and they are not even aware of preconception care. Women still have limited access to information on preconception care. This gave rise to an overwhelming need in the researcher to give women sensitive health information on preconception care in their reproductive years to raise their awareness regarding preconception care and encourage to take proactive measures to prevent future complications related to pregnancy. So, this study aims to develop a multimedia educational package on preconception care to test its effectiveness on knowledge and attitude regarding preconception care among female college students.

Emphasizing preconception care among young adults is vital for preventing maternal and perinatal complications, especially in societies where awareness and access to such care remain limited."

Cluster Sampling

Stage 1:
There are 13 Arts and Science colleges under Kerala University in Thiruvananthapuram corporation, out of which 7 colleges are Government and 6 are private colleges.

Stage 2:
From the 13 Arts and Science colleges, 4 Arts and Science colleges were selected. 2 from Government and 2 from private sector was selected by stratified random sampling technique.

Stage 3:
One department was selected randomly from each college. One class from UG, PG and Ph.D. were selected from that department. All the students who met selection criteria and given consent were included

Sampling

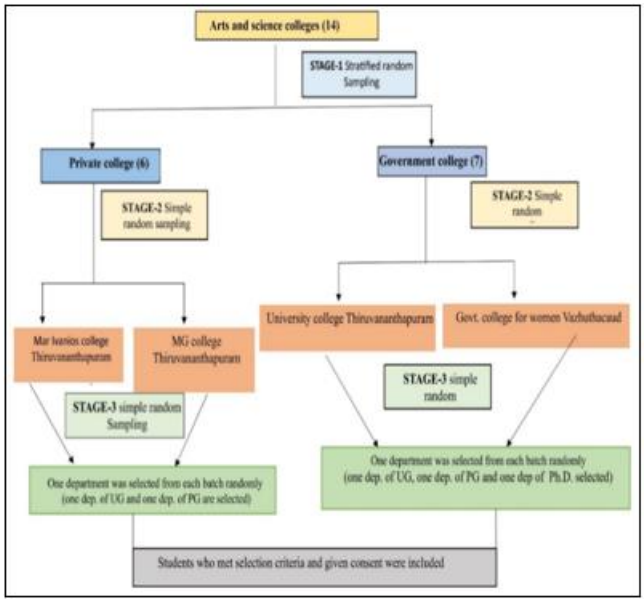

Figure 1: Schematic representation of cluster sampling

Research Design

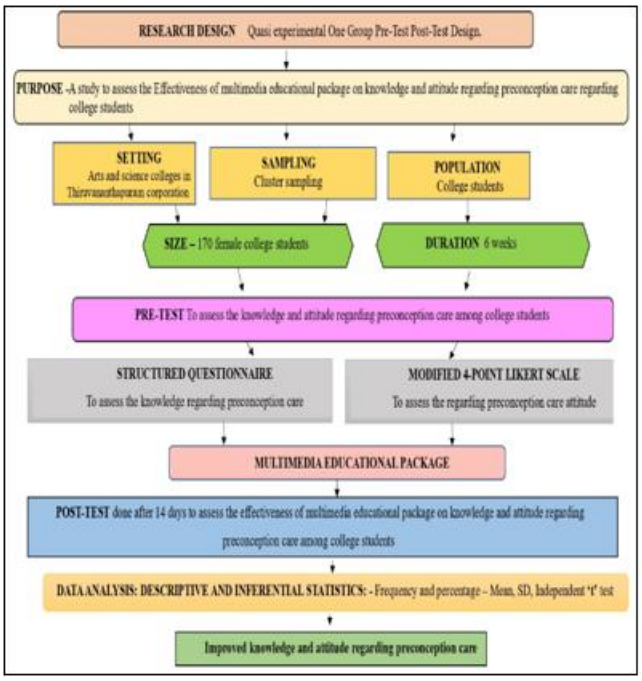

Figure 2: Schematic representation of research design

Reliability of the Tool
The general consistency of a metric is its reliability. If a measure yields consistent results under regular circumstances, it is considered to have high reliability. Split half method and test-retest method were used to analyses the tool's reliability and reliability co. efficient of the tools were found to be 0.73 and 0.78 respectively. The tool's practicality and dependability were evaluated in the pilot study before being employed in the primary investigation.

Analysis

Table 1: Distribution of college students based on knowledge and attitude regarding preconception care

	f	%
Pre- test Attitude Score		
Unfavourable	72	42.4
Moderately Favourable	66	38.8
Highly Favourable	32	18.8
Post- test Attitude Score		
Unfavourable	1	0.6
Moderately Favourable	35	20.6
Highly Favourable	134	78.8

Table 2: Mean, standard deviation and 't' value of knowledge and attitude score

	Mean	SD	Paired 't'
Knowledge Score			
Pre- test	1.8	0.7	18.087***
Post test	2.8	0.4	
Attitude Score			
Pre- test	1.5	0.6	25.6***
Post test	2.8	0.4	

3. Result

Results show that the pre-test mean knowledge score was 1.5, with a standard deviation of 0.6 and post-test mean knowledge score was 2.8 with standard deviation of 0.4. The

t value (25.6) obtained was statistically significant at p value <0.001. So, there was a significant difference in knowledge score regarding preconception care among college students before and after intervention. The pre-test mean attitude score was 1.8 with standard deviation of 0.7 and post-test mean attitude score was 2.8 with standard deviation 0.4. The t value (18.087) obtained was statistically significant at p value <0.001. So, there was a significant difference in attitude score regarding preconception care among college students before and after intervention. So, it can be concluded that the multimedia educational package was successful in progressing the level of knowledge and attitude with respect to preconception care among college students.

4. Conclusions

This study underscores the potential of multimedia educational tools in enhancing awareness and shaping positive attitudes toward preconception care among young women. The statistically significant improvement in knowledge and attitude scores supports the integration of such interventions in college health programs. Broadly, this approach may contribute to improved reproductive health outcomes in the community.

References

[1] Patel KK, Saroj RK, Kumar M. Prevalence and Determinants of Adverse Pregnancy Outcomes among Women in India: A Secondary Data Analysis. Indian J Community Med. 2021;46(3):434–7.
[2] Amaje E, Fikrie A, Utura T. Utilization of Preconception Care and Its Associated Factors among Pregnant Women of West Guji Zone, Oromia, Ethiopia, 2021: A Community-Based Cross-Sectional Study. Health Serv Res Manag Epidemiol. 2022; 9:23333928221088720.
[3] Daly MP, White J, Sanders J, Kipping RR. Women's knowledge, attitudes and views of preconception health and intervention delivery methods: a cross-sectional survey. BMC Pregnancy Childbirth. 2022 Sep 24;22(1):729.
[4] Alemu AA, Bitew MS, Zeleke LB, Sharew Y, Desta M, Sahile E, et al. Knowledge of preconception care and its association with family planning utilization among women in Ethiopia: meta-analysis. Sci Rep. 2021 May 25;11(1):10909.
[5] Family planning/contraception methods [Internet]. [cited 2024 Jun 3]. Available from: https://www.who.int/news-room/fact-sheets/detail/family-planning-contraception
[6] ECONOMIC REVIEW 2017 | State Planning Board, Thiruvananthapuram, Kerala, India [Internet]. [cited 2024 Jun 27]. Available from: https://spb.kerala.gov.in/economic-review/ER2017/web_e/ch431.php?id=41&ch=431
[7] Meh C, Sharma A, Ram U, Fadel S, Correa N, Snelgrove J, et al. Trends in maternal mortality in India over two decades in nationally representative surveys. BJOG. 2022 Mar;129(4):550–61.
[8] Maternal mortality rates and statistics - UNICEF DATA [Internet]. [cited 2024 May 18]. Available from: https://data.unicef.org/topic/maternal-health/maternal-mortality/
[9] Kerala registers an MMR of 19 in SRS, which experts term as unrealistic - The Hindu [Internet]. [cited 2024 May 20]. Available from: https://www.thehindu.com/news/national/kerala/kerala-registers-an-mmr-of-19-in-srs-which-experts-term-as unrealistic/article66201590.ece#:~:text=Kerala%20has%20registered%20an%20incredible%20maternal%20mortality%20ratio,the%20office%20of%20the%20Registrar%20General%20of%20India.
[10] Significant Decline in the Maternal Mortality Ratio (MMR) from 130 in 2014-16 to 97 per lakh live births in 2018-20: Dr. Mansukh Mandaviya [Internet]. [cited 2024 Jun 27]. Available from: https://pib.gov.in/pib.gov.in/Pressreleaseshare.aspx?PRID=1879912
[11] Sarder A, Islam SMS, Maniruzzaman, Talukder A, Ahammed B. Prevalence of unintended pregnancy and its associated factors: Evidence from six south Asian countries. PLoS One. 2021 Feb 1;16(2):e0245923.
[12] Sedgh G, Singh S, Hussain R. Intended and Unintended Pregnancies Worldwide in 2012 and Recent Trends. Stud Fam Plann. 2014 Sep;45(3):301–14.