Research Article

Effectiveness of Video-Assisted Teaching Programme on Knowledge Regarding Home Remedies for Reducing Dysmenorrhoea Among Adolescent Girls Studying at MMINSR SKIMS, Soura, Jammu and Kashmir

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ABSTRACT

Background: The menstrual period is usually painless for females, but some females experience pain and cramps during this process. This is called dysmenorrhoea. The study aimed to assess the effect of a video-assisted teaching programme on the knowledge of adolescent girls regarding home remedies for reducing dysmenorrhoea.

Methodology: A pre-experimental one-group pre-test post-test design was used involving 50 BSc Nursing 3rd semester and 2nd-year female students from MMINSR, SKIMS who were selected via purposive sampling. Data was collected using a self-structured questionnaire. A pre-test occurred on day one, followed by a video-assisted teaching program on home remedies for dysmenorrhoea. Post-test occurred on day four.

Results: The majority (80%) of participants were less than 22 years old, with most (68%) from rural areas and 84% from nuclear families. Fathers' education was primarily graduation and above (48%), and many (60%) had government-employed fathers. About half (50%) had mothers with primary education, and most (88%) were homemakers. Most (72%) experienced menarche before 14 years, with menstrual periods lasting 3–5 days for 54%. The majority (74%) experienced moderate menstrual periods, and 84% had regular cycles. The pre-test showed that 64% had poor knowledge, while the post-test indicated 100% had good knowledge.

Conclusion: Pre-test findings showed poor knowledge, highlighting the need for education on dysmenorrhoea remedies. Post-test results demonstrated effective intervention, with all participants achieving good knowledge. No significant associations were found with demographic or clinical variables. not impact knowledge levels.

Keywords: Menarche, Dysmenorrhoea, Video-Assisted Teaching Programme, Adolescent Girls, Heat Application, Ginger Tea, Turmeric Milk

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Introduction

Life is a cycle from birth to death. Today's adolescent is yesterday's girl and tomorrow's mother. In a woman's journey of life, many important changes occur, mainly at the adolescent stage. It is a period of development and transition of childhood into adolescence. The significant events include the development of secondary sexual characteristics and menarche along with lots of physical and psychological stress resulting from changes taking place in the body.[1]

Adolescent girls are subjected to certain social problems like academic challenges, difficulties with social interactions, low self-esteem, and psychological conditions such as depression, anxiety, mood swings and physical problems like Endocrine disorders, urinary tract infections, iron deficiency and menstrual abnormalities. One of the major common problems is the menstrual problem which constitutes around 78% of the total issues faced by adolescent girls.[2]

One-fifth of the world's population includes adolescent girls. Whose reproductive health needs are poorly understood, adolescents often have poor knowledge regarding reproductive changes, sexuality, and very little access to reproductive health services.[3]

Normal, regular menstruation lasts for a few days (2–8 days). The terms "menstruation" and "menses'' are derived from the Latin word menses (month), which in turn refers to the Greek mene (moon) and roots of the English words month and moon. It is the regular discharge of blood along with mucosal tissue from the innermost lining of the uterus through the vaginal canal. A single menstrual cycle is measured from the first day of the period to the first day of the next period. The average length of a menstrual cycle is 28 to 29 days, but every woman has a different cycle.[4]

The menstrual period is usually painless, but some females experience pain and cramps during this period. This is called dysmenorrhoea. Dysmenorrhoea, also known as period pain, painful periods, or menstrual cramps, is the pain experienced during menstruation. Its usual onset occurs around the time of menstruation. Symptoms usually last less than three days. The pain is felt in the pelvis or lower abdomen. Most of the females face a certain amount of pain or cramps during periods which is normal. However, if the cramps become extremely strong it is called dysmenorrhoea. Younger females are prone to experience more cramps. Dysmenorrhoea accounts for one of the most common gynaecological conditions, regardless of age or race. It is one of the most frequently identified aetiology of pelvic pain in menstruating females. It can occur without an underlying disease. Typically, it begins within one year of the first menstrual period in the absence of any underlying cause. Often the pain improves with age or following childbirth, but this does not always occur.[4]

The outcomes of untreated dysmenorrhoea are loss of work hours, college hours and personal family disruption. Therefore, dysmenorrhoea not only affects the untreated women but also affects their personal, social, family, and economic issues as well.[2]

A desire to be free from menstrual pain is an everlasting wish in the minds of females. Menstrual cramps don't have a set pattern or same intensity every month. Irrespective of the severity, the uneasiness associated with it makes those few days difficult.[1]

Dysmenorrhoea is medically managed in many ways to reduce painful menstrual cramps. The most common remedy adopted universally, to get instant pain relief, is by taking non-steroidal anti-inflammatory drugs (NSAIDs) which include drugs like aspirin, ibuprofen, naproxen, etc. These reduce the pain by prostaglandin inhibition. But common side effects include nausea, severe diarrhoea, dyspepsia, flatulence, etc. These are also costly, and it is also not recommended to continue for a long duration. An alternative method is particularly important for women showing adverse effects to medical therapy and may be beneficial as a complementary therapy. Therapies such as acupuncture, massage, exercise, and some home remedies have been used to manage pelvic pain. There are several home remedies to reduce menstrual cramps and its associated symptoms. Usually, women start using these remedies a few days before the cycle starts and continue till it ends. These are totally natural and do not result in any unwanted side effects.[1]

Most women use home remedies for relieving dysmenorrhoea and most of these are centred around the dilation of blood vessels and relaxing the muscles. These are more effective than medication and provide pain-relieving benefits.[3] Among various folk medicines, ginger and turmeric are known to have outweighing benefits.[2]

Need For the Study

Every day women of all age groups, through the changes of life experience many kinds of pain like premenstrual syndrome, dysmenorrhoea, and labour. Dysmenorrhoea being common, limits activities for one to three days per month in females who experience it.[1]

The most common problem in adolescent girls is painful menstruation. The pain is crampy usually located in the lower abdomen. Pain usually starts just before or as menstrual bleeding begins and gradually diminishes over 3–4 days. Pain is intermittent ranging from mild to severe.[4]

Dysmenorrhoea is a debilitating condition among women with a main impact on health-related quality of life, work productivity, or absenteeism in schools. It is estimated that annually worldwide it results in a loss of 600 million work hours and a 2-billion-dollar loss in productivity.[1]

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A pre-experimental study was conducted by Gayathri[5] on knowledge regarding home remedies for dysmenorrhoea among 50 nursing Students of Sri Devaraj College of Nursing, Kolar, Karnataka, India. Results revealed that on the pre-test all the study subjects had inadequate knowledge of home remedies for dysmenorrhoea. In the post-test, the majority (58%) had moderate knowledge, 22% had adequate knowledge and 20% had inadequate knowledge. There was a significant change in knowledge level before and after the administration of intervention as indicated by the use of the paired 't' test.

A quasi-experimental study was conducted by Kaur et al.[6] to evaluate the effectiveness of a structured teaching programme regarding home remedies for dysmenorrhoea among 60 adolescent girls of senior secondary school in Hoshiarpur, Punjab, India, with 30 subjects in the experimental and control groups each. The experimental group was subjected to intervention (structured teaching programme), whereas the control group was not subjected to any intervention. Data was gathered using a standard questionnaire. Results of the study showed that in the control group mean pre-test knowledge score was 14.20 and the mean post-test knowledge score was 15.23. In the experimental group, the mean pre-test knowledge score was 14.43 and the mean post-test knowledge score was 30.17. The mean pre-test and post-test knowledge scores of experimental groups were statically significant at p < 0.05 level.

Keeping in view the findings and experiences of the above studies, dysmenorrhoea is viewed as a prevalent problem affecting the daily activities of adolescent girls. The pain associated with this condition can be reduced to a greater extent using home remedies.

After doing an extensive review of the literature, regarding the use of home remedies in reducing dysmenorrhoea and because of the investigators' personal experiences and the experiences of friends, she got motivated to undertake the study to assess the knowledge of adolescent girls regarding home remedies in reducing dysmenorrhoea.

Methodology

The research design utilised in the study was a pre-experimental one-group pre-test, post-test design. Permission was acquired from the relevant authorities to conduct the study, and ethical clearance was obtained from the Institutional Ethics Committee (IEC). A purposive sampling technique was employed to select 50 adolescent girls from BSc Nursing 3rd semester and 2nd Year studying at MMINSR, SKIMS, Soura. The duration of the study was 4–6 weeks from June 16 to August 5, 2023.

Inclusion Criteria

Adolescent girls who fulfilled the following criteria were included in the study:

1. Students of BSc Nursing 3rd semester and 2nd year
2. Willing to participate
3. Available at the time of data collection

Exclusion Criteria

The girls were excluded from the study as per the following criteria:

1. Not studying in BSc Nursing 3rd semester and 2nd year
2. Absent/ unavailable at the time of data collection

The feasibility of the study was assessed through a pilot study.

A self-structured questionnaire was administered to the study subjects as a pre-test on day one, followed by an intervention in the form of a video-assisted teaching programme. Post-test assessment was conducted on day four using the same self-structured questionnaire.

The assessment of knowledge scores was categorised into various levels based on the scale developed by Skaria[1] in her study on the effectiveness of ginger tea upon dysmenorrhoea. A knowledge score of less than 50% indicated poor knowledge, 51–75% indicated average knowledge, and > 75% indicated good knowledge.

The data was analysed using descriptive and inferential statistics.

Descriptive Statistics: Frequency and percentage were used to analyse the demographic variables which were presented in tables and figures.

Inferential Statistics: A comparison of pre-test and post-test mean knowledge scores was done using 't' test. The chi-square test was used to find the association of pre-test knowledge scores with the selected demographic variables.

Results and Discussion

Findings Related to the Demographic and Clinical Variables

The study found that the majority (80%) of the study subjects were under 22 years old, with most (68%) residing in rural areas. Additionally, a large proportion (84%) came from nuclear families, and nearly half (48%) of the subjects had fathers with a graduation level of education or higher. Moreover, a significant portion (60%) of the subjects had fathers employed in government positions, while half (50%) had mothers with only primary education. The majority (88%) of mothers were homemakers. Furthermore, most (72%) of the subjects experienced menarche before the age of 14, with around half (54%) having menstrual periods lasting 3–5 days. The majority (74%) also reported having moderate menstrual periods, and 84% had regular cycles. Additionally, 42% of the subjects reported experiencing

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dysmenorrhoea (Tables 1 and 2).

In a similar study conducted by Farooq et al.[7], 43.3% of participants were aged 21, 28.3% were aged 20, and 21.7% were aged 19. The vast majority (88.3%) belonged to nuclear families. Regarding menarche, 40% experienced it at 13 years, 30% at 14 years, 11.7% at over 15 years, and 18.3% at under 12 years. Most (88%) had regular menstrual cycles, with 11.7% experiencing irregular cycles.

Similarly, in a study by Gayathri,[5] 92% of participants were aged 18-19, with 6% aged 17–18 and 2% aged 16–17. Approximately half (52%) resided in urban areas, while the other half (48%) lived in rural areas. A vast majority (84%) had no history of dysmenorrhoea, and 16% reported experiencing it. Additionally, 38% used home remedies to alleviate dysmenorrhoea symptoms.

Findings Related to the Level of Knowledge of Study Subjects

During the pre-test, the majority of the study subjects (64%) demonstrated poor knowledge, with only 36% exhibiting average knowledge, and none possessing good knowledge. However, following the post-test assessment, all subjects (100%) showed good knowledge, with none scoring poor or average (Table 3). These findings align with those of a study conducted by Savitha et al.,[8] where pre-test results indicated that 73.3% of subjects had moderate knowledge, 1.7% had adequate knowledge, and 25% had inadequate knowledge regarding home remedies for dysmenorrhoea. Post-test results from the same study showed that the majority (56.6%) had adequate knowledge, 41.6% had moderate knowledge, and only 1.8% had inadequate knowledge regarding home remedies for reducing dysmenorrhoea.

The comparison between pre-test and post-test knowledge scores revealed a statistically significant difference. Specifically, the mean post-test knowledge score of the study subjects (37.3 ± 1.82) was significantly higher than the mean pre-test knowledge score (18.54 ± 3.52) at a significance level of 0.05, indicating the effectiveness of the intervention, which was a video-assisted teaching programme (Table 4). A similar study conducted by Sheikh et al.[9] also demonstrated significant improvements in knowledge scores. In their study, the mean post-test knowledge score (24.9 ± 2.54) was significantly higher than the mean pre-test knowledge score (12.7 ± 2.51), highlighting the high effectiveness of the video-assisted teaching programme in improving the knowledge of adolescent girls.

Findings Related to the Association of Knowledge Level of Study Subjects with Selected Demographic and Clinical Variables

The results indicated that there was no statistically significant association between the pre-test knowledge scores of study subjects and various demographic and clinical variables, including age, residence, type of family, fathers' education, fathers' occupation, mothers' education, mothers' occupation, age at menarche, duration of periods, type of flow, pattern of cycles, and whether a case of dysmenorrhoea (Tables 5 and 6). A similar study conducted by Kaur et al.[6] revealed that factors such as age, education of mother, occupation of mother, regularity of menstrual cycle, and presence of dysmenorrhoea did not influence the knowledge of adolescent girls regarding home remedies for dysmenorrhoea in both the control and experimental groups

Table 1.Frequency and Percentage Distribution of Study Subjects According to Their Demographic Variables

(N = 50)

Demographic Variables	Category	Frequency (f)	Percentage (%)
Age in years	< 22	40	80
	> 22	10	20
Residence	Urban	16	32
	Rural	34	68
Type of family	Nuclear	42	84
	Joint	8	16
Father's education	Primary	8	16
	Secondary	13	26
	Higher secondary	5	10
	Graduate and above	24	48
Father's occupation	Private employee	20	40
	Government employee	30	60

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Mother's education	Primary	25	50
	Secondary	9	18
	Higher secondary	11	22
	Graduate and above	5	10
Mother's occupation	Homemaker	44	88
	Private employee	4	8
	Government employee	2	4

Table 2.Frequency and Percentage Distribution of Study Subjects According to Their Clinical Variables

(N = 50)

Clinical Variables	Category	Frequency (f)	Percentage (%)
Age at menarche (years)	< 14	36	72
	> 14	14	28
Duration of menstrual periods (days)	3–5	27	54
	5–7	21	42
	> 7	2	4
Type of menstrual flow	Scanty (< 2 pads in 24 hours)	9	18
	Moderate (2–4 pads in 24 hours)	37	74
	Heavy (> 4 pads in 24 hours)	4	8
Pattern of menstrual cycle (days)	Regular (21–35)	42	84
	Irregular (< 21 or > 35)	8	16
Is it a case of dysmenorrhoea?	Yes	21	42
	No	29	58

Table 3.Frequency and Percentage Distribution of Pre-Test and Post-Test Knowledge Scores Regarding Home Remedies in Reducing Dysmenorrhoea

(N = 50)

Level of Knowledge	Knowledge Scores	Pre-Test Score		Post-Test Score	
		Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)
Poor	< 20	32	64	0	0
Average	20–30	18	36	0	0
Good	> 30	0	0	50	100

Table 4.Comparison of Pre-Test and Post-Test Knowledge Scores Regarding Home Remedies in Reducing Dysmenorrhoea

(N = 50)

Knowledge Score	Mean ± SD	Mean %	Mean Difference	p Value
Pre-test	18.54 ± 3.52	46.50	18.66	0.001**
Post-test	37.2 ± 1.82	92.95		

**: Highly significant

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Table 5.Association Between Pre-Test Knowledge Scores of Participants Regarding Home Remedies in Reducing Dysmenorrhoea and Their Selected Demographic Variables

(N = 50)

Demographic Variables	Category	Poor Knowledge		Average Knowledge		Good Knowledge		p Value
		f	%	f	%	f	%	
Age in years	< 22	27	54.0	13	26.0	0	0.0	0.302 NS
	> 22	5	10.0	5	10.0	0	0.0	
Residence	Urban	11	22.0	5	10.0	0	0.0	0.631 NS
	Rural	21	42.0	13	26.0	0	0.0	
Type of family	Nuclear	26	52.0	16	32.0	0	0.0	0.479 NS
	Joint	6	12.0	2	4.0	0	0.0	
Father's education	Primary	3	6.0	5	10.0	0	0.0	0.08 NS
	Secondary	10	20.0	3	6.0	0	0.0	
	Higher secondary	5	10.0	0	0.0	0	0.0	
	Graduate and above	14	28.0	10	20.0	0	0.0	
Father's occupation	Private employee	12	24.0	8	16.0	0	0.0	0.63 NS
	Government employee	20	40.0	10	20.0	0	0.0	
Mother's education	Primary	15	30.0	10	20.0	0	0.0	0.813 NS
	Secondary	7	14.0	2	4.0	0	0.0	
	Higher secondary	7	14.0	4	8.0	0	0.0	
	Graduate and above	3	6.0	2	4.0	0	0.0	
Mother's occupation	Homemaker	29	58.0	15	30.0	0	0.0	0.748 NS
	Private employee	2	4.0	2	4.0	0	0.0	
	Government employee	1	2.0	1	2.0	0	0.0	

NS: Non-significant

Table 6.Association Between Pre-Test Knowledge Scores of Participants Regarding Home Remedies in Reducing Dysmenorrhoea and Their Selected Clinical Variables

(N = 50)

Clinical Variables	Category	Poor Knowledge		Average Knowledge		Good Knowledge		p Value
		f	%	f	%	f	%	
Age at menarche (years)	< 14	23	46.0	13	26.0	0	0.0	0.979 NS
	> 14	9	18.0	5	10.0	0	0.0	
Duration of menstrual periods (days)	3–5	19	38.0	8	16.0	0	0.0	0.13 NS
	5–7	13	26.0	8	16.0	0	0.0	
	> 7	0	0.0	2	4.0	0	0.0	
Type of menstrual flow	Scanty	6	12.0	3	6.0	0	0.0	0.826 NS
	Moderate	24	48.0	13	26.0	0	0.0	
	Heavy	2	4.0	2	4.0	0	0.0	
Pattern of menstrual cycle	Regular	29	58.0	13	26.0	0	0.0	0.088 NS
	Irregular	3	6.0	5	10.0	0	0.0	
Is it a case of dysmenorrhoea?	Yes	14	28.0	7	14.0	0	0.0	0.738 NS
	No	18	36.0	11	22.0	0	0.0	

NS: Non-significant

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Conclusion

The findings of the present study indicate that the majority of the study subjects had poor knowledge regarding home remedies for reducing dysmenorrhoea during the pre-test assessment, highlighting the need for education on this topic. However, following the implementation of a video-assisted teaching program, all study subjects demonstrated good knowledge, indicating the effectiveness of the intervention. Additionally, no significant association was found between pre-test knowledge scores and selected demographic and clinical variables, suggesting that these factors may not influence the level of knowledge among the subjects.

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Conflict of Interest: None

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