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Research Article

A Study to Evaluate the Effectiveness of Planned Teaching Program on Knowledge Regrading Menstrual Disorders Among Girls in Selected PU Colleges at Vijayapur

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Abstract

Aim: The aim of study was to evaluate the effectiveness of planned teaching program (PTP) on knowledge regrading menstrual disorders among girls in selected PU colleges at Vijayapur.

Materials and Methods: Pre-experimental (one group pre-test and post-test) research design was employed in this study. The PTP is the independent variable, while the knowledge of the adolescent girls enrolled in PU College regarding menstrual diseases is the dependent variable. The location of the teenage ladies at particular PU College in Vijayapur. To choose the subjects, a simple random sampling procedure is utilized. The sample consists of 60 teenage girls who attend PU College in Vijayapur. Structured knowledge questionnaires were employed as the study's instrument to gauge adolescent girls' knowledge about menstrual problems.

Results: This study aims to evaluate the efficacy of a PTP in terms of its impact on knowledge acquisition as measured by post-test scores. Based on the pre-test and post-test results, it is evident that the adolescent girls' knowledge regarding menstrual disorders significantly increased from a mean score of 14–25.2. This indicates that the PTP effectively enhances the knowledge of adolescent girls in relation to menstrual disorders.

Conclusion: The findings of study indicate that the initial level of knowledge among adolescent girls regarding menstrual disorders was measured at 14, while their knowledge after the teaching program increased to 25.2. This significant difference strongly suggests that the implemented educational intervention effectively enhances the awareness of menstrual disorders among adolescent girls.

Keywords: Effectiveness, evaluate, menstrual disorders, planned teaching program

Introduction

The regular and natural changes that take place in a woman's reproductive system, notably in the uterus and ovaries, during the course of her menstrual cycle are what make it possible for her to get pregnant. If fertilization does not take place, the lining of the uterus sheds itself in a process known as menstruation, which is often referred to as a period. This process takes place once every 14 days. Menarche refers to the age range between 12 and 15 years old, which is typically when a girl experiences her first menstruation. In a regular cycle, the period might last anywhere from 3 to 5 days. After a woman reaches menopause, which typically occurs between the ages of 45 and 55, she no longer experiences menstruation. The menstrual cycle is controlled by the hormonal shifts that occur in a woman's body. Menstrual disorders are conditions that manifest themselves in an atypical manner during a woman's menstrual cycle. There are numerous varieties of anomalies, each with its own unique set of symptoms. Dysmenorrhea, menstrual flow irregularities,

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and premenstrual symptoms are some of the most common menstrual abnormalities that a female experience.[1]

When a girl is going through the process of menarche, her periods could be unpredictable and erratic. Also referred to as the female puberty stage. Every time a woman has her period, the endometrium works to get itself ready to support a developing baby. In the event that fertilization does not take place, the endometrium will be expelled from the body during the monthly cycle. In certain instances, a disruption in this cycle may occur, which may be an indication of menstrual abnormalities. The menopause is the point in a woman's life when she stops her periods for good. Menstrual issues include, among others polymenorrhagia, premenstrual symptoms, menorrhagia, amenorrhea, oligomenorrhea, a typical vaginal discharge, irregular menstruation, and dysmenorrhea. Several studies indicate that a significant proportion of women of reproductive age experience menstruation-related health difficulties. Menstrual issues not only constitute a financial hardship, but also rank among the most prevalent factors contributing to young women's chronic absence from school and subpar academic performance.[2]

In particular, women suffer highly painful periods, which can have a negative impact on both their attendance and performance in school. Menstruation has the potential to interfere with daily life if it is not managed effectively. Girls skipping school because they feel ashamed or "unclean", a lack of proper facilities and supplies, and restrictions on girls' mobility when they are menstruating are all factors that contribute to this issue. The taboos, misconceptions, and shame that surround menstruation can lead to girls being teased, shamed, and excluded from day-to-day activities, all of which have a severe impact on the girls' feelings of dignity. Many of the cultural and religious customs surrounding periods are said to have originated from discriminatory and patriarchal beliefs about a woman's status and role in society. It is extremely important for girls to have access to written and spoken information regarding menstruation and the management of menstrual hygiene. Without this information, the majority of girls would enter puberty without any prior understanding of what is occurring to their body.[3]

Clinical data from the published literature as of the 3rd year after menarche show that the time between bleeding episodes is between 21 and 34 days, with a flow lasting between 3 and 7 days and a mean menstrual blood loss of 35 mL (range 5–80 mL). In addition, the flow lasts for 3–7 days. It is not appropriate to reassure young women who are experiencing chaotically irregular periods in their 1st year of gynecological development that it is "normal" to have irregular periods. Rather, these young women should have their periods assessed. A disruption in the normal levels of central gonadotropin-releasing hormone can be the root cause of menstrual abnormalities.[4]

Research objectives

1. To assess the knowledge on menstrual disorders among girls in selected P.U colleges
2. To evaluLate the planned teaching program on menstrual disorders
3. To find the association between knowledge score with sociodemographic variables.

Hypothesis

H_1: There is a significant difference between pre-test knowledge score with selected sociodemographic variables

H_2: There is a significant association between pre-test and post-test knowledge scores with planned teaching program (PTP).

Research methodology

Research approach

An evaluative research approach.

Research design

In the present study, pre-experimental one group pre-test and post-test design was used.

Setting

The present study was conducted in PU College at Vijayapur.

Population

The population for this study was adolescent girls in PU College at Vijayapur.

Sample

In the present study, adolescent girls who met the inclusion criteria were selected as samples.

Sample size

The sample size for the present study is 60.

Sampling technique

Purposive sampling technique is used for the present study.

Sampling criteria

Inclusion criteria: Adolescent girls

1. Who are studying in selected PU Colleges at Vijayapur
2. Who can understand, Read, and write English
3. Who are willing to participate in selected PU Colleges at Vijayapur.

Exclusion criteria: Adolescent girls

1. Who are not available during the time of data collection
2. Who are not willing to participate in this study.

Selection and development of the study tool

The tool data relevant to the study could be collected while also expanding the body of general knowledge in the field. The researcher employed instruments for data collecting to observe or quantify the key.

The tool was chosen and developed in accordance with the study's goals. Following a review of the pertinent literature, it is determined that the structured knowledge questionnaire is appropriate. The subject matter experts and guide improved and validated the produced tool.

Data collection procedure

The 4-week data collection period was used. The principal of the PU colleges in Vijayapur gave his approval. After introducing the study and outlining its goals, the researcher administered the instrument. Adolescent females were given the pre-test structured knowledge questionnaire on the 1st day, and their knowledge of menstrual disorders was evaluated. After administering a pre-test and using visual aids to make it easier for participants to grasp, the investigator gave a post-test for 1 h to gauge participants' knowledge of menstruation diseases in adolescent girls. The primary study lasts for 6 weeks.

Results

Table 1 Maximum subjects, that is, 24 (40%) of the girls were between the age group of 15–16 years, 31(51.7%) of them were between the age group of 17–18 years, and 5 (8.3%) of girls were between the age group of 19–20 years.

Maximum subjects, that is, 38 (63.3%) of girls were Hindu, 15 (25%) of them were Muslim, and 7 (11.7%) of girls were Christian.

Maximum subjects, that is, 21 (35%) of girls from selected PU colleges at Vijayapur belongs to rural places, 24 (40%) of them were staying in semi urban area, and 15 (25%) of girls staying in urban areas.

Maximum subjects, that is, 36 (60%) of girls from selected PU colleges at Vijayapur from nuclear family, 16 (26.7%) of them were from joint family, 3 (5%) of them were belonged to single parent family, and 5 (8.3%) of girls were from extended family.

Maximum subjects, that is, 34 (56.7%) of girls from selected PU colleges at Vijayapur belong to below 10000/- family income, 20 (33.3%) of them belonged to 10001–30000/- family income, 6 (10%) of girls belonged to family have income between 31001 and 50000/-, and none of them belonged to family income 50001/- and above.

Maximum subjects, that is, 20 (33.3%) of girls from selected PU colleges at Vijayapur were getting information from Books and Magazines, 10 (16.7%) of them were getting information from Family/Relatives, 8 (13.3%) of girls were getting information from health professionals and 22 (36.7%) of them were have no information (Table 1).

The knowledge of girls from selected PU colleges at Vijayapur before administer PTP. In that 42 (70%) of girls from selected PU colleges at Vijayapur were having inadequate knowledge, 18 (30%) of them were having moderate knowledge, and none of them were have adequate knowledge regarding menstrual disorders reveals that the level of knowledge of girls from selected PU college at Vijayapur after administering PTP. In 0 (0%) of them are have inadequate knowledge, 12 (20%) of girls are having moderate knowledge regarding menstrual disorders, and 48 (80%) of girls from selected PU college at Vijayapur are having adequate knowledge regarding menstrual disorders (Table 2).

Table 3 shows the comparison of pre- and post-test knowledge on menstrual disorders among girls. In pre-test, 70% of girls have inadequate knowledge, 30% having moderate knowledge, and 0% adequate knowledge about menstrual disorders while in post-test, 0% of girls having inadequate knowledge, 20% of girls having moderate knowledge, and 80% of girls having adequate knowledge about the menstrual disorders (Table 3).

Table 1: Frequency and percentage distribution of subjects according to sociodemographic variables

S. No	Sociodemographic variables	No	*n*=60
			%
1	Age		
	a. 15–16 years	24	40
	b. 17–18 years	31	51.7
	c. 19–20 years	5	8.3
2	Religion		
	a. Hindu	38	63.3
	b. Muslim	15	25.0
	c. Christian	7	11.7
	d. Others. If specify	0	0.0
3	Place of residence		
	a. Rural	21	35.0
	b. Semi urban	24	40.0
	c. Urban	15	25.0
4	Type of family		
	a. Nuclear family	36	60.0
	b. Joint family	16	26.7
	c. Single parent family	3	5.0
	d. Extended family	5	8.3
5	Family income in rupees Per month		
	a. Below 10,000/-	34	56.7
	b. 10,001–30,000/-	20	33.3
	c. 31,001–50,000	6	10.0
	d. 50,001 and above	0	0.0
6	Source of information		
	a. Books and magazines	20	33.3
	b. Family/relatives	10	16.7
	c. Health professionals	8	13.3
	d. No information	22	36.7

Table 2: To assess the knowledge on menstrual disorders among girls before administer PTP (*n*=60)

Level of knowledge	Score	No of respondents			
		Before administer PTP		After administer PTP	
		No	%	No	%
Inadequate	<50%	42	70	0	0
Moderate	50–75%	18	30	12	20
Adequate	>75%	0	0	48	80
Total		60	100	60	100

PTP: Planned teaching program

Table 3: Comparison of pre- and post-test knowledge on menstrual disorders among girls (*n*=60)

Level of knowledge	Pre-test		Post-test	
	No	%	No	%
Inadequate	42	70	0	0
Moderate	18	30	12	20
Adequate	0	0	48	80
Total	60	100	60	100

Table 4 shows that range, mean, SD, and mean % of knowledge on menstrual disorders among girls in that definition and types of menstrual disorders mean score was 55 and 10.4 SD score was 3.3 and 2.7 and mMean % was 42.3 and 80.0 in pre- and post-test. The score for causes and risk factor for mean score 22 and 3.4, SD score was 1.9 and 2.3, and Mean % score was 55.0 and 85.0 in pre- and post-test, respectively. The mean score was 2.1 and 3.5 and SD score was 1.9 and 2.2 and mean % score was 52.5 and 87.5 for the signs and symptoms in pre- and post-test, respectively. The investigations and treatment mean score was 4.2 and 7.9, SD score was 2.2 and 2.6, and 46.7 and 87.8 was the mean % score in pre- and post-test, respectively (Table 4).

Table 5 shows that the efficacy of a PTP is measured by the increase in knowledge scores observed in the post-test. Based on the pre-test and post-test results, it can be concluded that the adolescent girl's initial knowledge regarding menstrual disorders was measured at 14, while her knowledge after the PTP increased to 25.2. This increase in knowledge is statistically significant, providing sufficient evidence to support the effectiveness of the PTP in enhancing the knowledge of adolescent girls regarding menstrual disorders (Table 5).

Table 6 reveals that there was no association between pre-test knowledge with selected demographic variables such as age, religion, and type of family. However, there was a significant association between pre-test knowledge scores with place of residence, family income, and source of information.

Chi-square test was used to find the association between the sociodemographic variables and knowledge of subjects regarding menstrual disorder. No significant association was found between the knowledge of menstrual disorder and their sociodemographic variables: Age, religion, and type of family.

A significant association was found between the knowledge of menstrual disorder and their sociodemographic variables: Place of residence, family income, and source of information (Table 6).

Discussion

Ovarian tumors in children are rare, but research has shown that they can still have endocrine function, which can interfere with normal feedback processes and cause amenorrhea. Ovarian Sertoli-Leydig cell tumors (SLCTs) are more likely to occur in individuals who inherit germline DICER1 mutations. They were described as the first instance to our knowledge of secondary amenorrhea brought on by high levels of inhibin B in a female adolescent with an ovarian SLCT. Ovarian tumors should be considered in the differential diagnosis for pediatric patients who come with monthly irregularities, according to this study. It is appropriate to assess inhibin levels as well as the hypothalamic-pituitary-ovarian axis early on. Our instance highlights the need of DICER1 mutation testing in pediatric ovarian SLCT patients.[5]

A research undertaken to examine the prevalence of functional hypothalamic amenorrhea (FHA) in young women, which is often attributed to low body weight, excessive physical activity, and elevated levels of stress. The study suggests that a majority of women exhibited normal menstrual cycles before experiencing alterations in various parameters such as weight, stress, and exercise. Athletes exhibit a greater prevalence of certain conditions, which can be attributed to the interplay between physical activity and low body weight during the stages of puberty and the menstrual cycle. In instances where treatment-resistant FHA persists, it may be imperative to substitute hormones with physiologically appropriate levels of transdermal estrogen and cyclic progesterone to promote optimal bone health in young female individuals.[6]

The study aim was to summarize the most recent research on using medicinal herbs to treat primary dysmenorrhea. In at least one RCT, the majority of the medicinal plants tested showed benefit in reducing menstruation pain. The information base regarding the use of these medicinal herbs in the treatment of primary dysmenorrhea was revealed by this investigation. Before

Table 4: To assess range, mean, SD, and mean % of pre-test knowledge on menstrual disorders among girls (*n*=60)

Domain			Mean		SD		Mean%	
	Statement	Max score	Pre-test	Post-test	Pre-test	Post-test	Pre-test	Post-test
Definition and types of menstrual disorders	13	13	55	10.4	3.3	2.7	42.3	80.0
Causes and Risk factor	4	4	22	3.4	1.9	2.3	55.0	85.0
Signs and symptoms	4	4	2.1	3.5	1.9	2.2	52.5	87.5
Investigations and treatment	9	9	4.2	7.9	2.2	2.6	46.7	87.8
Overall	30	30	14	25.2	3.4	3.1	46.7	84.0

Table 5: To evaluate the effectiveness of planned teaching program on menstrual disorders *n*=60

Domain	Pre-test		Post-test		Enhancement		Paired "t" test
	Mean	SD	Mean	SD	Mean	SD	
Definition and types	5.5	3.3	10.4	2.7	4.9	2.3	16.5**
Causes and Risk factor	2.2	1.9	3.4	2.3	1.2	1.9	4.9**
Signs and symptoms	2.1	1.9	3.5	2.2	1.4	1.8	6**
Investigations and treatment	4.2	2.2	7.9	2.6	3.7	2.4	12**
Overall	14	3.4	25.2	3.1	11.2	2.8	31**

**Significant at $P<0.01$, df 59 t value 1.6

Table 6: To find the association between knowledge score with sociodemographic variables *n*=60

S. No	Sociodemographic variables	No	%	No of Respondents				Chi- square
				≤Median (32)		>Median (28)		
1	Age			No	%	No	%	
	a. 15–16 years	24	40	17	70.8	7	29.2	5.7
	b. 17–18 years	31	51.7	12	38.7	19	61.3	df 2
	c. 19–20 years	5	8.3	3	60.0	2	40.0	N. S
2	Religion							
	a. Hindu	38	63.3	20	52.6	18	47.4	0.6
	b. Muslim	15	25.0	9	60.0	6	40.0	df 2
	c. Christian	7	11.7	3	42.9	4	57.1	N. S
	d. Others. If Specify	0	0.0	0	0.0	0	0.0	
3	Place of residence							
	a. Rural	21	35.0	16	76.2	5	23.8	14.3
	b. Semi urban	24	40.0	14	58.3	10	41.7	df 2
	c. Urban	15	25.0	2	13.3	13	86.7	S
4	Type of family							
	a. Nuclear family	36	60.0	20	55.6	16	44.4	3.3
	b. Joint family	16	26.7	10	62.5	6	37.5	df 3
	c. Single parent family	3	5.0	1	33.3	2	66.7	N. S
	d. Extended family	5	8.3	1	20.0	4	80.0	
5	Family income in rupees Per month							
	a. Below 10,000/-	34	56.7	23	67.6	11	32.4	10.2
	b. 10,001–30,000/-	20	33.3	9	45.0	11	55.0	df 2
	c. 31,001–50,000	6	10.0	0	0.0	6	100.0	S
	d. 50,001 and above	0	0.0	0	0.0	0	0.0	
6	Source of information							
	a. Books and magazines	20	33.3	5	25.0	15	75.0	16.9
	b. Family/relatives	10	16.7	5	50.0	5	50.0	df 3
	c. Health professionals	8	13.3	3	37.5	5	62.5	S
	d. No information	22	36.7	19	86.4	3	13.6	

NS: Not significant, S: Significant at $P<0.05$ level

drawing any conclusions on the effectiveness and safety of using these medicinal plants, the study suggested more research.[7]

To present the preliminary findings of a pilot study on the level of gynecological prevention knowledge among minors sent to a juvenile attendance center by court orders, a survey study was carried out. Participants in health preventive classes in late 2010 and early 2011 filled out an anonymous survey form. The study sample was made up of young adults in the Zamo region of South-east Poland who were being watched over by probation officers and ranged in age from 15 to 17 (mean age: 15.72 years, median = 16 years, SD = 0.679). One hundred and one people made up the sample, 51 of them boys (50.50%) and 50 of them girls (49.5%). Menstrual irregularities was show(70.30%), while, a pregnancy suspicion (63.37%), and pain or burning while urinating (58.42%). Cancers of the breast (99.01%), cervix (89.1%), and ovaries (62.38%) were considered to be the most common cancers in women. Although more than 92% of participants said that it was possible to prevent cervical cancer, just 41.5% of respondents correctly identified what the term "cytology" meant. According to a study, kids from comparable backgrounds can have more trouble learning about health prophylaxis, particularly gynecological prevention.[8]

A descriptive study was done to determine how little teenage girls knew about menstrual hygiene. The current study aimed to evaluate that knowledge among 30 girls of different ages. When pre-test and post-test parameters were compared, a systematic education program significantly improved them. Thus, a study found that systematic instruction is useful in raising teenage girls' awareness about menstruation.[9]

A study on planned behavior was done with attitude strength and role identification included in the study. Teenagers' attitudes and behaviors regarding healthy eating were to be changed. The purpose of the study was to assess the effectiveness of an intervention program with a theoretical underpinning. The sample consisted of 335 high school students who were divided into intervention and control groups. The 12-week campaign promoted healthy eating using posters and lectures. Measures used to assess the hypothesis and track eating patterns included a questionnaire on food frequency. The intervention proved attitudes toward healthy eating and the strength of those attitudes, as well as intentions, perceptions of behavioral control, and healthy eating behavior, according to analysis. However, it was ineffective in predicting subjective norms and role identity. According to a study, there has been a shift in attitudes regarding a behavior in a school context as outcome of intervention evidence.[10]

Conclusion

According to this study, pre-test knowledge of menstruation disorders among adolescent girls was 14, and post-test knowledge was 25.2; this difference is substantial and serves as sufficient evidence that the intended education program

is successful in increasing adolescent girls' awareness of menstrual disorders.

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