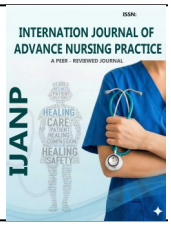
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A Study to Assess the Effect of Structured Teaching Program (STP) on Adolescent Health Among School Children at Selected schools of Puducherry

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Abstract:
Adolescent health is a major public health concern, particularly regarding reproductive health and menstrual hygiene. Inadequate knowledge and unhealthy practices may contribute to reproductive tract infections, menstrual disorders, psychological distress, and other health complications. This study aimed to assess the effectiveness of a structured teaching programme on knowledge regarding adolescent health among school-going girls. An evaluative study was conducted using a one-group pre-test–post-test design. Simple random sampling was adopted to select 96 adolescent girls. Data were collected using a structured knowledge questionnaire validated by three subject experts, with reliability established through the split-half method and Karl Pearson's correlation coefficient. The findings revealed that the majority of participants (85.4%) were aged 14 years, 94.8% were Hindus, 61.5% resided in rural areas, and 87.5% received health information from teachers. In the pre-test, 39.6% had adequate knowledge, 54.2% had moderately adequate knowledge, and 6.3% had inadequate knowledge. Following the structured teaching programme, 97.9% achieved adequate knowledge and 2.1% had moderately adequate knowledge. The improvement in knowledge scores was statistically significant ($t = -8.135$). A significant association was also identified between pre-test knowledge and source of information ($p = 0.028$), while no significant associations were observed with other demographic variables. The study concludes that the structured teaching programme was effective in improving adolescent girls' knowledge regarding reproductive health and menstrual hygiene.

Keywords: Adolescent health, reproductive tract infections, menstrual disorders

INTRODUCTION

Adolescence is a time of change between childhood and adulthood and all adolescents should be counselled on how to respond to the changes their bodies and feelings will experience during this stage. They are the formative years when maximum amount of physical, psychological and behavioral changes take place. According to World Health Organization (WHO) the definition of adolescents is persons aged 10 & 19. Several terms are commonly used in reference to particular stage of growth and development. Puberty is the process of maturation, growth and hormones which is largely associated with the onset of functioning of the reproductive organs and the development of the secondary sex characteristics.

This may be subdivided into three phases: prepubescence – the 2 year or so before the onset of puberty, when the child shows initial signs of physical change that foretell the approach of sexual maturity; puberty – when puberty is reached – in girls this is when the first period appears, in boys the changes are less obvious; and post pubescence – a 1-2 year period afterwards during which the skeletons of boys and girls do not grow any further and the reproductive function becomes fairly well established. Adolescent girls constitute about one fifth of the female population in the world. Adolescence is a special time in girls' life cycle and needs special and particular attention.

At adolescence the child begins to assume these needs on his/her Own Hands. They are still dependent to some extent on parents or others for some of these needs but are more self-reliant than ever before. They are making choices of how these needs are met and hopefully they are making the right one. Teens have to take lot of choices when it comes to fluids. Be sure to educate teenagers to drink adequate water. Fulfillments of physiological needs are inevitable as it is related to the very existence of the individual. The need of oxygen, need for water and food, need for rest and sleep, need for self-gratification etc, are the important physiological needs. Puberty results in a physically mature individual whose body habits and secondary sexual characteristics usually testify unmistakably to maleness or femaleness and who is able to reproduce.

The average age of onset of male puberty is 11 to 12 years, range 9 to 14 year. The average age at which females reach puberty is approximately 10-11 years, while males are somewhat delayed at approximately 12-13 years, but age range of 8-13 years is normal.

STATEMENT OF THE PROBLEM

A Study to Assess the Effect of Structured Teaching Program (STP) on Adolescent Health Among School Children at Selected schools of Puducherry

OBJECTIVES OF THE STUDY

- To assess the level of knowledge regarding adolescent health before and after Structured Teaching Program among school children.
- To assess the effectiveness of Structured Teaching Program on adolescent health among school children.
- To associate pretest level of knowledge regarding adolescent health with selected socio demographic variables of school children.

METHODOLOGY

A one-group pre-test–post-test quasi-experimental research design was adopted to assess the effectiveness of a Structured Teaching Programme (STP) on adolescent health, focusing on menstrual hygiene and sex education. Two schools were selected from seven higher secondary schools using simple random sampling. The study included 96 ninth-standard adolescent girls aged 14–18 years from selected Government Girls' Higher Secondary Schools and Navodaya Vidyalaya in Periyakalapet, Puducherry. The STP was the independent variable, while knowledge regarding adolescent health was the dependent variable.

Students who were willing to participate, available during data collection, and able to understand English were included, whereas those whose parents declined consent were excluded. Data were collected using a structured questionnaire comprising eight demographic items and 15 knowledge-based questions administered before and after the intervention. Written permission and informed consent were obtained from the school authorities, parents, and participants. A pilot study confirmed the feasibility of the research, and the questionnaire demonstrated acceptable reliability using the split-half method and Karl Pearson's correlation coefficient ($r = 0.70$). +

Data Collection Procedure

Following approval from the Institutional Review Board and written informed consent, the study was conducted in March 2018 among 96 adolescent girls from selected urban schools in Puducherry, recruited through simple random sampling. Participants were informed about the study objectives and assured of confidentiality. A pre-test was administered using a structured knowledge questionnaire, followed by a 45-minute Structured Teaching Programme on menstrual hygiene and sex education. A post-test was conducted seven days later using the same questionnaire.

Data were analyzed using descriptive statistics, including frequency, percentage, mean, median, mode, and standard deviation. Knowledge scores were categorized as inadequate, moderate, or adequate. A paired t-test was employed to evaluate the effectiveness of the teaching programme, while Fisher's exact test was used to examine associations between pre-test knowledge levels and selected demographic variables.

RESULT

Table 1 shows that with regards to age nearly 82(85.4%) of adolescents were 14 years, based on education of the father shows that 35(36.5%) educated up to primary level, based on education of mother shows that 34(35.4%) were educated up to primary level, based on family income shows that 42(43.8%) was 3001-5000 per month.

Table 2 reveals that, based on Religion shows that 91(94.8%) participants were Hindu, based on residential area shows that 59 (61.5%) participants were in rural, based on the source of information shows that 84(87.5%) participants were getting information from teachers.

The above table shows that, the pretest knowledge level was adequate knowledge 39.6%(38),54.2%(52) was moderately adequate knowledge and 6.3%(6) was inadequate knowledge. But post test knowledge level was 97.9%(94),2.1%(2) moderately adequate knowledge and 0%(0) inadequate knowledge for all study subjects.

The table 4 shows that, the post test mean knowledge score on menstrual hygiene and sex education among adolescents was significant higher (14.18) than in pretest (10.70). The observed difference in the knowledge score was found to be statistically significant at p 0.001. The above table 5 shows statistically significant association between pretest knowledge levels and selected demographic variables such as source of information

DISCUSSION

Among the 96 adolescent girls, the majority (85.4%) were aged 14 years, 36.5% of fathers had primary education or above, and 35.4% and 29.2% of mothers had primary and secondary education, respectively. Most participants belonged to families earning ₹3,001–₹5,000 monthly (43.8%), were Hindu (94.8%), resided in rural areas (61.5%), and received health information through posters (87.5%). In the pre-test, 54.2% demonstrated moderately adequate knowledge, 39.6% adequate knowledge, and 6.3% inadequate knowledge. Following the Structured Teaching Programme, 97.9% achieved adequate knowledge. The mean knowledge score increased from 10.70 ± 1.904 in the pre-test to 14.18 ± 0.929 in the post-test, indicating a statistically significant improvement ($p < 0.001$). Among the demographic variables, only the source of information showed a statistically significant association with pre-test knowledge ($p = 0.028$). These findings suggest that the Structured Teaching Programme was effective in improving adolescents' knowledge of menstrual hygiene and sex education.

CONCLUSION

The major findings of the study are that the structured teaching program is effective in adolescent health (menstrual hygiene and sex education) among school children. There is association between knowledge and sex, education of the mother and father, Family income, Religion, residential area, and source of information

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Table 1: Frequency and percentage distribution of socio demographic variables among school children.

SL. NO	DEMOGRAPHIC VARIABLES	FREQUENCY	PERCENTAGE
1.	**Age (in year)**		
	14 years	82	85.4%
	15years	8	8.6%
	16years	6	6.3%
2.	**Education of the father**		
	Non formal	15	15.6%
	Primary	35	36.5%
	Secondary	32	33.3%
	Higher secondary	5	5.2%
	Graduate and above	9	9.4%
3.	**Education of the mother**		
	a) Non formal	16	16.7%
	b) Primary	34	35.4%
	c) Secondary	28	29.2%
	d) Higher secondary	14	14.6%
	e) Graduate and above	4	4.2%
4.	**Family income**		
	Less than 3000 per month	26	27.1%
	3001-5000 per month	42	43.8%
	5001-10000 per month	20	20.8%
	More than 10001 per month	8	8.3%

Table-2: Frequency and percentage distribution of socio demographic variables among the school children

SL. NO	DEMOGRAPHIC VARIABLES	FREQUENCY	PERCENTAGE (%)
1.	**Religion**		
	a)Hindu	91	94.8%
	b) Christian	3	3.1%
	c) Muslim	2	2.1%
2.	**Residential area**		
	Urban.	37	38.5%
	Rural.	59	61.5%
3.	**Source of information**		
	a)Television	6	6.3%
	b)Newspaper	2	2.1%
	d)Teachers	84	87.5%
	e)Mother	4	4.2%

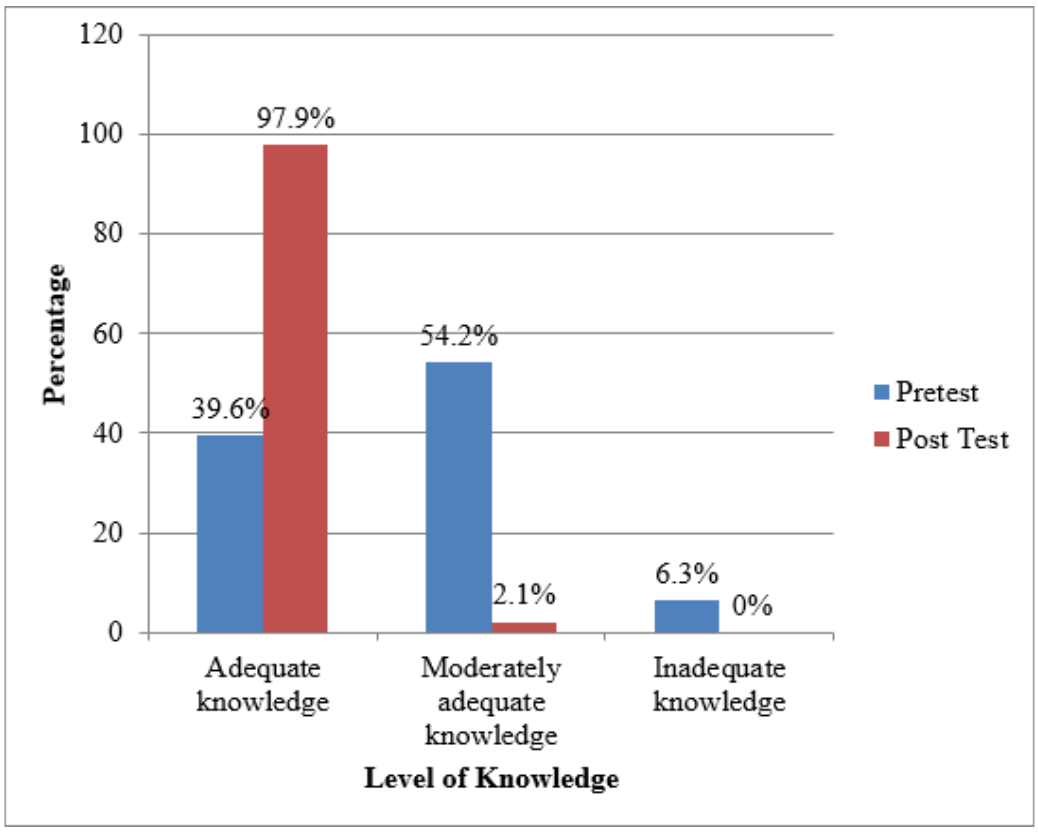
Table 4: Comparison of pretest and post test knowledge regarding adolescent health (menstrual hygiene and sex education) among school children.

Knowledge	Difference		't' value	'p' value
	Mean	S.D		
Pre test	10.70	1.904	-8.315	0.001* S
Post test	14.18	.929		

Table 5:Association of pre test knowledge level on adolescent health among school children with socio demographic variables

SOCIO DEMOGRAPHIC VARIABLES	Level of Knowledge						p-value
	Adequate		Moderately Adequate		Inadequate		
	No	%	No	%	No	%	
1.Age :							
a) 14 years.	32	33.3	46	47.9	4	4.1	0.30 NS
b) 15 years.	1	1.0	5	5.2	2	2.0	
c) 16 years.	5	5.2	1	1.0	0	-	
2. Education of the father:							
a).Non formal.	5	5.2	9	9.3	1	1.0	.576 NS
b).Primary.	13	13.5	19	19.7	3	3.1	
c).Secondary.	16	16.6	14	14.5	2	2.0	
d).Higher secondary.	0	0	5	5.2	0	0	
e).graduate and above	4	4.1	5	5.2	0	0	
3. Education of the mother:							
a) Non formal	5	5.2	8	8.3	3	3.1	.406 NS
b) Primary	11	11.4	20	20.8	3	3.1	
c) Secondary	14	14.5	14	14.5	0	-	
d) Higher secondary	6	6.2	8	8.3	0	-	
e) Graduate and above	2	2.0	2	2.08	0	-	
4. Family income.							
a) 3001-5000 / month	11	11.4	12	12.5	3	3.1	0.894 NS
b) 5001-10000 / month	16	16.6	24	25	2	2.0	
c) more than 10001 / month	7	7.2	12	12.5	1	1.0	
d) less than 3000 / month	4	4.1	4	4.1	0	0	
5. Religion							
a) Hindu	37	38.5	48	50	6	6.2	.738 NS
b) Christian	1	1.0	2	2.0	0	-	
c) Muslim	0	1	2	2.0	0	-	
6. Residential area							
a) Urban	15	15.6	20	20.83	2	2.08	.137 NS
b) Rural	23	23.9	32	33.3	4	4.1	
7. Source of information							
a) Television	2	2.0	3	3.1	1	1.0	.028 S*
b) Newspaper	0	-	1	1.0	1	1.0	
d) Teachers	34	35.4	46	47.9	4	4.1	
e) Mother	2	2.0	2	2.0	0	-	

Figure 2:Distribution of pretest and post test level of knowledge regarding adolescent health (menstrual hygiene and sex education) among school children.



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