Effectiveness of Structured Teaching Programme on Knowledge and Level of Anxiety Regarding Puberty Changes among 12 to 14 Years of Girls

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Abstract: _Background_: _Puberty is the continuous event by which a person goes intoan adult age with some changes in the body. Majority of girls usually have lack of scientific knowledge regarding puberty, menstruation and its hygienic practices.55.8% do not receive adequate parental preparation on pubertal growth and 61% had only average knowledge. Thus, the girls required more knowledge about the puberty changes._ _Materials and Methods_: _The study setting was Shree Parvati Jain senior secondary school, Jalandhar, Punjab. The study sample comprised of 100 girls from selected School. Self –Structured questions was used to evaluate the information regarding puberty changes from 12-14 years of girls. Structured teaching programme was prepared and administered tothe 12-14 years of girls._ _Results_: _The study concluded that after the administration of programme in pre-test score was low about awareness of puberty and in post-test scores was high than pre-test about puberty changes among 12-14 years of girls as measured by self-structured knowledge questionnaire._

Keywords: Puberty changes, knowledge, 12-14 years of girls, structured teaching programme

1. Introduction

Puberty is defined as the time in life when a girl or boy becomes sexually mature and it also includes the growth of a child and its development. It also includes the physical changes in which enlargement of breast, changing in voice, underarms hair, pubic hairs and oily skin. Nowadays by crossing thorough puberty can be challenging time for any girl. As growing numbers of girls reach puberty even before they are ten. Menarche is the last stage in biological changes related to puberty. Puberty menarche is a time when girl's roles changes in dressing, behaviour and mobility restrictions.1some girls feel fear and shame of menstruation. In about 50% of girls have first sign of breast buds followed by development of pubic hairs starting of menstruation. It gave an important part or position in life for girls. It is a dramatic transition from girlhood to womanhood.[2]although menstruation is a natural phenomenon major changes start with menarche, Menstrual problems are common adolescent females such a mood swings, which include pain during menstruation and abnormal menstrual cycle length.

In some societies, puberty seen as a negative perceptions in some practices such as restriction during any religious work during menstruation. When girls don't get information or prepared before puberty age about menstruation and puberty changes it may increase the anxiety and some girls are not able to accept these changes which can leads to severe depression.

Statistics indicate that girls in the United States are maturing at an earlier age than they did 30 years ago and the number of girls with diagnosed precocious puberty is on rise.[3]

More than 80% of the girls in cities are reaching puberty around age 11 years.[4]

2. Related Work

Anusha L, Radhika M, Indira S conducted a study to saw the awareness about pubertal changes in pre-adolescent girls. Sample size was 60 girls. The findings of the study revealed in pretest 43 (71.6%) had poor awareness and 17 (28.4%) had fairly sufficient awareness. Whereas in post-test 34 (56.7%) had fairly sufficient awareness, 15 (25%) had poor awareness and 11 (18.3%) had sufficient awareness.[5]

Haque, Shah, Um et al. Conducted the community based study shows that sanitary pads from cloth pads are good to use, 93.8% of adolescent school girls used sanitary pads. In rural areas girls are using cloths as a pads because they can't have enough money to buy a pad and they have less awareness about the benefits of using pads.[6]

Anjuman A. and Meenakshi A. conducted a study to know the awareness about Puberty and periods among Girls. The results revealed that most of the adolescent girls were not aware about periods hygiene, changes occur in periods. Mean score of Rural Area and Urban Area was (4.83 and 7.22). [7]

Sequeira D.F., D'souza A. -conducted a study to saw the anxiety and coping pattern regarding pubertal changes among pre-adolescents girls. The study concluded that pre-adolescent girls have moderate level of anxiety and adaptive coping pattern regarding pubertal changes .[8]

3. Material and Methods

This pre-experiment research designed was conducted at Shree Parvati Jain Co-Education Senior Secondary School, Jalandhar, Punjab. The sample was girls of 12-14 years of girls and present at the time of data collection procedure.

- **Research approach:** Quantitative research approach was contemplated and found appropriate for the study.
- **Study design:** Pre-experimental research design with one group pre-test post- test method was used.
  Study location: The study was held in Senior Secondary School based in Jalandhar, Punjab at Shree Parvati Jain Co-Education Senior Secondary school.
  Sample Size: Was 100 girls of 12-14 years which were studying in Shree Parvati Jain Co-Education Senior Secondary school.
- **Sampling Technique:** The Technique to draw the sample used was Non-probability purposive sampling.

3.1 Methodology

3.1.1 Development of the Tool
Section-A: Socio-demographic variables to obtain the personal information among subjects on aspects like residential area, religion, currently residing in, type of family, mother education, father education, number of sibling sisters, total family income, birth order, previous source of knowledge regarding puberty changes ever provided from mothers, health care providers, teachers, friends, T.V, internet, radio.

Section –B: Self-made questions to saw the awareness about puberty changes.

The tool was consisted of 30 items with multiple choice options. 1-15 items consisted of questions about definition, concept in puberty, 16-18 items consisted of questions about concept of menstruation, 19-30 items consisted of questions about changes occurs in puberty for each correct answer 01 mark is given and each incorrect or unattempted question 0 mark is given.

Criterion measurement

S.No	Category	Score	Percentage (%)
1.	Good	23-30	75-100%
2.	Average	15-22	50-74%
3.	Below Average	0-14	0-49%

Section –C: The Self-structured anxiety rating scale to assess the level of anxiety regarding puberty changes.

The tool was consisted of 20 statements related to anxiety towards puberty changes. 3 point likert scale was used with scores of 1, 2, 3 under always, sometimes and never respectively.

S.No	Category	Score	Percentage (%)
1.	Severe	31-40	75-100%
2.	Moderate	20-30	50-74%
3.	Mild	0-19	0-49%

Data Collection Procedure
Final data was collected in the month of February after getting administrative approval. The motive of the study was explained to the sample and vowed about anonymity and keep it secret of the information provided by them and written permission was taken to participate. Final data was collected in the month of February after getting administrative approval. Written permission was taken from the higher authority i.e. principal of selected school, Jalandhar. Then 100 girls of 12-14 years were selected by using non-probability purposive sampling technique. Purpose of the study was explained to the subject and were assured about anonymity and confidentiality of the information provided by them and written consent was taken to participate in the study. Self-structured knowledge questionnaire and self-structured anxiety rating scale was used to assess the knowledge and level of anxiety regarding puberty changes among 12-14 years of girls.

Pre-test: Pre-test was administered to 12-14 years of girls in the form of self-structured knowledge questionnaire on puberty changes.

Implementation of programme: The Programme was administered among 12-14 years girls after pre-test on the same day.

Post-test: Post-test was carried out on 3rd day of pre-test with the same set of self-structured knowledge questionnaire on puberty changes.

Statistical analysis
Data was scrutinized using inferential analysis and descriptive analysis. Interpretation and analysis of data was done using percentage, mean, mean percentage, standard deviation, chi square and paired t-test. Paired t-test is performed to ascertain the significance differences between pre-test and mean post-test values. Chi- square was employed to know the association of awareness with selected socio-demographic variables.

4. Result

Table 1: Comparison of the knowledge score: Mean of pre-test and post-test, N=100

Test Difference	Mean	SD	Mean	SE	t-test
Pre- test	9.17	±1.94	10	0.42	23.80***
Post-test	19.17	±3.80			

Maximum score = 30
Minimum score = 0 df = 99
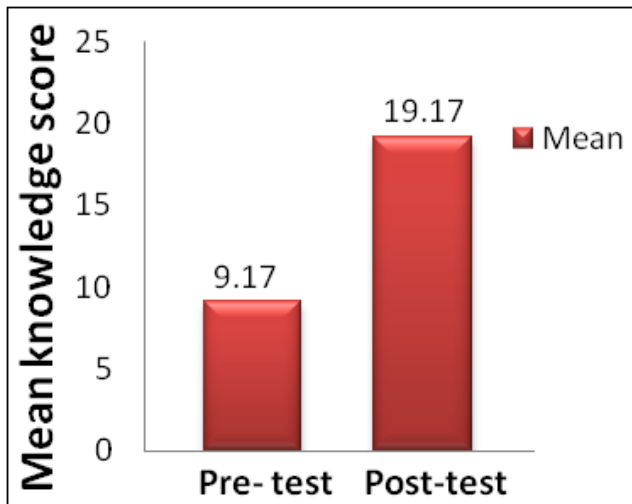******* Significant at 0.001 level

Figure: Comparison of knowledge score: Mean of pre-test and post-test

Table 2: Comparison of Anxiety score: Mean of pre- test and post-test

Test Difference	Mean	SD	Mean	SE	t-test
Pre- test	14.53	±303	2.84	0.46	617***
Post-test	11.69	±3.64			

Maximum score = 40
Minimum score = 0   df =99
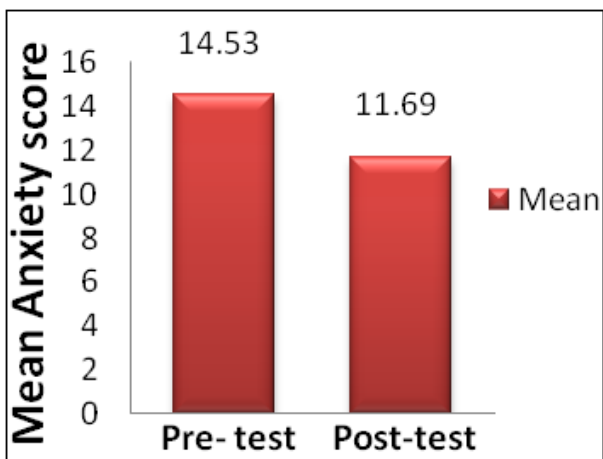*****Significant at 0.001 level**

Figure: Comparison of pre-test and post-test knowledge regarding puberty changes among 12-14 years of girls.

Table 3: Association between level of pre-test knowledge with socio demographic variables

Socio- demographic Variables	Average	Below Average	df	Chi-Square
Currently residing in				
Own Home	01 (1.20%)	97(98.97%)	01	432*
Relatives/P.G	00 (0.00%)	02 (100%)		

Maximum score = 30
Minimum score = 0
* = Significant at 0.05 level

The association of knowledge score during pr- test regarding prevention of abuse with demographic variables like currently residing in (4.32) was found significant associated at p<0.05 level. Hence, it is concluded that socio-demographic variables such as currently residing in had influence on the knowledge of puberty changes.

5. Major Findings

Mean pre-test knowledge score regarding puberty changes among 12-14 years of girls was 9.17 ($\pm$1.94) with mean percentage of 30.56 %.Majority of girls 90 (90%) were having below average knowledge regarding puberty changes.

Mean pre-test of anxiety score regarding puberty changes among 12-14 years of girls was 14.53 ($\pm$3.03) with mean percentage of 36.32%. Majority of the 12-14 years of girls 93 (93%) were having mild anxiety level regarding puberty changes.

Mean post-test knowledge score regarding puberty changes among 12-14 years of girls was 19.17($\pm$3.8) with mean percentage of 63.9 %.

Mean post-test of anxiety level score regarding puberty changes among 12-14 years of girls was 11.69 ($\pm$3.64) with mean percentage of 29.22 %.

The finding revealed the difference in the mean pre-test and post-test knowledge was 10.The calculated 't' value (23.80) which found to be statistically significant at 0.001 level of significance.

The finding revealed the difference in the mean pre- test and post-test anxiety was 2.84.The calculated 't' value (6.17) which found to be statistically significant at 0.001 level of significance.

6. Recommendations

- The study can be done at large scale.
- A comparative study to saw the awareness about puberty changes between 10-15years of girls and boys.

7. Conclusion

At some areas among girls there is no information is given to the girls about menstruation and regarding puberty changes in body so they got anxiety and severe depression about the changes occur in body, so the use of proper knowledge is required to them. The findings also revealed that after giving the teaching programme in pre-test score is low and in post-test score is more than pre-test and in anxiety score in post-test is low than pre-test regarding puberty changes among 12-14 years of girls.

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