



“A DESCRIPTIVE STUDY TO ASSESS THE LEVEL OF KNOWLEDGE ON PUBERTAL CHANGES AMONG ADOLESCENT GIRLS (12-17YEARS) IN A SELECTED HIGH SCHOOL OF LUDHIANA, WITH A VIEW TO PREPARE INFORMATION BOOKLET.”

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ABSTRACT

Background “Puberty” differs from “adolescence” in that it is just one change that occurs during adolescence. From a biological perspective, puberty is the stage of development during which an individual first attains fertility and is capable of reproduction. Physical changes that occur during puberty include somatic growth, primary sexual organ development and the appearance of secondary sexual characteristics. According to Nightingale Nursing Times of India (2010) the adolescents represent about a fifth of India's population that is 22% of its population. It is expected that this age group will continue to grow reaching over 214 million by 2020.

Objectives of the study

- To determine the level of knowledge on pubertal changes among adolescent girls.
- To find out the association of knowledge scores with the demographic variables.
- To develop and distribute information booklet on pubertal changes to adolescent girls.

Method A descriptive survey approach was used for the study. The sample consisted of 50 adolescent girls, selected by purposive random sampling method. Data was collected by administering the Structured Knowledge Questionnaire on pubertal changes among adolescent girls. The collected data was analyzed using the descriptive and inferential statistics. **Results** The analysis of the level of knowledge showed that in the knowledge scores, 32 (64%) of adolescent girls had average knowledge, 9 (18%) of them had good knowledge and 9 (18%) of them had poor knowledge regarding pubertal changes. **Interpretation and Conclusion** The findings of the study have certain important implications for the nursing profession such as in nursing practice, nursing education, nursing research and nursing administration.

KEYWORDS : Assess; Level of knowledge on pubertal changes among adolescent girls

INTRODUCTION

Adolescence as the period in human growth and development that occurs after childhood and before adulthood, from the ages 10 to 19. In India they account for 23 percent of the population. This implies that about 230 million Indians are adolescents in the age group of 10 to 19 years.. This is also the period of psychological transition from a child who has to live in a family to an adult who has to live in a society. In an adolescent, the development that takes place is generally uneven, in that physical maturity may well be achieved in advance of psychological or social maturity.

Puberty is the process of physical changes through which a child's body matures into an adult body capable of sexual reproduction. It is initiated by hormonal signals from the brain to the gonads: the ovaries in the girl, the testes in a boy. In response to the signals, the gonads produce hormones that stimulate libido and the growth, function, and transformation of the brain, bones, muscle, blood, skin, hair, breasts, and sex organs. The major landmark of puberty for females is menarche, which occurs on average between ages 12-13.

Puberty is influenced primarily by heredity, although environmental factors, such as diet and exercise, also exert some influence. Physical changes of puberty mark the onset of adolescence. For girls, these changes include a growth spurt in height, growth of pubic and underarm hair, and skin changes (e.g., pimples). Girls experience breast development and begin menstruating. These pubertal changes are driven by hormones, particularly an increase in estrogen for girls. Emotional changes are also common in girls going through puberty; they may easily switch from happiness and joy to sadness and gloom. Breast development starts with the flat area around the nipple (areola) becoming enlarged and some breast tissue forms under the nipple. Pubic hair starts along the vaginal lips, the outer opening of private parts. The hair becomes darker and coarser and grows like an inverted triangle. Acne is one of the most common problems in adolescent teens affecting nearly seventeen million people in the United States. Menstruation is a process in which a sexually mature girl's or a woman's body releases of a small amount of blood and tissue through her vagina.

Knowledge of the timing and the physical changes associated with puberty is important for adolescents. Parents and adolescents often experience anxiety when puberty is not occurring as expected, even when it occurs within the range of normal. A clear understanding of pubertal milestones also promotes appropriate interventions for delayed or advanced puberty when the practitioner and parents are in agreement that intervention is in the best interest of the child. Recently, changes in the timing of puberty as compared to previously published

standards now make the understanding of this complex process even more important. The observation that more children are showing signs of puberty earlier places pressure upon the practitioner to differentiate the child with early but otherwise normal puberty from the child with early onset puberty as a consequence of a pathologic process.

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MATERIALS AND METHODS

A descriptive study was conducted to assess the level of knowledge on pubertal changes among adolescent girls (12-17 years) in a selected high school of Ludhiana. Permission was obtained from the licensed authority for conducting the study. The conceptual framework used in this study was based on Rosenstock and Becker M's Health Belief Model. Structured knowledge questionnaire was used to assess the level of knowledge. Purposive random sampling technique was used to collect 50 samples based on their inclusion criteria. Data was collected using demographic proforma and rating scale. The tool was validated by 4 nursing experts. The pilot study was conducted from 28-04-2017 to 30-04-2017 among 10 selected adolescent girls. The main study was conducted among 50 adolescent girls 08-05-2017 to 11-05-2017. Data was subjected to analysis, the analysis was done using both descriptive and inferential statistics.

Plan for data analysis

The data obtained was planned to be analyzed by both descriptive and inferential statistics on the basis of objectives of the study. To compute the data, a master data sheet was prepared by investigators.

- Baseline proforma was analyzed using frequency and percentage.
- The level of knowledge among the adolescent girls.
- Graphical representation was used to describe the level of knowledge among adolescent girls.
- Range, mean, standard deviation and mean percentage of level of knowledge among adolescent girls.
- Chi square was intended to be used to find out the association of level of knowledge among adolescent girls with demographic variables.

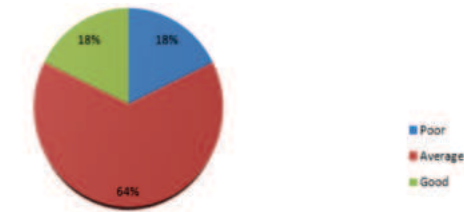
RESULTS

The majority (80%) of adolescent girls had previous knowledge regarding pubertal changes among adolescent girls and the least (20%)

had no previous knowledge. The highest (45%) of adolescent girls got knowledge about pubertal changes from their friends and the least (12.5 %) got from mass media.

N=50

Grade of Knowledge	Range of Score	Level of Knowledge	
		Frequency	Percentage (%)
Poor	0-8	9	18
Average	9-16	32	64
Good	17-25	9	18



Level of Knowledge

The data presented in Table and Figure shows that majority (64%) of the adolescent girls had average knowledge and 18% of them had good knowledge and 18% of them had poor knowledge on pubertal changes among adolescent girls.

The findings of the demographic variables like age, age at first menstruation, type of family, religion, place of residence, educational qualification family income, previous knowledge and source of information. The chi-square test was used to find the association of level of knowledge with the demographic variables.

There is significant association of the knowledge score with the demographic variables like age at first menstruation, place of residence and family income (in rupees). The calculated chi square value for age at first menstruation ($\chi^2 = 8.17$), place of residence ($\chi^2 = 6.17$) and family income ($\chi^2 = 7.38$) was more than the table value at 0.05 level of significance. Hence the null hypothesis is rejected and research hypothesis is accepted.

DISCUSSION

The findings of the study showed that 64% (32) of adolescent girls had average knowledge, 18% (9) of them had good knowledge and 18% (9) of them had poor knowledge regarding pubertal changes. The findings can be compared with the descriptive study to assess the level of knowledge among adolescent girls. Purposive random sampling technique was used to collect the data. The study showed that 58% had average knowledge, 41% of girls had good knowledge and 1% of them had poor knowledge regarding pubertal changes among adolescent girls with mean knowledge score 11.17.

The study about showed that there was a significant association of the knowledge score with the demographic variables like age at first menstruation, place of residence and family income (in rupees). The calculated chi square value for age at first menstruation ($\chi^2 = 8.17$), place of residence ($\chi^2 = 6.17$) and family income ($\chi^2 = 7.38$) was more than the table value at 0.05 level of significance. Hence the null hypothesis is rejected and research hypothesis is accepted. The study can be compared with a descriptive study was conducted among 40 adolescent girls of a selected school in Madras, aged between 13-16 years about pubertal changes among adolescent girls. Sample is selected by using random sampling technique. Data were collected by using questionnaires method. The study findings showed that there was significant association between physical ($r^2 = 0.52$), psychological ($r^2 = 0.65$), and behavioural ($r^2 = 0.67$) changes there was no significant association of pubertal changes with their demographic variables like age, age at first menstruation, religion and family income.

CONCLUSION

This study was conducted with the objective to assess the knowledge on pubertal changes among adolescent girls in a selected high school of Ludhiana.

The following conclusions were drawn on the basis of the findings of the study.

- The findings showed that the adolescent girls did not possess very good knowledge on pubertal changes during adolescence period.
- There is significant association of variables like age at first

menstruation, place of residence and family income and there is no significant association of variables like age, type of family, religion, educational qualification, previous knowledge and source of information was found.

Limitations

- As the study was conducted only in a selected high school of Ludhiana which imposed limits in generalisation of findings.
- The use of Structured Knowledge Questionnaire restricts the amount of information that can be collected from the respondents.
- The study was restricted to 50 adolescent girls in a selected Government senior secondary school at Dehlon, Ludhiana.

Recommendations

Based on the study findings, the following recommendations are stated:

- A similar study can be done on a larger sample to validate and generalise the findings.
- A similar study can be conducted by using the randomised control trial group method.
- A similar study can be conducted by the descriptive method on knowledge and attitude on adolescent girls on pubertal changes.

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