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Research Article

A Study to Assess the Knowledge of the School Going Girls regarding Menarche, Pubertal Changes and Problems Faced by them in a Selected School of New Delhi

Madhu Bala

Principal, Lakshmi Bai Batra College of Nursing, BHMRC, New Delhi, India.
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I N F O

E-mail Id:
madhubala.cancer9@gmail.com
Orcid Id:
https://orcid.org/0000-0002-5397-0540
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A B S T R A C T

Puberty is the process of physical changes through which a child's body matures into an adult body capable of sexual reproduction. The major landmark of puberty for females is menarche, the onset of menstruation, which occurs on an average between ages 12-13 years. Education regarding menarche and pubertal changes aims to reduce the risks of potentially negative outcome from sexual behavior such as fear and stigma of menstruation. Keeping this in mind, a study was conducted to assess the knowledge of the school going girls regarding menarche, pubertal changes and problem faced by them. The objectives of the study were to assess the level of knowledge of school going girls regarding menarche and pubertal changes and to assess the problems faced by school going girls during menstruation. The setting of the present study was Kendriya Vidyalaya, Tughlakabad, New Delhi, India. The tools used for data collection were, a structured Performa to determine the demographic data and problems faced during menstruation and a structured questionnaire to assess the knowledge regarding menarche and pubertal changes, of 30 school going girls. The study findings revealed that majority (68.4%) of the school going girls had inadequate knowledge regarding pubertal changes, and menarche and thus, faced many problems while undergoing these changes. The major conclusions drawn on the basis of the findings of the study were that literacy rate of parents have a huge impact on knowledge level regarding menarche and pubertal changes of school going girls and girls having adequate knowledge found to be facing less problems regarding pubertal change.

Keywords: Knowledge, Pubertal Changes, School going Girls

Introduction

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 brain

to the gonads: the ovaries in a girl. In response to the signals, the gonads produce hormones that stimulate libido and the growth, function, and transformation of the brain, bones, muscles, blood, skin, hair, breasts and sex organs. On an average, girls begin puberty around ages 9-16. Girls usually complete puberty around ages 15-17. The major landmark of puberty for females is menarche, the onset of menstruation, which occurs on an average between ages 12-13 years.[1]

The physical body reacts to stress in the way of non-verbal action such as cramps, headaches and sweaty palms. The mind impact includes thoughts, opinions, judgments, belief system that a person has the influence on the behavior. Emotions or feelings experiences lead the way one reacts to the people, place and events that influence over decision.[2]

Education regarding menarche and pubertal changes aims to reduce the risks of potentially negative outcome from sexual behavior such as fear and stigma of menstruation. Puberty is a physiological event that profoundly transforms the human body. Yet the significance of this event extends far beyond the physiological or biological into the social and psychological domains of the early life course. Consequently, puberty, especially its timing is of interest of sociologists and psychologists who study adolescence.[3]

Manisha Rani, Priyanka Kumari and Neha Rani[4] conducted a cross sectional study to assess the menstrual practices and knowledge among adolescent girl in rural area of Haryana. The results of the study revealed regarding the level of practice score of adolescent girls, 9.2% had healthy level (>75%) of practices, 86% had moderately healthy level (50-75%) of practices and 4.8% had unhealthy level (<50%) of practices. Further results illustrates that 29% had very good level (>75%) of knowledge, 34% had good level (61-75%) of knowledge followed by 31% with average level (50- 60%) of knowledge and 6% had below average level (<50%) of knowledge.

Alka Malhotra, Srinivas Goli, Sue Coates and Mario Mosquera - Vasquez [5] conducted a study to assess the factors associated with knowledge, attitudes, and hygiene practices during menstruation among adolescent girls in Uttar Pradesh. The findings suggest that about half of the girls did not have information or knowledge about menstruation. Less than one-quarter of them followed correct hygiene practices, with very few using 'sanitary napkin' as a menstrual absorbent. It was also found that 31 per cent, 20 per cent, and 24 per cent of girls felt impure, isolated, and irritated respectively during menstruation. Two-thirds of the girls reported constraints in the management of menstruation and nearly one-quarter had low autonomy during menstruation.

Christina Patricia Balla and Samson Sanjeeva Rao Nallapu[6] conducted a study on Knowledge, perceptions and practices of menstrual hygiene among degree college students in Guntur city of Andhra Pradesh, India. The study findings revealed that Mother's education was significantly related to the girls' knowledge about menses (2 16.6, p 0.00002). A positive perception of menses was associated with good knowledge about it. (p<0.00001). Complaints related to menses were also associated with good knowledge scores (2 9.8, p 0.002). Absenteeism during periods was 81.5%, the causes being pain 60.4%, heavy bleeding 31.4%, both pain and heavy bleeding 4.8% and nausea 3.4%.

In India the knowledge regarding the pubertal changes for adolescent girls is from her mother or from friends. The amount and degree of information that a girl can take depends upon her education and understanding. Based on the above studies and overviews, the researcher felt that assessing the knowledge regarding menarche, pubertal changes and problems faced during menstruation of school going girls in a selected school of New Delhi.

Objective of the Study

The objectives of the study were:

- To assess the of knowledge school going girls regarding menarche and pubertal changes
- To assess the problems faced by school going girls during menstruation

Material and Methods

The quantitative research approach was used for the study using descriptive research design. The setting of the study was Kendriya Vidyalaya Senior Secondary School, Tughlakabad, New Delhi. Formal permission was sought from the Principal of the school. Purposive sampling technique was used to select sample of 30 school going girls of age group 9-16 years. The tools used for data collection were, a structured Performa to determine the demographic data and problems faced during menstruation and a structured questionnaire to assess the knowledge regarding menarche and pubertal changes, of 30 school going girls. Informed consent was sought from the study subjects. Data was collected from February 22-26, 2016 of school going girls of age group 9-16 years undergoing pubertal changes. The tool was validated by experts from the field of obstetrics and gynaecological nursing. Data analysis was done by using descriptive statistics.

Results

The results of the present study are presented under the following sections:

Section I: Findings related to Demographic Characteristics of School going Girls

This section describes the demographic characteristics of

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the school going girls. Frequency and percentage were computed for describing the demographic characteristics (Table 1).

Table 1.Frequency and Percentage Distribution of School Going Girls by their Demographic Characteristics

n=30

Demographic characteristics	School going girls of age group 9-16 years
	Frequency (f)
Age	
9-10	0
11-12	0
13-14	21
15-16	9
Religion	
Hindu	30
Muslim	0
Christian	0
Others	0
Types of Family	
Nuclear	3
Joint	18
Extended	0
Others	9
Educational status of mother	
No formal education	6
Primary education	21
Undergraduate	3
Graduate & above	0
Educational status of father	
No formal education	3
Primary education	3
Undergraduate	9
Graduate & above	15
Class in which they study	
5-6	0
7-8	0
9-10	30
11-12	0
Onset of menarche	
9-10 years	3
11-12 years	12
13-14 years	12
15-16 years	3

The data presented in Table 1, shows that, out of 30 girls, 21 were within the age group of 13-14 years and 9 were within the age group of 15-16 years. Out of 30 school going girls, all belonged to Hindu religion. 3 out of 30 lived in nuclear family, 18 out of 30 lived in joint family and 9 out of 30 lived in other types of family. According to the educational status of mother, mothers of 3 school going children were illiterate, mothers of 21 girls had primary education and 6 were undergraduate. According to educational status of father, fathers of 3 school going girls; were illiterate, 3 had primary education, 9 were undergraduates and 15 were graduates. Monthly income of families of 9 school going girls were less than Rs. 10,000/- and families of 21 school going girls earned Rs. 11,000/- to Rs. 30,000/-. All 30 school going girls were in 9^{th} - 10^{th} standard. Majority of the students had their onset of menarche between 11 - 12 years (12) and 13 - 14 years (12).

Section 2: Findings related to Assessment of Knowledge of School Going Girls regarding Menarche and Pubertal Changes

Mean and standard deviation of the knowledge scores of schools going girls regarding menarche and pubertal changes were computed.

The data presented in Table 2, shows that 68.4% of school going girls had inadequate knowledge regarding menarche and pubertal changes and 31.6% had adequate knowledge regarding menarche and pubertal changes.

Table 2.Category of Knowledge Level, Percentage of Knowledge Scores, Possible Range of Knowledge Scores, Mean and Standard Deviation of Knowledge Scores of Schools Going Girls of Age 9-16 Years regarding Menarche and Pubertal Changes

n=30

Category of knowledge level	Percentage of knowledge scores	Possible range of knowledge scores	Mean	Standard deviation
Inadequate knowledge	68.4%	0 - 21	12.2	6.73
Adequate knowledge	31.6%			

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Table 3.Findings related to Problems Faced by School Going Girls during Menstruation

n=30

S. No.	Problems faced during Menstruation	Never	Rarely	Occasionally	Always
1.	Allowed to go to the temple during menstruation	30	0	0	0
2.	Isolation by family members because of their belief that menstrual blood is dirty blood	6	21	0	3
3.	Allowed to touch pickles or other food during menstruation	15	3	9	3
4.	Itching or rashes in private area due to use of sanitary pads	9	12	3	6
5.	Diarrhea during menstruation	30	0	0	0
6.	Nausea during menstruation	15	6	3	6
7.	Missing school during menstruation	15	9	6	0
8.	Feeling of loss of appetite during menstruation	12	3	6	9
9.	Overeating during menstruation	27	0	3	0
10.	Face sleep disturbances during menstruation	9	6	3	12
11.	Feeling of depression during menstruation	6	9	0	15
12.	Feel allergic during menstruation	18	6	0	6
13.	Experience of pain during menstruation	6	15	3	6
14.	Consumption of painkillers during menstruation	21	9	0	0

Section 3: Findings related to Problems faced by School going Girls during Menstruation

The problems faced by school going girls during menstruation are presented below in Table 3.

Discussion

The present study findings revealed that, out of 30 school going girls, 21 were not allowed any sort of exercises during menstruation. The study findings are somewhat consistent to the study conducted by Kumar A, on knowledge, attitude and practice of high school girls regarding menstruation in rural area. The study sample consisted of 65 unmarried school girls studying in class in X in age group of 13-16 years. The results show that certain activities were restricted during menstruation, like taking bath, entering into kitchen and playing.[7]

In the present study, the study findings showed that 68.4% of school going girls had inadequate knowledge regarding menarche and pubertal changes and 31.6% had adequate knowledge regarding menarche and pubertal changes. The study findings are similar to a study conducted by Ahuja A and Tewari S, to assess the knowledge of pubertal changes among adolescent girls in Uttar Pradesh. The sample size was 100 adolescent girls of the age group 12-16 years. Majority (70%) of them were not aware of physiological process of menstruation and emotional changes.[8]

The present study findings are not consistent to a cross section study conducted in Gazipur village in east Delhi on awareness and practices of pubertal changes and menstruation amongst 251 adolescent girls between the ages of 10-19 years. An interview method was used, to assess the outcome of the study. Two-thirds of subjects had knowledge of menstruation during the study. Only a third (33.4%) of the girls had aware of all the pubertal changes. The association between awareness of pubertal changes and increasing age was statistically significant. 45.5% of the girls had knowledge of menstruation prior to menarche, these variations can be due to the different regions surveyed and differences in the socioeconomic status and literacy status of the study subjects in respectively. The majority of the adolescent had aware of menarche and pubertal changes, but very low knowledge regarding breast development and the appearance of axillary and pubic hair so further studies is needed to develop the awareness and practices of pubertal changes and menstruation.[9]

Conclusion

The major conclusions drawn on the basis of the findings of the study were that literacy rate of parents have a huge impact on knowledge level regarding menarche and pubertal changes of school going girls and girls having adequate knowledge found to be facing less problems regarding pubertal change.

Conflict of Interest: None

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