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Knowledge on pubertal changes among adolescents in selected schools of Pokhara

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Abstract

Aims: To assess the knowledge on pubertal changes among adolescents in selected schools of Pokhara.

Methods: A cross-sectional descriptive study was conducted among 175 adolescents from selected schools of Pokhara. The profile of respondents and their knowledge level of puberty changes were assessed using self-administered questionnaire techniques. Data was collected through a semi-structured questionnaire.

Results: The study showed that more than half (n=102, 58.3%) of the respondents were of 15-18 years age group. Similarly, more than half of the respondents (n=109, 62.3%) were from the nuclear family and 90 (51.4%) respondents' level of knowledge was adequate.

Conclusion: The findings of the current research study concluded that more than half of the respondents had adequate knowledge on pubertal changes. Class, gender, presence of siblings, parents' educational status, and source of information had statistically significant relationship with the knowledge level of the adolescents.

Introduction

Adolescence is one of the most fascinating and complex transitions in the life span. Biological processes drive many aspects of this growth and development with the onset of puberty marking the passage from childhood to adolescence.¹ Puberty is a transition period between childhood and adulthood, during which a growth spurt occurs, secondary sexual characteristics appear, fertility is achieved, and profound psychological changes take place.² On average, girls begin puberty at ages 10-11 years; boys at ages 11-12 years. Girls usually complete puberty by ages 15-17 years, while boys, by ages 16-17 years. The major landmark of puberty for females is menarche which occurs on average between ages 12-13 years.³

During puberty, growth is rapid, disorganized, and confusing, compared to the relatively stable earlier period of childhood. When pubescent children are not informed of the changes that take place at puberty, it is traumatic to undergo these changes and may develop unfavorable attitude towards these changes.⁴ According to a study conducted in Nepal, due to lack of knowledge regarding puberty, adolescents face various problems through physiological and emotional stresses and malpractices.⁵ Adolescents may experience intense feelings of despair, anxiety, depression, impatience, hopelessness and all adolescents are assumed to experience emotional stress, risk taking behaviors.⁶

Thus, there is a need for attitude promoting awareness program regarding pubertal changes among adolescents.⁷ For this, it is essential to impart knowledge regarding physical and psychological changes of puberty among adolescents. This study was, therefore, undertaken to assess the knowledge on pubertal changes among adolescents in selected schools of Pokhara.

Methods

A cross-sectional descriptive study was conducted in Diamond Secondary School and Golden Nature Boarding School of Pokhara Metropolitan city. The study populations were all adolescent girls and boys studying in classes VIII, IX and X. Sample size were calculated by Cochran formula and calculated sample size was 175. Private schools were selected by non-probability convenience sampling technique. Proportionate stratified random sampling technique was used to select the total number of students from each class. Lottery method was used to select the students from each class.

A semi-structured, self-administered questionnaire was developed which consisted of two parts. Part A consisted information regarding profile of respondents like age, sex, level of education, religion, ethnicity, types of family, educational status of parents, presence of sibling, source of information on puberty changes. Part B contained closed ended questions consisting of 22 items with 5 multiple choices. The level of knowledge was categorized as adequate (above mean) and inadequate (below or equal to mean) and the total score was 42.

Ethical clearance was taken from Institutional Review Committee of Pokhara University. A formal permission and approval letter were obtained from Pokhara University and the concerned authorities of the selected schools. Those who brought consents from parents were included in data collection. Before administering the questionnaire, the purpose of the study was explained to the respondents. Privacy and confidentiality were maintained while collecting data.

The collected data was coded and entered in Epi Data 3.1. and then exported to and analyzed with Statistical Package for Social Sciences (SPSS) software version 16. Descriptive statistics as frequency, percentages and mean with standard deviation were used to present the qualitative data and Chi-Square test was used to analyse the relationship between different variables. A p value <0.05 was considered statistically significant.

Results

A total of 175 students were enrolled in the study. The mean age (+SD) was 14.83±1.55 years.

Table 1: Distribution of respondents according to socio-demographic characteristics (N=175)

Variables	Frequency	Percentage
Respondent's age (years)		
11-14	73	41.7
15-18	102	58.3
Class		
VIII	55	31.5
IX	62	35.4
X	58	33.1
Respondent's Sex		
Male	87	49.7
Female	88	50.3
Religion		
Hinduism	141	80.6
Buddhism	34	19.4
Ethnicity		
Brahmin/ Chhetri	119	68.0
Dalit	6	3.4
Janajati	34	19.4
Madhesi	16	9.2
Type of family		
Nuclear	109	62.3
Joint and Extended	66	37.7
Father's Education		
Illiterate	92	52.6
Informal	35	20
Basic Level	0	0
Secondary Level	39	22.3

Bachelor and above	9	5.1
Mother's Education		
Illiterate	18	10.3
Informal	79	45.1
Basic Level	6	3.4
Secondary Level	63	36
Bachelor and above	9	5.1
Presence of Sibling		
None	116	66.3
Brother	32	18.3
Sister	27	15.4
Source of information*		
Parents	145	82.9
Peer group	105	60.0
Social media	175	100
Teachers	175	100
Health Professionals	14	8
Siblings	47	26.9

*multiple response

More than half (58.3%) of the respondents were in the 15-18 years age group. Most of the respondents (35.4%) were from class IX while 33.1% were from class X. More than half of the respondents (62.3) belonged to the nuclear family. Most of

respondents (66.3) did not have any sibling whereas 18.3% had brother and 15.4% had sister (Table 1).

The study found that more than half (n=90, 51.4%) of the respondents' level of knowledge was adequate.

Table- 2: Association of knowledge with selected demographic variables (N=175)

Variables	Knowledge Level		Chi Square Value	p- value
	Inadequate	Adequate		
Class				
VIII	18 (32.7%)	37 (67.3%)	17.449	<0.001
IX	43 (69.4%)	19 (30.6%)		
X	24 (41.4%)	34 (58.6%)		
Respondent's Sex				
Male	53 (60.9%)	34 (39.1%)	10.561	<0.001
Female	32 (36.4%)	56 (63.6%)		
Father's Education				
Illiterate	34 (37.0%)	58 (63.0%)	16.645	<0.001
Informal	19 (54.3%)	16 (45.7%)		
Secondary Level	29 (74.4%)	10 (25.6%)		
Bachelor and above	3 (33.3%)	6 (66.7%)		
Presence of Siblings				
None	46 (39.7%)	70 (60.3%)	10.957	0.004
Brother	21 (65.6%)	11 (34.4%)		
Sister	18 (66.7%)	9 (33.3%)		
Source of information				
Parents	65 (44.8%)	80 (55.2%)	4.746	0.012
Peer groups	69 (65.7%)	36 (34.3%)	30.882	<0.001

The data depicted that there is significant association between knowledge level and socio-demographic variables such as respondent's class, sex, presence of siblings, and parents and peer group (Table 2).

Discussion

The present study was conducted to assess the knowledge on pubertal changes among adolescents in Pokhara. We found the majority of respondents (n=102, 58.3%) were from 15-18 years age group. The findings of the study were consistent with the study conducted by Shrestha K et al. where majority of respondents (n=202, 79.5%) were from the age group 15-17 years.⁸ The present study revealed that 50.3% were females which is consistent with the study conducted by Chitra K et al.⁹

Most of respondents (66.3%) did not have any siblings whereas 18.3% had brother and 15.4 had sister. This finding was however contradictory to that of the study conducted by Dhakal B which revealed that 121 (66.1%) had siblings and 62.8% had elder sister.⁴

The present study revealed that more than half of the respondents' (51.4%) level of knowledge was adequate. The finding was consistent with the study conducted by Shrestha S et al.¹⁰ Our findings were also in agreement with those of the study conducted by Pandit S et al. which revealed that 63% of adolescents had good level of knowledge.¹¹ It might be because of the age group of the adolescents, where most of the adolescents belonged to the age group of 15-19 years. Most of the boys and girls might have experienced either of their pubertal changes in this age group.

The present study revealed that there is significant association between knowledge and socio- demographic variables such as respondent's class, sex, ethnicity, and presence of siblings, and source of information of puberty changes. The study findings were consistent with a previous study conducted by Upadhyay DK et al. where most of the adolescents got information regarding reproductive health from friends and magazines.¹² The presence of sibling significantly affected the relation of knowledge level. Siblings are more likely to share information and experiences about puberty changes.

A relatively small sample size and non-random sampling of colleges are some of the limitations of this study which restrict the generalization of our results to other population. Similar studies can be done in boys and girls separately as well to differentiate levels of knowledge.

Conclusion

This study concluded that slightly more than half of the respondents had adequate knowledge on pubertal changes. Class, gender, presence of siblings, parents' educational status, and source of information had statistically significant relationship with the knowledge level of the adolescents.

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