

Original Article

Anxiety & Coping Patterns Regarding Pubertal Changes among Pre-Adolescent Girls of Udupi Taluk, Karnataka

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Abstract

Background : Puberty is a period in the developmental span when the individual changes from an asexual being to a sexual being.

Objectives : The present study was aimed to assess the anxiety and coping pattern regarding pubertal changes among pre-adolescents girls in selected schools of Udupi Taluk, Karnataka.

Materials and methods : The study included 540 pre-adolescent girls of age group (10-12years) from selected schools of Udupi Taluk by cluster random sampling technique. Data was collected using structured questionnaires.

Results : The study showed that out of 231 pre-adolescents who attained menarche (55%) had moderate anxiety and 52.4% had adaptive coping pattern. Among 309 pre-adolescents who did not attain menarche, 62.1% had moderate level of anxiety and 53.4% had adaptive coping pattern regarding pubertal changes. It also showed that there was a negative correlation between anxiety and coping pattern of the pre-adolescent girls, $r = -0.754$.

Conclusion : The study concluded that pre-adolescent girls have moderate level of anxiety and adaptive coping pattern regarding pubertal changes and it also showed that when anxiety increases coping pattern decreases. Majority of the respondents had moderate level of anxiety and adaptive coping pattern.

Keywords: Anxiety, puberty, coping pattern, pre-adolescents.

Introduction

Puberty is a period in the developmental span when the individual changes from an asexual being to a sexual being. It is a period of rapid physical change and personality growth when individual achieves nearly the adult bodily stature. The girls begin their preadolescent growth spurt at about 10 years of age and boys at about 12 years of age. Girls and boys approach the end of puberty between 12-14 and 13-15years respectively.¹

During puberty the biological changes reach a climax and there is sexual maturity in both boys and girls. The pubescent girls and boys will have more concern about their bodily changes, which will bring about psychological consequences. Among

many adjustments the adolescents must make, the most important is learning about the change in the body. With the onset of puberty the feeling, questions and concern about bodily appearance begin to occupy a central place in the life of the individual. All physical characteristics require extraordinary attention and examination during this phase. This is a time, which the individual feels himself different from others and undesirable characteristics put the adolescent at risk for teasing and ridicule.²

Adolescence is regarded as unique phase of human development; adolescents are important resources of any country. They have successfully passed the adversaries of early childhood and are on the way to adulthood.³

Adolescence is a period where a vital physical and psycho-sexual change takes place. In this regard, not only the preschooler, but also the older child that is the preadolescents between the age of 10 and 12 years should

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also receive adequate attention as a preparation for pubertal changes and menarche.⁴

A correlative study to assess the knowledge and anxiety of pre-adolescents related to pubertal growth in a selected school of Udipi district among 170 pre-adolescents showed that 55.88% had not received adequate parental preparation on pubertal growth, 61.8% had only average knowledge and majority 154 (90.58%) had moderate anxiety of which 83 were girls and 71 were boys. The data also showed that 16 (9.41%) had severe anxiety of which 8 were girls and 8 were boys.⁴

Kumar et al investigated 1000 girls and boys of the age group 13-19 years drawn from eight selected institutions to determine the pattern of anxiety related to their own growth during puberty at Punjab. The study results showed that a larger number of subjects were needlessly troubled on account of viewing the normal variations in the rate of physical development as abnormal variations. Boys surpassed girls in the degree of concern expressed over various parameters of pubertal growth and development. Height, shoulder width, and pubic hair growth were the principal areas of concern in boys and menstruation, height and weight in girls.⁵

A descriptive comparative study in Punjab about knowledge and coping patterns among 200 adolescents regarding pubertal changes showed that most of the adolescents were having good knowledge. As per comparison, female adolescents (72%) were having better knowledge than male adolescents (68%). In terms of coping, male adolescents (92%) had more adaptive coping patterns than female (22%) adolescents. The study concluded that there is a need to educate the adolescents especially females regarding pubertal changes before the onset of puberty. This may improve their coping ability in future and can lead a healthy life.⁶

Mehta M, Chugh G and Pandey P investigated developmental changes and gender differences in the experience of stress and coping strategies among children. About 2000 school children in the age of 8-14 years from

different schools of Delhi were administered scales to measure physical and psychological symptoms of stress, stressful life events as well as their coping strategies. The study revealed that females had higher physical as well as psychological manifestation of stress and had somewhat higher levels of daily hassles contributing to their stress and girls make more use of seeking social support and problem solving as coping strategies when compared to boys. The study concluded that females are at higher risk of taking stress and they are more anxious about the changes occurring in their body.⁷

Studies have shown that there is lack of adequate information about pubertal changes and parental guidance to meet with changes in pubertal period. This leads to anxiety and misconceptions in the mind of young adolescents especially females which hinders their healthy growth. The purpose of the study was to assess the anxiety and coping pattern regarding pubertal changes among pre-adolescent girls and to provide an informational pamphlet which will help to reduce the anxiety and to improve the coping pattern and adaptation in future.

The objectives of the study were to assess and determine the relationship between anxiety and coping pattern regarding pubertal changes among preadolescent girls who attained and did not attain menarche.

Material and Method

The conceptual framework adopted for the study was Betty Neuman's System Model.⁸

Descriptive survey was adopted and study setting was higher primary schools of Udipi Taluk.

Cluster random sampling was used to select the schools. Study was conducted among 540 girls from 12 higher primary schools. The sample size was calculated at 95% confidence interval. The related precision was taken at 2%. The divisions of classes 5th, 6th, and 7th are considered as clusters and samples were all the female preadolescents in the selected division who met the sampling criteria. Ethical permission was obtained from Institutional Ethics Committee. Assent from the participants was obtained and

parents' consent was taken prior to the study. Confidentiality of the information provided by the respondents was assured to them by taking down the roll numbers.

Data collection instruments

Tool 1 : Demographic proforma: It included 15 items regarding background information. Items included were age, class of study, educational and occupational status of the parents', birth order, family income, source of information and attainment of menarche.

Tool 2 : Anxiety scale was developed by the researcher. It consists of 33 items in which 4 items were exclusively for the pre-adolescents girls who attained menarche. It was a 3 point rating scale with three alternatives never, sometimes, always. A score of 69 to 87 was considered as severe anxiety, 49 to 68 as moderate anxiety and 29 to 48 as mild anxiety. To ensure the content validity it was given to 9 experts from the field of mental health nursing, child health nursing and OBG nursing. Reliability was computed using Cronbach's Alpha and r was 0.76.

Tool 3: Coping scale consists of 29 items regarding various coping pattern adopted by the pre-

adolescents. The areas selected were self-acceptance, avoidance, spiritual-positive coping, seeking social support and positive reappraisal. It was 4 point likert scale with four alternatives namely strongly agree, agree, disagree and strongly disagree. To ensure the content validity it was given to 9 experts from the field of mental health nursing, child health nursing and OBG nursing. Reliability was computed using Cronbach's Alpha and r was 0.71. A score between 73 to 116 were considered as adaptive coping pattern and 29 to 72 as maladaptive coping pattern.

Tool 4 : Opinionnaire regarding informational pamphlet provided to the participants. It consisted of 10 items to get their opinion on informational pamphlet.

The data was collected from the samples and then informational pamphlet was distributed to all the samples.

The statistical analysis was done using SPSS version 16. Frequency, percentage, chi-square and spearman's rho were the statistical tests used for the data analysis with the level of significance at 0.05.

Results

Sample characteristics

Demographic profile of subjects is presented in Table 1.

Table 1: Frequency and percentage distribution of sample characteristics. (n=540)

Sample characteristics	Frequency (F)	Percentage (%)
1. Age in years		
A. 10	170	31.5
B. 11	184	34.1
C. 12	186	34.4
2. Class of study		
A. 5	180	33.3
B. 6	180	33.3
C. 7	180	33.3
3. Father's educational status		
A. No formal education	25	4.6
B. Primary	217	40.2
C. Secondary	154	28.5
D. Pre-university	85	15.7
E. Diploma	11	2
F. Degree & above	48	8.9
4. Mother's educational status		
A. No formal education	47	8.7
B. Primary	217	40.2
C. Secondary	156	28.9
D. Pre-university	74	13.7
E. Diploma	8	1.5
F. Degree & above	38	7
5. Father's occupation		
A. Unemployed	5	0.9
B. Farmer	35	6.5
C. Business	146	27.0
D. Skilled	126	23.9
E. Professional	72	13.3
F. Semi skilled	156	28.4
6. Mother's occupation		
A. House wife	345	63.9
B. Semi skilled	133	24.6
C. Business	19	3.5
D. Skilled	19	3.5
E. Professional	24	4.4
7. Religion		
A. Hindu	359	66.5
B. Muslim	137	25.4
C. Christian	44	8.1

Sample characteristics	Frequency (F)	Percentage (%)
8. Type of family		
A. Extended	90	16.7
B. Joint	116	21.5
C. Nuclear	334	61.9
9. Birth order		
A. 1	215	39.8
B. 2	232	43.0
C. 3	71	13.1
D. 4 & above	22	4.1
10. Total monthly family income in rupees		
A. <2000	205	38.0
B. 2000-4000	161	29.8
C. 4001-6000	91	16.9
D. 6001 & above	83	15.4
11. Source of health related information		
A. News paper	44	8.1
B. Magazines	24	4.4
C. Radio	24	4.4
D. Television	174	32.2
E. Cinema	4	0.7
F. Computer/ Internet	15	2.8
G. Teachers	213	39.4
H. Friends	42	7.8
12. Does your mother explain to you about menstruation/ pubertal changes		
A. Yes	454	84.1
B. No	86	15.9
13. Specify the source of information regarding menstruation.		
A. Mother	434	80.4
B. Sibling	11	2.0
C. Friends	49	9.1
D. Father	6	1.1
E. Neighbour	5	0.9
F. No information	3	6.5
14. Have you attained menarche		
A. Yes	231	42.8
B. No	309	57.2
15. If yes, when did you attain?(mention the age at menarche)		
A. 10	39	16.88
B. 11	98	42.42
C. 12	94	40.69

The data presented in table 1 reveals that out of 540 samples, 186(34.4%) respondents were in the age group of 12years. With respect to parents' educational status, primary education comprised of highest percentage 217(40.2%). In majority of the respondents father's occupation was semiskilled type and mothers were housewives, 345 (63.9%). Considering the data on religion most of the respondents were of Hindu religion 359(66.5%) and majority of the respondents were from nuclear family 334(61.9%). With regard to data on birth order most of the respondents belong to 2nd birth order 232(43.0%). In majority of the respondents total monthly income is <2000, 205(38%). Teachers 213(39.4%) were the source of information for most of

the sample. In majority of the respondents mother explained to them regarding menstruation/pubertal changes 454(84.1%). Majority of the respondents have not attained the menarche 309(57.2%) and majority who attained menarche are at the age of 11 years, 98(18.1%).

Anxiety : Results showed that out of 231 pre-adolescents who attained menarche, 15(6.5%) had severe anxiety, 127 (55%) had moderate and 89(38.5%) had mild anxiety.

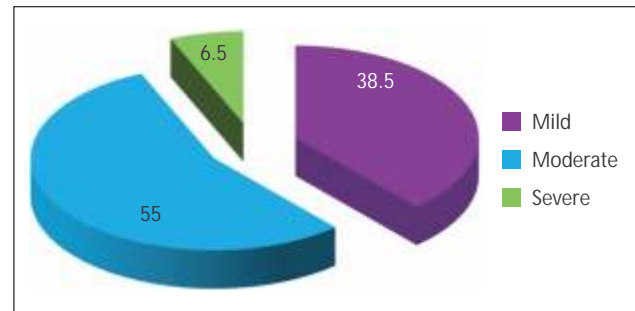


Fig 1(A) : Pie chart showing percentage distribution of anxiety scores of preadolescents girls who attained menarche It also showed that out of 309 pre-adolescents who did not attain menarche, 35(11.3%) had severe anxiety, 192 (62.1%) had moderate and 82 (26.5%) had mild anxiety.

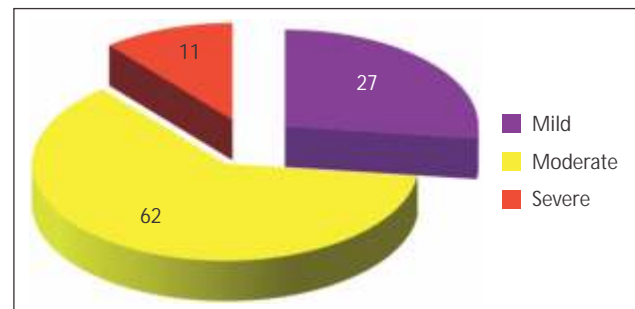


Fig 1(B) : Pie chart showing percentage distribution of anxiety scores of preadolescents who did not attain menarche

Coping pattern

Out of 231 female pre-adolescents who attained menarche, 121 (52.4%) had adaptive coping pattern and 110 (47.6%) had mal adaptive coping pattern regarding pubertal changes. Out of 309 female pre-adolescents who did not attain menarche, 165 (53.4%) had adaptive coping pattern and 144 (46.6%) have mal adaptive coping pattern regarding pubertal changes.

Correlation between Anxiety and Coping pattern

Spearman Rho Correlation coefficient was computed between anxiety and coping pattern of pre-adolescents who attained and who did not attain menarche. It was evident that there was a significant relationship between

anxiety and coping pattern of pre-adolescents in both the groups respectively ($r = -0.754$, $p = 0.001$), ($r = -0.675$, $p = 0.001$)

Table 2(A) : Correlation Co-efficient computed between anxiety and coping pattern of female pre adolescents regarding pubertal changes who attained menarche. (n=231)

Variables	r Value	p Value
Anxiety Coping	-0.754 [*]	.001

The data presented in table 2(A) shows that the correlation co-efficient of anxiety and coping pattern score of female pre adolescents who have attained menarche is (-0.754).

Table 2(B): Correlation Co-efficient computed between anxiety and coping pattern of female pre adolescents regarding pubertal changes who did not attain menarche (n=309)

Variables	r Value	p Value
Anxiety Coping	-0.675 [*]	.000

The data presented in table 2(B) show that the correlation co-efficient of anxiety and coping pattern score of female pre adolescents who did not attain menarche is (-0.675).

Other findings of the study

Opinionnaire on informational pamphlet was collected and it showed that majority of the pre-adolescent girls (77.4%) believe to a great extent that information pamphlet on pubertal changes is a good source of learning. Most of the respondents (71.7%) strongly felt to a great extent that the pamphlet is easy to understand.

Discussion

The study revealed that majority of 127(55%) the respondents who attained menarche had moderate level of anxiety and majority of the respondents 192 (62.1%) who did not attain menarche also had moderate level of anxiety.

The findings of the present study is supported by a correlational survey conducted by Jilu Meera to assess the knowledge and anxiety of pre-adolescents related to pubertal growth in Udupi district among 170 pre-adolescents. Majority 154 (90.58%) had moderate anxiety of which 83 were girls and 71 were boys. The data also showed that 16 (9.41%) had severe anxiety of which 8 were girls and 8 were boys.⁴

The present study revealed that majority of 121 (52.4%) the respondents who attained menarche had adaptive coping pattern and majority of the respondents 165(53.4%) who did not attain menarche also had adaptive coping pattern. Whereas, study by Vibha in Punjab revealed that male adolescents (92%) had more adaptive coping patterns than female (22%) adolescents.⁶

The findings of the present study show that there is a negative correlation between anxiety and coping pattern score of pre adolescents girls who have attained & not attained menarche (-0.754), (-0.675).

The findings were supported by similar study conducted by Bruce and Byrne. This study investigated the relationships between anxiety, fear, self-esteem, and coping strategies in a sample of 224 post primary students (years 7, 9, and 12) in Australia. There was a significant correlation ($p < .01$) between anxiety and fear for both the boys and the girls at year 7, $r(34) = .49$ and $r(36) = .50$, respectively, and at year 12, $r(36) = .54$ and $r(38) = .52$, there was none at year 9. Furthermore, for both the boys and the girls at year 12, there was a significant ($p < .01$) negative correlation between self-esteem and anxiety, $r(32) = -.69$ and $r(32) = -.67$, and between self-esteem and fear, $r(31) = -.45$ and $r(31) = -.68$. It is noteworthy that there was a stronger correlation between self-esteem and fear for the girls than for the boys at year 12.⁹

The current study was limited to adolescents girls between 10-12 years of age studying in 5th, 6th and 7th grade in selected schools of Udupi Taluk.

Conclusion

The study concluded that majority of the respondents had moderate level of anxiety and adaptive coping pattern. The findings revealed a significant negative correlation between anxiety and coping pattern. Hence it is concluded that higher the anxiety score, lesser will be the coping pattern and lesser the anxiety higher will be the coping pattern. Most of the respondents felt that the informational pamphlet provided to them is the good source of learning and easy to understand.

Adolescents belong to a very vital age group as they are the entrant population to parenthood. These groups undergo vital physiological and psychosexual changes. So the

preadolescents should receive adequate attention as a preparation to meet the changes in the adolescent period.

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