

Original Research Article

# Assessing the Stress & Coping Strategies Regarding Pubertal Changes among Female School Children in Bangalore

Jenita Khwairakpam<sup>1</sup>, Asha Andrews<sup>2</sup>

<sup>1</sup>Consultant - Maternal Health Division, Ministry of Health and Family Welfare (MoHFW), New Delhi.

<sup>2</sup>Professor, Florence College of Nursing, Bangalore

Corresponding Author: Jenita Khwairakpam

## ABSTRACT

**Introduction:** Adolescence is a period of life between the onset of puberty and a full commitment to an adult social role. During this transition period dramatic physical, cognitive, psychosocial and psychosexual changes take place that are exciting and at the same time frightening. The aim of the study was to assess the stress and coping strategies of female school children regarding pubertal changes.

**Materials and methods:** A descriptive survey design was selected for the study among 100 female school children from selected urban schools at Bangalore, Karnataka. A non-probability purposive sampling technique was used to select the samples for the study. A stress rating scale and coping strategies rating scale was used to collect data from the subjects.

**Results:** In the stress score, 74% of the samples experienced high level of stress and regarding coping strategies, 50% of the samples had moderately coped to overcome the stress related to pubertal changes. A significant association was found between stress and age of female school children, education of the mother, occupation of the mother, monthly family income, number of siblings and information received regarding pubertal changes.

**Conclusion:** The study concluded that female school children have stress regarding pubertal changes and the samples used more positive coping strategies compared to negative coping strategies regarding pubertal changes.

**Key words:** Pubertal changes, female school children, stress, coping strategies

## INTRODUCTION

“Adolescence” comes from the Latin word meaning “to come to maturity”, a fitting description of this stage of life. The adolescent is maturing physically and emotionally, growing from childhood towards adulthood, and seeking to be grown up. It is a period of transition between childhood and adulthood. During this transition period dramatic physical, cognitive, psychosocial and psychosexual changes take place that are exciting and at the same time frightening. This time is

pressure packed with conflicts as the adolescent experience further collisions between their own needs and the demands of their family and social environment. <sup>[1]</sup>

Adolescence involves three distinct sub phase: early adolescence (ages 11 to 14), middle adolescence (ages 15 to 17), and late adolescence (ages 18 to 20). Adolescence tends to begin and end earlier in girls than in boys. Puberty primarily refers to the maturational, hormonal, and growth process which generally begins between 8 to 14 years. The age of onset of

adolescence varies according to sex, ethnicity, health status, genetics, nutrition, and activity level. It is initiated by hormonal changes triggered by the hypothalamus. [2]

In most girls, the initial indication of puberty is the appearance of breast buds, an event known as thelarche, which occurs between 9 and 13½ years. This is followed in approximately 2 to 6 months by growth of pubic hair on the mons pubis, known as adrenarche. The initial appearance of menstruation, or menarche, occurs about 2 years after the appearance of the first pubescent changes, approximately 9 months after attainment of peak height velocity and 3 months after attainment of peak weight velocity. [3]

Children with poor mental health skills or those suffering from environmental stress are unlikely to perform well in school or later in life. All children face significant stresses in life. Some stresses are part of normal growth, hormonal changes as well as changes that young people experiences in relation to parents and society at large. Children negotiate these stresses with varying degrees of resilience and mastery. They exhibit emotional disturbances in a variety of ways. [4]

Adolescence can be a specifically turbulent as well as a dynamic period of one's life. G. Stanley Hall denoted this period as one of "Storm and Stress" Adolescence is recognized to be a time of rapid change and transition that can be stressful and difficult, drawing on all one's resources. The adolescent is faced with pressures from peers to conform, which often involve flaunting adult authority and even serious health risks. Early maturing girls and late maturing children are especially sensitive to the stresses of being different from their peers. Many feel intense anxiety over their identity. Slow maturing youngsters need support and reassurance that they are not abnormal and need only be patient until the time comes when they, too, will develop the characteristics for which they yearn. [5]

Young women may have difficulty coping with rapid growth, secondary sexual changes such as breast development or genital hair, or their menstrual periods. During this period of life, most girls do not want to be perceived as being different from their friends or to be singled out in any way. They often become preoccupied with body image concerns as adult physical features appear and reproductive capacity is achieved. They therefore respond to bodily sensations with increased intensity. Early puberty in females has been consistently associated with emotional and behavioral problems. It result in peer rejection, emotional immaturity, and low self esteem were commonly viewed as the factors underlying emotional, behavioral, and health problems. Psychological style in response to stressors, such as ruminative and self blaming coping styles, may also shift at puberty. [6]

Children are dealing with the challenges of going through puberty, meeting hanging expectations and coping with new feelings. They can either stimulate new adaptive coping or lead to regression and maladaptive ways of coping or lead to regression and maladaptive coping abilities. Environmental factors may help or hinder the adolescents attempt to deal with these issues. Coping skills are predictably related to psychological problems like depression, anxiety, and physical symptoms in general adolescents. It must be stressed that teenagers do not always volunteer information. They may be too shy or embarrassed or under false impression. Therefore, adolescents should be given the option of being educated about their bodies and the normal changes that occur in their body. [7]

### **Objectives**

The objectives of the study were to:

- Identify the stress as perceived by the female school children regarding pubertal changes.
- Determine the coping strategies used by the female school children to overcome

their perceived stress related to pubertal changes.

- Find out the relationship between the perceived stress and coping strategies of the female school children regarding pubertal changes.
- Associate between the perceived stress among the female school children regarding pubertal changes with selected sociodemographic variables.
- Associate the coping strategies used by the female school children regarding pubertal changes with selected sociodemographic variables.

## MATERIALS AND METHODS

A descriptive survey design was selected for the study. The study setting was at three selected urban school settings at Bangalore. **POPULATION:** The target population for the present study comprise of female school children in the age group of 11-15 years studying at the urban schools at Bangalore.

**SAMPLING TECHNIQUE:** The sampling technique used was Non probability purposive sampling. **SAMPLE SIZE:** A total sample of 100 female school children in the age of 11-15 years who met the inclusion criteria were selected by using purposive sampling technique.

**Variables under study were:** In this study, the attribute variables are age, religion, education of parents, occupational status of parents, family monthly income, age of attainment of puberty, type of family, number of siblings, information received and the source of information regarding pubertal changes.

### Research hypothesis:

**H<sub>1</sub>:** There is a significant correlation between the perceived stress and coping strategies of female school children regarding pubertal changes.

**H<sub>2</sub>:** There is a significant association between the perceived stresses among female school children regarding pubertal changes and selected sociodemographic variables.

**H<sub>3</sub>:** There is a significant association between the coping strategies used by female school children regarding pubertal changes and selected sociodemographic variables.

Based on the objective of the study and after reviewing related literature and with guidance of experts in the field, the tool for data collection was developed.

Part A: Sociodemographic proforma

Part B: Stress rating scale

Part C: Coping strategies rating scale

### CONTENT VALIDITY

Content validity of the tool was ensured by a team of 10 experts. The experts include 7 nursing experts specialized in the field of psychiatric nursing, 2 psychiatrist and 1 clinical psychologist.

### RELIABILITY OF THE TOOL:

The tool after validation was subjected to test for its reliability. The tool was administered to a High School. The reliability was established by split-half method using product moment correlation and it was found reliable with  $r=0.87$  for stress scale and  $r=0.88$  for coping scale.

### SCORING AND INTERPRETATION:

The questions were phrased at statements. It was arranged in a continuum on a 4 point rating scale with alternatives as always, often, sometimes and never for both stress rating scale and coping strategies rating scale. In both the tools, there are positive and negative statements. For positive statements the score is given as for always 4, for often 3, for sometimes 2 and never 1. A reverse scoring was considered for negative statements.

## RESULTS AND DISCUSSION

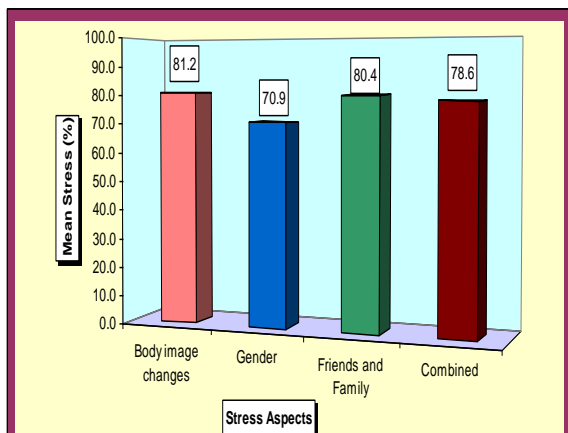
### Stress Score Of Female School Children Regarding Pubertal Changes:

n=100

Stress level	Category	Respondents	
		Number	Percentage
Low	Below 50 % Score	0	0.0
Moderate	51-75 % Score	26	26.0
High	Above 75 % Score	74	74.0
Total		100	100.0

The study reveals that majority (74%) of the female school children experience high

level of stress regarding pubertal changes. Followed by the remaining 26% with moderate degree of stress. It is significant to note that all of the samples experience moderate to high level of stress regarding their pubertal changes and none of the samples are in the category of low level of stress.



It shows that the participants had highest mean percentage stress score (81.2%) in the area of body image changes and the least aspect wise mean percentage score was observed in the area of gender related stress (70.9%) and on aspects of stress from friends and families, the mean percentage score is 80.4.

**n=100**

Coping level	Category	Respondents	
		Number	Percent
Low	Below 50% Score	0	0.0
Moderate	51-75% Score	50	50.0
High	Above 75% Score	50	50.0
Total		100	100.0

The above table shows that majority of the samples (50 out of 100, 50%) had moderately coped regarding pubertal changes and the remaining 50% (50 out of 100) had high coping regarding pubertal changes. It is seen that none of the female school children who participated in the study had low coping to overcome the stress related to pubertal changes.

The findings of the study were discussed according to the objectives and hypothesis.

### 1. Sociodemographic characteristics of the female school children.

The study findings demonstrated that 25% under the age group of 11-12 years, and an equal percentage distribution was observed for all other age groups such as 12-13 years, 13-14 years and 14-15 years. Majority 54% of female school children who participated in the study were Hindus and 31% were Christians and the remaining 15% were Muslims. Regarding educational status of the samples fathers (34%) had High school education, about (33%) had degree education, (19%) had pre university education and the remaining (14%) had only primary education.

Regarding educational status of the samples mother, (37%) had Pre university education, about (34%) had High school education, (17%) had Primary education, and the remaining (12%) had Degree education. Almost (94%) of the respondents father were employed and the remaining (6%) were unemployed. On the contrary majority of the samples mother (56%) were unemployed and the remaining (44%) were employed.

Majority (27%) of the samples monthly family income is between Rs. 2,501-5,000 , about (19%) is between Rs. 7,501-10,000, and an equal percentage (9%) is between Rs. 5001-7500 and for less than Rs. 2500 .Majority of the samples (61%) hailed from nuclear family and the remaining (39%) in joint family.

Majority of the samples (37%) attained puberty at the age of 12-13 years and about (26%) attained puberty at the age of 13-14 years, about (26%) at 11-12 years and only (11%) attained puberty at the age of 14-15 years. Almost majority of the samples (83%) had received information regarding pubertal changes and the remaining (17%) had not received information regarding pubertal changes and the samples (38%) received information regarding pubertal changes from parents, and about (32%) received information from friends, (23%) received information from mass media and only (7%) received information from health professionals. .Majority (51%) of the samples were the



first child of their parents, about (31%) were the second child and the remaining (18%) were the third child in the family.

## **2. a) Stress scores of female school children regarding pubertal changes.**

This study supports the findings of the study by Huerta R in which it was found that adolescent girls experience stress regarding their pubertal changes and pubertal development in adolescents is associated with high stress, anxiety and stress perception. In the present study it was found that the overall stress score of female school children was high 74% (74 out of 100) and 26% (26 out of 100) of the samples experience moderate stress regarding pubertal changes.

In the present study, it was observed that none of the female school children who participated in the study experienced low stress regarding pubertal changes. The highest mean stress score was noticed in the aspects body image changes, (51.94) followed by gender related stress and stress from families and friends (35.36, 22.69) respectively.

## **b) Coping strategies score of female school children regarding pubertal changes.**

The findings of the study shows that the samples have moderate to high coping to overcome the stress cause by pubertal changes. The findings of the study shows that the samples have moderate to high coping to overcome the stress cause by pubertal changes. It was observed that in the present study, the samples used more positive coping strategies (Mean percentage  $\pm 8.1$ ) than negative coping strategies (Mean percentage  $49.2 \pm 10.2$ ) to overcome their perceived stress. This finding contradicts the findings of the study conducted by Sawyer MG<sup>18</sup> in which it was observed that children who experience high stress made use of more negative coping strategies and an independently statistically significant relationship was observed between high stress and negative coping.

## **3. Correlation between Mean Stress and Coping scores regarding Pubertal changes.**

The findings of the study shows that there is a negative relationship between perceived stress and coping strategies with the obtained (r) value (-0.408) which is more than the table value (0.205) with 98df at 0.05 level of significance. This study support the findings of Hampel<sup>11</sup> in which it was found that girls perceived a higher amount of stress but scored less at on maladaptive coping strategies.

## **4. Association between stress and coping and selected sociodemographic variables.**

The sociodemographic variables to which an association is assessed are age, educational status of parents, occupational status of parents, family monthly income, type of family, number of siblings, information received and source of information. Among these a statistically significant association was found between stress and age, education of mother, occupation of mother, monthly income, received information and number of siblings. A statistically significant association was only found between coping and type of family.

## **Implications**

The results of the study shows that majority of the female school children experience high level of stress regarding pubertal changes and considerable number are using negative coping strategies to overcome the perceived stress. So the study had several implications for nursing practice, nursing education, nursing administration and nursing research.

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