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Stress experience during menstrual cycle among adolescents at selected schools, Nellore, Andhra Pradesh

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Abstract
Background: Globally the prevalence of stress during menstrual cycle among adolescent girls has ranged from 15.8% to 89.5% stress related symptoms is the most common gynecological problem among female adolescents with a prevalence of 60% to 93% in the United States. A study done in Sweden, showed that more than 50% of all menstruating girls experience some discomfort. It has also been reported by a senior obstetrician that probably 5-10% girls in their late teens suffer from severe stress during menstrual cycle, the prevalence was >2-4.
Objectives: 1.To identify the stress level among adolescents during menstrual cycle. 2. To find the association between stress level in adolescents girls and socio demographic variables.
Methods: descriptive design was used and 100 adolescent girls were selected Sravanthi High School and Tagore High School at NTR Nagar, Nellore.
Results: Regard to level of stress 4(4%) of them had mild stress, 74(74%) of them had moderate stress and 22(22%) of them had severe stress during menstrual cycle.

Keywords: stress, menstrual cycle, adolescents

Introduction
The menstrual period is one of the crucial periods in adolescent girls, the reported prevalence of about 20 to 40% shows that a significant group of adolescents may affect by stress and related problems [5]. Reports of stress during menstrual cycle among adolescents in Western Countries indicate a prevalence ranging from 14-40% some of the stress related problems like mood depression feeling of hopelessness, lethargy and excessive fatigability may create serious negative consequences for the adolescents their families, and the social relationship including low self-esteem low tolerance to stress and feeling of inadequacy [2].

Anil *et al.,* (2015) [1] conducted a study on prevalence of stress during menstrual cycle among adolescent's girls in Gwalior, India. An explorative survey technique with a co-relational approach was used and 970 adolescent girls of age13-17 years, studying in the higher secondary school of Gwalior was taken for the study. The Results were the prevalence of stress during menstrual cycle among adolescent girls was found to be 79.67%, most of them37.965%, suffered regularly from stress severity, the most common symptoms present on both days, that is day before and first day of menstruation were lethargy and tiredness, depression and in ability to concentrate in work, whereas ranking of these of symptoms on the day after the stoppage of menstruation showed depression as the first common symptom. Negative co-relation has found between stress and general health status as measured by body surface area [1].

Need for the study
Uswala Valsala Francis (2010) [3] Globally the prevalence of stress during menstrual cycle among adolescent girls has ranged from 15.8% to 89.5% stress related symptoms is the most common gynecological problem among female adolescents with a prevalence of 60% to 93% in the United States. A study done in Sweden, showed that more than 50% of all menstruating girls experience some discomfort. It has also been reported by a senior obstetrician that probably 5-10% girls in their late teens suffer from severe stress during menstrual cycle, the prevalence was >2-4.

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Shahida Nagma (2012) A descriptive study was conducted among 233 adolescent girls in residential school of Udupi district, Karnataka to identify the prevalence of stress, related symptoms during menstrual cycle. Simple random technique was used for selection of sample. Structured questionnaire and stress scale were used for data collection. The findings of the study revealed the prevalence of stress and related symptoms in adolescent girls was found to by 62.70%, out of 233 samples 28(12%) had mild stress, 77(33%) had moderate stress and 41(17.6%) had severe stress during menstrual cycle [4].

Problem Statement
A descriptive study to assess the stress experience during menstrual cycle among adolescents at selected schools, Nellore.

Objectives
- To identify the stress level among adolescents during menstrual cycle.
- To find the association between stress level in adolescents girls and socio demographic variables.

Delimitations
The study is delimited to;
- Adolescent girls aged between 13-17 years only.
- The sample size of 100 students only.
- Adolescent girls studying in selected schools of Nellore

Materials and Methods
Research Approach: Quantitative Research Approach
Research Design: Descriptive Research Design

Setting of the Study
The study was conducted in Sravanthi high school and Tagore high school at NTR Nagar, Nellore.

Population
Target Population
The target population was all adolescent girls aged between 13-17 years of age.

Accessible Population
The adolescent girls who are studying 8th 9th and 10th standard in Sravanthi high school and Tagore high school at NTR Nagar, Nellore and who fulfilled the inclusion criteria.

Sample Size
100 adolescent girls aged between 13-17 years studying in Sravanthi high school and Tagore high school at NTR Nagar, Nellore.

Sampling Technique
Purposive sampling technique was used to select the samples.

Criteria for Sample Selection
Inclusion criteria
- Adolescent girls aged between 13-17 years.
- Adolescent girls studying in Sravanthi high school and Tagore high school schools at NTR Nagar, Nellore.

Exclusion Criteria
- Who has stress related to other gynecological problems
- Who is not present at the time of data collection
- Who have any psychiatric disorders

Discription of the tool
The tools consist of two parts.
Part-I: Socio demographic variables
It includes age, standard of education, dietary pattern, age at menarche, duration of cycle, days of menstrual flow, and any problems related to menstruation.
Part-II; Structured stress rating scale to assess the stress level among adolescent girls during menstrual cycle.
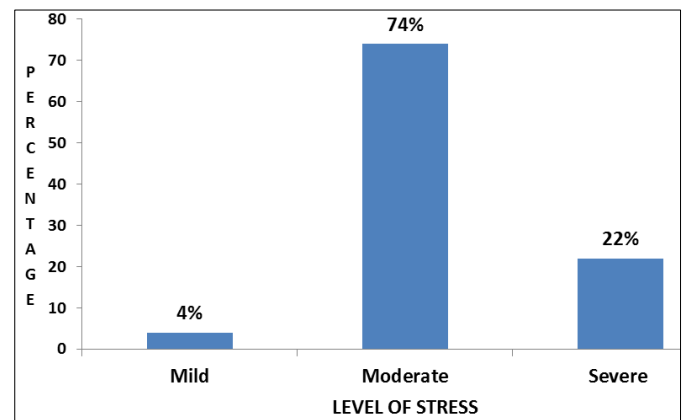
Score Interpretation

Score	Level of stress
1-25	Mild stress
26-50	Moderate stress
51-75	Severe stress

Results & Discussion

Table 1: Frequency and percentage distribution of stress level of adolescent girls during menstrual cycle. (n=100)

Level of stress	Frequency (F)	Percentage (%)
a. Mild	4	4
b. Moderate	74	74
c. Severe	22	22
d. Total	100	100

Table no-1: shows that regard to level of stress 4(4%) of them had mild stress, 74(74%) of them had moderate stress and 22(22%) of them had severe stress during menstrual cycle.

Fig 1: Percentage distribution of adolescent girls based on level of stress.

Table 2: Mean and standard deviation of stress level during menstrual cycle among adolescent girls.

Sample category	Mean	Standard deviation
Adolescent girls	31.7	5.70

Table 3: Association between prevalence of menopausal osteoporosis and selected socio demographic variables of peri-menopausal women.
(n=100)

S. No.	Demographic variables	Mild		Moderate		Severe		Chi square (x^2)
		F	%	F	%	F	%	
1.	Age							C=32.376
	a. 13-14 years	4	4	40	40	12	12	T=18.47
	b. 15-16 years	-	-	31	31	9	9	Df=4
	c. 17-18 years	-	-	3	3	1	1	P<0.001 S***
2.	Dietary pattern							C=13.687
	a. Vegetarian	1	1	7	7	1	1	T=9.49
	b. Non vegetarian	-	-	9	9	9	9	Df=4
	c. Mixed	3	3	58	58	12	12	P<0.01 S**
3.	Duration of cycle							C=24.78
	a. 28 days	-	-	9	9	5	5	T=22.46
	b. 29 days	-	-	16	16	6	6	Df=6
	c. 30 days	1	1	41	41	10	10	P<0.001
	d. >31 days	3	3	8	8	1	1	S***
4.	Days of menstrual cycle							C=14.24
	a. 3 days	3	3	17	17	2	2	T=12.59
	b. 4 days	-	-	14	14	8	8	Df=6
	c. 5 days	-	-	34	34	10	10	P<0.05
	d. >5 days	1	1	9	9	2	2	S*

Major findings of the study
- Regarding the level of stress 4(4%) of them had mild stress, 74(74%) of them had moderate stress and 22(22%) of them had severe stress during menstrual cycle.
- Adolescent girls mean stress score is 31.7 and standard deviation is 5.70.
- Among all the demographic variables age, dietary pattern, duration of cycle, days of menstrual cycle and problems related to menstruation had significant association with level of stress at P<0.05 level.

Conclusion
The study concluded that majority of the adolescent girls (74%) had moderate stress and 22% had got severe stress during menstrual cycle. Since the stress became the major and common problem among adolescent girls, the care must be taken to educate the adolescent girls regarding the symptoms, prevention and effective management of stress. Thereby the adolescent girls can adopt and manage the menstruation related problems effectively.

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