

Premenstrual Tension Syndrome among Adolescent Girls: A Cross Sectional Study at Bagalkot

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ABSTRACT

Background: Adolescent stage is very important in the life of a girl, because in this stage physical, sexual and psychological maturity takes place. The major landmark of puberty for females is menarche, the onset of menstruation, which occurs on an average between ages 12 and 13. The start of menstruation is usually a mixture of excitement and anxiety.

Aims: The aim of the study was to assess the premenstrual tension syndrome among adolescent girls studying in selected degree colleges of Bagalkot.

Methodology: The premenstrual tension syndrome was measured using Premenstrual tension syndrome scale from a convenient sample of 200 adolescent girls studying in selected degree colleges of Bagalkot in a cross sectional design. Data were analyzed using descriptive and inferential statistics.

Results: Findings indicates that majority 64.5% of respondents had mild level premenstrual tension syndrome, 35% of respondents had moderate premenstrual tension syndrome and 0.5 % respondents had severe premenstrual tension syndrome. Results depicts that total mean percentage of Premenstrual tension syndrome of adolescent girls was 24.38% with mean and SD 10.73 ± 7.0907 . Chi-square test was calculated to assess the association between Premenstrual tension syndrome & selected socio-demographic variable of adolescent girls. Findings depict that, there was a significant

association found between Age and Levels of Premenstrual tension syndrome [$\chi^2=5.35$, $P < 0.05$], there was a significant association found between Mother's educational status and Levels of Premenstrual tension syndrome [$\chi^2=4.84$, $P < 0.05$], there was a significant association found between Father's occupation and Levels of Premenstrual tension syndrome [$\chi^2=6.99$, $P < 0.05$] and No significant association found between Premenstrual tension syndrome and other variables.

Conclusion: The finding of the study concluded that most of the adolescent girls having mild and moderate and severe level of premenstrual tension syndrome. This study is effective to identify the premenstrual tension syndrome among adolescent girls.

Keywords: Premenstrual tension syndrome, Adolescent girls, Degree colleges.

INTRODUCTION

Adolescent is a transitional stage of physical and mental human development generally occurring between puberty and legal adulthood, but largely characterized as beginning and ending with the teenage stage. Adolescent is a person between the ages of 13 and 19. Puberty has been heavily associated with teenagers and the onset of adolescent development.^[1]

Adolescence comes from the Latin word 'adolescence' which means 'to come to maturity'. It is a period of dramatic

growth and development. A process of transition from childhood to adulthood.^[2]

Adolescent stage is very important in the life of a girl, because in this stage physical, sexual and psychological maturity takes place. The major landmark of puberty for females is menarche, the onset of menstruation, which occurs on an average between ages 12 and 13. The start of menstruation is usually a mixture of excitement and anxiety.^[3]

The term Premenstrual syndrome was first coined by Greene and Dalton in 1953. It has been defined as “the cyclic recurrence in the luteal phase of the menstrual cycle of a combination of distressing physical, psychological, and behavioral changes of sufficient severity to result in deterioration of interpersonal relationships and or interference with normal activities.”^[4]

Menstruation is a normal physiological phenomenon in a woman's reproductive life. Among the gynecological problems, menstrual problems are said to be the major one especially among adolescent females.^[5]

Premenstrual syndrome (PMS) refers to physical and emotional symptoms that occur in the one to two weeks before a woman's period. Symptoms often vary between women and resolve around the start of bleeding. Common symptoms include acne, tender breasts, bloating, feeling tired, irritability, and mood changes. Often symptoms are present for around six days. A woman's pattern of symptoms may change over time. Symptoms do not occur during pregnancy or following menopause.^[6]

American College of Obstetrician and Gynaecologist (ACOG) put forward a criterion which consists of any one of the Affective symptoms for premenstrual syndrome are (Depression, Angry outbursts, Irritability, Anxiety, Confusion and Social withdrawal) and Somatic symptoms (Breast tenderness, Abdominal bloating, Headache and Swelling of extremities).^[7]

MATERIALS AND METHODS

Study Design and Participants

Present study was cross sectional design conducted in March 2022. Convenient sample of 200 adolescent girls studying in degree first year and second year among various degree college's of Bagalkot were selected for the study. Adolescent girls who are studying in degree first year and second year are willing to participate in the study and adolescent girls who are present at the time of data collection are included in the study. Adolescent girls who are not physically fit at the time of data collection are excluded from the study.

INSTRUMENTS

Premenstrual tension syndrome scale (PMTS):

Premenstrual tension syndrome scale developed by Steiner et al was used to assess the symptoms of premenstrual syndrome among adolescent girls. There are 11 items for premenstrual tension syndrome scoring of these as follows: 0- no disturbance, 1- doubtful, trivial, 2-mild, 3-moderate and 4-severe. The reliability of the premenstrual tension syndrome for adolescent girls was established by test retest method ($r = 0.97$) shows equally reliable.

Socio-demographic Variable and Clinical characteristics

The socio-demographic data consists of information about premenstrual syndrome adolescent girls -Age, Religion, Year of study, father's educational status, mother's educational status, father's occupation, mother's occupation, family monthly income, type of family, area of residence, menstrual cycle regularity, menstrual cycle duration, duration of menstrual flow and age at menarche.

DATA COLLECTION PROCEDURES

Prior permissions were taken from relevant institutions before the beginning of data collection procedure. The study

participants were attended class at their college during study period. Every adolescent girl who fulfilled the inclusion criteria was approached for data collection. Consent was taken from adolescent girls. Purpose of the study was explained to the participants before administration for structured questionnaire.

DATA ANALYSIS

The data obtained were analyzed in terms of the objectives of the study using Descriptive and Inferential statistics. A master data was prepared with responses given by the participants. Frequencies and percentage for the analysis of demographic data. The mean and standard deviation of answered questions. The Chi Square test was used to determine association between premenstrual tensions syndrome level and selected demographic variables presented in tables and graphs.

RESULTS

A: Sample characteristics

Percentagewise distribution of adolescent girls to their age group reveals that majority of the adolescents girls (36%) were in the age group of 20 years. 91% of adolescent girls were Hindu. Majority (33.5%) of them are studying in BSc II year. Majority (25%) of adolescent girls fathers were graduates and above. Majority (29%) of mothers had secondary education.

Majority (37.5%) of adolescent’s fathers had agriculture as an occupation. Majority (67%) of adolescents mothers were housewives. (74.5%) of adolescents had income between 10, 001-20,000 per month. Most (83.5%) of them were in Nuclear family. Majority (76%) of them were residing in urban area. Majority (77%) of adolescents were regular with their menstrual cycle. Most(48%) of them with 29-35 days length in their menstrual cycle. Majority (61%) of them had 3-5days of menstrual flow and Most (30%) of adolescents attained their menarche at the age of 14.

B. Assessment of Premenstrual tension syndrome among Adolescents.

Table 1: Levels of Premenstrual tension syndrome among Adolescents.

Levels of Premenstrual tension syndrome	Number	Percentage (%)
Mild	129	64.5%
Moderate	70	35%
Severe	01	0.5%

Findings revealed that distribution of respondents by premenstrual tension syndrome levels (mild, moderate and severe). 64.5% of respondents had mild level premenstrual tension syndrome, 35% of respondents had moderate premenstrual tension syndrome and 0.5 % respondents had severe premenstrual tension syndrome. (Table 1)

Table 2: Area wise Mean, SD and Mean percentage of Premenstrual tension syndrome score among Adolescents.

Area	Maximum score	Minimum score	Mean	SD	Mean percentage
Premenstrual tension syndrome	40	00	10.73	7.0907	24.38%

Results depict that Mean, SD and Mean percentage of Premenstrual tension syndrome score of adolescent girls reveals that, the total mean percentage of Premenstrual tension syndrome of adolescent girls was 24.38% with mean and SD 10.73±7.0907. (Table 2)

C. Association between premenstrual tension syndrome and selected sociodemographic variable of adolescent girls.

Table 3: Association between Premenstrual tension syndrome and selected sociodemographic variable of adolescent girls.

Sl No	Sociodemographic variables	Degree of freedom	Chi-square value	P value
1	Age	1	5.3539	0.020675267*
2	Religion	1	0.7576	0.384065922
3	Year of study	1	2.16146	0.141510115
4	Father’s educational status	1	0.9259	0.335923821
5	Mother’s educational status	1	4.8418	0.027776322*
6	Father’s occupation	1	6.9940	0.00817803*
7	Mother’s occupation	1	2.5258	0.111995702
8	Family monthly income	1	24.894	6.05508E-07

9	Type of family	1	0.0455	0.83091105
10	Area of residence	1	0.04498	0.832032982
11	Menstrual cycle regularity	1	0.02606	0.871751689
12	Menstrual cycle duration	1	0.8235	0.364155889
13	Duration of menstrual flow	1	0.9506	0.3295601
14	Age at menarche	1	0.6023	0.437673428

*P<0.05

Result reveals that Association between Premenstrual tension syndrome & selected socio-demographic variable of adolescent girls. Findings depict that, there was a significant association found between Age and Levels of Premenstrual tension syndrome [$\chi^2=5.35$, $P < 0.05$], there was a significant association found between Mother's educational status and Levels of Premenstrual tension syndrome [$\chi^2=4.84$, $P < 0.05$], there was a significant association found between Father's occupation and Levels of Premenstrual tension syndrome [$\chi^2=6.99$, $P < 0.05$] and No significant association found between Premenstrual tension syndrome and other variables. (Table 3)

DISCUSSION

The main objective of the present study was to find the premenstrual tension syndrome among adolescent girls studying in degree first year and second year among various degree colleges of Bagalkot.

Findings shows that majority of the adolescent girls (36%) were in the age group of 20 years. 91% of adolescent girls were Hindu. This is consistent and supported with the study conducted by Pattanashetty N O, Mugali J et al at Gadag. Result shows that the majority, 39 (10.1%) were Hindus.^[8]

Majority (33.5%) of them are studying in BSc II year, Most (25%) of adolescent girls fathers were graduates and above, Majority (29%) of mothers had secondary education, Majority (37.5%) of adolescent girls fathers had agriculture as a occupation, Majority (67%) of adolescents mothers were housewives.

74.5% of adolescents had income between 10,001-20,000 per month, Most (83.5%) of them were in Nuclear family and (76%) of them were residing in urban area. This is consistent and supported with the

study conducted by Bhuvanewari K, Rabindran P, Bharadwaj at Puducherry. Result shows that majority of them (73%) were from urban areas and belonged to a nuclear family (83.3%).^[9]

Majority (77%) of adolescents were regular with their menstrual cycle. Most (48%) of them with 29-35 days length in their menstrual cycle. Majority (61%) of them had 3-5 days of menstrual flow. This is consistent and supported with the study conducted by Tsegaye, D., Getachew, Y at Ethiopia. Result shows that majority (52.4%) of participants reported average length of menstrual period of 4-5 days of bleeding per one cycle.^[10]

This is consistent and supported with the study conducted by Janita P. C. Chau, Anne M. Chang et al at Hong Kong. Result shows that majority ($\bar{x} = 5.56$, $SD = 1.14$) of adolescent girls are with 3-8 days of menstrual flow.^[11]

Most (30%) of adolescents attained their menarche at the age of 14. This is consistent and supported with the study conducted by T Segaye, D., Getachew, Y at Ethiopia. Result shows that majority (55.5%) of adolescent girls attained their menarche at the age of 13-15.^[10]

Findings revealed that distribution of respondents by premenstrual tension syndrome levels (mild, moderate and severe). 64.5% of respondents had mild level premenstrual tension syndrome, 35% of respondents had moderate level premenstrual tension syndrome and 0.5 % respondents had severe level premenstrual tension syndrome. This is consistent and supported with the study conducted by P Padmavati, Sankar R et al at Erode. Results show that majority (54%) of the samples had mild PMS, 28% as moderate and 18% of them had severe.^[12]

Findings depicts that, there was a significant association found between Age

and Levels of Premenstrual tension syndrome [$\chi^2=5.35$, $P<0.05$]. This is consistent and supported with the study conducted by Joseph T et al at Thrissur.

There was a significant association found between Mother's educational status and Levels of Premenstrual tension syndrome [$\chi^2=4.84$, $P<0.05$], there was a significant association found between Father's occupation and Levels of Premenstrual tension syndrome [$\chi^2=6.99$, $P<0.05$] and no significant association found between Premenstrual tension syndrome and other variables.

Limitation Of The Study

This study is limited to adolescent girls between the age group of 18-22 years attending selected high schools of Bagalkot.

Recommendations

Based on the findings of the study the following recommendations are stated; a similar study can be undertaken with a large stratified sample including adolescent girls from different sections of society to generalize the findings. A study can be conducted to find out the prevalence of anxiety and symptoms of premenstrual syndrome among adolescent girls. A study can be carried out to evaluate the efficiency of various teaching strategies like SIM, pamphlets and computer-assisted instruction on anxiety and symptoms of premenstrual syndrome among adolescent girls.

Suggestions

Health professionals can conduct health education programme on anxiety and symptoms of premenstrual tension syndrome among adolescent girls at various places.

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Results shows that there is a significant association found between age [$\chi^2=1.12$, $P<0.05$] and premenstrual syndrome.^[13]

Ethical Approval: Ethical clearance was obtained from the institutional ethical committee of BVVS Sajjalashree Institute of Nursing Sciences, Bagalkot.

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