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Prevalence of Menorrhagia and its Association Factors Quality of Life of Adolescents: A Cross-sectional Study

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ABSTRACT

Background: Menorrhagia is characterised by prolonged uterine bleeding that lasts more than seven days or by heavy bleeding that occurs at regular intervals. Nearly all age groups are affected by this extremely upsetting illness, which has several underlying causes. Every cycle, menstrual bleeding exceeding 80 millilitres can be a symptom of menorrhagia. The WHO ranks women's health as one of its top objectives. For adolescent girls, adolescence is a time of profound physical and psychological transformation.

Methods: This was a quantitative, non-experimental approach with a cross-sectional descriptive survey research design. A purposive sampling of 86 adolescent girls with menorrhagia was selected from Basaveshwara's new English medium high school Bagalkot. Socio-demographic information of adolescent girls with menorrhagia using socio-demographic profile and quality of life were assessed using pediatric quality life inventory scale. Data were analyzed in terms of the objectives of the study.

Results: Findings related to the prevalence of adolescent girls with menorrhagia is about 61% and quality of life among adolescent girls with menorrhagia reveal that 62.79% have a good quality of life, 37.21% had the average quality of life and total mean, SD, and mean percentage of quality of life of adolescent girls is SD 18.79+4.15. The association between the quality of life and socio-demographic variables reveals that no significant association was found between the levels of quality of life of adolescent girls and their socio-demographic variables.

Conclusion: According to the study's findings, 62.79% of teenage females enjoy an excellent quality of life, while 37.21% have an average one.

Key-words: Menstrual cycle, Prevalence, menorrhagia, Quality of life, Adolescent girls

INTRODUCTION

Women feel strong, active, creative, intelligent, and worthwhile when they are in a condition of personal and social balance and well-being where they have the freedom to choose, express themselves, and move around. For adolescent girls, adolescence is a time of significant physical transformation.[1] Girls' adolescence is seen as a unique time that marks the passage from girlhood to womanhood. An essential turning point that characterizes this phase of transition is the commencement of menarche. [2]

Adolescence marks the start of the menstrual cycle, which is a natural physiological activity that can be linked to several symptoms that appear either before or during the flow [3]. A part of the intricate process of growing up is menarche. The average age in the United States is approximately 12 years and 8 months, and the commencement of menstruation varies from 9 to 18 years. It has been claimed to be approximately 12 years

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in India, however slightly lower [4]. A typical menstrual cycle lasts two to seven days, with a blood loss of five to eighty milliliters, and occurs every 24 to 38 days on average. Abnormal uterine bleeding includes menorrhagia, oligomenorrhea, and dysfunctional uterine bleeding, which are deviations from the regular menstrual cycle. [3]

One of the most typical gynecological symptoms, both in clinics and outside, is menorrhagia. Menorrhagia is characterized by prolonged uterine bleeding that lasts more than seven days or by heavy bleeding that occurs at regular intervals. Nearly all age groups are affected by this extremely upsetting illness, which has several underlying causes. Every cycle, menstrual bleeding exceeding 80 milliliters can be a symptom of menorrhagia. [4] Adolescent menorrhagia is very common, and most cases are brought on by abnormal uterine bleeding brought on by an immature hypothalamic-pituitary-ovarian axis during adolescence. [5]

Teenagers who experience heavy monthly flow frequently develop anemia and have a lower quality of life. Compared to the general population, girls who experience significant menstrual bleeding are more likely to suffer from bleeding problems. [6] One of the main causes of gynecological disorders that affect 1-4 women in North America and Europe (9–14%) is the overall prevalence of menorrhagia (15.9%). In Nigeria, 12% of teenagers reported having menorrhagia resulting in a blood loss of more than 80 milliliters. In our nation, menorrhagia was diagnosed in 16% of women between the ages of 15 and 44, and 25% of women reported experiencing prolonged or regular bleeding or staining.[7] Teenage girls who experience menorrhagia should be evaluated more extensively at an earlier age. Regular health education sessions and group discussions in schools and colleges are also necessary to raise awareness of teenage gynecological issues [8]. Reduced menstrual blood loss was linked to various treatment modalities, either individually or in combination.[9] Girls who experience significant menstrual bleeding are more likely than the general population to suffer from bleeding disorders. [10-13]

MATERIALS AND METHODS

Design of the Study and Participants: The current study, a descriptive cross-sectional study, was carried out on 86 teenage girls who were enrolled in Girls High School Bagalkot and Basaveshwar New High School between June 7, 2023, and July 22, 2023.

Instruments

Pediatric quality of life inventory scale- The quality of life among adolescent girls was measured using the Pediatric quality of life inventory scale. The scale is used to assess adolescent girls' quality of life, comprising 15 items. Scoring of these items (0 -Never, 1-Almost never, 2-Sometimes, 3-often, 4-almost always). Thus, the total score for the quality-of-life scale ranges from 0-30 for poor quality of life, 30-60 for average quality of life, and more than 60 for good quality of life.

Sociodemographic and Clinical Characteristics- Age, religion, family type, place of residence, monthly income, mother's educational status, mother's occupation, father's educational status, and mother's occupation were among the sociodemographic and clinical factors.

Data Collection Procedures- Before starting the data collection process, authorization from pertinent institutions was obtained. The study participants were identified at Girls High School Bagalkot and Basaveshwar New High School during the study period. Every teenage female who met the requirements for inclusion was contacted to gather data. Before participants began the structured interview, which lasted for about 15 to 20 minutes, the interviewers got their consent. The participants, who were questioned in Kannada or a language that they could comprehend, were informed of the study's goal. The basis for all the data gathered was the student's self-report.

Statistical Analysis- Descriptive and inferential statistics were applied to the data analysis. The sample's numerical data will be arranged and condensed using descriptive statistics such as percentages, means, medians, and standard deviations. The identification of teenage girls with menorrhagia will be done using Karl Pearson's coefficient correlation formula.

Ethical Clearance- The BVVS Sajjalashree Institute of Nursing Sciences, Bagalkot, the institutional ethical committee granted ethical clearance.

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RESULTS

Percentage-wise distribution of adolescent girls according to their socio-demographic variables reveals that out of 86 subjects, the majority (40.70%) of them belonged to 16years of age, the majority (93.02%) of them belonged to Hindu category, the majority (75.58%) of them belonged to the nuclear family, place of residence reveals that out of 86 samples majority (67.49%) of them were belongs to an urban area, majority (37.24%) of them monthly income was 10,000-20,000rs, the majority (36.04%) of adolescent girls mothers had primary education, the majority (46.51%) of adolescent girls mother were housewife, reveals majority(41.86) of adolescent girls fathers had secondary education, the majority (47.67%) of adolescent girls fathers were employed.

Findings related to the assessment of the prevalence of menorrhagia among adolescent girls reveal that 61%. Findings related to the quality-of-life assessment among adolescent girls with menorrhagia reveal that 62.79% have a good quality of life, 37.21% have an average quality of life, and no one has a poor quality of life (Table 1).

Table 1: Quality of life among adolescent girls

Quality of life	Range	Frequency	%
Poor quality of life	<30	0	0
Average quality of life	30-60	32	37.21
Good quality of life	>60	54	62.79

Assessment of mean, SD and mean per cent of quality of life of adolescent girls with menorrhagia. Findings in Table 2 reveal that the total mean and SD of quality of life is 18.79±4.15.

Table 2: Mean, SD and mean percent of quality of life among adolescent girls

Variables	Mean	SD
Quality of life	18.79	4.15

The results of the analysis of the relationship between the sociodemographic characteristics and the quality-of-life levels of adolescent females indicate that no meaningful relationship was discovered between the two (Table 3).

Table 3: Association between quality of life of adolescent girls with menorrhagia and their related socio-demographic variables

Sociodemographic variables	Chi-square value
Age	5.93
Religion	Fisher's exact p=0.313
Type of family	0.36
Residence	1.51
Monthly income	0.44
Education status of mother	4.95
Occupation of mother	5.53
Education status of father	4.16
Occupation of father	0.616

DISCUSSION

Out of 86 samples, the majority (40.70%) are in the age range of sixteen. This is according to the percentage-wise distribution of adolescent girls (total 86) in the current study based on their socio-demographic characteristics. The findings of the present study are consistent with the study conducted by Duflos-Cohade *et al.* to assess the Quality of life among adolescent girls at gynaec unit Khyber Teaching Hospital, Peshawar Findings of this study show that out of 105 samples (15%) of being in the age group of 14 to 17 years [14]

In the present study, percentage-wise distribution of adolescent girls according to their religion, the majority (93.02%) were Hindu. The present study's findings are consistent with the survey conducted by Ravi *et al.* to assess the Quality of life of adolescent girls at rural schools in the Tiruvallur district, Tamil Nadu. The findings of this study show that of our 350 adolescent girls, 87.4% belong to the Hindu religion. [15]

In the present study, percentage-wise distribution of adolescent girls according to their type of family, the majority (75.58%) belong to nuclear families. The present study's findings are consistent with the study conducted by Barr *et al.* at K`Dere village in Southeast Nigeria. Among 307 subjects 81.2% belong to the nuclear family. [16]

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In the present study, the percentage-wise distribution of adolescent girls according to their residence is the majority (67.49%) from urban areas. The present study's findings are consistent with the study conducted by Joshi *et al.* at South Asian Feder Obstet Gynae. These findings show that out of 50 subjects, the majority, 72.6%, belong to urban areas. [17]

In the present study, the percentage-wise distribution of adolescent girls according to their monthly income was that the majority (37.24%) had 10,000-20,000rs. The findings of the present study are consistent with the study conducted by Mariappen *et al.* to assess the Quality of life of adolescent girls. The findings of this study show that out of 235 adolescent girls, 43.5% of them had 10,000-25,000rs [18]

In the present study, the majority (36.04%) of adolescent girl's mothers had primary education, the majority (46.51%) of adolescent girl's mothers were homemakers, the majority (41.86) of adolescent girls' fathers had secondary education, and the majority (47.67%) of adolescent girl's fathers were employed. In the present study, findings related to the assessment of the prevalence of menorrhagia among adolescent girls reveal that 61%**.** In a similar study conducted by Adebimpe *et al.* [19] to assess the prevalence of menorrhagia among adolescent girls in Malaysia, the prevalence of menorrhagia among adolescents was 63.9% in the Klang Valley.

According to the results of the current study, 62.79% of adolescent girls with menorrhagia have an excellent quality of life, while 37.21% have an average quality of life. A similar study conducted by Mariappen *et al.* to assess the quality of life of adolescent girls and its socio-demographic variables in South-Western Nigeria shows that about 82.8% (409/494) had regular monthly menstrual flow patterns 21.9% (108/494) had menorrhagia [18]

Results on the mean, standard deviation, and mean percentage of quality of life for teenage females indicate that the overall mean and standard deviation of quality of life was 18.79+4.15. In a related study, Adebimp *et al.* evaluated the quality of life of teenage girls in Malaysia through a cross-sectional examination of school populations. The results indicate that issues were associated with a considerably lower mean total score of PedsQL (70.23±13.53 vs. 76.36±14.93).[19]

The results of this study about the relationship between the sociodemographic characteristics and the quality of life indicate that there is no meaningful correlation between the sociodemographic variables and the levels of quality of life experienced by teenage girls. A similar study was conducted by Chi *et al.* at a comprehensive care treatment center. A significant association was found between quality of life and only with place of residence. [20]

CONCLUSIONS

Menstruation is an important milestone in women's life. Variations in a normal menstrual cycle are referred to as abnormal or dysfunctional uterine bleeding if it is excessive. That is known as menorrhagia. Adolescent girls with menorrhagia should be evaluated thoroughly sooner and regularly in schools and colleges to raise awareness about adolescent gynaecological problems. Health education and group discussions are necessary to raise awareness about the prevalence of menorrhagia, which is a significant cause of gynaecological diseases, anaemia, and a lower quality of life in adolescents.

CONTRIBUTION OF AUTHORS

Research concept- Shanta SH, Pooja SM
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