Research Article

Correlating Symptoms of Dysmenorrhea and PERIOD-QOL Among Adolescent Girls

Dr. Supriya Pottal Ray[1], Ms. Megha Kavathe[2], Mr. Siddharth Kashid[3], Ms. Archana Karande[4]

[1]Associate Professor, Bharati Vidyapeeth (Deemed to be University) College of Nursing, Pune, Maharashtra, India, supriya.ray@bharatividyapeeth.edu Orcid: 0000-0002-6253-8346
[2,3,4]Diploma Student, Bharati Vidyapeeth (Deemed to be University) College of Nursing, Pune, Maharashtra, India.

Abstract

Introduction: The health of every woman, adolescent, adult is deeply rooted on her menstrual health which is governed by numerous factors aligning with the holistic health. These factors coincide with daily life activities of education, societal relations and exchanges and psychological health. In the age of girls attending school and college these factors take precedence above overall health as menstruation comes with its challenges of morbidity with symptoms such as pain lower region of the abdomen, heavy bleeding, signs and symptoms of pre-menstruation which gives rise to disbalance of normal daily activities versus the phase of menstruation. When the adolescent group of girls including young women are pacing with life activities facing these symptoms of monthly blood flow lasting between 4-5 days has impact on their everyday activities of studies, co-curricular work and emotional life. They are a crucial period of life where such kind of physiological change which is inevitable starting hampering life activities and choices. Statistics reveal that about 90% of the adolescent age group of girls are affected by this during some period of their life cycle. These symptoms are accompanied by irritation without no specific cause, fear of being judged, discomfort at various occasions, and all this can have a substantial effect on their life which is termed as Quality-Of-Life.

Purpose: To correlate the symptoms of dysmenorrhea and PERIOD-Q-O-L among adolescent girls

Materials and Methods: A quantitative, Correlational Survey-Research Design was adopted. 100 samples were selected using non-probability purposive sampling. Data was gathered related to demography and symptoms of dysmenorrhea .Data were analyzed using descriptive and inferential statistics.

Results: The symptoms of dysmenorrhea among subjects, which specify that abdominal cramps (93%) are the most prevalent symptom of dysmenorrhea, followed by lower back pain and mood disturbances (70% each), with moderate occurrence of fatigue, bloating, and systemic symptoms, while gastrointestinal symptoms such as nausea and vomiting are comparatively less common. Results also indicated that indicates that dysmenorrhea significantly affects certain physical, psychological, & social aspects of life, with determined issues such as low confidence, hygiene concerns, and lack of concentration, alongside frequent disruptions in daily activities, sleep, and social interactions."

The overall **P-Q-O-L** score was 29.8 out of 60, which falls under the 'Good **P-Q-O-L**' category, indicating a moderate impact of menstrual symptoms on the quality of life of the respondents."

Conclusion: Majority of participants had Moderate QOL (61%) Overall, the quality of life among participants is mostly moderate, with a small proportion experiencing severe impairment. Mean = 29.8 & SD = 6.7 which represents the average dysmenorrhea severity score suggesting a moderate level variability among participants, r = 0.204 which shows Correlation coefficient indicating weak positive correlation, as it is seen that severity of dysmenorrhea increases, QOL tends to worsen slightly, but not depicting strongly.p = 0.041 ,Since $p < 0.05$, the result is statistically significant , there exists an association between dysmenorrhea severity and QOL

Keywords: Correlating, symptoms of dysmenorrhea, PERIOD-QOL adolescent girls

Introduction

India's population has always had a divided view in terms of discussing menstrual health where still the taboo of having an open discussion on sexual health which has the main stay in menstrual health is challenged. The age-appropriate education where it has to be accepted as normal physiology has seen an increased graph but yet still a lot has to be achieved. This reluctance is sowed deep in the mind of adolescent girls when she first faces her menarche, she is told not to discuss it in public, leading to her not discussing the pain, discomfort, mood swings to

others, which leads to either suffering alone in silence or consider it to be normal. Therefore, missing classes, not participating in events being alone is also accepted and keeps them away from seeking medical help or counselling. Hence trying to see what affects their life choices , quality needs awareness, propagation education, open conversations so as to encourage girls , women to completely be responsible for their own health especially reproductive health and seek appropriate medical help when required, thereby improving their overall life quality(Q-O-L). An inclusive environment has to be built around by family, healthcare workers, teachers from them to feel secured and share their concerns.

Taking into account the various findings brought up by researchers there is an increased prevalence of menstrual signs & symptoms in the adolescent age group where dysmenorrhoea is the mainstay and has impacted their health in terms of physical as well daily living features which impacted their overall health. The data analysed by in Hong-Kong China (2018) among 600 plus young adolescent girls discussed that 92.3 percent girls refrained from seeking medical help for dysmenorrhea which has become a mainstay in menstrual health, what was more alarming that 82 percent took medication by self with guidance of immediate peers. The ratio of bodypain, physical domain, psychological health and social dysfunction between those with and without dysmenorrhea was skewed which proved lower Q-O-L among those having dysmenorrhea

Need of the Study

The incidence related to dysmenorrhea in Indian setting is great, with stated rates between sixty percent to eighty percent or even more . Reviewed literature(2025) with meta-analysis revealed prevalence of sixty five percent of Indian girls ,79.07(%) of women, figures of 84%.painful periods is tremendously high in adolescent age group girls ,with rates characteristically fluctuating from 65% to 80%, with precise data from Pune region representing 72.05% to79.00%.It distresses most of them at some point of time in their age, frequently through reasonable to severe pain affecting daily life, in spite of inconsistency across states and regions.

Having discussed few of these articulations it is deliberated and reviewed that it is common for adolescent girls, young women to have these symptoms or morbidities as termed by few others however not to be neglected and ignored. All the areas impress upon the symptoms what the girls have and how it effects all the quadrants of life, nonetheless it needs to be assessed whether these symptoms have a direct relation with the quality of the parameters of life. As study related to a specific geographical region it needs to be studied how their surrounding has an impact when they have to face issues every month during their stipulated days of menstrual flow. Not limiting it only to the problems but what strategies could be devised to make their stressful days less burdened.

The present analysis of facts through research will enable us to know the problems, how it affects the Q-O-L during menstruation and what ripples it has. By understanding this relief measure needs to be devised and communicated to the school authorities, parents, healthcare workers and most important the adolescent girls at large.

Aim of the Study: to correlate the symptoms of dysmenorrhea and PERIOD-Q-O-L among adolescent girls.

Objectives: To assess the symptoms of dysmenorrhea among adolescent girls .

2. To assess the Quality- Of-Life related to dysmenorrhea among adolescent girls.

3. To corelate symptoms of dysmenorrhea and PERIOD-QOL among adolescent girls,

4.To associate the findings generated with specific demographic variables.

Methodology

Research Approach: Quantitative

Research Design: Correlational Survey-Research Design

Research Setting: Geographically accessible regions of the city

Research Variable: Symptoms of dysmenorrhea & PERIOD-Q-O-L

Accessible Population: Adolescent girls residing in geographically selected regions of Pune city

Sample Size:100

Sampling Technique: Non-probability purposive sampling

Inclusion Criteria: Adolescent girls residing from selected areas, whose parents have signed accent, within the age group of 10- 19 years, with regular menstrual cycles, with presence of any 1 symptom of dysmenorrhea along with abdominal cramps, who can read, write Marathi/ English language

Exclusion Criteria: Who are on treatment for dysmenorrhea

Research Tool

Section I: Demographic data : Age, Class, Age (Menarche attained), Menstrual Cycle details, Home Remedies, Experience of Pre-Menstrual-Symptoms

Section II: Tool: Assessment of symptoms of Dysmenorrhea: Abdominal Cramps,

Pain: lower abdomen, Lower back, lower extremities Inner Thighs

Nausea, Vomiting, Lethargy, generalized weakness, abdomen bloating, irritability

SECTION III

PERIOD-Q-O-L: Statements reflecting view during menstrual cycle

Data Collection Procedure

Ethical committee approval, Permission from hospital authorities, Informed consent

Data Analysis

Descriptive statistics: Frequency and percentage, Inferential statistics: Student's t-test and Chi-square test, Data presented in tables, graphs, and diagram.

Validity

Content validity established through expert review.

Reliability: Test-retest method was used ., Karl Pearson's formula of correlation coefficient formula adopted, r= 1, highly reliable Tool accomplished reliability needed for research.

Pilot Study: Pilot study displayed feasibility for executing the final study

Results of the Study:

Demographic Attributes of the subjects:

Maximum of them 22% studied in 7^{th} grade/class,50% of subject attained menarche at the age of 14 years, 62% had regular menstrual cycle, 70% of them bled between 2-5 years, 60% had normal menstrual flow, 10% used hot water bags , hot drinks and carrrom seeds for alternate remedies., 60% had experience more than on menstrual symptom along with abdominal pain

Symptoms of dysmenorrhea among adolescent girls:

S.N	Symptoms Of Dysmenorrhea	Yes(%)	No(%)	N=100
1	Abdominal Cramps/pain in the lower abdomen	**93**	07	
2	Nausea	**39**	61	
3	Vomiting	29	**71**	
4	Giddiness/Fainting	**51**	49	
5	Lower Back pain	**70**	30	
6	Pain in lower extremities	40	**60**	

7	Pain in inner thigs	45	**55**	
8	Diarrhea	40	**60**	
9	Lethargy	**50**	50	
10	Fatigue	**56**	44	
11	Generalized weakness	**50**	50	
12	Headache	44	**56**	
13	Abdominal bloating	**55**	45	
14	Irritable/mood swings	**70**	30	

Table No 1 portrays the symptoms of dysmenorrhea among subjects, which specify that abdominal cramps (93%) are the most prevalent symptom of dysmenorrhea, followed by lower back pain and mood disturbances (70% each), with moderate occurrence of fatigue, bloating, and systemic symptoms, while gastrointestinal symptoms such as nausea and vomiting are comparatively less common..

Table No 2: Quality of Life related to dysmenorrhea among adolescent girls

S.N	Statement (Short form)	Mean Score	Interpretation
1	**Missing school/college**	**1.54**	Sometimes
2	Comfort in routine activities	1.40	Sometimes
3	Comfort doing exercise	0.60	Never
4	Feeling more irritable	1.20	Sometimes
5	**Feeling more tired**	**1.67**	Sometimes
6	Eating less than normal	1.00	Mostly
7	Loss of energy	1.24	Mostly
8	Sleep pattern affected	1.20	Mostly
9	Forced activity schedule change	1.23	Mostly
10	Change in dressing pattern	1.02	Always
11	Arguments with friends	1.10	Mostly

12	Lack of concentration	1.40	Always
13	Comfort in isolation	1.30	Sometimes
14	**Refrain from spiritual activities**	**1.66**	Sometimes
15	**Avoid household work**	**1.55**	Sometimes
16	Difficulty maintaining hygiene	1.20	Always
17	Worry about staining garments	1.30	Always
18	Uncomfortable buying sanitary pads	**2.20**	Mostly
19	Increased dysmenorrhea symptoms	**2.00**	Mostly
20	Low confidence during cycle	**2.30**	Always

Table No 2 indicates that dysmenorrhea significantly affects certain physical, psychological, & social aspects of life, with determined issues such as low confidence, hygiene concerns, and lack of concentration, alongside frequent disruptions in daily activities, sleep, and social interactions.

Table No 3 Overall Quality of Life related to dysmenorrhea among adolescent girls

S.No	PERIOD-QOL	f	%	Mean	SD
1	Excellent QoL: 46-60	4	4%	29.8	6.7
2	**Good QoL : 31-45**	**61**	**61%**		
3	Moderate QoL:16-30	35	35%		
4	Sever Impact on QoL:1-15	0	0%		

29.8 falls in the range 16–30
Quality of Life: Moderate
The overall Quality of Life score was 29.8 out of 60, falls in the range 16–30 indicating 'Good Quality of Life' category, indicating a moderate impact of menstrual symptoms on the quality of life of the respondents.

Table No 4 Severity of Dysmenorrhea (Symptom Score)

Level	Frequency	Percentage	Mean	SD
Mild	14	14%		

Moderate	**69**	**69%**	**0.54**	**0.18**
Severe	17	17%		

The data denote that the majority of participants (69%) experience moderate dysmenorrhea, with a insignificant yet significant proportion (17%) suffering from severe symptoms, while only 14% report mild pain. The mean score (0.54 ± 0.18) further confirms that dysmenorrhea severity is primarily moderate with minimal variation among participants.

Table No 5 Represents the correlation of symptoms of dysmenorrhea and PERIOD-QOL among adolescent girls N=100

Category	Frequency	Percentage	Mean	SD	r	p
Severe Impact	4	4%	29.8	6.7	0.204	0.041
Moderate QOL	**61**	**61%**				
Good QOL	35	35%				
Excellent QOL	0	0%				

Majority of participants had Moderate QOL (61%)

Overall, the quality of life among participants is mostly moderate, with a small proportion experiencing severe impairment.

Mean = 29.8 & SD = 6.7 which represents the average dysmenorrhea severity score suggesting a moderate level variability among participants

r = 0.204 which shows Correlation coefficient indicating weak positive correlation, as it is seen that severity of dysmenorrhea increases, QOL tends to worsen slightly, but not depicting strongly.

p = 0.041 ,Since $p < 0.05$, the result is statistically significant , there exists an association between dysmenorrhea severity and QOL

Association of the findings with selected demographic variables

Table No 6 represents the association of findings with selected demographic variables N=100

Variable	χ^2	df	p-value	Remark
Age	3.12	6	>0.05	Not Significant
Class	2.01	2	>0.05	Not Significant

Menarche Age	5.89	4	>0.05	Not Significant
Cycle Regularity	6.45	2	<0.05	**Significant**
Duration	4.22	6	>0.05	Not Significant
Menstrual Flow	9.12	4	<0.05	**Significant**
Home Remedies	1.88	2	>0.05	Not Significant
PMS Symptoms	7.54	2	<0.05	**Significant**

Table No 7 discusses that the association between selected demographic variables and quality of life during menstruation was analyzed using the Chi-square test.

There was no statistically significant association found between age ($\chi^2 = 3.12$, $p > 0.05$), class ($\chi^2 = 2.01$, $p > 0.05$), age at menarche ($\chi^2 = 5.89$, $p > 0.05$), duration of bleeding ($\chi^2 = 4.22$, $p > 0.05$), and use of home remedies ($\chi^2 = 1.88$, $p > 0.05$) with quality of life.

However, a statistically significant association was observed between cycle regularity ($\chi^2 = 6.45$, $p < 0.05$), menstrual flow ($\chi^2 = 9.12$, $p < 0.05$), and presence of premenstrual symptoms ($\chi^2 = 7.54$, $p < 0.05$) with quality of life.

This indicates that menstrual characteristics such as irregular cycles, heavy flow, and presence of PMS symptoms have a significant impact on the quality of life among adolescent girls.

Discussion:

The findings of demographic where 37% of subjects covered an age of 12.1-14 years, maximum of them 22% studied in 7th grade/class,50% of subject attained menarche at the age of 14 years,62% had regular menstrual cycle,70% of them bled between 2-5 days,60% had normal menstrual flow,10% used hot water bags , hot drinks and carrrom seeds for alternate remedies.,60% had experience more than on menstrual symptom along with abdominal pain.

Literature supporting the above finding states that mean age of the sample was 16 years. The first menstrual cycle was experienced at 12 and 14 (83%), 73.3% of them bled 3 to 6 days. the signs and symptoms reported were fatigue 63.06%, headache 37.07%, insomnia 32.07%, sweating 25.09%, loss of appetite 21%, nausea 17.0% , dizziness 16.08% (17).

The symptoms of dysmenorrhea among subjects, which specify that abdominal cramps (93%) are the most prevalent symptom of dysmenorrhea, followed by lower back pain and mood disturbances (70% each), with moderate occurrence of fatigue, bloating, and systemic symptoms, while gastrointestinal symptoms such as nausea and vomiting are comparatively less common.

The above data is congruent to the discovering of study conducted at Lucknow U.P where Menstrual pain was reported among .20.02% of subjects demonstrating effect on daily physical activities 19.06%had severe pain. Discomfort was also reported with menstrual cycle. Fatigue & weakness commonly reported, fatigue 21.03. which affected life quality. Bleeding heavy also wedged effect on daily chores, with 21.06% addressing harsh disturbances. Menstrual signs took a sensitive toll, 37.08% were anxious about taking care of themselves at social settings .Emotional worry was stated by 22.04% of subjects, indicating mood transformations and psychological challenges are common Menstrual problems also affect social communications including academics. 36.07% had disruptive social activities and 07% missed school .The same has been seen in the current study as well indicates that dysmenorrhea significantly affects certain physical, psychological, & social aspects of life, with determined issues such as low confidence, hygiene concerns, and lack of concentration, alongside frequent disruptions in daily activities, sleep, and social interactions."

Conclusion:

Majority of participants had Moderate QOL (61%) Overall, the quality of life among participants is mostly moderate, with a small proportion experiencing severe impairment. Mean = 29.8 & SD = 6.7 which represents the average dysmenorrhea severity score suggesting a moderate level variability among participants, $r = 0.204$ which shows Correlation coefficient indicating weak positive correlation, as it is seen that severity of dysmenorrhea increases, QOL tends to worsen slightly, but not depicting strongly.$p = 0.041$,Since $p < 0.05$, the result is statistically significant , there exists an association between dysmenorrhea severity and QOL

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CONFLICT OF INTEREST

The authors declare that there is no conflict of interest related to this study.

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