



FACTORS INFLUENCING MENSTRUAL CHARACTERISTICS AMONG ADOLESCENT GIRLS

Nursing

Mrs. Geethu. J. B Assistant Professor, Sree Gokulam Nursing College, Venjaramoodu.

ABSTRACT

Menstruation is an important physiological process in which visible manifestation of cyclic uterine bleeding due to shedding of the endometrium. The exact period when a normal puberty begins is not defined, but varies between the ages of 13 and 16 years. The typical menstruation period lasts from three to five days, though many women experience either shorter or longer periods. The most common characteristics associated with menstruation include: vaginal discharge, blood flow, vaginal odour, cramps, bloating, tenderness in breasts, difficulty in sleeping, and moodiness. The objectives of the study were to assess the menstrual characteristics among adolescent girls and to find out the factors influencing the menstrual characteristics. The finding revealed that there are certain factors influencing menstrual characteristics among adolescent girls such as dietary habits, stress, exercise and BMI.

KEYWORDS

Menstrual Characteristics

INTRODUCTION

Adolescent girls constitute one fifth of the female population in the world. Menarche is the onset of menstruation and it is one of the most significant milestones in a woman's life. A deviation from normal menstrual cycle characteristics like oligomenorrhea, or hypomenorrhea heavy or long periods longer than 7 days or hypermenorrhea, spotting, metrorrhagia, amenorrhea, dysmenorrhoea, are more reported among adolescents. The investigator focused on the need of a study to know the factors which influences menstrual characteristics adversely and took keen interest in contribution of promoting highest attainable standard of health among adolescents². The reviewed literature shows that menstrual characteristics among adolescent girls varies and these characteristics are influenced by many factors like BMI, family history, stress, dietary pattern, medical disorders, exercise pattern etc. Studies show that there are certain factors which adversely affecting menstrual characteristics.

MATERIALS AND METHODS

Quantitative research approach was used in this study and cross sectional research design was adopted. The variables mainly included in this study are independent and dependent variables. In the present study the dependent variable is the menstrual characteristics which are influenced by multiple factors which serves as the independent variables. In this study, population comprised of adolescent girls belonging to age group between 13 to 16 years who are studying in 8th, 9th and 10th classes of three higher secondary schools in Thiruvananthapuram District. The sample size was 367 adolescent girls belonging to the age group of 13 to 16 yrs from higher secondary schools, Varkala. In this study samples were selected according to convenience sampling technique. The tool consists of questionnaire to assess menstrual characteristics and to identify the factors influencing menstrual characteristics. Reliability of the questionnaire was tested by Cronbach's Alpha and it is found to be 0.70. Reliability of the weighing machine was tested by using Test Re-test Method. Same weighing machine and measuring tape were used to take height and weight of every samples to ensure reliability of the tool.

Formal permission was obtained from institutional research committee. Data was collected from Gem Know Model Higher Secondary School, Sivagiri Sree Narayana Higher Secondary School, Sivagiri Sree Narayana Senior Secondary School, respectively. The purpose of the study was well explained to students and obtained informed consent from the study participants. Data were collected over a period of one week. Total 367 adolescent girls who had attained menarche participated for the study. The data collected was analyzed using descriptive and inferential statistics.

Demographic data was analyzed by frequencies and percentages. Menstrual characteristics were analysed by frequencies and percentages. Association of menstrual characteristics and factors influencing menstrual characteristics were analysed by 'chi square' test and by 'Fishers Exact' test.

RESULTS AND DISCUSSIONS

The data obtained were analyzed and presented under the following sections:-

Section A: Distribution Of Adolescent Girls According To Socio Demographic Data (n=367)

SL. No:	Socio demographic variables	Category	Frequency	Percentage
1	Age	13	100	27.3
		14	83	22.6
		15	123	33.5
		16	61	16.6
2	Religion	Hindu	247	67.3
		Muslim	118	32.2
		Christian	2	0.5
3	Monthly income of family	≤5000	169	46
		50001-10000	117	31.9
		>10000	81	22.1
4	Education of mother	Illiterate	28	7.6
		High school/Primary school	176	48
		Higher secondary	75	20.4
		Degree and above	88	24

Section B: Description Of Menstrual Characteristics (n=367)

SL. No:	Menstrual characteristics	Category	Freq uency	Perce ntag e
1	Age at menarche in years	<10	19	5.2
		10-12	177	48.2
		13-15	166	45.2
		>15	5	1.4
2	Regularity of menstrual cycle	Yes	226	61.6
		No	141	38.4
3	Length of menstrual cycle	<21 days	62	16.9
		21-35 days	255	69.5
		>35 days	50	13.6
4	Number of pads used per day	≤3 pads	182	49.6
		4-6 pads	171	46.6
		> 6 pads	14	3.8
5	Amount of bleeding	Scanty	11	3
		Moderate	302	82.3
		Severe	54	14.7
6	Duration of bleeding	<4 days	62	16.9
		4-6 days	241	65.7
		>6 days	64	17.4
7	passing of clots during menstruation	Frequently	16	4.4
		Sometimes	234	63.8
		During morning, getting up from bed	46	12.5
		No clots	71	19.3
8	Having pain during menstruation	No pain	19	5.2
		Little pain	128	34.8
		Moderate pain	158	43.1
		Severe pain	62	16.9

9	consultation of doctor for menstrual problems	Yes	74	20.2
		No	293	79.8
10	Mood change abruptly during menstruation	Sometimes	227	61.9
		Always	29	7.9
		Never	111	30.2
11	family history of menstrual disorder	Yes	173	47.1
		No	194	52.9
12	Daily exercise pattern	5-7 days/wk	45	12.3
		3-4 days/ wk	29	7.9
		<3 days	60	16.3
		No exercise	233	63.5
13	Playing outside home	Daily	20	5.5
		Often	89	24.3
		Rarely	258	70.2
14	Experience of stress	Yes	252	68.7
		No	115	31.3
15	history of medical disorders	Thyroid disorder	9	2.4
		Cardiac disorder	5	1.4
		Anemia	11	3
		Chronic Liver disorder	0	0
		No disorder	342	93.2
16	BMI	Underweight	125	34.1
		Normal	217	59.1
		Overweight	23	6.3
		Obese	2	0.5
17	consumption of tea or coffee per day	not drinking tea/coffee	27	7.4
		drinking tea or coffee 1 cup daily	82	22.3
		drinking tea/ coffee 2 cup daily	239	65.1
		drinking tea / coffee 3 cup daily	12	3.3
		drinking tea/ coffee ≥4 cup daily	7	1.9

Table 18: Distribution Of Adolescent Girls According To Dietary Habits (n=367)

Sl no	Items	5 or more days in a week	3-4 days in a week	Rarely	Never
1	Milk	123	74	109	61
2	Fish	233	82	46	6
3	Meat	16	96	239	16
4	Fruits	54	200	105	8
5	Chocolates	51	152	156	8
6	Ice cream	2	94	259	12
7	Fast foods	3	70	246	48

Section C: Factors Influencing Menstrual Characteristics

Table 19 Association Between Various Factors And Regularity Of Menstrual Cycle

Age	Regularity of menstrual cycle				χ^2	p
	Yes	No				
	f	%	f	%		
13 yrs	45	19.9	55	39		
14 yrs	50	22.1	33	23.4	19.13	0.000***
15 yrs	86	38.1	37	26.3		
16 yrs	45	19.9	16	11.3		
Family history of menstrual disorder	91	40.3	82	58.2	11.2	0.001***
	135	59.7	59	41.8		
Consumption of ice creams						
Regularly	51	22.6	45	31.9	3.92	0.04*
Rarely	175	77.4	96	68.1		
BMI						
Underweight	46	20.4	79	56		
Normal	161	71.2	56	39.7	49.2	0.000***
Overweight	19	8.4	6	4.3		

*Significant at 0.05 level ***Significant at 0.001 level

Table 20 Association Between Various Factors And Length Of Menstrual Cycle

Consumption of fast foods	length of menstrual cycle						χ^2	p
	<21 days		21-35 days		>35days			
	f	%	f	%	f	%		
Regularly	14	22.6	43	16.9	16	32	6.35	0.04*
Rarely	48	77.4	212	83.1	34	38		
BMI								
Underweight	30	48.4	68	26.7	27	54	20.5	0.000***
Normal	30	48.4	167	65.5	20	40		
Overweight	2	3.2	20	7.8	3	6		

*Significant at 0.05 level ***Significant at 0.001 level

Table 21 Association Between Various Factors And Duration Of Bleeding During Menstruation

Consumption of meat	Days of bleeding during menstruation				Fisher's Exact value	p
	<6 days		>6 days			
	f	%	f	%		
Regularly	85	28.1	27	41.5	4.52	0.03*
Rarely	217	71.9	38	58.5		

*Significant at 0.05 level

Table 22 Association Between Various Factors And Amount Of Bleeding During Menstruation

BMI	Amount of bleeding during menstruation				χ^2	p
	scanty / moderate		severe			
	f	%	f	%		
Underweight	98	31.4	27	49.1	6.26	0.04*
Normal	191	61.2	26	47.3		
Overweight	23	7.4	2	3.6		

*Significant at 0.05 level

Table 23 Association Between Various Factors And Pain During Menstruation

Family history of menstrual disorder	Pain during menstruation								χ^2	p
	No pain		Little pain		Moderate pain		Severe pain			
	f	%	f	%	f	%	f	%		
Yes	3</									

Table 24 Association Between Various Factors And Passing Of Clots During Menstruation

Passing clots with bleeding										
Daily exercise pattern	frequently & sometimes				during morning & no clots				χ ²	p
	f		%		f		%			
5-7 days/wk	22	8.8	23	19.7					14.20	0.003**
3-4days/wk	16	6.4	13	11.1						
<3 days/wk	39	15.6	21	17.9						
No exercise	173	69.2	60	51.3						

Stress	Frequently		Sometimes		During morning		No clots		χ ²	p
	f	%	f	%	f	%	f	%		
Yes	10	62.5	164	70.1	39	84.8	39	54.9	12.28	0.006 **
No	6	37.5	70	29.9	7	15.2	32	45.1		

**Significant at 0.01 level

Table 25 Association Between Various Factors And Menstrual Problems

Menstrual problems						
Stress	Present		Absent		χ^2	p
	f	%	f	%		
Yes	247	69.8	5	38.5	5.714	0.03 *
No	107	30.2	8	61.5		

Consumption of milk						
Regularly	188	53.1	9	69.2	14.79	0.02 *
Rarely	166	46.9	4	30.8		

*Significant at 0.05 level

CONCLUSION

Considerable proportion of adolescent girls are having abnormal menstrual characteristics and there are number of factors which influence menstrual characteristics. Based on the findings the present study revealed that age, family history of menstrual disorder, consumption of ice creams and BMI are factors which influence the regularity of menstrual cycle. Consumption of fast foods and BMI are factors which influence length of menstrual cycle. Consumption of meat is a factor influencing duration of bleeding during menstruation. BMI is a factor influencing amount of bleeding during menstruation. Family history of menstrual disorder, physical activities like playing outside home, Consumption of fish are factors contributing to pain during menstruation. Daily exercise and stress are factors contributing to passing of clots during menstruation. Stress and consumption of milk are the factors contributing to problems during menstruation.

Hence the study concluded that there are many factors which influence menstrual characteristics among adolescent girls.

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