

ORIGINAL ARTICLE

A Study to assess the Effectiveness of Carrot Juice Upon Dysmenorrhea among Adolescents Girls in Selected Government School Gwalior

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ABSTRACT

Dysmenorrhea can affect daily activities. The effect of dysmenorrhea is reduced quality of life. The carrot was administered to the school students for the reduction of dysmenorrhea and symptoms. The Most of them had reduction in dysmenorrhea and symptoms the carrot juice is proved to be very effective in menstrual cycle.

Objectives of the Study: 1. To assess the Dysmenorrhea among adolescents girls. 2. To evaluate the effectiveness of carrot juice on Dysmenorrhea among the adolescent girls. 3. To find out the association between effectiveness of carrot juice on Dysmenorrhea with selected demographic variables.

Design and Method

Quantitative Evaluative Research Approach was found to be most appropriate. quasi experimental (pre and post-test control group design) was used in this study. Sample for the studied consisted of 60 school students and selection was done on the basis of Non-Probability purposive sampling selected government school Gwalior. In this study 30 dysmenorrhoea girls were taken as experimental group, this group carrot juice was given for seven consecutive days and 30 dysmenorrhoea girls for control group were got normal treatment.

Tool was prepared for collection of data. Demographic variables, Simple descriptive pain scale, Rating scale for symptoms of dysmenorrhea.

Results: The mean of adolescents girls with dysmenorrhoea is 2.66 and the standard deviation is 0.18 during pre-test assessment by the simple descriptive pain scale. In post test evaluation the mean is 1.2 and the standard deviation of 0.07 in experimental group. The mean of adolescents girls with dysmenorrhoea is 58.6 and standard deviation is 2.77 during pre-test assessment by the rating scale on symptoms of dysmenorrhoea. In post test evaluation the mean is 27.4 and the standard deviation is 1.17 in experimental group. The mean of adolescents girls

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with dysmenorrhoea is 3.03 and standard deviation is 38 0.163 during the pre-test assessment by the simple descriptive pain scale. In post test evaluation the mean is 2.66 and standard deviation is 0.165 in control group. The mean of the adolescents girls with dysmenorrhoea is 50.4 and the standard deviation is 2.89 during pre-test assessment by the rating scale on symptoms of dysmenorrhoea. In post test evaluation the mean is 53 and the standard deviation 2.6 in control group.

Discussion: The present study concluded to assess the effectiveness of carrot juice in reduction of dysmenorrhea and symptoms on school students.

Conclusion: The main study was to assess the effectiveness of carrot juice in reduction of dysmenorrhea and symptoms on school students.

The following conclusion was drawn on the basis of findings of the study:

- The pre test finding showed that the dysmenorrhea and symptoms was present.
- The carrot was administered to the school students for the reduction of dysmenorrhea and symptoms.
- Most of them had reduction in dysmenorrhea and symptoms, the carrot juice is proved to be very effective in menstrual cycle.

KEYWORDS:

- Effectiveness; • Dysmenorhea; • Carrot Juice; • Adolescent Girls.

INTRODUCTION

Menstruation is a normal, healthy occurrence for many years in life. Yet many women, across a range of different cultures, experiences menstrual problem that range from mild discomfort to acute pain. Although most women have some physical or emotional changes or discomfort linked to menstrual cycle, a small number of about 5% finds that the problems are more serious and may have to seek some kind of treatment. In the days before the periods start, the adolescent may feel tense or emotional, gain water weight and feel bloated, pain in the abdomen, back or legs that lasts few hours or more. It is one of the most significant milestones in a woman's life. The mean age at menarche varies from population to population and is known to be a sensitive indicator of various characteristics of population including nutritional status, geographical location, environmental conditions and magnitude of socioeconomic inequalities in a society. In India, the average age of menarche among girls was 12.6 years in 1992 and it came down to 12.5 years in 2005. This study is an approach to assessment and management of dysmenorrhea and menorrhagia that considers the cultural, social and personal significance of symptoms and management choices. Cultural influences, such as a woman's status within society, her life stage, religion, education and employment, determine whether a woman seeks medical

help for menstrual problems, and the personal significance of dysmenorrhea. assessment involves consideration of pain, associated symptoms, effect on lifestyle and activities of daily living, and a psychosocial and cultural assessment. Management involves specific treatment of underlying pathology, psychosocial support and individualizing treatment according to impact of the pain, associated symptoms, reproductive stage, cost, and the woman's personal values and attitudes.

METHODS

Hypothesis made for this study are mentioned below:

- H_1 : There will be significant difference between the pre test and post test level of pain, symptoms during dysmenorrhoea in control and experimental group.
- H_{0_1} : There will be not significant difference between the pre test and post test level of pain, symptoms during dysmenorrhoea in control and experimental group.
- H_2 : There will be significant association between the effectiveness of carrot juice on dysmenorrhoea with selected demographic variables.
- H_{0_2} : There will be not significant association between the effectiveness of carrot juice on dysmenorrhoea with selected demographic variables.

ASSUMPTION OF STUDY

- Carrot juice will have effect on pain during dysmenorrhoea.
- Carrot juice will reduce the pain during dysmenorrhoea.

LIMITATION OF THE STUDY

1. The study sample related to 12-17 years age group
2. The study sample is very large
3. The investigator found it difficult to collect the sample

RESEARCH APPROACH

The research is the broad based procedure for the collection of data in a particular situation keeping in view the need to see the effectiveness of carrot Juice and the objective of the Quantitative Evaluative Research Approach was found to be most appropriate.

RESEARCH DESIGN

Keeping in the view the objectives of the study, the research design for a present study is experimental quantitative research design.

In the study we have chosen to focus effectiveness of carrot juice upon dysmenorrhea among adolescence girls.

SETTING OF THE STUDY

The present study was conducted the effectiveness of carrot juice upon dysmenorrhea among adolescence girls in selected government school.

Population

The population comprises all the school students of age group 12-17 years at selected Govt. school Gwalior.

Sample and Sampling technique

Sample for the studied consisted of 60 school students and selection was done on the basis of Non-Probability purposive sampling technique from Govt. school Gwalior.

Inclusive criteria:

1. School students who are between the age group of 12 to 17 years
2. Onset of pain within 6-12 hour after onset of menses

3. School students who have lower abdomen pain with onset of menses
4. School students who have Lower back pain
5. School students who have Medial or anterior thigh pain.

Exclusive criteria:

1. The girls who had not attain the menarche.
2. The girls who are taking other remedies for dysmenorrhoea
3. The girls who are not willing to participate

Data collection

Data collection was done after taking formal permission from principal of the Govt girls. School in, Gwalior (M.P.) for the conduction of study in their 60 students explaining the purposes and objectives of the study. The school students were assured that their responses would be confidential and used for research purpose only by keeping the ethical consideration in mind. The collected data was taken then organized for analysis.

Part I

Demographic Variables It consists of demographic variables such as age, religion, type of family, age of menarche, length of menstrual cycle in days, family history of dysmenorrhea, number of sanitary pad changed per day, food pattern.

Part II

Simple descriptive pain scale it consists of simple descriptive pain scale, used to assess the level of pain. Level of pain Score No Pain 1 Mild Pain 2 Moderate Pain 3 Severe Pain 4 Very Severe Pain 5 Worst Possible Pain 6 Minimum -1 Maximum-6.

Part III

Rating scale for symptoms of dysmenorrhea it consists of rating scale used to assess the symptoms of dysmenorrhea. Scale Score Never 1-30 Sometime 31-60 Always 61-90 Minimum -1 Maximum - 90.

Data analysis and interpretation

The analysis and interpretation of data collected from 60 school Students of Govt. Girls school in Gwalior (M.P.). A structured questionnaire was used for collection of data and analysis was done with the help of descriptive and inferential statistics.

Section A

DEMOGRAPHIC VARIABLES

Table 1: Demographic Variables

Demographic variables	Experimental group		Control group	
	(f)	(%)	(f)	(%)
Age in years				
12-13 years	7	23.33%	8	26.66%
14-15 years	15	50%	12	40%
16-17 years	8	26.66%	10	33.33%
Religion				
Hindu	15	50%	12	40%
Christian	9	30%	10	33.33%
Muslim	6	20%	8	26.66%
Others	0	0%	0	0%
Type of family				
Nuclear family	22	73.33%	18	60%
Joint family	8	26.66%	12	40%
Age of menarche				
11-12 years	10	33.33%	9	30%
13-14 years	14	46.66%	16	53.33%
15-16 years	6	20%	5	16.66%
Length of menstrual cycle in days				
24	7	23.33%	5	16.66%
26	9	30%	6	20%
28	4	13.33%	5	16.66%
30	10	33.33%	14	46.66%
The number of sanitary pads changed per day				
Below 3	7	23.33%	6	20%
3-5	9	30%	8	26.66%
Above 5	14	46.66%	16	53.33%
Family history of dysmenorrhoea				
Present	25	83.33%	27	90%
Absent	5	16.66%	3	10%
Food pattern				
Vegetarian	19	63.33%	20	66.66%
Non-vegetarian	11	36.66%	10	33.33%

Section B

Table 2: Frequency and percentage distribution of pre test score simple descriptive pain scale among adolescents girls with dysmenorrhoea in control and experimental group

Level of pain	Criteria measure	Experimental group (Pre-test)		Control group (Pre-test)	
		(F)	(%)	(F)	(%)
No pain	1	0	0%	0	0%
Mild pain	2	7	23.33%	6	20%
Moderate pain	3	18	60%	16	53%
Severe pain	4	5	16.66%	8	26%
Very severe pain	5	0	0%	0	0%
Worst possible pain	6	0	0%	0	0%

Table 3: Frequency and percentage distribution of pre test score rating scale among adolescents girls with dysmenorrhoea in control and experimental group

Symptoms	Criteria measure	Experimental group (Pre-test)		Control group (Pre-test)	
		(F)	(%)	(F)	(%)
Never	1-30	3	10%	2	6.66%
Some Times	31-60	20	66.66%	23	76.66%
Always	61-90	7	23.33%	5	16.66%

Table 4: Frequency and percentage distribution of post-test score simple descriptive pain scale among adolescents girls with dysmenorrhoea in control and experimental group

Level of pain	Criteria measure	Experimental group (Post-test)		Control group (Post-test)	
		(F)	(%)	(F)	(%)
No pain	1	24	80%	2	6.67%
Mild pain	2	4	13.33%	8	20.66%
Moderate pain	3	2	6.66%	13	43.33%
Severe pain	4	0	0%	7	23.33%
Very severe pain	5	0	0%	0	0%
Worst possible pain	6	0	0%	0	0%

Table 5: Frequency and percentage distribution of post -test score rating scale among adolescents girls with dysmenorrhoea in control and experimental group

Symptoms	Criteria measure	Experimental group (Post-test)		Control group (Post-test)	
		(F)	(%)	(F)	(%)
Never	1-30	25	83.33%	6	20%
Some Times	31-60	5	16.66%	17	56.66%
Always	61-90	0	0%	7	23.33%

SECTION C

Table 6: Comparison between Mean and Standard deviation of assessment score and evaluation score of adolescents girls with dysmenorrhoea in experimental and control group

Group	N	Pre-Test		Post-Test		DF(N-1)	T-test
		Mean	SD	Mean	SD		
Experimental Group	30	2.66	0.18	1.2	0.07	29	8.19
Discriptive Pain Scale							
Rating Scale	30	58.6%	2.77%	27.4	1.17	29	20.08
Controle Group	30	3.03%	0.163%	2.66	0.165	29	0.81
Discriptive Pain Scale							
Rating Scale	30	50.4%	2.89%	53	2.68	29	1.05

Section D

Objectives 2 To evaluate the effectiveness of carrot juice on dysmenorrhoea among adolescents girls.

Table 7: Frequency and percentage distribution of the effectiveness of carrot juice on adolescents girls with dysmenorrhoea in experimental group

Scale	Mean difference	t-test	Tabulated value
Simple descriptive pain scale	1.46	8.19	2.05
Ratingscale	31.2	20.08	2.05

Section E

Objectives 3 To find out the association between effectiveness of carrot juice upon dysmenorrhoea with selected demographic variables.

Table 8: Analysing the association between demographic variables and effectiveness of carrot juice upon dysmenorrhoea among adolescents girls

Demographic Variables	Post-test score						X2
	Mild		Moderate		Severe		
	No	%	No	%	No	%	
Age in years							
12-13 years	1	2	1	2	0	0	0.18 NS
14-15 years	26	4	20	33	0	0	
16-17 years	6	10	6	10	0	0	
Religion							
Hindu	31	52	21	55	0	0	4.03 NS
Christian	2	3	4	7	0	0	
Muslim	0	0	0	3	0	0	
Others	0	0	0	0	0	0	
Type of family							
Nuclear	27	45	23	38	0	0	0.12 NS
Joint	6	10	4	7	0	0	
Age of menarche							
11-12 years	8	13	6	10	0	0	2.84 NS
13-14 years	19	32	11	18	0	0	
15-16 years	6	10	10	17	0	0	
Length of menstrual cycle in days							
24	3	5	4	7	0	0	1.07 NS
26	3	5	1	2	0	0	
28	18	30	15	25	0	0	
30	9	5	7	12	0	0	
The number of sanitary pads changed per day							
Below 3	6	10	1	2	0	0	7.40 S
3-5	16	27	8	13	0	0	
Above	11	18	18	30	0	0	

Demographic Variables			Post-test score						X2
			Mild		Moderate		Severe		
			No	%	No	%	No	%	
Family history									
Present			27	45	26	43	0	0	3.02
Absent			6	10	1	2	0	0	NS
Food pattern									
Vegetarian			21	35	23	38.8	0	0	3.51
Non-vegetarian			12	20	4	6.66	0	0	NS

DISCUSSION

- majority i.e. 23.33% of the adolescents girls had mild pain, 60% of the adolescents girls had moderate pain, 16.66% of the adolescents girls had severe pain in experimental group.
- Majority i.e. 20% of the adolescents girls had mild pain, 53.3% of the adolescents girls had moderate pain, 26.66% of the adolescents girls had severe pain in control group.
- Experimental group and control group of adolescents girls with dysmenorrhoea according to post-test level of pain. The post-test was conducted after given the carrot juice.
- majority of adolescents girls in i.e. 0(0%) no severe pain and least 2(6.66%) had moderate pain and 4(13.33%) had mild pain and 24(80%) had no pain, post-test score in experimental group.
- adolescents girls with dysmenorrhoea in control group i.e. 7(23.33%) had severe pain, 13(43.33%) had moderate pain, 8(20%) had mild pain and 2(6.66%) had no pain.
- post-test was conducted after given the carrot juice. Among which majority of adolescents girls in i.e. 0(0%) no always symptoms and least 5(16.66%) had sometimes symptoms and 25(83.33%) had never symptoms, post-test score in experimental group.
- adolescents girls with dysmenorrhoea in control group i.e. 7(23.33%) had always symptoms, 17(56.66%) had sometimes symptoms, 6(20%) had never symptoms.
- experimental group was 42.03 and it decreased to 14.9 after treatment process assessed by standardized scale.
- carrot juice on dysmenorrhoea effectiveness process the calculated value 18.57 was compared with the table value 2.05 at degree of freedom.
- mean score of the adolescents girls with dysmenorrhoea for control group was 29.36 and it decreased to 11.45 after normal treatment assessed by the using rating scale and pain scale.
- The calculated value 1.07 was compared with the table value at 29 degree of freedom.
- pre test and post test regarding dysmenorrhoea score was 1.437 the obtained p value = 0.012 and post test was 1.068 and obtained p value = 0.064. determine difference in the pain p value 0.000 ($p < 0.05$).
- simple descriptive pain scale (2.66-1.2 =1.46), rating scale mean difference is (58.6-27.4 =31.2).
- The simple descriptive pain scale t-test value was 8.19 and the rating scale on symptoms of dysmenorrhoea t-test value was 20.08 which was statically significant.
- Effectiveness of carrot juice in reduction of dysmenorrhoea and symptoms among adolescents girls school students. Thus research hypothesis H_1 is accepted.

CONCLUSION

Menstruation has dual significance for women. Menstrual disorders affect not only India but millions of women in the United States and represent an important health burden. The most common menstrual disorders are dysmenorrhea and headache; these conditions are leading causes of work or school absenteeism and substantially impact quality of life. This study is an approach to

assessment and management of dysmenorrhea and menorrhagia that considers the cultural, social and personal significance of symptoms and management choices. Cultural influences, such as a woman's status within society, her life stage, religion, education and employment, determine whether a woman seeks medical help for menstrual problems, and the personal significance of dysmenorrhea. assessment involves consideration of pain, associated symptoms, effect on lifestyle and activities of daily living, and a psychosocial and cultural assessment. Management involves specific treatment of underlying pathology, psychosocial support and individualizing treatment according to impact of the pain, associated symptoms, reproductive stage, cost, and the woman's personal values and attitudes. The main study was to assess the effectiveness of carrot juice in reduction of dysmenorrhea and symptoms on school students.

- The pre test finding showed that the dysmenorrhea and symptoms was present
- The carrot was administered to the school students for the reduction of dysmenorrhea and symptoms
- Most of them had reduction in dysmenorrhea and symptoms
- The carrot juice is proved to be very effective in menstrual cycle.

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