"Effectiveness of Ginger Tea on dysmenorrhea among students of Narayan Nursing College, Jamuhar, Rohats, Bihar."

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***Abstract*: The study was conducted at Narayan nursing college, Jamuhar. On 30 nursing students who meet the inclusion criteria. Data is collect by purposive sample technique. The research approach used in the present study is quantitative research approach and the research design is one group pre-test and post-test design is chosen for conducting the study, where there is no randomization and control group. In this design all the subjects were selected by convenience sampling technique and were given a pre-test and then post-test were conducted after they receive an intervention. Pre-test level of dysmenorrhea was estimated by using numerical Pain Rating Scale. Ginger tea 100ml was administrated 3 times (morning, afternoon, evening) on the first 2 days of menstruation. On the second day evening post test was by using the same scale. Ethical aspect of this study maintained throughout the study. The data were analyzed using descriptive and inferential statistics. The study identified that in pre-test 8.75% had moderate pain, 50.4% had severe pain and none of them hade mild and no pain. The study result t vale is 27.58 and df value is 29. Hence there is a reduction in level of dysmenorrhea after administration of Ginger tea among college students. The study concluded that Ginger tea found to be an effective non-pharmacological measure to reduce dysmenorrhea among college students.**

Keywords: effectiveness, ginger tea, dysmenorrhea, nursing students

I. INTRODUCTION:

The girls of yesterday are today's adolescents and they are going to be the mothers of tomorrow. Undergoing through puberty is the single most significant change that occurs in adolescence, during which they go through physical and psychological development. Data says that approximately one fifth of the world girl's population is suffering from dysmenorrhea. Today 1.2 billion adolescents stand the cross roads between childhood and adulthood, around 243 million of them live in India. They are undergoing a lot of physical as well as psychological stress due to changes taking place in the body.

The rich Ayurveda heritage of India ensured the availability of various fold medicines to treat day to day minor disorders such as dysmenorrhea, indigestion nausea. Among various folk medicines, ginger is known to have out weighing benefits.

The ancient oriental civilization recognized the potential of ginger and certainly treated it as a 'universal medicine', and even today ginger remains a component of more than 50% of the traditional herbal remedies and has been used to treat nausea, indigestion, fever and infection to promote vitality and longevity. Also, ginger has been used for the treatment of dysmenorrhea as a spasmodic, anti – inflammatory and circulatory stimulant.

In Ayurveda ginger is reported to be useful in treating inflammation and pain. Ginger exerts its ameliorative effect and it could be related to the inhibition of prostaglandin and leukotriene biosynthesis.

Many studies proved that ginger can be used for relieving menstrual cramps, it act as an anti-inflammatory and it can be taken as tea, extract or capsules.

II. STATEMENT OF THE PROBLEM;

Effectiveness of Ginger Tea on dysmenorrhea among students of Narayan Nursing College, Jamuhar, Rohats, Bihar.

III. OBJECTIVES OF THE STUDY:

- To assess the level of dysmenorrhea among nursing students in pre test
- To assess the level of dysmenorrhea among nursing students in post test
- To determine the effectiveness of ginger tea on dysmenorrhea among nursing students
- To find out association between the post-test with selected demographic variables.

IV. CONCEPTUAL FRAMEWORK:

The conceptual framework of this study was based on Sister Cllista Roy's adaption model.

V. MATERIALS AND METHOD:

Research methodology

Pre-experimental research design i.e., one group pre-test, post-test

Research setting
The study was conducted among 30 B.Sc. nursing and GNM students at Narayan Nursing College in Jamuhar, Bihar, who have dysmenorrhea.

Sampling technique
Purposive sampling technique was used to select study participants.

Sample criteria
Inclusion Criteria
- Students who are having dysmenorrhea.
- Students with primary dysmenorrhea.
- Students who are available during the time of data collection.
- Students of GNM and B.Sc nursing programme.

Exclusion Criteria
- Students who having medical complication e.g PCOD, Ovarian Cyst etc.
- Students who are taking medicine during the time of dysmenorrhea.

Students who are not interested to participate in the study

Tool for data collection:
The tool was designed into 3 parts-

Section A:- Demographic variables:
Religions, age, Diet, Types of Family, Family income, BMI

Section B:- Menstrual variables:
This section deals with the distribution of the study subjects based on their menstrual history such as Age at Menarche, Length of menstrual cycle, Duration of menstruation in days, family history of dysmenorrhea, Onset and duration of dysmenorrhea, Impact of menstrual cycle, taken any treatment to get rid of dysmenorrhea.

Section C:- Numerical pain ratting scale:
The severity of dysmenorrhea before and after the intervention is evaluated using a numerical pain rating scale.

Scoring - 0 - NO PAIN
1-3 - MILD PAIN
4-6 - MODERATE PAIN
7-10 - SEVERE PAIN

Method of data collection:
Data collection is the gathering of information from the sampling units. The 30 B.Sc. nursing and GNM students at Narayan Nursing College in Jamuhar, Bihar, who have dysmenorrhea were the subjects of the study's data collection. “The tool has 3 parts for the collection of data. Sociodemographic variables, menstrual history, Numerical pain ratting scale, Intervention 3parts of tools is a method of data collection in which the researcher obtain responses from the subject in a face to face encounter”. Hence, the researcher developed a Socio- demographic variables, menstrual history, Numerical pain ratting scale, Intervention to conduct the tools. Pre-test post-test design was used for data collection to assess the effectiveness of Ginger tea on Dysmenorrhea The methods of tools, which was used in pre-test was again used in the post test in the same manner in the same order to all the respondents of the research study.

VI. DATA ANALYSIS AND INTERPRETATION:
The data analysis strategies were as follows. Frequencies and percentages were used to summarize the sample characteristics by item• wise analysis. Mean, standard deviation and paired t test were used to calculate the effectiveness of• ginger tea Chi – square values were computed to find out relationship between knowledge with• selected demographic variable.

VII. PRESENTATION OF DATA:
The data analysed are presented under the following section.
Section A: Deals with the distribution of the study subjects based on demographic variables.
Section B: Deals with the pre-test level of dysmenorrhea among college students.
Section C: Deals with the post-test level of dysmenorrhea among college students.
Section D: Deals with the comparison of pre-test and post-test level of dysmenorrhea.
Section E: Deals with the effectiveness of Ginger tea on dysmenorrhea among college students.
Section F: Deals with the association between the demographic variables and level of dysmenorrhea.

SECTION A. Table1 Demographic Variables:

SL NO	Demographic variables	Number	Percentage
1	Age in years		
	a. 17-18 years	10	33.33%
	b. 19-20 years	7	23.33%
	c. 21-22 years	11	36.67%
	d. 23 years and Above	2	6.66%
2	Religion		
	a. Hindu	20	66.67%
	b. Christian	3	10%
	c. Muslim	6	20%
	d. Others	1	3.33%
3	Type of Family		
	a. Nuclear	14	46.67%
	b. Joint	12	40%
	c. Extended	4	13.33%
4	Family's Monthly Income		
	a. Below Rs. 10000/-	7	23.33%
	b.Rs.10001–Rs. 20000/-	10	33.33%
	c. Above Rs. 20001/-	13	43.33%
5	Diet Pattern		
	a. Vegetarian	12	40%
	b. Non Vegetarian	18	60%
6	Body mass Index (BMI)		
	a. Under Weight	5	16.66%
	b. Normal	13	43.33%
	c. Over weight	7	23.33%
	d. Obese	5	30%

Table.2 Menstrual variables

SL No	Menstrual History	Number	Percentage
1	Age at Menarche		
	a. Below 12 years	4	13.33%
	b. 12-13 years	18	60%
	c. 14 years and above	8	26.66%
2	Length of menstrual cycle		
	a. 21-25 days	4	13.33%
	b. 26-30 days	23	76.66%
	c. 31-35 days	3	10%
3	Duration of menstruation in days		
	a. Below 3 days	3	10%
	b. 4-6 days	25	83.33%
	c. Above 7 days	2	6.66%
4	Do you have family history of dysmenorrhea		
	a. Yes	16	53.33%
	b. No	14	46.66%
5	Onset and duration of dysmenorrhea		
		8	26.66%

	a. Starts before menstruation, continues upto 24 hrs of menstruation. b. Start with the onset of menstruation continues upto 48 hours c. Start before menstruation, continues throughout menstruation d. Starts after 24 hours of menstruation and continue throughout the menstruation.	10 9 3	33.33% 30% 10%
6	Impact of menstrual cycle a. Limitation in daily living activities b. Absenting from class c. Remain isolated d. Others	 13 7 7 3	 43.33% 23.33% 23.33% 10%
7	Have you taken any treatment to get rid of dysmenorrhea a. No b. Yes (if yes specify) i. Self-medication ii. Seeking physician consultation iii. Home remedies	 29 1	 96.66% 3.33%

Section B. Level of dysmenorrhea among nursing students before intervention

(n=30)

SL NO	VARIABLES	LEVEL OF PAIN BEFORE INTERVENTION							
		NO PAIN		MILD		MODERATE		SEVERE	
		F	%	F	%	F	%	F	%
1	overall	0	0%	0	0%	22	73.33%	8	26.66%

Section C. Level of dysmenorrhea among nursing students after intervention

SL NO	VARIABLES	LEVEL OF PAIN AFTER INTERVENTION

		NO PAIN		MILD		MODERATE		SEVERE	
		F	%	F	%	F	%	F	%
1	OVERALL	13	43.33%	17	56.66%	0	0%	0	0%

(n=30)

Section D. Comparison of pre-test and post-test level of dysmenorrhea.

	No pain	Mild	moderate	Severe
Pre Test	0%	0%	73.33%	26.66%
Post Test	43.33%	56.66%	0%	0%

Section E. (a) Effectiveness of Ginger tea on dysmenorrhea among nursing students.

(n=30)

Pain score	**Max**	**MEAN**								**STANDARD DEVIATION**								**MEAN %**							
		PRE TEST				**POST TEST**				**PRE TEST**				**POST TEST**				**PRE TEST**				**POST TEST**			
		No pain	**Mild**	**Moderate**	**Severe**	**No pain**	**Mild**	**Moderate**	**Severe**	**No pain**	**Mild**	**Moderate**	**Severe**	**No pain**	**Mild**	**Moderate**	**Severe**	**No pain**	**Mild**	**Moderate**	**Severe**	**No pain**	**Mild**	**Moderate**	**Severe**

Overall	10	0	0	5.04	8.75	0	1.76	0	0	0	0	0.76	0.96	0	0.806	0	0	0	0	50.4	87.5	0	17.6	0	0

(b)

Pain Score	**Max Score**	**MEAN**								**STANDARD DEVIATION**								**MEAN DIFFERENCE**				**T-TEST**	
		PRE-TEST				**POST-TEST**				**PRE TEST**				**POST TEST**				**NO PAIN**	**MILD**	**MODERATE**	**SEVERE**	**t**	**df**
		No pain	**Mild**	**Moderate**	**Severe**	**No pain**	**Mild**	**Moderate**	**Severe**	**No pain**	**Mild**	**Moderate**	**Severe**	**No pain**	**Mild**	**Moderate**	**Severe**						
Overall	10	0	0	5.04	8.75	0	1.76	0	0	0	0	0.76	0.96	0	0.806	0	0	0	1.76	5.04	8.75	27.58	29

Section F. Association between demographic variables with the level of dysmenorrhea with selected subjects

n = 30

Demographic data	Level of pain						
	After intervention						
	No pain		Mild		X^2	DF	P
	f	%	f	%			
Age in years					2.47	3	0.480
a. 17-18 years	5	16.66	5	16.66			
b. 19-20 years	4	13.33	3	10			
c. 21-22 years	4	13.33	7	23.33			
d. 23 years and above	0	0	2	6.66			
Religion					1.696	3	0.637
a. Hindu	9	30	11	36.66			
b. Christian	2	6.66	1	3.33			

c. Muslim	2	6.66	4	13.33			
d. Others	0	0	1	3.33			
Type of family					0.814	2	0.665
a. Nuclear	7	23.33	7	23.33			
b. Joint	5	16.66	7	23.33			
c. Extended	1	3.3	3	10			
Family's monthly income					1.878	2	0.39
a. Below Rs. 10000	2	6.66	5	16.66			
b. Rs. 10001- Rs. 20000	6	20	4	13.3			
c. Above Rs. 20001	5	16.66	8	26.66			
Diet pattern					0.022	1	0.880
a. Vegetarian	5	16.66	7	23.33			
b. Non-Vegetarian	8	26.66	10	33.33			
Body mass Index (BMI)					0.714	3	0.869
a. Under Weight	3	10	2	6.66			
b. Normal	5	16.66	8	26.66			
c. Over weight	3	10	4	13.3			
d. Obese	2	6.66	3	10			

VIII. **Results:**

In terms of age, out of 30 college students, 33.33% were in the age group 17-18 years, 23.33% were in 19-20 years, 36.67 % were in the age group 21-22 years and 6.66% were in the age group 23 years and above. Among them 66% were Hindu, 10% were Christian, 20% were Muslim and 4% were others. Those students had 47% were in nuclear family, 40% were in joint family and 13% were in extended family. 23.33% were below Rs.10000/-, 33.33% were Rs.10001-Rs.20000 and 43.33% were above 20001. Among them 40% were vegetarian and 60% were non-vegetarian. 17% were have underweight, 43% were have normal weight, 23% were overweight and 17 % were have obese.

13.33% were below 12 years, 60% were 12-13 years, and 26.66% were 14 years and above. 13.33% were 21-25 days, 76.66% were 26-30 days and 10% were 31-35 days. 10% were below 3 days, 83.33% were 4-6 days, and 6.66% were above 7 days. 53.33% were having family history of dysmenorrhea and 46.66% were having no family history of dysmenorrhea. 27% were having dysmenorrhea start before menstruation, continue upto 24 hours of menstruation, 33% were having up to 48 hours, 30% having dysmenorrhea throughout menstruation, 10% were having dysmenorrhea after 24 hours of menstruation and continue throughout the menstruation. 43.33% were having limitation in their daily activities, 23.33% were absenting from class. 23.33% were remain isolated, 10% were others. 43.33% were having limitation in their daily activities, 23.33% were absenting from class. 23.33% were remain isolated, 10% were others. t in experimental group 96.66% were no treatment taken to relief and 3.33% were taking treatment for dysmenorrhea.

26.66% had severe pain, 73.33% had moderate pain. After intervention, t 43.33% of the sample had no pain, 56.66% had mild pain. Comparison between the pre-test score was 73.33% had moderate pain, 26.66% had severe pain and none of them having no pain and mild pain the post test score shows that 43.33% had no pain, 56.66% had mild pain, none of them having moderate and severe pain.

IX. DISCUSSION:

The first objective was to assess the level of dysmenorrhea among nursing students in pre-test.This study reveals the findings shows that 73.33% were having moderate pain, and 26.66% were having severe pain and no one having mild pain.

The research findings were in line with the findings of the following study by Divya Talawar (2021) Pre-test menstrual symptom scores ranged from 36 to 73.2 on average, with a standard deviation of 11.42. Pre-test results showed that 20 out of the subjects (80%) had moderate menstrual symptoms, 10 (20%) had severe symptoms, and none had light symptoms. demonstrates that the pre-test menstrual symptom scores and some demographic factors did not have any correlation.

The second objective was to assess the level of dysmenorrhea among nursing students in posttest. This study reveals the findings shows that 43.33% of the sample had no pain, 56.66% had mild pain, and none of them had moderate, and severe pain.

The research findings were in line with the conclusions of the following study conducted by Mrs. V.M. (2016) According to this study, 6.67% of participants reported no pain, 43.33% reported mild pain, 50% reported moderate pain, and none reported severe pain. The mean pain score after the test is 3.36, and the SD is 1.54. The estimated value of "t" is 8.10. As a result, after giving college students ginger tea, the level of dysmenorrhea decreased.

The third objective was to determine the effectiveness of ginger tea on dysmenorrhea among nursing students this study reveals the findings shows that in pre-test mean score is 8.75 in severe pain, 5.04 is moderate no one having is mild and no pain, in post-test the mean score is 1.76 is mild and no one having moderate and severe. Pre-test SD 0.96 is severe, 0.76 is moderate no one having mild and no pain, in post-test SD 0.806 is mild and no one having moderate and severe pain. The mean% in pre-test 87.5% is severe, 50.4% is moderate, in posttest mean % 17.6% is mild, the mean differences 8.75 is severe, 5.04 is moderate, 1.76 is mild, T test the value of T is 27.58 and df is 29.

The study's conclusions were in line with the findings of the following investigation by Sheetal Crasta (2019) When comparing pain measurements taken before and after the administration of ginger tea, a Wilcoxon signed-rank test revealed a significant difference (p 0.05). These results show that ginger tea was successful in lowering menstruation pain. To determine the relationship between baseline dysmenorrhea and demographic and clinical factors, the chi-square test and likelihood ratio were utilized. It was discovered that there is no correlation ($p > 0.05$). the results of the statistical analysis showing that ginger tea reduces dysmenorrhea.

The fourth objective was to find out association between the post-test with selected demographic variables The Chi-square of the age in years of students is 2.74, religion: 1.696, types of family: 0.814, family monthly income: 1.878, diet pattern: 0.022, BMI: 0.714.

The research findings coincided with those of the following study conducted by Shynee Paul (2019) According to the results, baseline pain is unrelated to demographic or clinical factors (dysmenorrhea before treatment). The p-value was more than 0.05 (at the 5% threshold of significance) for each variable, which amply demonstrates that baseline dysmenorrhea and demographic factors are not related.

X. CONCLUSION:

The study shows that ginger tea has been proven to be a successful alternative treatment for dysmenorrhea. In contrast to previous pharmaceutical treatments, ginger tea was discovered to have no side effects. With this intervention, sample satisfaction is significantly higher. The study's results demonstrate that ginger tea can be utilized as a low-cost remedy to lessen dysmenorrhea

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