A study to assess the Effectiveness of Ginger for Reducing Pain in Primary Dysmenorrhoea among Adolescent Girls in selected college of nursing at Dehradun

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Abstract: *Adolescence marked with the onset of menarche. Menarche is often associated with problems of irregular menstruation, excessive bleeding and dysmenorrhoea. A population measure of dysmenorrhoea by the standardized "Numerical pain rating" scale. The score ranging from 0-10. The nature of the study was true experimental. The study was conducted in selected college of nursing Dehradun. The research design used for this study was two group pre-test post-test design. Data collected using convenience sampling. The data was collected to assess the effectiveness of ginger in primary dysmenorrhoea among 60 adolescent girls (group I=30, group II=30. The data were analyzed and interpreted by using descriptive and inferential statistics. Major findings of the study- revealed that in pre test more than half girls severe pain and in post test 93.33% adolescent girls had mild pain of group II where only 33.66% adolescent girls had mild pain of group I. while pre test Mean pain score is 6.87 and post test Mean pain score is 4.67 of group I, pre test Mean pain score is 6.93 and post test Mean pain score is 2.53 of group II. Significant difference ($p<0.05$) is found between pre-test and post-test score. It can be conclude that ginger application effective in reducing pain in both group but group II is more effective than group I.*

Key Words: *Effectiveness, Ginger, primary dysmenorrhoea, adolescent girls.*

1. INTRODUCTION:

Dysmenorrhoea or painful menstruation is one of the most common gynecological problems in woman of all ages. Usually dysmenorrhoea is differentiated as primary or secondary. Primary dysmenorrhoea that occurs in the absence of anatomic abnormalities or pelvic pathologic disorders in which pain begins at the onset of the menstrual flow and lasts for 12-48 hours. The main symptom of dysmenorrhoea is pain concentrated in the lower abdomen, in the umbilical region or the suprapubic region of the abdomen. Symptoms often co-occurring with menstrual pain include nausea and vomiting, diarrhea or constipation, headache, dizziness, disorientation, hypersensitivity to sound, light, smell and touch, fainting, and fatigue. Symptoms of dysmenorrhoea often begin immediately following ovulation and can last until the end of menstruation. This is because dysmenorrhoea is often associated with changes in hormonal levels in the body that occur with ovulation. The normal treatment for these cramps is the consumption of antipyretics like aspirin and similar medications. In contrast to the medications, many herbal therapies can offer an alternative and effective remedy not only to the symptoms but also to the treatment of the condition. Ginger is an herb) is used as a spice and also as a medicine. It can be used fresh, dried and powdered, or as a juice or oil. Ginger is helpful to reduce the menstrual cramps. It is also helpful in relaxing the muscular spasms and in relieving the pain present during ovulation and during menstrual periods.

2. OBJECTIVE:

- To assess the intensity of pain in primary dysmenorrhoea among adolescent girls in experimental group I & experimental group II.
- To compare intensity of pain between experimental group I & experimental group II after intervention.
- To find out association between experimental group I & experimental group II with their selected demographic variables.

3. ASSUMPTIONS:

- Primary dysmenorrhoea is common among adolescent girls.
- Ginger preparation will have effect on primary dysmenorrhoea.
- Any complication will not include the study.

4. HYPOTHESES:

- **H_1:** There was a significant reduction in intensity of dysmenorrhoea after giving intervention in both groups (experimental group I and II)
- **H_2**: There was a significant difference between the experimental group I and II.
- **H_3:** There was a significant association of post test score of pain experimental group I & II with their selected demographic variable.(age, age of menarche, menstrual cycle, duration of menstruation, dietary pattern, family history, height, weight, flow of menstrual cycle & LMP.

5. RESEARCH APPROACH:

- Quantitative research approach is used for this study.
- **Research design**
- True Experimental research design (two group pre-test and post-test design was adopted for the study)
- **Setting**
- The study was conducted in College of Nursing Dehradun. This area was selected because of easy access to the population under study and availability of adolescent girls with primary dysmenorrhoea.
- **Population**
- Adolescent Nursing girls studying in College of nursing.
- **Sample**
- In this study the sample is adolescent girls with primary dysmenorrhoea.
- **Sample size**
- 60 adolescent girls were the sample size of the study having the age group of 17 to 22 year (experimental group I i.e. n_1= 30 and experimental group II i.e. n_2= 30).
- **Sampling technique**
- The sample for the study was selected by convenience sampling technique.
- **Data collection instrument**
- Section A: Demographic variables
- Section B: Standard tool.(Numerical Pain Scale)

SECTION A-

TABLE-1:- Frequency & Percentage distribution of demographic variables of experimental group I.

n_1=30

S. NO.	DEMOGRAPHIC VARIABLES	FREQUENCY	PERCENTAGE (%)
1.	Menstrual cycle:-		
	• Regular	30	100
	• Irregular	00	00
2.	Duration of menstrual flow:-		
	• 2-4 days	18	59.94
	• 4-6 days	11	36.63
	• More than 6 days	01	03.33
3.	Dietary pattern:-		
	• Vegetarian	08	26.64
	• Non-vegetarian	17	56.61
	• Others (egg)	05	16.65
4.	Family history of dysmenorrhoea:-		
	• Yes	13	43.29
	• No	17	56.61
5.	Flow of menstrual cycle:-		
	• Average with clot	11	36.63
	• Excess with clot	02	06.66
	• Average without clot	10	33.30
	• Excess without clot	07	23.31

The data from table-1 revealed that all adolescents girls had regular menstrual cycle (100%), majority of them had duration of menstrual flow from 2-4 days (59.94%), most of the girls were non-vegetarian (56.61%), majority of the girls had no Family history of dysmenorrhoea (56.61%) and very few girls (06.66%) had excess flow with clot.

TABLE-2:- Frequency & Percentage distribution of demographic variables of experimental group II.

n_2=30

S.NO.	DEMOGRAPHIC VARIABLES	FREQUENCY	PERCENTAGE (%)
1.	Menstrual cycle:- • Regular • Irregular	 30 00	 100 00
2.	Duration of menstrual flow:- • 2-4 days • 4-6 days • Mora than 6 days	 14 15 01	 46.62 49.95 03.33
3.	Dietary pattern:- • Vegetarian • Non-vegetarian • Others (egg)	 07 14 09	 23.31 46.62 29.97
4.	Family history of dysmenorrhoea:- • Yes • No	 08 22	 26.64 73.26
5.	Flow of menstrual cycle:- • Average with clot • Excess with clot • Average without clot • Excess without clot	 06 08 15 01	 19.98 26.64 49.95 03.33

The data from table-2 revealed that all adolescents girls had regular menstrual cycle (100%), majority of them had duration of menstrual flow from 4-6 days (49.95%), most of the girls were non-vegetarian (46.62%), majority of the girls had no Family history of dysmenorrhoea (73.26%) and very few girls (03.33%) had excess flow without clot.

SECTION B -

1. To assess the intensity of pain in primary dysmenorrhoea among adolescent girls in experimental group I & experimental group II.

TABLE-3:- Assess the intensity of pain with respect to frequency & percentage distribution of pre test & post test score of experimental group I before and after the ginger application respectively.

n_1=30

S.NO.	GRADING FOR INTENSITY OF PAIN BY USING NUMERICAL PAIN SCALE	PRE TEST		POST TEST	
		FREQUENCY	%	FREQUENCY	%
1.	0 (no pain)	00	00	00	00
2.	1-3 (mild pain)	00	00	11	36.66
3.	4-6 (moderate pain)	11	36.66	19	63.33
4.	7-10 (severe pain)	19	63.33	00	00

The assessed data from table-3 reveled that in pre test shows 36.66% adolescent girls had moderate pain, 63.33% adolescent girls had severe pain.

Post test show that 36.66% adolescent girls had mild pain, 63.33% adolescent girls had moderate pain.

TABLE-4:- Assess the intensity of pain with respect to frequency & percentage distribution of pre test & post test score of experimental group II before and after the ginger application respectively.

n_2=30

S.NO.	GRADING FOR INTENSITY OF PAIN BY USING NUMARICAL PAIN SCALE	PRE TEST		POST TEST	
		FREQUENCY	%	FREQUENCY	%
1.	0 (no pain)	00	00	00	00
2.	1-3 (mild pain)	00	00	28	93.33
3.	4-6 (moderate pain)	13	43.33	02	06.66
4.	7-10 (severe pain)	17	56.66	00	00

The assessed data from table-4 in pre test shows that 43.33% adolescent girls had moderate pain, 56.66% adolescent girls had severe pain. Post test show that 93.33% adolescent girls had mild pain, 06.66% adolescent girls had moderate pain.

TABLE-5:- Effectiveness of post assessment intensity of pain of experimental group I & experimental group II.

N=30

S. NO.	GRADING FOR INTENSITY OF PAIN BY USING NUMERICAL PAIN SCALE	% OF POST TEST FOR EXPERIMENTAL GROUP I	% OF POST TEST FOR EXPERIMENTAL GROUP II
1.	0 (no pain)	00	00
2.	1-3 (mild pain)	36.66	93.33
3.	4-6 (moderate pain)	63.33	06.66
4.	7-10 (severe pain)	00	00

TABLE-6:- Compare the pre & post score of intensity of pain of experimental group I with respect to mean, SD & "t" value.

n_1=30

GROUP I	MEAN	SD	df	"t"	p
Pre test	6.87	1.074	29	24.884	**.000***
Post test	4.67	1.348			

Paired t-test t_{tab} = 2.05 *Level of significance(P)<0.05

Table-6 show that the effectiveness of experimental group I in which mean for pre test 6.87 and post test mean 4.67 and "t" value is 24.884 that is highly significant.

TABLE-7:- Compare the pre & post score of intensity of pain of experimental group II with respect to mean, SD & "t" value.

n_2=30

GROUP II	MEAN	SD	df	"t"	p
Pre test	6.93	1.311	29	26.944	**.000***
Post test	2.53	0.973			

Paired t-test t_{tab} = 2.05 *Level of significance(P)<0.05

Table-7 show that the effectiveness of experimental group II in which mean for pre test 6.93 and post test mean 2.53 and "t" value is 26.944 that is highly significant.

TABLE-8:- Effectiveness of post score assessment of intensity of pain of experimental group I & experimental group II with respect to "t" value.

N=60

GROUP I & II	MEAN	SD	df	"t" $_{cal}$	p
Post test I	4.67	1.348	58	7.029	**.000***
Post test II	2.53	0.973			

independent t-test t_{tab} = 2.00 *Level of significance(P)<0.05

Table-8 show that the effectiveness of intervention in which mean for post test of experimental group I is 4.67 and post test mean of experimental group II is 2.53 that mean experimental group II is more effective than experimental group I and independent "t" value is 7.029 that is highly significant.

6. RECOMMENDATION:

The study recommends the following for further research:-

- The study can be conducted in large sample for better generalization.
- Comparative studies can be done on different home remedies for adolescent girls in dysmenorrhoea.
- Other home remedies usage & its effectiveness can be tested for adolescent girls in dysmenorrhoea.
- We can do a study related to assess the knowledge, skill and attitude of staff nurse in management and prevention of dysmenorrhoea with the help of ginger powder and make new findings for futuristic nursing practices.
- We can recommend the use of home remedies like ginger should be mandatory in settings like female wards (gynae ward).

7. CONCLUSION:

The present study assessed the effectiveness of ginger in experimental group I & experimental group II for reducing pain in primary dysmenorrhoea among adolescent girls. The result revealed that experimental group II (In this ginger give two days before the onset of the menstrual period and continue through the first three days of menstrual period) is very effective in reducing pain at p<0.05 level than the Experimental group I (In this ginger give only for the first three days of menstrual period). On the basis of the study, investigator concluded that ginger application has a significant effect in reducing pain in both experimental group I & experimental group II but experimental group II is more effective than experimental group I.

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