



Research Article

## ASSESSMENT OF EFFECTIVENESS OF GINGER TEA ON DYSMENORRHOEA

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### ABSTRACT

**Introduction:** Adolescence is a crucial period in which young people experienced fleeting changes in body. During adolescent period people sustain many changes in body in order to achieve physical maturity. One of the paramount changes that take place in adolescent girls is initiation of menstruation. Many times menstruation coexist with certain health problems like irritability, dysmenorrhoea, irregular menstruation, nausea and vomiting. Dysmenorrhoea is a condition of painful menstruation. There are various measures to control dysmenorrhoea which include pharmacological and non-pharmacological approach. Non-pharmacological methods include herbs, acupressure, exercise, hot application and massage therapy. Among various herbs ginger have relaxing effect on relieving dysmenorrhoea. **Methodology:** A quasi experimental study was conducted to evaluate effect of ginger tea on dysmenorrhoea among 80 adolescent girls of selected schools of Anand district, Gujarat. Convenient sampling technique was used to select samples. Performa of demographic variable and standardize numerical pain rating scale was used to collect data. After first day pre-intervention assessment for both groups, ginger tea 50 ml was administered to participants of experimental group only two times a day (morning and evening) for 3 consecutive days. Post interventional dysmenorrhoea was assessed on third day evening for both experimental and control group. **Result:** The study revealed that mean pre interventional level of dysmenorrhoea in experimental group and control group was 7.10 and 6.90 respectively whereas the mean post interventional level of dysmenorrhoea in experimental and control group was 1.75 and 3.18 respectively. **Conclusion:** The study concluded that there is significant effect of ginger tea on relieving dysmenorrhoea. Ginger is effective home remedy with positive impact on health of adolescent girls. Hence, ginger tea can be use as home based management for reducing dysmenorrhoea.

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### INTRODUCTION

Adolescence is the crucial period, in which young people experience fleeting changes in body size, physiological, psychological and social functioning. During adolescent period, people sustain many body changes as they proceed from childhood to physical maturity. One of the paramount physiological changes that take place in adolescent girls is initiation of menstruation. Many times menstruation is coexist with certain health problems like irritability, irregular menstruation, dysmenorrhoea, nausea and vomiting.<sup>1</sup>

Dysmenorrhoea is a condition of painful menstruation where adolescent girls experienced crampy abdominal pain. It begins before or at the onset of menstruation. Duration of pain is often 8 to 72 hours and usually associated with menstruation. Dysmenorrhoea is a common gynecological problem which

affect women of all ages and all races. Dysmenorrhoea is provoking disturbance in education, physical health and social life.<sup>2</sup>

Dysmenorrhoea may be classified into two types: primary and secondary. Primary dysmenorrhoea is defined as painful menses in women without any changes in normal pelvic anatomy. Secondary dysmenorrhoea is menstrual pain which occur due to any pathology such as endometriosis, pelvic inflammatory disease, intra-uterine devices, irregular cycles or infertility problems, ovarian cysts, polyps, intra-uterine adhesions, or cervical stenosis. The cause of primary dysmenorrhoea is prostaglandins, particularly PGF2 $\alpha$ . As menstruation begins, PGF2 $\alpha$  released from disintegrating endometrial cells. PGF2 $\alpha$  trigger myometrial contractions, ischemia and sensitization of nerve endings and it cause pain.<sup>2</sup>

According to studies done in 2015, prevalence rate of dysmenorrhoea in Gujarat was 45%.<sup>2</sup> In India prevalence of dysmenorrhoea was 33.5%.<sup>3</sup> This high prevalence shows how adolescent girls are suffering during the peak years of their education period.

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There are various options to overcome from dysmenorrhoea which include pharmacological and non-pharmacological approach. Non-pharmacological method include use of herb, hot application, acupressure, exercise, massage therapy.<sup>4</sup>

Among the various herbs several studies done suggest to relieve dysmenorrhoea. Ginger is most powerful and god gifted natural home remedy. In Ayurveda it is known as Mahaashadhi as such it is used for improve body function and eliminates toxic substance from body. Ginger has numerous therapeutic properties like antibiotic, antimicrobial, antioxidant and also have ability to inhibit formation of inflammatory compounds.<sup>5</sup>

Ginger have relaxing effect on muscular spasm hence it is useful in relieving dysmenorrhoea. Ginger work as herbal medicinal that comprise pharmacological properties with non-steroidal anti-inflammatory drugs through inhibition of cyclooxygenase- 1 and cyclooxygenase-2, ginger suppresses prostaglandin synthesis.<sup>6</sup>

**MATERIAL AND METHOD**

The present study adopted a quasi experimental research design. 80 adolescent girls having primary dysmenorrhoea were selected using convenient sampling technique then were randomly allocated to experimental and control group (40 each). Adolescent girls taking any other treatment for dysmenorrhoea or were suffering from any gynecological disorders or were having any allergy to ginger tea components were excluded from present study. These 80 participants were sampled from selected schools of Anand district, Gujarat. Permission and informed consent was taken from the participants, their parents and the school authority. Data collection was done using researcher developed performa of demographic variable and standardize numerical pain rating scale. The pain level was assessed on the first day for both experimental and control group. Followed it was administration of 50 ml of ginger tea to participants of experimental group two times a day (morning and evening) for the first three days of menstruation. Post interventional dysmenorrhoea was assessed on third day evening for both experimental and control group. The collected data was tabulated and statistically analyzed.

**RESULT**

**Demographic variables of adolescent girls of both experimental and control group**

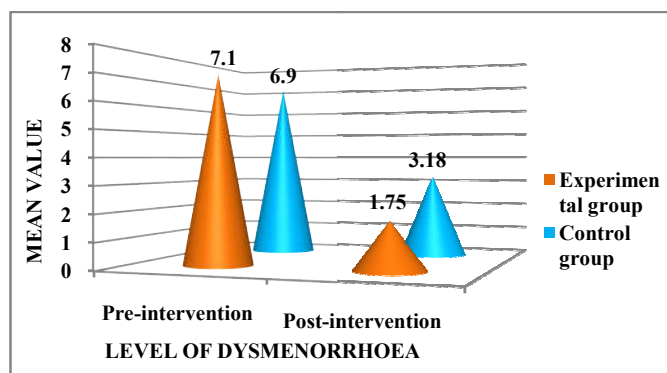
The findings of the study revealed that 47.5% adolescent girls belonged to 17 years of age. 60% participant of experimental group had 141-150 cm height while 52.5 % participant of control group had 151-160 height. 57.5% participant of experimental group and 47.5% of control group had below 40 kg weight. 55% adolescent girls had completed 12<sup>th</sup> standard in both group. In experimental group 80% and in control group 60% participant was vegetarian. 52.5 % participant of experimental group had menarche at age of 12-13 years while in control group 42.5% at 14-15 years of age. 60% participant of experimental group and 45% participant of control group had 3-4 days of menstruation. Many of participant in experimental group (70%) and control group (85%) had 28-32 days of interval of menstrual cycle. Majority of participant in experimental group (70%) and control group (62.5%) had dysmenorrhoea with limitation but no effect on study.

**Level of dysmenorrhoea in experimental and control group**

In present study paired t-test was used to determine statistical difference between level of dysmenorrhoea of experimental and control group. The findings of study revealed that, mean and standard deviation value of pre interventional level of dysmenorrhoea in experimental and control group was 7.10±1.51 and 6.90±1.60. Mean and standard deviation value of post interventional level of dysmenorrhoea in experimental and control group was 1.75±1.37 and 3.18±1.57. There was statistically significant difference found in level of dysmenorrhoea's score after administration of ginger tea at p <0.001. This suggested that ginger tea was significantly effective in reducing dysmenorrhoea.

**Table 1** Level of dysmenorrhoea before and after intervention between experimental and control group

	Experimental group		Control group		t value	df	p value
	Mean	Standard deviation	Mean	Standard deviation			
Pre-intervention	7.10	1.51	6.90	1.60	5.12	78	<0.001
Post-intervention	1.75	1.37	3.18	1.56			



**Association between pre-interventional level of dysmenorrhoea and selected demographic variables**

Chi square test was used to find out association between pre-interventional level of dysmenorrhoea and demographic variables. There was significant association found between age and pre-interventional level of dysmenorrhoea ( $\chi^2=5.733$ , df=2, p value <0.05) in experimental group. Rest of demographic variable were statistically independent with pre-interventional level of dysmenorrhoea.

**CONCLUSION**

The findings of present study illustrated that ginger has a positive effect on relieving dysmenorrhoea. Ginger is a herbal remedy which is cheap and easy to prepare by everyone. Use of ginger protect adolescent girls from harmful effect of medicines. Hence, pamphlets related to benefits and preparation of ginger tea can be distributed in schools and colleges. Awareness campaign can be arrange about traditional herbs and its health benefits. So, it will improve community knowledge about non-pharmacological management of dysmenorrhoea.

**Reference**

1. Anupa Achuthan, Resmi CR. Effect of ginger tea versus mint tea in reducing dysmenorrhoea among adolescent girls. Ijoap. 2016. 2(3). Available from: <http://www.allresearchjournal.com/archives/2016/vol2issue3/PartC/2-2-114>.

2. Salvi Shah *et al.* Menstrual characteristics and prevalence of dysmenorrhoea among female physiotherapy students. *Ijmhr*. 2015. 1(1). Available from: <http://manuscript.advancejournals.org/uploads/5595a0e5e2a6aec028a69995f0ff03d4ef3b81e55ed197c6888efb0b09102290/Manuscript/350.pdf>
3. Agarwal A. A study of dysmenorrhea during menstruation in adolescent girls. *Ijcm*. (online). 2010 (cited on 21<sup>st</sup> may 2018).35(1).page no 159-164. Available from:- <http://www.ijcm.org.in/article.asp?issn=09700218;year=2010;volume=35;issue=1;spage=159;epage=164;aualast=Agarwal>
4. Aisha Ibrahim *et al.* a review on evaluation, management and pathophysiology of dysmenorrhoea. *Wjpr*. (online). Published in 2016 (cited on 20<sup>th</sup> june 2017). 5(5).page no: 241-259. Available from: [https://www.researchgate.net/publication/305149458\\_A\\_review\\_on\\_evaluation\\_management\\_and\\_pathophysiology\\_of\\_dysmenorrheal\\_World\\_Journal\\_of\\_Pharmaceutical\\_Research\\_Volume\\_5\\_Issue\\_5\\_241-259](https://www.researchgate.net/publication/305149458_A_review_on_evaluation_management_and_pathophysiology_of_dysmenorrheal_World_Journal_of_Pharmaceutical_Research_Volume_5_Issue_5_241-259)
5. Neeru Bhatt *et al.* Ginger: A functional herb. *Researchgate*.(online).January 2013.(cited on 21<sup>st</sup> September 2018). page no: 1-29 Available from: <http://icmr.nic.in/annual/nirrh/200304/Ch%203%20Reproductive%20Tract%20Infection.pdf>
6. Reinhard Grzanna, Lars Lindmark, and Carmelita G. Frondoza. *Jmf*. Ginger an herbal medicinal product of broad anti inflammatory.(online).Published in iuly 2005(cited on 6<sup>th</sup> june 2017).8(2).page no: 125-132.Available from: <https://doi.org/10.1089/jmf.2005.8.125>

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