A study to assess the effectiveness of acupressure on reducing dysmenorrhoea among adolescent girls in a selected college at Indore.

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Abstract: *Dysmenorrhoea is a very common disorder. Dysmenorrhoea affects quality of life and even reduces productivity in general. One of the major physiological changes that take place in adolescent girls is the onset of menarche, which is often associated with problems of irregular menstruation, excessive bleeding, and dysmenorrhea. Of these, dysmenorrhea is one of the common problems experienced by many adolescent girls. Study was conducted in a selected nursing college at Indore. The conceptual frame work used for this study was based on Prescriptive theory by Ernestine Wiedenbach's (1969). Pre experimental one group pre test post test design (O_1 x O_2) was used. Study consisted of 30 adolescent girlss between the age group of 18- 21 years. Convenience sampling technique was used to select the sample. Numerical pain rating scale and self administered rating scale to assess discomforts during dysmenorrhoea were used for data collection. The reliability of the tool (self administered rating scale to assess discomforts during dysmenorrhoea) was tested by split half method using Karl Pearson's correlation coefficient and it was found to be reliable (r = 0.82). The main study was conducted at Index College of nursing, Indore. Data was analysed using descriptive and inferential statistics. The hypotheses were tested at 0.05 levels. The findings of the study revealed that dysmenorrhoea score was high before acupressure and pain score reduced significantly after acupressure. As time increased the effect of acupressure was decreasing. This suggests that acupressure is one of the effective, non pharmacological measures to reduce dysmenorrhoea for 2-3 hours. This study showed that there was a positive correlation between dysmenorrhoea and discomforts and revealed that dysmenorrhoea affects studies and daily activities of the students. No relations between any demographical variables like age, type of family, monthly income, education of the mother, age of menarche, duration of pain, duration of menstrual cycle . Study revealed that mean score of dysmenorrhoea among students before acupressure ($\bar{x}$ = 5.367) was higher than immediately after administration ($\bar{x}$ = 3.533). After 1 hour ($\bar{x}$ = 4.23) and three hours ($\bar{x}$ = 4.53) there was increase in mean score of dysmenorrhoea when compared to the mean score of immediately after acupressure where 't' value was found to be significant (t_{29} = 6.26 p < 0.05). The result showed that there was significant reduction in dysmenorrhoea after acupressure.*

Keywords: *Adolescent girls, dysmenorrhea, acupressure, Menstrual cycle, Abdominal Cramps*

I.   Introduction

Dysmenorrhea, also known as painful periods, or menstrual cramps, is pain during menstruation. Its usual onset occurs around the time that menstruation begins. Symptoms typically last less than three days. The pain is usually in the pelvis or lower abdomen. Other symptoms may include back pain, diarrhea, or nausea. It is more common among those with heavy periods, irregular periods, whose periods started before twelve years of age, or who have a low body weight.[1]

Dysmenorrhea is estimated to affect approximately 25% of women. Reports of dysmenorrhea are greatest among individuals in their late teens and 20s, with reports usually declining with age. It has been stated that there is no significant difference in prevalence or incidence between races.[2]

It is estimated that between 50 and 70 percent of women endure some degree of period pain and cramping. Of those, approximately 10 percent experience contractions so extreme that they are one and a half times more powerful than labour pains. Every month many women suffer from pain around the time of their periods. For some women the pain can be so debilitating that they are forced to take time off work or can only get through their periods by dosing themselves with painkillers[3].

Acupressure is a traditional Chinese manipulative stimulation of acupoints by means of pressure, usually using the hands, fingers or thumbs. Derived from acupuncture, acupressure is a non invasive technique of traditional

Chinese medicine[4]. Thirty to sixty percentages of women suffers from some level of discomfort. It is estimated that 6 billion work hours are lost in this manner every year in the United States which equals a economical loss of nearly $200 million[5].

Statement of the problem
A Study to assess the Effectiveness of acupressure on reducing dysmenorrhoea among adolescent girls in a selected college at Indore.

Objectives of the study
1. To determine the level of dysmenorrhoea among adolescent girls.
2. To determine the effectiveness of acupressure on reducing dysmenorrhoea.
3. To find out the correlation between pre test score of dysmenorrhoea and discomforts during menstruation.
4. To find out the association between dysmenorrhoea and selected variables.

Assumption
1. Dysmenorrhoea is a common problem among adolescent girls between the age group of 18-21 Years, this leads to decrease in the activity level.
2. Dysmenorrhoea decreases the academic performances of adolescent girls.
3. Acupressure is an accepted non pharmacological treatment for dysmenorrhoea.

Hypotheses
H_1:   The mean post test score of dysmenorrhoea will be significantly lower than the mean pre test score at 0.05 level of significance.
H_2:   There will be significant relationship between pre test scores of dysmenorrhoea and selected demographic variables at 0.05 level of significance.

II.   Methodology

An evaluative research approach has been adopted for this study. Pre experimental one group pre test post test design was adopted for this study. Study was conducted in 3 phases. In phase I the tool for study was prepared and validated. In phase II, subjects were assessed for severity of dysmenorrhoea by using numerical pain rating scale and discomforts were assessed by using self administered rating scale to assess discomforts during menstruation. Intervention (acupressure) was initiated for the same group of subjects. Post test was conducted to know the effect of acupressure on reducing dysmenorrhoea by using numerical pain rating scale. Phase III plan for data analysis will be done by using descriptive and inferential statistics. In the study, applying acupressure is the independent variable, whereas dysmenorrhoea is the dependent variable. 30 BSc adolescent girls between the age group of 18-21 years, in a selected college at Indore, who fulfilled the inclusion criteria, were selected. Convenience sampling technique was used for the study. 30 BSc adolescent girls were selected with dysmenorrhoea from all 4 years of BSc nursing. Written consent was obtained from the subjects. On the day of menstruation (during dysmenorrhoea) pre test was conducted and assessed the level of dysmenorrhoea and discomforts by using numerical pain rating scale and self administered rating scale to assess discomforts during menstruation respectively. Following it the acupressure treatment was given for 20 minutes. The acupoint chosen was SP6. Post test was conducted, immediately after acupressure, after 1 hour and 3 hours. Difference in the level of dysmenorrhoea was assessed during post test, by using numerical pain rating scale. Data was analysed by using descriptive and inferential statistics. Significance of difference between the score of subject before and after the administration of acupressure would be analysed by using paired 't' test. Correlation between pre test score of dysmenorrhoea and discomforts during menstruation would be assessed by Karl Pearson correlation coefficient test. Association between the pre test scores of dysmenorrhoea and selected variables like, age, type of family, monthly income, education of the mother, diet, age of menarche, duration of pain and duration of menstrual cycle would be tested using chi-square test.

III.   Results
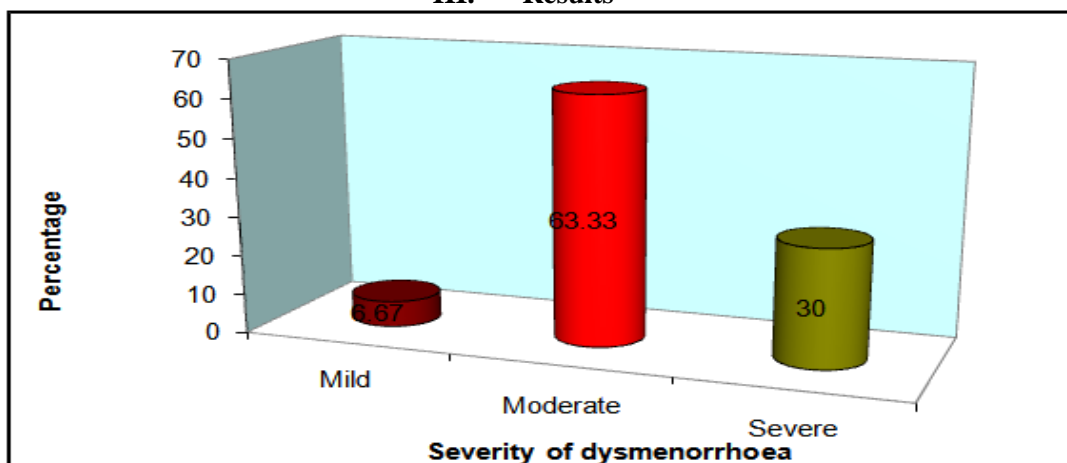
Figure 1: Bar diagram showing distribution of subjects according to severity of dysmenorrhoea

Figure 1 shows that more than half (63.33%) of the subjects had moderate dysmenorrhoea, 30% experienced severe dysmenorrhoea, while 6.67% had mild dysmenorrhoea before administration of acupressure.

Table 1: Comparison of scores of dysmenorrhoea, before and after administration of acupressure

N= 30

	Mean	SD	Mean % Score	Mean difference	't' value
Pre test	5.367	1.829	53.67	1.834	6.26∗
Post test	3.533	1.73	35.33		

't'$_{(29)}$ = 2.045,p< 0.05   ∗Significant at 0.05 level.

The data presented in table 1 shows that mean post test scores (35.33%) is lower than mean pre test scores (53.67%). Dysmenorrhoea scores were reduced after giving acupressure. The paired 't' test (t$_{29}$= 6.26, p< 0.05) shows that there is significant difference between dysmenorrhoea scores before and after acupressure. Hence, null hypothesis is rejected and research hypothesis is accepted. It reveals that acupressure was effective in reducing dysmenorrhoea.

Table 2: Comparison of effect of acupressure, immediately, 1 hour and 3 hours after acupressure with pre test scores of dysmenorrhoea

N= 30

Time	Mean ± SD	Mean difference ($\bar{d}$)	't' value
Pre test score	5.367 ± 1.829	-	-
Immediately after acupressure	3.533 ± 1.599	1.83	6.26∗
1 hour after acupressure	4.23 ± 0.83	0.83	6.15∗
3 hours after acupressure	4.53 ± 1.8	1.17	5.57∗

't'$_{(29)}$ = 2.045,p< 0.05   ∗ Significant

Table 2 depicts that mean score of dysmenorrhoea was high (5.367) before acupressure was given. Immediately after acupressure was given and the score have reduced to 3.533. Dysmenorrhoea score showed high after 1 hour (4.23) and 3 hours (4.53) when compare with immediate dysmenorrhoea score (3.533). The paired 't' test showed that there is significant difference between pain score before and after acupressure *i.e* immediately after and after 1 and 3 hours.

IV.   Nursing Implications

Nursing practice

Nurses when working in the clinical settings may come across many patients with menstrual problems like, dysmenorrhoea, irregular menstrual cycle, menorrhagia, etc. If the nurse has knowledge regarding acupressure she can teach this to the patients so that they will get knowledge on non invasive, non

pharmacological, treatment without side effects. It does not require additional equipment, articles, place or extra precautions. It also helps in building up nurse patient relationship. Findings of the study also add knowledge in the field of nursing regarding the effect of non-pharmacologic interventions. Nurses with the knowledge and skills of acupressure help to improve the practices of treatment in areas like dysmenorrhoea, irregular menstrual cycle and menorrhagia.

Nursing education

Dysmenorrhoea is one of the major causes for absenteeism. Dysmenorrhoea reduces academic performances. Acupressure is one of the simple and non-pharmacological measures to relieve pain. Acupressure can be a self treatment. It can be used anywhere at any time. Even while in a class room if a student undergoes dysmenorrhoea acupressure can be used to reduce pain. Now a day's people are giving more importance to non pharmacological measures in reducing pain. Hence, it is appropriate to give emphasis on non pharmacological measure in nursing curriculum and nursing education. The knowledge and learning experience of students on acupressure will help in adopting these non-pharmacological measures in reducing pain in different disease conditions.

Nursing administration

As an administrator she can arrange in-service education programmes for students and staff nurses regarding non pharmacological treatment for dysmenorrhoea. She can encourage all the staffs to undergo training on acupressure and encourage them to use acupressure as one of the management for dysmenorrhoea whenever they come across patient with dysmenorrhoea in hospitals, communities and other settings. This information could be disseminated through media, like news paper, television, radio, internet etc. she can also provide administrative support for conducting such activities.

Nursing research

Dysmenorrhoea is the most common gynaecological disorder among adolescents. So, it is necessary to conduct research in non pharmacological measures for dysmenorrhoea. This study can be conducted in other geographical areas and among larger samples. Despite renewed interest in the use of acupressure, relatively few studies have been undertaken to examine its effects on primary dysmenorrhoea. Such research may be useful in reducing absenteeism and it may improve the academic performances of the students with dysmenorrhoea.

V. Conclusion

The findings of the study revealed that dysmenorrhoea score was high before acupressure and pain score reduced significantly after acupressure. As time increased the effect of acupressure was decreasing. This suggests that acupressure is one of the effective, non pharmacological measures to reduce dysmenorrhoea for 2-3 hours. Most of the subjects suffer from moderate to severe dysmenorrhoea and discomforts during menstruation. Acupressure is an effective, simple, non-pharmacological measure to reduce dysmenorrhoea. There is a correlation between dysmenorrhoea and discomforts during menstruation. Dysmenorrhoea affects the regular classes, studies and daily activities of the subjects.

References:

[1]. Osayande, AS; Mehulic, S (1 March 2014). "Diagnosis and initial management of dysmenorrhea". American Family Physician. 89 (5): 341–6.
[2]. eMedicine > Dysmenorrhea Archived 2011-02-22 at the Wayback Machine. By Andre Holder, Laurel D Edmundson and Mert Erogul. Updated: Dec 31, 2009
[3]. Proctor M. Diagnosis and management of dysmenorrhoea. BMJ 2006; 332: 1134-1138.
[4]. Gentz BA. Alternative therapies for the management of pain in labour and delivery. Clinical Obstetrics and Gynaecology 2001; 44: 704-732.
[5]. Taylor D, Maiaskowski C, Kohn J. A Randomized clinical trial of the effectiveness of an acupressure devise (relief brief) for managing symptom of dysmenorrhoea. J Altern complement Med 2002; 8:143-54.