Evaluating The Effect Of Physical Exercise Therapy On The Mental Stress Of Dysmenorrhea Patients

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Abstract
Dysmenorrhea is common menstrual cramps that are recurrent and are not due to other diseases. Young girls who suffer from this problem generally take some medicines to get some relief. The present study was aimed to find the effect of physical exercises on stress among students with dysmenorrhea. 20 students were selected as sample for this study. The entire treatment process was scheduled for three months - 4 days a week. For measuring the stress of the patients, the scholars used a standard questionnaire - Perceived Stress Scale. Analysis of the results revealed that performing exercise significantly reduced the stress of dysmenorrhea ($P < 0.01$). So, it can be concluded from this study that if dysmenorrhea patients regularly practice some physical exercise they can get rid of mental stress during painful menstruation.

Keywords: Physical exercise; Dysmenorrhea; Mental Stress.

Introduction
Menarche, the onset of menstruation is a hallmark of female pubertal development. The onset of menarche 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. [1] There are several discomforts such as backache, constipation, abdominal cramps, nausea and vomiting that may be associated during menstruation. Dysmenorrhea is chronic, cyclical pelvic pain associated with menstruation. Typically, it is characterized by cramping lower abdominal pain occurring just before and/ or during menstruation, usually starting soon after menarche once regular ovulation is established. Yet despite this substantial effect on their quality of life and general wellbeing, few women with dysmenorrhea seek treatment, as they believe it will not help. [2] Dysmenorrhea is associated with restriction of activity and absence from school or work. [3] The notion that exercise is effective in preventing and treating symptoms has prevailed for many years and led to the promotion of anecdotal belief that exercise is beneficial. Behavioural interventions such as exercise may not only reduce dysmenorrhoea, but also eliminate or reduce the need for
medication to control menstrual cramps and other associated symptoms. The data show that stress and emotional disorders are related to menstrual disorders. Almost all women who have been exposed to hazards for a long time have experienced menstrual disorders. Sometimes, minor changes in living style such as changing the job, family conflicts and financial troubles result in menstrual disorders. There are variable individual differences in understanding these stresses and how to face them and the level of vulnerability against these stresses among women, which result in these disorders. [4,5] Worldwide, there are several processes which may help to reduce the pain during Dysmenorrhea. Pharmacological and non-pharmacological processes are used as management of Dysmenorrhea. Looking to the side effects of various pharmacological treatments the patients of dysmenorrhea hunt for alternative way of healing and as suggested by various philosophers/authors/practitioners, exercise is a way to get relief from dysmenorrhea. Physical activity has a positive impact on the most of primary dysmenorrhea symptoms. Females who regularly do any sort of physical activity can get rid of dysmenorrhea in general and primary dysmenorrhea in specific (6). Stretching exercise has been found to reduce menstrual discomfort through increase in vasodilatation, and decrease in ischemia; release of endogenous opiates, specially beta endorphins and suppression of prostaglandins and shutting of blood flow from viscera resulting in less pelvic congestion. (7). Exercise increases overall health and your sense of well-being, which puts more pep in your step every day. But exercise also has some direct stress-busting benefits. It pumps up your endorphins. Physical activity may help bump up the production of your brain's feel-good neurotransmitters, called endorphins. Although this function is often referred to as a runner's high, any aerobic activity, such as a rousing game of tennis or a nature hike, can contribute to this same feeling. It reduces negative effects of stress. Exercise can provide stress relief for your body while imitating effects of stress, such as the flight or fight response, and helping your body and its systems practice working together through those effects. This can also lead to positive effects in your body—including your cardiovascular, digestive and immune systems—by helping protect your body from harmful effects of stress. (8) Physical exercise has been suggested as a non-medical approach for the management of stress of dysmenorrhea patients.

**Materials and Methods**

The purpose of this study was to find out the effect of exercise on stress of dysmenorrhea patients. To fulfil the objective the scholar selected the subjects from Vidyasagar University. For selection of the subjects the scholar used a self-prepared questionnaire with some inclusive criteria like menstrual history, marital status etc. Out of 298 students total 105 students fulfilled the inclusive criteria who acted as population. Based on their menstrual history and basic data obtained from the questionnaire the scholar selected 20 students following random sampling technique who ultimately acted as the subjects for the study. The selected subjects age ranged between 18-23 years. The entire treatment process was scheduled for three months - 4 days in a week. The following physical exercises were - Standing Forward Bending, Sumo Squat, Side Lunges, Standing Crossover Toe Touches, Glute Lifts, Thigh Dancing, The Rockette, Toe Taps Exercise, Squat Thrust with Medicine Ball etc. The exercises were selected following exhaustive pilot study. All the subjects were given proper orientation about the exercises and
during training the load of exercises was gradually increased. For measuring the stress of the patients, the scholar used a standard questionnaire Perceived Stress Scale (9). Stress was assessed two times that was before the initiation of treatment and after the 3 months of the treatment process. For analysing the data, the scholar used Wilcoxon Signed Ranks Test.

**Result and Discussion**

**Table No. 1**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>SD</th>
<th>Median</th>
<th>Z</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exercise Pre</td>
<td>35.75</td>
<td>1.55</td>
<td>35.50</td>
<td>3.95*</td>
<td>0.01</td>
</tr>
<tr>
<td>Exercise Post</td>
<td>22.35</td>
<td>2.06</td>
<td>23.00</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

It is observed from table - 1 that the mean stress score before the onset of physical exercise treatment was 35.75 with ±1.55 standard deviation, whereas after getting exercise treatment for three month (post treatment) the mean stress score was 22.35 with ±2.06 standard deviation. It is further revealed from the above table that significant difference was found between the stress score of pre-exercise treatment and post treatment as the Z- score was found 3.95 with respect to P 0.01.

**Graph No. 1**

**Graphical Representation of Effect of Exercise Modulation on Stress**

**Discussion and Conclusions**

Exercise can provide stress relief for the body while imitating effects of stress, such as the flight or fight response, and helping the body and its systems practice working together through those effects. Studies have proved that physical exercises help in reducing the pain of the dysmenorrhea patients by activating home hormones. There are several studies that have shown
considerable correlation between tensional stress in life and premenstrual symptoms (10). That means the main cause stress of the young women is the dysmenorrhoeal pain and other discomforts related to the disease. The role of exercise therapy as a tool for reducing stress and biochemical changes in the immune system (11). Stress is actually the interesting link which maintains the relationship between exercise and dysmenorrhea. A number of studies have showed a correlation between life stress and gynaecological issues with premenstrual syndrome (10). It is concluded from the study that exercise helps in reducing the stress of the dysmenorrhea patients and as the stress is reduced the problems related of this physiological phenomenon also diminishes.

REFERENCE

8. https://www.mayoclinic.org › in-depth › art-20044469