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Effect of yogic practice treatment module on dysmenorrhea: An empirical study

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Abstract

Dysmenorrhea is the most common complains of pelvic pain and gynecological problem of female. The purpose of this study was to investigate the effect of yogic practice on dysmenorrhea. For this study 20 female students were selected as sample. The researcher tried to assess dysmenorrheal patients by giving them yoga manipulation. The entire treatment process was scheduled for three month - 4 days in a week. Yogic practice program included 40-45 minutes asanas and pranayama specified for pelvic region. For measuring the pain of the patients, the scholar used McGill pain questionnaire (Ronald Melzac, 1983). Analysis of the results revealed that performing yogasana and pranayama significantly reduced the pain of dysmenorrheal ($P < 0.01$). So it can be concluded from this study that if dysmenorrheal patients regularly practice yogic practices at home which are actually easier to perform then they can surely get benefit.

Keywords: Yogic practice, dysmenorrhea

Introduction

Menstruation is a biological phenomenon. It starts when a girl attains puberty and continues till a lady attains menopause. Menstruation cycle is the female reproductive cycle. This refers to the rhythmic changes that occur in the reproductive organs- the influence of hormones of the endocrine system. Normal and abnormal menstruation can be very complex and distressing for adolescent girls. The girl may become distressed at seeing blood and she does not understand why she is bleeding. There may be difficulties with hygiene, especially whether the periods are heavy, necessitating regular changes in sanitary protection. This may disturb the menstruating girls mentally as well as physically and this may further disturb their parents. Sometimes this issue may hamper their career also. Menstrual cycles can be irregular and periods can be painful (Dysmenorrhea) or heavy (menorrhagia). Dysmenorrhea can be classified into two subtypes. The pathogenesis of primary dysmenorrhea is commonly explained by "an abnormal increase in vasoactive prostaglandins originating in secretory endometrium and menstrual fluid, which may induce myometrial hyperactivity and uterine tissue ischemia and pain" [1, 2]. In addition, various psychological problems have also been proposed [1, 2]. Secondary dysmenorrhea can occur many years after menarche and is associated with identifiable pelvic pathology such as endometriosis [1, 2]. Dysmenorrhea is usually treated with drugs such as oral contraceptive pills or non-steroid anti-inflammatory drugs [4, 12]. These drugs have some side effect. 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 and yoga asana is a way to get relief from dysmenorrhea. Yoga therapy on the other hand is found to be a highly effective intervention in reducing the occurrence of dysmenorrhea. Moreover, the intensity of pain during dysmenorrhea, and the dysmenorrhea and stress scores are remarkably affected by yoga intervention. (Anice George 1998).

A growing body of evidence supports the belief that yoga benefits physical and mental health via down-regulation of the hypothalamic-pituitary- adrenal axis and the sympathetic nervous system. Yoga may be a safe and cost-effective intervention for managing menstrual problems. Yoga plays an important role in reducing stress and sympathetic activity, increasing parasympathetic activity, improving one's quality of life, and decreasing psychological

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symptom levels. As stated, there is evidence for the benefit of yoga in reducing pain and symptoms of dysmenorrhea. However, the quality of the evidence needs to be examined to establish whether or not we can advocate yoga as an alternative and complementary therapy for women (3) with painful periods. Therefore, the aim of this study is to assess the evidence for the effectiveness of yoga therapy in the management of menstrual pain and the symptoms associated with dysmenorrhea.

Materials and Methods

The present study was done to know the effect of yogic practice on dysmenorrhea. For the selection of the subjects the scholars used a self-made questionnaire which included some demographic characteristics regarding age, B.M.I., menstrual characteristics including types and number of medicines consumed, length of menstruation pain, volume and rate of bleeding during menstruation etc. On the basis of some inclusive criteria the scholars selected the population of 105 patients suffering from dysmenorrhea and from amongst the population 20 subjects were selected randomly. The selected subjects age ranged between 18-23 years studying at Panskura Banamali College (Autonomous), Purba Medinipur, West Bengal.

The main purpose of the study was to provide relief from pain to the dysmenorrheal patients and for that the researchers tried to assess dysmenorrheal patients by giving them yoga manipulation. The entire treatment process was scheduled for three month - 4 days in a week. Yogic practice program included 40-45 minutes asanas and pranayama specified for pelvic region. For measuring the pain of the patients, the scholar used McGill pain questionnaire (Ronald Melzac, 1983). Pain analyses of the dysmenorrheal patients were assessed three times that was - primary data - data collection before the treatment; intermediate data - data collected after five weeks of treatment and final data - data collected after three months of the treatment. The intermediate was collected with an intension to check the improvement in the patients due to treatment.

For analyzing the data which were mainly in ordinal scale so the scholars had to apply non-parametric statistics and that is why descriptive statistics and Wilcoxon Signed Ranks Test were considered most suitable statistical tool for this study.

Results and Discussion

The result of the study is presented using tables and graphs.

Table 1: Wilcoxon Signed Ranks Test of Pain between the pre and post result of Yoga group

| Variables | Mean | SD | Z | P |
|-----------|-------|------|--------|------|
| Yoga Pre | 76.25 | 1.29 | 3.94** | 0.01 |
| Yoga Post | 59.30 | 3.42 | | |

It is observed from above table that the mean pain score of the group before the yoga treatment was 76.25 with ± 1.29 standard deviation whereas after getting yoga treatment for three month (post treatment) the mean pain score was 59.30 with ±3.42standard deviation. It is further revealed from the above table that significant difference was found between the pain score of pre yoga treatment and post treatment as the Z-score was found 3.94 with respect to P 0.01.

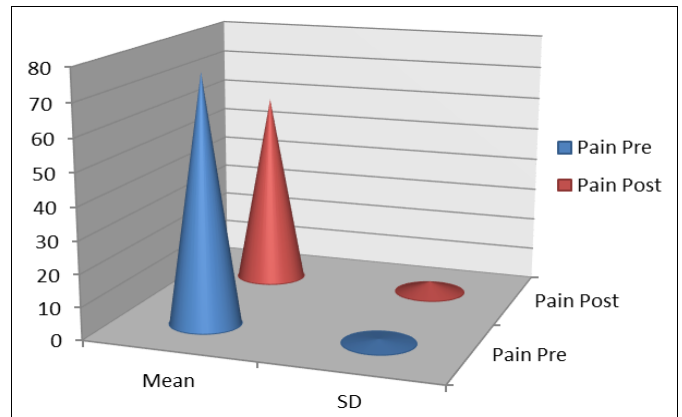


Fig 1: Graphical representation of pain result of Yoga group

Table 2: Wilcoxon Signed Ranks Test of Pain Intensity between the pre and post result of Yoga group

| Variables | Mean | SD | Z | P |
|-----------|------|------|--------|------|
| YogaPre | 4.95 | 0.22 | 3.99** | 0.01 |
| Yoga Post | 2.25 | 0.79 | | |

It is observed from table - 2 that the mean pain intensity score of the group without yoga treatment was 4.95 with ± 0.22standard deviation whereas after getting yoga treatment for three month (post treatment) the mean pain intensity score was 2.25 with ± 0.79 standard deviation. It is further revealed from the above table that significant difference was found between the pain intensity score of pre yoga treatment and post treatment as the Z- score was found 3.99 with respect to P 0.01.

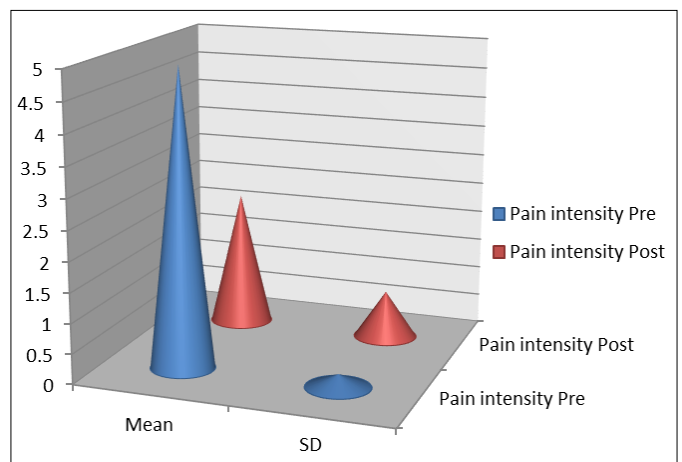


Fig 2: Graphical representation of pain intensity result of Yoga group

Discussion and Conclusions

The purpose of the study was to formulate some specific yogic practice intervention and further to find out the effect of those prescribed intervention on the pain of primary dysmenorrhea. After analyzing the data observed through Mc Gill pain questionnaire. It was found that yogic practice intervention plays significant role in reducing dysmenorrhea pain

According to the mechanism which an abnormal increasing vasoactive prostanoids in the endometrium and menstrual fluid may induce myometrial hyper activity and tissue

ischemia subsequently (4, 5, 6, 7, 8), yoga intervention improves blood flow at the pelvic level as well as stimulating the release of B endorphin acting as nonspecific analgesics (5).

In addition to this some yogic experts as well as researcher in their study have reported that yoga poses improve spinal flexibility and strengthen muscle in the back and pranayama which helps in purifying the body causing mental relaxation and psychic sleep which might induce deep relaxation and subsequently decrease oxygen consumption causing pain relief, the finding is corroborated with the studies of (7, 9, 10, 11).

The findings of this study support research findings demonstrated that relaxation training is an effective treatment for spasmodic dysmenorrheal or producing improvement in general measures of dysmenorrheal (Sigmon S.T., Nelson, R.O., 1988). Apart from this in this study the scholar also found that the selected subjects reported decrease rate of drop out from their daily routine as well as many of them also reported that after getting the yoga treatment they had proper flow of blood during the menstrual cycle. The reason of decrease rate of drop out would be due to the stress relief because of yogic intervention.

So it can be concluded from this study that if dysmenorrheal patients regularly practice yogic practices at home which are actually easier to perform then they can surely get benefit.

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