



# Effects Of Practising Supta Baddha Konasana And Supta Virasana In Individuals With Primary Dysmenorrhea

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## **Abstract:**

**Background:** Primary dysmenorrhea is a widespread gynecological issue in adolescent and young females, and it is described as painful menstruation that does not have a diagnosis of any pathology in the pelvis. The traditional medications like non-steroidal anti-inflammatory drugs (NSAIDS) offer short-term relief and could lead to side effects. The use of Yogic interventions is natural and therefore cost-effective and has become a topic of interest as holistic management. The Supta Baddha Konasana and Supta Virasana are some of the restorative poses known to help relieve menstrual pain by enhancing the flow of blood into the pelvis and decreasing the spasms of the uterus.

**Aim:** To assess the efficacy of Supta Baddha Konasana and Supta Virasana in lowering the level of pain in people with primary dysmenorrhea.

**Methods:** Experimental research was done with 30 women between the age of 18 to 25 years in the city of Pune, 15 women in a yoga group and the remaining 15 in controls. They were participants who had regular menstrual cycles and no pelvic pathological history. The yoga students practised Supta Baddha Konasana and Supta Virasana twice a day in two months and the control group continued their normal lifestyle. The WaLIDD was used to measure pain pre-intervention and post-intervention. They were statistically analyzed with the Wilcoxon Signed Rank Test and MannWhitney U test with the significance level being  $p < 0.05$ .

**Results:** Mean WaLIDD score in yoga group reduced significantly (6.73 -0.79) to 4.66 -0.81 ( $p = 0.0001$ ). The control group did not show any significant change (6.73 (1.22) to 6.53 (1.30);  $p = 0.083$ ). The comparison of groups revealed that the difference in means of reduction of the scores was statistically significant ( $p = 0.0001$ ).

**Recommendation:** Supta Baddha Konasana and Supta Virasana are an effective practice that helps reduce menstrual pain and enhance the quality of life in patients with primary dysmenorrhea. It is possible to recommend yoga as a safe, available, and sustainable treatment option to menstrual health issues.

**Index Terms** - Primary dysmenorrhea, Supta Baddha Konasana, Supta Virasana, WaLIDD score, Yoga therapy, Physiotherapy intervention.

## I. INTRODUCTION

Dysmenorrhea or menstrual pain refers to pain or cramps in the lower abdomen that occurs during the menstrual period in some women which is mainly at the age of 18-25 years and ceases at about the age of 40. Menstrual cycle in the age group of 19-40 occurs after 28 days. The initial cycle will be the follicular cycle and in the second half is referred to as the luteal cycle. The progesterone secretion during the luteal phase is high and in case of no fertilization (3 days before the onset of the menstrual bleeding) it results in low level of progesterone secretion. The decrease in the level of progesterone may lead to the discharge of acid phosphatase and lytic enzymes that are located in lysosomes into the cytoplasm. The enzymes break down endometrium cells releasing the prostaglandins. Dysmenorrhea or pain or cramp occurrence because of the increased concentration of the prostaglandin in the endometrium. Thus, it leads to muscle contractions in the myometrium, blood vessels constriction, and endometrial disintegration. It is a condition that may cause moderate to severe pain/cramp in the lower abdominal area which is referred to as dysmenorrhea. The presence of excessive uterine contractions can lead to hypoxia and uterine and ischemia as well as result in normal pain in the endometrium.<sup>1</sup>

Dysmenorrhea is classified in 2 groups. Primary dysmenorrhea is considered to be pain that is not related to any apparent pathological pelvic infections or menstrual cycle disorders, and the gynecological anatomy of the pelvic girdle is normal; Secondary dysmenorrhea is defined as the pain, which is related to gynecological pathology; usually, it occurs several years after the menarche and is more common in women over the age of 20 years. Dysmenorrhea was said to occur in more than 80% of women in their fertility age. Primary dysmenorrhea is extremely common in adolescents compared to older females because it can improve with age. Dysmenorrhea is less prevalent in married women (43) than in unmarried women (57).<sup>2</sup> Primary dysmenorrhea always happens in the young women whose ovulatory cycles but mostly in a year after menarche. The pain traditionally precedes or accompanies menstruation and continues all the way into the first and the second day; it is usually characterized as intermittent low abdomen or pelvic pain with a background of a steady dull pain that can extend to the back and along the thighs.

Among adolescents, primary dysmenorrhea is the most frequent gynecologic complaint.<sup>3</sup> Dysmenorrhea can cause numerous severe morbidities of the female reproductive tract including endometriosis, chocolate cyst, tubal blockage, depressive disorders that can result in poor-quality and reproductive success of women with untreated dysmenorrhea.

Pharmacological modalities that could be used in the management of Dysmenorrhea include natural contraceptive drugs and progestins which are non-steroidal anti-inflammatory drugs. These modalities are said to be of limited value and bring long term relief in this cycle pain.

Moreover, they have an extensive list of side effects. An increasing amount of evidence suggests that Yogic interventions are useful in the treatment of menstrual distress and disability and are considered cost effective, non-pharmacological and self care method to treat the dysmenorrhea without any unwanted side effects of the medications.<sup>4</sup>

Yoga is a healthy way of life. It is a combination of mind and body and soul. It is the greatest drugless system of treatment. Yogic asanas influences the vital organs of the body as well as controls the endocrine system in human. Which contributes to the reduction of pain. It has been established that yoga practice helps to overcome menstrual issues among adolescent children. Yoga has become a focus of attention as a possible alternative treatment of common condition related to woman health and menstrual issues such as dysmenorrhea.<sup>5</sup> Yoga is seen as one of the most ideal holistic stress management methods as it results in a sequence of bodily modifications that help reduce the stress and pain reaction. Yoga also reduces the concentration of prostaglandin production and myometrial ischemia to suppress the pain in case of dysmenorrhea.<sup>6</sup>

According to the book, "Yoga: A Gem for Women" by Geeta Iyengar, the need of yoga practice to the health of women, even at the menstrual period. She recommends at the time whether there is any abdominal pain, plenteous discharge, cramp or dysmenorrhea, practice Supta Baddha Konasana and Supta Virasana. Supta baddha Konasana relieves pain during menstruation, spasms and burning of the uterine organs. It tones the urinary system. The abdomen, the back and the waist are stretched by Supta Virasana.

### 1.1 Need for Study

It is a common phenomenon in the current fast paced society since women in such programs tend to ignore their health as they handle various aspects of life. Yoga is natural and free thus providing a viable alternative to drugs. This research seeks to determine the effectiveness of natural, low cost and available yoga in treating primary dysmenorrhea, as a way of enhancing the holism in the treatment of a woman.

## 1.2 METHODOLOGY AND MATERIAL

In this Experimental study the target population were adolescent and young women aged between 18-25 years old. The sample size was 30 female participants distributed into 2 groups (15 women in yoga group while the other 15 in control group). Inclusion criteria for the study were women aged 18-25 years old with regular menstrual cycle and without any underlying pelvic pathology (e.g. Endometriosis, fibroids etc.). Women on hormonal treatments or undergoing any other treatments for primary dysmenorrhea and those with prior experience in yoga were excluded from this study

Materials used were Consent form along with detailed demographic data and visual images of the asanas were given to each participant. Outcome measure used for this study was WaLLID Score.

## 1.3 Procedure

The individuals were briefly informed about the study and each of them gave a consent. The participants used in this study were selected based on inclusion and exclusion criteria. The participants of this study were supplied with information and visual guide of yoga asanas. Each of them was shown the yoga asanas. The sample size used in the study was 30 people in total and was divided into 2 groups which included 15 in yoga group (Y) and control group (C) of 15 people respectively. The interventional group participants were requested to practice the two asanas on a daily basis at least two times per day whereas the members of the control group continued their routine activity. WaLIDD score was used to record data of their menstrual pain of both the groups i.e intervention group and control group before and after the study. The members of the two groups were followed up 2 months after the intervention.

## 1.4 Result and Data Analysis

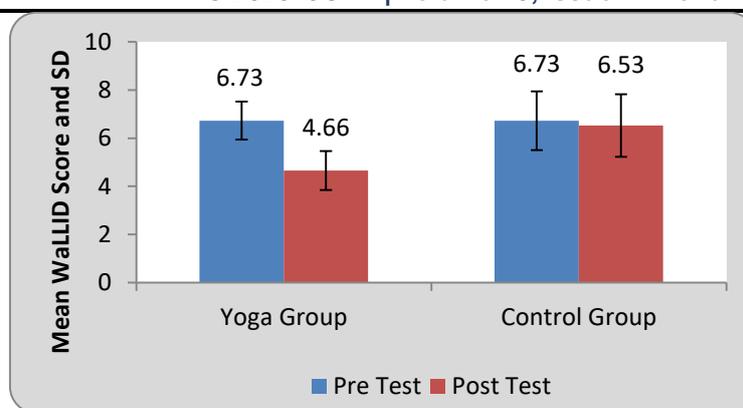
**Table 1** : Comparison of WaLLID score in two groups at pre and post test (Wilcoxon Signed Rank Test)

Group	Pre Test	Post Test	Mean Difference	z-value
Yoga Group	6.73±0.79	4.66±0.81	2.06±0.25	3.77 P=0.0001,S
Control Group	6.73±1.22	6.53±1.30	0.20±0.41	1.73 P=0.083,NS

Mean WaLLID score in yoga group at pre test was 6.73±0.79 and at post test it was 4.66±0.81. By using Wilcoxon Signed Rank Test statistically significant difference was found in WaLLID score at pre and post test (z=3.77,p=0.0001).

Mean WaLLID score in control group at pre test was 6.73±1.22 and at post test it was 6.53±1.30. By using Wilcoxon Signed Rank Test statistically no significant difference was found in WaLLID score at pre and post test (z=1.73,p=0.083).

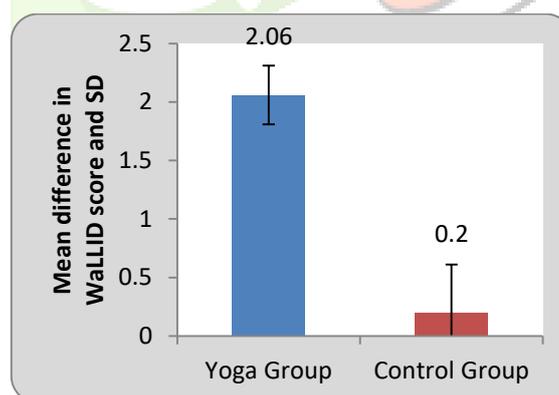
Wilcoxon Signed Rank Test)



**Table 2:** Comparison of mean difference in WaLLID score in two groups at pre and post test (Mann Whitney U Test)

Group	N	Mean	Std. Deviation	Std. Error Mean	z-value
Yoga Group	15	2.06	0.25	0.06	14.81 P=0.0001,S
Control Group	15	0.20	0.41	0.10	

Mean difference in WaLLID score at pre and post test in yoga group was  $2.06 \pm 0.25$  and in control group it was  $0.20 \pm 0.41$ . By using Mann Whitney U test statistically significant difference was found in WaLLID score in two groups ( $z=14.81, p=0.0001$ ).



## 1.5. Discussion

Primary dysmenorrhea is a significant problem of adolescents and young women, which usually interferes with everyday activities, psychological well-being, and life quality. Although pharmacological therapies are widely employed, they cause side effects and short-time effectiveness, thus making the use of non-pharmacological options even more significant. The impact of Supta Baddha Konasana and Supta Virasana was studied in the present study to determine the possibility of yoga as a self-management tool in relieving menstrual pain. The findings showed that the severity of pain among the participants who practiced these asanas was reduced significantly when they practiced them on a regular basis, which points to the therapeutic value of yoga when used to manage dysmenorrhea

In her book titled *Yoga: a Gem for Women*, Geeta Iyengar stresses the need of yoga in the health of women even during menstruation. She recommends at the time whether or not one has pain in the abdomen, excessive discharge, cramp or dysmenorrhea, practice Supta Baddha Konasana and Supta Virasana. Supta Baddha Konasana relieves pain, spasms and burning pains of the uterine organs during menstruation. It tones the urinary system. The abdomen, back and waist are all stretched by Supta Virasana.

Those who were chosen were 30 participants and they were classified into 2 groups i.e yoga group and control group. Those who were in the intervention group also said that there was a significant increase in the WaLIDD scores and general comfort during menstruation. The decrease in the severity of pains, decreased cramp duration and the enhanced daily activity depict physiological and psychological value of yoga. These restorative poses loosen the pelvic muscles, increase the blood to the uterus and decrease uterine spasms by slowing down the sympathetic nervous activity. Moreover, the incorporation of breathing exercises probably also had its part with contributing to mental calmness, which is also significant in pain perception and pain tolerance.

This study findings coincide with earlier studies by Gupta (2021) and Anushree et al. (2023), which depicted that yogic practices enhance blood flow in the pelvis, decrease muscle tension, and alter the autonomic nervous system, which results in fewer uterine contractions and reduced pain. Such restorative practices as Supta Baddha Konasana and Supta Virasana facilitate relaxation, openness of the pelvic area and decrease sympathetic overactivity, which decreases the level of prostaglandins that cause menstrual cramps. In addition, the relaxing nature of yoga on the mind can minimize emotional stress, which is a known cause of worsening menstrual symptoms.

Contrary to NSAIDs and hormonal medications, yoga is non-invasive, inexpensive and devoid of any side effects. It gives women the power to cope with pain on their own and encourages the comprehensive health. It can also be used regularly to avoid psychological symptoms such as irritability, fatigue, and anxiety that are present with menstrual pain.

## 1.6 Conclusion

This research is in favour of Supta Baddha Konasana and Supta virasana to relieve pain and enhance quality of life in patients with primary dysmenorrhea. Yoga may be prescribed as a non-hazardous, available and sustainable treatment of menstrual well-being. By incorporating yoga in everyday life, young women will have an opportunity to be more physically comfortable during their menstrual period.

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