

Part 1: Women's Yoga Sadhana and Menstrual Cycle.

Part 2: Immediate Effects of Yogic Pelvic Floor Muscle Exercises on Vaginal Squeezing Pressure and State Anxiety on Healthy Women – a Control Study

By

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Abstract

Part 1: Women's Yoga Sadhana and Menstrual Cycle

The very first female Yoga sādḥaka was none other

than *Pārvatī*, *Śrī Ādinātha's* (Śiva) wife, and in the later history of yoga we see numerous female practitioners. Womanhood is enriched with beautiful, mysterious opportunities to experience wholeness like pregnancy, delivery, motherhood and last but not the least, the menstrual cycle. The menstrual cycle is a complex biological and hormonal process which has direct connection with one's physical, mental and social well-being, and still there are numerous unknown factors about it for scientists, doctors and anthropologists. Every phase of womanhood is a microcosmic phenomenon which has hidden dimensions. The monthly period has various symbols like the character, structure, movement, influence etc. of the ever changeable Feminine Entity, Prakṛtī, or Mother Nature. Lots of restriction and rules have been created by men in India (and all over the world) to monopolize the spiritual yoga path (as well as other spiritual practices) for males only during the last 2500 years. This situation has prevailed ever since; however, the emphasis on male dominance varies in terms of regions and ages. Numerous rules, rites and rituals have come into existence related to menstruation since the age of Smṛtis, and many of them still exist (most of these ideas are neither indicated nor supported by the Vedas). Some of them are naive or superstitious, but some others have obvious logical reason for application (political, historical, psychological and hygienic). Therefore, we should examine and understand why they occurred and what the relevance of them is now. Why did the Hindu society start to regard women as extremely impure and temporarily untouchable in the first place? The question is that whether a female has rights to pursue spiritual

practices regardless of her cycle? Luckily, from the modern yogic point of view the menstrual cycle can be considered as a great chance to practise introspection, perform spiritual Sādhanā (like Dhyāna, Dhāraṇā, Meditation, Japa, etc.) to attain *mokśa*, the ultimate spiritual freedom. This “revolutionary” concept is supported by Swami Vivekānanda, Swami Sivānanda, Swami Satyānanda and others, and indicated by the practical way of life of Mā Śāradā Devi or The Mother of Pondicherry etc.

Obviously, there are some practical restrictions, advices in tune with women’s nature and its physiological, psychological changes during the period, but there is no reason to quit spiritual practice completely during menstruation. Last but not the least; Haṭha Yoga is getting more and more popular among women all around the world. However, many of them think that they cannot practise āsanās because of their monthly physical stiffness, weakness, pains or other discomfort. In reality, those with these kinds of mental or physical problems, are benefited by proper yoga practice (e.g. āsana, prāṇāyāma, bandha, relaxation) because Yoga also has various therapeutic aspects in this modern era (as a complementary therapeutic method) for those who have various menstruation-related problems (e.g. dysmenorrhoea, PMS, irregularities etc.). By improving inner awareness and consciousness, yogic practice helps women to understand how their bodies work and gives efficient help to overcome difficulties, to be healthy and to live a more complete life. Having a little glimpse into the ancient philosophical background, we can get some knowledge about the origins of the presently existing rules, rituals and restrictions on menstruation. An objective overview can help to verify the irrelevant customs and superstitions; and it can encourage women to practise various yoga sādhanās to overcome discomfort, get rid of stress and release physical or mental tension during the period. Several varieties of practices are given by some contemporary schools like SVYASA, Iyeṅgār method by Gītā Iyengār, and Swāmi Satyānanda (Bihar Yoga Bhāratī).

Summary

Summary of ancient and modern views

The menstrual cycle is an important and concomitant part of the life of a woman. This physiological phenomenon has been observed and recorded in various Indian scriptures (“Varuṇa’s curse”) and these gave birth to the existing

rules, regulations and customs. These restrictions and mostly negative attitudes strongly influenced and determined the spiritual rights of women (Manu Smṛti) and it left obvious imprints on the recommended and prohibited spiritual activities ('how and what to practise') during menses. The origins of the existing customs have been forgotten and often have been misinterpreted. [8]. Therefore, we need to verify the validity of these customs, which should be based on the innate nature of the woman's body' dynamism, constant changes and regenerating ability, and which is based on only unnecessary, old-fashioned social conventions, stigma, and superstitions. Fortunately, numerous female spiritual seekers have been brought up in India and have thrown light on the positive aspects of the menstrual cycle. Yogic traditions have also been influenced by their experiences and teachings and slowly they have started to introduce the significance and advantages of this phase in women's life in spirituality. Haṭha Yoga tradition has established different methods and programs to treat various menstrual disorders. By relieving women of the various discomforts and symptoms associated with menstruation, these practices help to improve their physical and mental health, thereby helping them to bring harmony, peace, and contentedness to their special cyclic period. This also helps them to progress in the path of spirituality because the physical purification leads to purification of the soul. The results of the sādhanā performed by women are independent from social rules or superstitions. It is only depend upon the determination and devotion of the sādhanika. Women must find her place; fulfil her through no other external agency. She is the handmaiden of the Great Goddess, the Divine mother. Because of the goddess, life renews itself. (S. Sivananda Radha) [57]

Part 2: Immediate Effects of Yogic Pelvic Floor Muscle Exercises on Vaginal Squeezing Pressure and State Anxiety on Healthy Women – a Control Study

Background: Pelvic floor muscle exercises became a well-known, popular, non-invasive, non-surgical method applied in the last 50 years in urology, gynaecology and andrology to treat various problems from stress incontinence to pelvic organ prolapses. The practice dates officially from 1948 when it was “re-introduced” by Dr. Arnold Kegel. Yoga has similar techniques, which use the manipulation of the muscles at the pelvic region, namely: “Mūla Bandha” (perineal lock), Aśvini Mudrā (horse gesture), Vajroli Mudrā (thunderbolt attitude for males) or Sahajoli Mudrā (attitude of the spontaneous arousing for females); which are recommended for its yogic benefits of calming down the mind and harmonizing and gain mastery over the physiological functions of the

body. Although, the main purpose of them in the path of Classical Yoga was purely spiritual, nowadays it is becoming a therapeutic tool in the field of Yoga Therapy to treat various diseases of the pelvic organs related to psyche and stress.

Aims of the study: This self-control study was designed to evaluate the immediate effects of Yogic Pelvic Floor Muscle Exercises (YPFME) in healthy women compared to Kegel types of Pelvic Floor Muscle Exercises (KPFME).

Hypothesis: Yogic pelvic floor muscle exercises are effective, safe, alternative methods with additional psychological advantages such as reduction in anxiety and stress.

Method: 20 healthy, nulliparous volunteers of different nationalities, in the age range between 18-45, with regular menstrual cycle, without previous medical history of incontinence or other functional and anatomical defects of the pelvic muscle floor muscles were recruited for the study. Women with non-ruptured hymen were excluded from the study. They were selected from a group who were attending a residential yoga training program in Praśhānti Kuṭīram (a serene health resort in South India). They were randomly allocated into two groups after signed informed consent had been taken. They had no practical background in any of these practices. The self control study was conducted after training the volunteers theoretically, followed by a 10 minute individual familiarizing session with the bio-feedback apparatus used for the study. All subjects were able to perform the perineal contraction according to the short verbal instruction. All were assessed after two interventions (YPFME and control KPFME) on alternate days (15-15 minutes each), as the study design was self-as-control. Assessments were made before and after both sessions, in the two groups, according to random number table (randomization for the day of the session) in the same supine posture (control and experiment), by (a) vaginal squeezing pressure by the use of Peritron Perineometer (supplied by Cardio Design Pty. Ltd., Australia, cat 9300V, serial number: P61 3 52822300 F 61 3 94459037, 2005), (b) Visual Analogue Scale for Anxiety (VAS), (c) a self-administered State Trait Anxiety Inventory by Spielberger et al (STAI) and (d) BP by manual mercury manometer.

Intervention: The sequence of the experimental (YPFME) and control (KPFME) intervention included similar pelvic muscle contractions (dynamic, strength

increase, maintenance), in same supine posture. Main difference was the number of contractions (Yoga had lesser) and that the Yoga sequence had the additional components of mental preparation and breath awareness.

Results: Improvement of the vaginal squeezing pressure was statistically significant (paired t test) in the Yoga (YPFME) session: $p < 0.001$ (pre: 37.37, post: 50.83 cm/H₂O – centimetres/water column) and was not statistically significant in the control session (KPFME): $p = 0.324$ (pre: 43.82, post: 46.65). The systolic BP was found to marginally decrease in YPFME session ($p = 0.051$) and significantly increase in KPFME session ($p = 0.016$). The state of anxiety by STAI and VAS decreased significantly in the YPFME session (STAI: $p < 0.001$; VAS: $p = 0.005$) and there was no significant decrease for control session. The effect of both practices on diastolic BP was non-significant in RMANOVA, there were significant differences between the sessions in vaginal squeezing pressure ($p = 0.001$), in diastolic BP ($p = 0.048$) and there was also marginal difference in VAS results ($p = 0.057$). There were no difference between groups in systolic variables ($p = 0.358$) and in STAI results ($p = 0.586$).

Summary and conclusion

There were significant changes in Yoga group, in four different variables out of the five. The results of this self as control study showed that the YPFME has highly significant immediate effects on vaginal squeezing pressure (increase) and the present state of anxiety (decrease). For the vaginal squeezing practice the improvement was seen to be statistically significant in the YPFME session and was not statistically significant in the KPFME session. The systolic blood pressure was found to marginally decrease in YPFME session and significantly increase in KPFME session. The state of anxiety by State Trait Anxiety Inventory and Visual Analogue Scale for Anxiety was found to be significantly decreased in the YPFME session and shows no significant decrease in KPFME session. The effect of both practices on diastolic blood pressure was non-significant.

Conclusion

The Yogic Pelvic Floor Muscle exercises could be safe alternative method in the treatment of those health defects (such as stress incontinence) in which the other methods (like KPFME) have already proven benefits. Yogic PFME also decrease the systolic blood pressure and has psychological advantages to

decrease the present state of anxiety.

YPFME shows significant immediate effects on vaginal squeezing pressure (increase) and on the present state of anxiety (decrease), and marginally significant effect on systolic Blood Pressure (decrease); therefore it could be a safety alternative method among similar methods with certain psychological advantages.

Key words: Yoga, Pelvic Floor Muscle Exercise, Peritron Perineometer, STAI, Anxiety, Blood Pressure.