

## **Effectiveness of Yoga and Psychoeducation on Menstrual Attitudes, Psychological Well-being, and Stress Reduction among Undergraduate Students**

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Yoga is an ancient Indian approach practiced for 5000 years to attain holistic wellbeing. The system of simplified physical exercises developed by Shri Vethathiri Maharishi after years of intense research, fulfills the need of maintaining holistic health. This experimental research proves the effectiveness of yoga and psychoeducation in enhancing psychological well-being, favourable attitude towards menstruation and stress reduction among undergraduate students. The need to enhance favourable attitude towards menstruation the psychosocial demands in the present world and the difficulties associated with menstruation interferes with the caliber of the students to perform their fullest in academic and personal life. Sixty One students participated in this before-after, without control group study. The study used simple random sampling and the results were analyzed using SPSS-21. Yoga and psychoeducation is effective in enhancing favourable menstrual attitude, psychological well-being and reducing stress in undergraduate students

**Key Words:** Yoga, Menstrual Attitude, Psychological Well being, Stress, Psychoeducation

Yoga, an ancient practice dating back over 5,000 years, is renowned for promoting holistic well-being. Among its many forms, Hatha Yoga, which blends various styles, stands out as one of the most popular. Unlike purely meditative forms, Hatha Yoga emphasizes physical movement and poses. (Desai, 2019).

Vethathiri Maharishi, drawing from his profound knowledge of ancient Indian yogic traditions, developed a simplified and scientific approach to yoga. His system of simplified physical exercises, rooted in the principles of bio-magnetism, is designed to maintain the proper circulation of blood, heat, air, energy, and bio-magnetism in the body. This gentle yet effective approach supports overall health, boosts immunity, and helps prevent diseases. These exercises also serve as a curative tool, regulating the flow of vital energies—blood, heat, air, and life force—

thereby fostering optimal physical health. (Vethathiri Maharishi, 2007).

### **Psychoeducation**

Psychoeducation interventions in therapy involve providing clients with information about psychological concepts, their specific problems, and the relationships between thinking, emotion, and behavior.

In the last few decades, psychoeducation has come up as a useful and effective mode of psychotherapy for persons with mental illness. Psychoeducation combines the elements of cognitive-behavior therapy, group therapy, and education. The basic aim is to provide knowledge and create awareness on one's health and wellness.

### **Menstruation**

Menstruation, often referred to as a woman's period, is a natural physiological

process that occurs in people with female reproductive systems. It is a monthly cycle in which the lining of the uterus (the endometrium) thickens in preparation for possible pregnancy. If pregnancy does not occur, the body sheds this uterine lining, resulting in the release of blood and other uterine tissues from the body through the vagina. This process typically occurs once every 21 to 35 days and lasts for several days, although the exact duration and flow can vary from person to person. Menstruation is a key aspect of the female reproductive system and is controlled by hormonal changes, primarily involving estrogen and progesterone. It usually begins during adolescence, known as menarche, and continues until menopause, which marks the cessation of menstrual cycles typically around the age of 45 to 55.

### **Menstrual Attitude**

Menstrual attitude refers to the opinions a woman forms regarding the process of menstruation, which can vary based on life experiences and awareness about menstruation. The formation of menstrual attitudes is influenced by biopsychosocial factors. A healthy or favorable menstrual attitude enables individuals to challenge myths about menstruation and equips women with the essential abilities to contribute to their fullest potential (Chrisler et al., 1995; Johnston-Robledo & Chrisler, 2013).

### **Perceived Stress**

The perceived stress of an individual reflects their subjective experience in coping with the increasing demands of biopsychosocial factors. Various factors, including lifestyle, psychological health, and societal pressures, significantly impact menstrual health and well-being.

Research shows that regular exercise is associated with a lower prevalence of

dysmenorrhea, a condition significantly linked to premenstrual syndrome (PMS) and its severity. Psychological symptoms of PMS are often more pronounced than physical ones (Indu, Gaurika, Dinesh, & Soni, 2020). Among adolescents, approximately 49.8% reported experiencing menstrual pain severe enough to affect daily activities, which correlated with worse sleep quality, inattention, hyperactivity-impulsivity, and psychological symptoms such as anxiety, depression, and hostility. Menstrual pain severity has also been associated with symptoms of ADHD and other psychological distress (Kabuku, Basay, & Basay, 2021).

Furthermore, changes in eating and exercise behaviors across the menstrual cycle, coupled with societal pressures to manage body image through restrictive eating and rigorous exercise, contribute to premenstrual distress and body dissatisfaction. The internalization of such pressures exacerbates psychological challenges during the premenstrual phase (Ryan, Ussher, & Hawkey, 2021).

Adolescent menstrual health, particularly in low- and middle-income countries, demands a holistic approach, including improved research and actionable strategies to address their comprehensive needs (Pelsons, Patkar, Babbj, et al., 2021). Yoga has emerged as a promising intervention for alleviating menstrual pain in women with primary dysmenorrhea, providing a non-invasive and effective method for pain management (Kirka & Celik, 2021).

Adolescence, characterized by significant hormonal shifts, is particularly challenging for Indian females who often experience menarche amidst myths, taboos, and societal stigma. These misconceptions contribute to physical discomfort and emotional irritability, fostering negative attitudes toward menstruation. Given that menstruation is a recurring aspect of life for many years,

promoting favorable attitudes through interventions like yoga and psychoeducation can enhance psychological well-being and reduce stress, which is the primary focus of this study.

### Objectives

- To identify the effectiveness of Yoga in enhancing favourable menstrual attitude, psychological well-being and reducing Perceived Stress
- To assess the effectiveness of Psychoeducation in enhancing favourable menstrual attitude, psychological well-being and reducing Perceived Stress
- To compare the effectiveness of Yoga, Psychoeducation, in enhancing favourable menstrual Attitude, Psychological Well-being and reducing Perceived Stress among undergraduate students

### Hypotheses

- H<sub>1</sub> There will be significant difference between before and after phases in dimensions of Menstrual Attitude, level of Perceived Stress and domains of Psychological Well-being among undergraduate students through Yoga
- H<sub>2</sub> There will be significant difference between before and after phases in dimensions of Menstrual Attitude, level of Perceived Stress and domains of Psychological Well-being among undergraduate students through Psychoeducation
- H<sub>3</sub>-There will be significant difference between the intervention, yoga and psychoeducation in enhancing favourable menstrual attitude, psychological well-being and reduce stress among undergraduate students

## Method

### Tools

*Menstrual Attitude Questionnaire* by Brooks, Gunn and Ruble was developed in the year 1980, The Indian adaptation was completed by Bhogle in 1991. There are five dimensions such as considering menstruation as Debilitating Event, Bothersome Event, Natural Event, Anticipation of onset and Denial of effects, It enables the understanding of attitude towards menstruation.

*The Perceived Stress Scale* (Cohen et al. 1983) consists of 14 items that assess the symptoms of stress experienced by an individual for a period of past one month.

*Psychological Well Being Scale* (Ryff, 2013) consists of six sub scales such as Autonomy, Environmental Mastery, Personal Growth, Positive relations with Others, Purpose in Life and Self Acceptance, It aids in assessing the specific domains pertaining to psychological well-being

### Procedure

The consent was sought from the willing participants and confidentiality was ensured. The initial sample size of the study was 211, the samples were selected using simple random technique and were screened using the selected tools, based on the scores obtained, participants assessed to have high level of perceived stress, unfavourable menstrual attitude and low psychological well being were selected for the intervention phase.

The research adopted before, after without waitlist/control experimental research design and involved 61 samples with 30 experimental first group and 31 in second experimental group. The samples were undergraduate students belonging to different courses of study. The samples were divided into the experimental groups using randomization.

## **Intervention**

### **Sessions**

- Weekly thrice for 7 weeks

### **Duration**

- **35 minutes**

Total Sessions- 21 for each experimental group

*Yoga*- The Simplified Exercises by Vethathri Maharishi were adopted for the experimental Study. The following exercises were included in the sessions.

- *Neuro Muscular Breathing* - Neuro-Muscular Breathing involves specific breathing techniques designed to strengthen the connection between the nervous and muscular systems, improving oxygen flow, focus, and relaxation.
- *Foot Reflexology*- Foot Reflexology, an integral part of the exercises, emphasizes stimulating pressure points on the feet that correspond to various organs and systems in the body, enhancing circulation and activating the body's natural healing processes.
- *Maharasana* - Maharasana, a yogic posture, focuses on spinal alignment, flexibility, and energy balance, offering physical and mental stability. These practices, rooted in simplicity and effectiveness, serve as tools for self-care and holistic health, suitable for people of all ages and fitness levels.

*Psychoeducation*- The psychoeducation focused on the following facets

Menstrual process- Biopsychosocial View, Premenstrual Syndrome, Menstrual Hygiene Promoting Healthy Menstruation

Stress- Causes, Symptoms, Biology, Postive Coping Strategies

Psychological Well-being- Dimensions of Psychological Well-being, Benefits of High Psychological well-being.

### **Statistical Analysis**

SPSS (Statistical Package for Social Sciences) version 25 was used to analyze data. The effectiveness of the intervention between before and after groups were analyzed using paired t test and the comparison of efficacy between yoga and psychoeducation was computed using independent samples t test.

### **Results and Discussion**

The table 2, demonstrates that there is a significant difference between before and after phases of the intervention . The t values of the dimensions Debilitating event, Bothersome event , Natural event , Denial of effects are significant at 0.01 level and the mean value portrays the yoga has effectively reduced the unfavourable menstrual attitude and strengthened favourable attitude as considering menstruation as a normal event. The before and after intervention phases of Anticipation of onset is not statistically significant. The increasing psychosocial demands exhaust adolescent females during menstrual cycle interfering with everyday life responsibilities and the myths and taboo associated with the process of menstruation creates an unfavourable menstrual attitude and reduces the coping resources and normal perspective development towards menstruation. Thus, strengthening of favourable attitude towards menstruation leads to holistic well-being.

Table 1 Before and After Intervention Phases of Menstrual Attitude through Yoga

Menstrual Attitude	Before Intervention		After Intervention		Mean Difference	t
	Mean	S.D	Mean	S.D		
Debilitating	51.00	5.058	40.97	4.460	10.03	9.61**
Botherosme	29.07	3.823	24.90	2.369	4.17	7.00**
Natural	19.33	4.163	20.03	3.978	-0.7	4.37**
Anticipation of Onset	19.93	2.288	20.37	3.479	-0.44	0.66 N.S
Denial	23.27	3.787	21.40	3.338	1.87	3.28**

\*\* = significant at 0.01 level

N.S.= Not Significant

Table 2 Before and After Intervention Phases of Menstrual Attitude through Psychoeducation

Menstrual Attitude	Before Intervention		After Intervention		Mean Difference	t
	Mean	S.D	Mean	S.D		
Debilitating	44.27	5.546	38.53	4.562	5.74	7.403**
Botherosme	31.20	6.266	25.33	4.816	5.87	7.239**
Natural	15.20	2.772	19.70	4.129	-4.0	6.725**
Anticipation of Onset	22.97	2.684	22.17	2.679	0.8	7.954**
Denial	25.07	2.993	23.43	3.431	1.64	4.178**

\*\* = significant at 0.01 level

Table 3 Before and After Intervention Phases of Perceived Stress through Yoga

Variables	Before Intervention		After Intervention		Mean Difference	t
	Mean	S.D	Mean	S.D		
Stress	26.81	4.83	15.65	4.17	11.16	10.58**

\*\* = significant at 0.01 level

The table shows that there is significant difference between before and after intervention phases. The t values are significant at 0.01 level and the mean scores in the dimensions of menstrual attitude such as Debilitating event, Bothersome event, Anticipation of onset and Denial of effects of menstruation demonstrates a reduction in the level of scores and in the dimension, natural event the mean of after intervention phase has increased proving the efficacy of

psychoeducation in enhancing the favourable attitude which further enables the students to develop coping skills to face the challenges during menstrual period and manage premenstrual syndrome.

The table 3 portrays there is a significant difference between before and after intervention phases of stress. The t value is significant at 0.01 level and the mean scores show that the level of stress has reduced in after intervention phase. Thus, Yoga is found

to be effective in reducing the levels of perceived stress that enables the students to understand the benefits of yoga in managing stress and equip oneself with positive coping strategies to deal with stress which is an inevitable factor in life.

The table 4 portrays there is a significant difference between before and after intervention phases of stress. The t value is

significant at 0.01 level and the mean scores show that the level of stress has reduced in after intervention phase. Thus, psychoeducation is found to be effective in reducing the levels of perceived stress that enables the students to be aware of the stress, causes, symptoms, biology of stress and learn many effective coping techniques to avoid using negative coping strategies.

Table 4 Before and After Intervention Phases of Perceived Stress through Psychoeducation

Variables	Before Intervention		After Intervention		Mean Difference	t
	Mean	S.D	Mean	S.D		
Stress	34.43	6.224	22.50	5.704	11.93	15.90**

\*\* = significant at 0.01 level

Table 5 Before and After Intervention Phases of Psychological Well-being through Yoga

Psychological Wellbeing	Before Intervention		After Intervention		Mean Difference	t
	Mean	S.D	Mean	S.D		
Autonomy	10.59	2.571	10.72	2.404	-0.13	2.11**
Environmental Mastery	11.86	1.726	11.93	1.668	-0.07	1.44 N.S.
Personal Growth	10.72	1.830	11.90	1.319	-1.18	3.34**
Positive Relations	10.17	1.490	10.31	1.628	-0.14	2.18**
Purpose in Life	10.59	1.955	11.69	1.365	-1.1	3.97**
Self-Acceptance	10.41	2.196	11.66	1.289	-1.25	3.48**

\*\* = significant at 0.01 level N.S.= Not Significant

The table 5 show there is a significant difference in the subscales of psychological well-being before and after intervention. The t values of the subscales autonomy, personal growth, positive relations , purpose in life and self acceptance are significant at 0.01 level portraying the effectiveness of yoga in enhancing psychological well-being. The mean scores depict the increase in the scores in the after intervention phase. The t value of the sub-scale environmental mastery is not statistically significant. The practice of yoga can help one in attaining personal growth in all facets of life and therefore ensure the sustainability in psychological well-being. The table 6 shows there is a significant difference in all the subscales of psychological well-

being before and after intervention. The t values of the subscales autonomy, personal growth, positive relations , purpose in life and self acceptance are significant at 0.01 level portraying the effectiveness of psychoeducation in enhancing psychological well-being. The mean scores depict the increase in the scores in the after intervention phase. The knowledge about the factes of psychological wellbeing shall assist an individual in developing the right focus to help one in attaining goals in all walks of life and therefore the shift of one's direction towards enhanced psychological well-being. Therefore the hypotheses H1 and H2 is partially accepted

Table 6 Before and After Intervention Phases of Psychological Well-being using Psychoeducation

Psychological Wellbeing	Before Intervention		After Intervention		Mean Difference	t
	Mean	S.D	Mean	S.D		
Autonomy	10.37	2.173	11.87	1.570	-1.5	4.84**
Environmental Mastery	10.43	2.223	11.43	1.331	-1	4.01**
Personal Growth	10.83	2.036	11.23	1.612	-0.4	2.56**
Positive Relations	10.43	1.794	10.87	1.408	-0.44	3.26**
Purpose in Life	10.30	1.442	10.73	1.143	-0.43	3.07**
Self-Acceptance	10.27	1.893	11.33	1.241	-1.06	3.50**

\*\*= significant at 0.01 level

Table 7 Comparing the effectiveness of Yoga and Psychoeducation in Menstrual Attitude

Variable	ExperimentalGroup	N	Mean	SD	Df	t	Significance
Menstruation as a debilitating event	Yoga	30	40.97	4.460	60	2.26**	0.027
	Psychoeducation	31	38.32	4.636			
Menstruation as a bothersome event	Yoga	30	24.90	2.369	60	0.91N.S	0.37
	Psychoeducation	31	25.94	5.802			
Menstruation as a natural event	Yoga	30	20.03	3.978	60	0.28 N.S	0.78
	Psychoeducation	31	19.74	4.066			
Anticipation of onset of Menstruation	Yoga	30	20.37	3.479	60	2.28**	0.026
	Psychoeducation	31	22.16	2.634			
Denial of effects Of Menstruation	Yoga	30	21.40	3.338	60	2.35**	0.022
	Psychoeducation	31	23.42	3.374			

\*\* = significant at 0.01 level N.S.= Not Significant

The table 7 portrays the comparison of the two interventions Yoga and Psychoeducation in the dimensions of menstrual Attitude. The t value of the dimensions, Bothersome event and Natural event are not statistically significant. The t value of the dimensions considering menstruation as Debilitating event, Bothersome event, Anticipation of onset and Denial of effects are significant at 0.01 level. The Mean scores show that Psychoeducation is comparatively effective for the dimension

of considering menstruation as Debilitating event. Yoga is found to more effective in dimensions such as anticipation of onset and denial of effects of menstruation.

The table 8 demonstrates that t values of the subscales of psychological well-being such as environmental mastery, Positive relations with others and self-acceptance are not significant. The sub-scales such as Autonomy and Purpose in life show significant differences between the two

interventions i.e., Yoga and Psychoeducation. The mean score of Autonomy shows Psychoeducation has comparatively been

effective in enhancing levels of autonomy whereas the mean of Purpose in Life depicts Yoga has been effective in enhancing the level of purpose in life.

Table 8 Comparing the effectiveness of Yoga and Psychoeducation in Psychological Well-being

Variable	ExperimentalGroup	N	Mean	SD	Df	t	Significance
Autonomy	Yoga	30	10.63	2.539	60	2.35**	0.02
	Psychoeducation	31	11.88	1.540			
Environmental Mastery	Yoga	30	11.93	1.741	60	1.28 N.S	0.20
	Psychoeducation	31	11.44	1.294			
Personal Growth	Yoga	30	11.90	1.296	60	1.77 N.S	0.08
	Psychoeducation	31	11.25	1.566			
Positive Relations	Yoga	30	10.20	1.472	60	1.86 N.S	0.06
	Psychoeducation	31	10.88	1.385			
Purpose inLife	Yoga	30	11.63	1.377	60	2.88*	0.005
	Psychoeducation	31	10.72	1.114			
Self Acceptance	Yoga	30	11.67	1.269	60	1.28 N.S	0.22
	Psychoeducation	31	11.28	1.224			

\*\* = significant at 0.01 level

\*= significant at 0.05 level

N.S.= Not Significant

Table 9 Comparing the effectiveness of Yoga and Psychoeducation in Perceived Stress

Variable	Intervention	N	Mean	SD	df	t	Significance
PerceivedStress	Yoga	30	22.24	5.62	60	7.92**	0.00
	Psychoeducation	31	13.26	2.78			

\*\*= significant at 0.01 level

Table 9 depicts the t value comparing the effectiveness of Yoga and Psychoeducation is significant at 0.01 level. The mean scores show that the psychoeducation has been more effective in reducing the stress levels of students. The knowledge and awareness of various stressors, analyzing the coping strategies and equipping self with more positive coping strategies can help in

alleviating stress in longer run. Thus the hypothesis H3 is partially accepted.

### Discussion

The findings highlight the efficacy of yoga and psychoeducation as interventions for improving menstrual attitudes, psychological well-being, and stress reduction in undergraduate students, while also exploring their comparative benefits in specific

domains. These interventions offer holistic strategies to address the multifaceted challenges faced by young women during menstruation, both physically and emotionally.

Yoga and its Effectiveness in Enhancing Menstrual Attitude, Psychological Well-being, and Stress Reduction. Yoga, an ancient mind-body practice, has been widely recognized for its role in promoting mental and physical health. Studies show that yoga helps reduce stress by activating the parasympathetic nervous system, enhancing mindfulness, and improving self-regulation (Kirk & Celik, 2021). In the context of menstrual health, yoga is particularly effective in fostering a more positive attitude toward menstruation by addressing the physical discomforts and psychological stresses associated with the menstrual cycle. Through postures (asanas) that enhance pelvic circulation and breathing techniques (pranayama) that calm the mind, yoga empowers students to better cope with menstrual-related challenges, improving their overall psychological well-being (Kirk & Celik, 2021).

Psychoeducation and its Effectiveness in Enhancing Menstrual Attitude, Psychological Well-being, and Stress Reduction. Psychoeducation, which involves educating individuals about health-related topics while addressing associated emotional and cognitive aspects, has been shown to be effective in improving menstrual attitudes and reducing stress. It dismantles myths and misconceptions surrounding menstruation, replacing negative beliefs with accurate knowledge and fostering a sense of empowerment (Pelsons, Patkar, & Babbj, 2021). Psychoeducation helps students understand the physiological and emotional changes during menstruation, equipping them with coping strategies that enhance psychological well-being and reduce perceived stress. By promoting awareness

and self-acceptance, psychoeducation encourages undergraduate students to approach menstruation more positively, reducing feelings of shame or discomfort. Yoga is particularly effective in addressing the anticipation of menstruation and the tendency to deny its effects, reflecting its ability to reduce anxiety and increase emotional resilience. Regular yoga practice enhances mindfulness and helps individuals focus on the present moment, which reduces anticipatory anxiety about menstrual onset (Ryan, Ussher, & Hawkey, 2021). Furthermore, yoga promotes a sense of purpose and connection to one's body, fostering a deeper understanding and acceptance of physiological changes. This helps individuals view menstruation not as a hindrance but as a natural and manageable part of life, which aligns with broader benefits such as enhanced purpose in life (Kirk & Celik, 2021).

Psychoeducation is particularly effective in mitigating perceptions of menstruation as a debilitating event and reducing perceived stress. By providing scientifically accurate information and challenging cultural taboos, psychoeducation normalizes menstruation and reduces its perceived burden (Pelsons, Patkar, & Babbj, 2021). This intervention also promotes autonomy by empowering students with the knowledge and skills to manage their menstrual health independently. In doing so, psychoeducation addresses the psychosocial aspects of menstruation, reducing the stigma and psychological distress associated with it.

### **Implications**

Practical techniques and simple exercises which could be adopted for everyday life usage is essential in today's world to face the challenges put forth in all facets of life. The increasing psychosocial demands makes stress an inevitable factor in women's life that lead to various other health complications,

hence the use of simple Yoga and knowledge about favourable Menstrual Attitude, Perceived Stress and Psychological Well-being enables the students to promote healthy menstrual practices, shift their focus in right direction and learn to cope stress in an effective manner. The United Nation's Sustainable Development Goal 3- "Good health and well-being" is not a destiny and a process. Various schemes such as Rashtriya Kishor Swasthya Karyakram-2014 and Menstrual Hygiene Scheme- 2011 can be sustained using applied research studies.

### Conclusion

Yoga is effective in enhancing favourable menstrual attitude, psychological well-being and reducing stress in undergraduate students

Psychoeducation is effective in enhancing favourable menstrual attitude, psychological well-being and reducing stress in undergraduate students

Yoga is comparatively effective in reducing the anticipation of onset of menstruation and denial of effects of menstruation, Yoga is effective in enhancing purpose in life.

Psychoeducation is comparatively effective in reducing considering menstruation as debilitating event and perceived stress. Pschoeducation is effective in enhancing Autonomy

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