

The Influence of Knowledge Level on Adolescents' Interest in Practicing Ayurvedic Yoga to Alleviate Premenstrual Syndrome (PMS) Symptoms

Nahdiyatul Mukaromah, Rifa'at Hanifa Muslimah

Midwefery, STIKes Prima, Indonesia

nahdiyatulmukaromah@gmail.com

Article Information

Submitted: 12 December 2024

Accepted: 21 December 2024

Online Publish: 30 December 2024

Abstract

Introduction: Premenstrual Syndrome (PMS) is a condition characterized by behavioral and emotional changes that occur prior to menstruation. Common symptoms include altered appetite, weight gain, abdominal pain, back pain, lower back pain, headaches, breast tenderness and swelling, nausea, constipation, restlessness, irritability, anger, fatigue, and mood swings. One non-pharmacological approach to managing PMS symptoms is Ayurvedic yoga therapy. Understanding the relationship between adolescents' knowledge of Ayurvedic yoga and their interest in practicing it can provide valuable insights, particularly in promoting natural alternatives for PMS management. **Aim:** This study aims to examine whether there is a significant relationship between knowledge about Ayurvedic yoga and the interest in practicing it among adolescents experiencing PMS. **Method:** This research employs a quantitative approach using a cross-sectional design. The study population consisted of female adolescents aged 15 to 19 years. Participants were selected through purposive sampling. Data were collected using questionnaires assessing knowledge of and interest in Ayurvedic yoga. **Results:** The analysis was conducted using the Mann-Whitney test, resulting in a p-value of 0.00 (< 0.05), indicating a statistically significant relationship between knowledge and interest in practicing Ayurvedic yoga among adolescents with PMS. **Conclusion:** Improving knowledge about Ayurvedic yoga has the potential to enhance adolescents' interest in adopting it as a strategy for managing PMS symptoms. Therefore, appropriate and informative education on the benefits and techniques of Ayurvedic yoga is essential

Keyword: Knowledge; Interest; Ayuverdic Yoga; Teenager; PMS

The Influence of Knowledge Level on Adolescents' Interest in Practicing Ayurvedic Yoga to Alleviate Premenstrual Syndrome (PMS) Symptoms

Introduction

Premenstrual Syndrome (PMS) is a psychoneuroendocrine disorder that leads to behavioral and emotional changes prior to menstruation (Shariati, Ghazavi, Saedi, Ghahremani, & Shariati, 2019). These symptoms typically subside a few days after menstruation begins (Saglam & Orsal, 2020). Although the exact cause of PMS remains unclear, fluctuations in estrogen, progesterone, androgens, and prolactin levels have been highlighted in its pathophysiology. Additionally, serotonin production in the brain appears to play a central role (Shariati et al., 2019). Other contributing factors may include hormonal imbalances, neurotransmitter activity, prostaglandins, dietary habits, lifestyle, obesity, hypothalamic-pituitary-adrenal axis disorders, adrenal hormone secretion issues, nutritional deficiencies, and environmental influence (Yi, Kim, & Park, 2023).

Globally, approximately 47.8% of women of reproductive age experience PMS (Nascimento et al., 2020), with about 20% reporting symptoms severe enough to interfere with daily activities (Gudipally & Sharma, 2024). The remaining majority experience mild to moderate symptoms such as appetite changes, abdominal pain, and mood swings. Various treatment options are available to manage PMS symptoms, including both pharmacological and non-pharmacological approaches (Bhuvaneswari, Rabindran, & Bharadwaj, 2019). Non-pharmacological therapies such as physical exercise, yoga, nutritional improvements, and social support are among the recommended interventions. (Saglam & Orsal, 2020).

Ayurvedic yoga originates from a traditional system of medicine that has evolved into a rational and evidence-based approach, emphasizing disease prevention and holistic health maintenance (Ayu, Andriyogi, & Santosa, 2022) (Chobe, Patra, Chobe, & Metri, 2022). Although Ayurvedic yoga offers a range of proven benefits, knowledge, and interest in its practice among adolescent girls with PMS vary widely (Tsai, 2016). Exploring the relationship between adolescents' knowledge of Ayurvedic yoga and their interest in practicing it may provide valuable insights for promoting natural PMS management (Pratiwi, Meidiantari, & Dewi, 2024). This study aims to determine whether there is a significant relationship between knowledge of Ayurvedic yoga and interest in practicing it among adolescents experiencing PMS.

Methods

This study employed a quantitative research design using a cross-sectional approach to explore the relationship between knowledge of Ayurvedic yoga and the interest in its practice among female adolescents experiencing PMS. The population in this study consisted of female adolescents aged 15 to 19 years. A total of 30 participants were selected using purposive sampling, based on inclusion criteria: female adolescents aged 15–19 years who had begun menstruating and agreed to participate. The exclusion criteria included adolescents with other medical conditions that could affect the menstrual cycle and those unwilling to participate. Data collection took place from February 28 to March 4, 2024, in RT 18, Babelan Kota Village. Data were gathered using a structured questionnaire designed to assess two primary variables: knowledge of Ayurvedic yoga

The Influence of Knowledge Level on Adolescents' Interest in Practicing Ayurvedic Yoga to Alleviate Premenstrual Syndrome (PMS) Symptoms

and interest in its practice. The knowledge questionnaire consisted of 12 items evaluating participants' understanding of the principles and practices of Ayurvedic yoga. The interest questionnaire comprised 10 items assessing the adolescents' willingness to engage in Ayurvedic yoga to alleviate PMS symptoms. Demographic data, knowledge levels, and interest were analyzed using descriptive statistics. To assess the correlation between knowledge and interest, a Chi-square test was initially planned. However, due to unmet assumptions, the Mann-Whitney U test was used to obtain valid statistical results.

Results and Discussion

Univariate Analysis

Based on the results of the analysis above regarding the relationship between family income, family size, and knowledge of stunting in RAEOA, the following results can be found:

Table 1
Frequency of Respondents Based on Knowledge Level of Ayurvedic Yoga

Knowledge Level	f	%
Good	10	33.3%
Fair	16	53.3%
Poor	4	13.4%
Total	30	100%

As seen in Table 1, most respondents (53.3%) had a moderate level of knowledge regarding Ayurvedic Yoga. This finding contrasts with previous research (Romero, 2022) which noted that adolescents generally possess limited awareness and understanding of yoga, reflecting a lack of information among students. As explained, good knowledge plays a vital role in effective problem-solving, whereas insufficient knowledge can result in poor decision-making.(Ristanti & Windayanti, 2023).

Knowledge of yoga among adolescents contributes to their physical, emotional, and mental well-being by fostering resilience and self-regulation (Singh & Misra, 2018). Other studies highlight yoga as an effective strategy for alleviating psychological discomfort, unifying the mind and soul, and detaching from materialistic sensory experiences . Integrating yoga education into youth development programs may therefore be beneficial in promoting overall adolescent health

Table 2
Frequency of Respondents Based on Interest in Ayurvedic Yoga

Interest Level	f	%
High	10	33,3%
Moderate	20	66,7%
Low	0	0%
Total	30	100%

Table 2 shows that most respondents (66.7%) had a moderate interest in practicing Ayurvedic Yoga. This result differs from prior research (Defika & Desiningrum, 2016) which reported a higher level of interest among adolescents. However, another study (Pooja Patel & Panchal, 2023) found that yoga can significantly reduce academic anxiety, which in turn may enhance interest in yoga as a coping mechanism. Promoting healthy lifestyles during adolescence is crucial, as it shapes their decisions and interests regarding health (Mingazov, Popel, & Mingazova, 2024).

Bivariate Analysis

Table 3
Relationship Between Knowledge and Interest in Ayurvedic Yoga Among Adolescents with PMS

Knowledge Level	Interest				<i>P-value</i>
	High		Moderate		
	f	%	f	%	
Good	9	30%	1	3,3%	0,000
Fair	1	3,3%	15	50%	
Poor	0	0%	4	13,4%	
Total	10	33,3%	20	66,7%	

Table 3 indicates that 50% of respondents with moderate interest also had a fair level of knowledge about Ayurvedic Yoga. Initially, a Chi-square test was planned, but due to unmet assumptions, the Mann-Whitney U test was applied. The result yielded a significant p-value ($p = 0.000 < 0.05$), indicating a statistically significant relationship between knowledge and interest in Ayurvedic Yoga among adolescents with PMS.

These findings suggest that higher knowledge levels are positively associated with greater interest in Ayurvedic Yoga. Adolescents with better understanding were more inclined to engage in yoga practices than those with limited knowledge. According to Hendra (2008) (Widya, Usman, & Widowati, 2022). Peningkatan pengetahuan terhadap suatu hal akan menyebabkan peningkatan minat seseorang (Rotgansa & Schmidt, 2017). Semakin baik pengetahuan maka akan semakin baik minat yang ditujukan pada responden, sebaliknya jika pengetahuan kurang maka akan terbentuk minat yang rendah (Andaruni, N. Q. R., Harahap, A. P., Amilia, R., & Makmun, 2020). several factors influence knowledge acquisition, including education, occupation, media exposure, environment, and life experience. A higher level of knowledge often corresponds with greater personal interest. Interest reflects a person’s internal desire to perform a specific behavior; therefore, increasing awareness can enhance motivation to engage in Ayurvedic Yoga (Nurbaiti & Nurita, 2020).

Solid knowledge of yoga equips adolescents with better coping mechanisms during PMS episodes (E, Masruroh, Lalo, & Sari, 2021). Evidence shows that yoga supports physical and emotional health by downregulating the hypothalamic–pituitary–adrenal (HPA) axis and the sympathetic nervous system through vagal stimulation, which

The Influence of Knowledge Level on Adolescents' Interest in Practicing Ayurvedic Yoga to Alleviate Premenstrual Syndrome (PMS) Symptoms

regulates hormone secretion such as cortisol, glucose, plasma renin, epinephrine, and norepinephrine (Kamalifard, Yavari, Ghaffarilaleh, & Kasb-Khah, 2017).

Further research confirms that physical activity enhances hemoglobin, hematocrit, red blood cell count, and platelet count, while decreasing prolactin, estradiol, and progesterone levels. This leads to reduced fatigue, improved focus, and alleviation of other PMS symptoms (Andaruni, N. Q. R., Harahap, A. P., Amilia, R., & Makmun, 2020). Yoga also decreases inflammatory markers and promotes alpha brainwave activity, linked to relaxation and serotonin release, helping individuals feel more at ease after sessions (Kamalifard et al., 2017).

Studies also show that yoga reduces stress and anxiety—two common symptoms of PMS (Ghaffarilaleh, Ghaffarilaleh, Sanamno, & Kamalifard, 2019) (Sheila Patel et al., 2019). Through breathing and meditation practices, adolescents may experience emotional relief. Ayurvedic Yoga, rooted in traditional medicine, now adopts a rational and evidence-based framework focused on prevention, therapy, and holistic health (Ayu et al., 2022).

Introducing yoga to adolescents has been shown to reduce stress and enhance emotional resilience—vital during transitional teenage years (N & Rao, 2024). It also fosters mental wellness and stress relief through an integrative approach that harmonizes the body, mind, and spirit (Charan & Kumar, 2024). Ayurvedic Yoga offers an effective way to manage psychological distress, reconnect the self with inner peace, and detach from overreliance on material experiences (Waghe, 2023). Ayurveda not only strengthens physical health but also supports spiritual and mental growth. Yoga, as a core practice within this system, presents an enjoyable and effective method for alleviating PMS symptoms (Bhal, 2020).

Conclusion

The findings indicate a significant relationship between knowledge and interest in Ayurvedic Yoga among adolescents with PMS. Enhancing knowledge through proper and informative education on Ayurvedic Yoga—its benefits and techniques—can serve as an effective strategy to encourage its practice among adolescents for managing PMS symptoms.

References

- Andaruni, N. Q. R., Harahap, A. P., Amilia, R., & Makmun, I. (2020). Premenstrual Gentle Yoga Melalui Media Terapi Musik Relaksasi Sebagai Upaya Mengatasi Gejala Premenstrual Syndrom (Pms) Di Desa Jempong Timur Wilayah Kerja Puskesmas Karang Pule. *Jurnal Pengabdian Masyarakat Berkemajuan*, 4(November), 706–710.
- Ayu, Ida, Andriyogi, Ketut, & Santosa, Imam. (2022). Ruang Pengobatan di Pusat Yoga-Ayurveda : Kajian Pustaka. *ITB Graduate School Conference (IGSC)*, 2006, 703–712.
- Bhal, Jatin P. (2020). Role Of Ayurveda And Yoga In Mental Disorder Or Mental Illness. *IJCRT*, 8(4), 3963–3975.
- Bhuvaneswari, K., Rabindran, P., & Bharadwaj, B. (2019). Prevalence of premenstrual syndrome and its impact on quality of life among selected college students in Puducherry. *National Medical Journal of India*, 32(1), 17–19. <https://doi.org/DOI: 10.4103/0970-258X.272083>
- Charan, Hardiksinh, & Kumar, Anu. (2024). Integrating Yoga Into Mental Health Care: Enhancing Holistic Well-Being. *Divyayatan - A Journal of Lakulish Yoga University*, 1(2), 25–27. <https://doi.org/10.69919/7jswky51>
- Chobe, Shivaji, Patra, Sanjib Kumar, Chobe, Meenakshi, & Metri, Kashinath. (2022). Efficacy of Integrated Yoga and Ayurveda Rasayana on cognitive functions in elderly with mild cognitive impairment: Non-randomized three-arm clinical trial. *J Ayurveda Integr Med*, 3(1), 1–8. <https://doi.org/10.1016/j.jaim.2020.11.003>
- Defika, Mutiara, & Desiningrum, Dinie Ratri. (2016). Hubungan Antara Minat Mengikuti Yoga Class Dengan Body Image Pada Remaja Putri. *Jurnal Empaty*, 5(April), 308–311.
- E, Jeklin Yuliani, Masruroh, Lalo, Yunita Santy, & Sari, indah Nurmala. (2021). *Penerapan Yoga untuk Mengurangi Nyeri Haid pada Remaja Selama Masa Pandemi Covid-19*. 8–17.
- Ghaffarilaleh, Ghafoureh, Ghaffarilaleh, Vahid, Sanamno, Zeinab, & Kamalifard, Mahin. (2019). Yoga positively affected depression and blood pressure in women with premenstrual syndrome in a randomized controlled clinical trial. *Complementary Therapies in Clinical Practice*, 34, 87–92. <https://doi.org/10.1016/j.ctcp.2018.11.007>
- Gudipally, Pratyusha R., & Sharma, Gyanendra K. (2024). *Premenstrual Syndrome*. Treasure Island: StatPearls Publishing LLC.
- Kamalifard, Mahin, Yavari, Abbas Mohammad Asghari Jafarabadi, Ghaffarilaleh, Ghafoureh, & Kasb-Khah, Ahmad. (2017). The Effect of Yoga on Women's Premenstrual Syndrome: A Randomized Controlled Clinical Trial. *International Journal of Women's Health and Reproduction Sciences*, 5(3), 205–211. <https://doi.org/10.15296/ijwhr.2017.37>

- Mingazov, R. N., Popel, A. E., & Mingazova, E. N. (2024). A healthy lifestyle of students is a resource for preserving the health of the working-age population in the near future. *Probl Sotsialnoi Gig Zdravookhranennii Istor*, 32(1), 647–651. <https://doi.org/10.32687/0869-866X-2024-32-s1-647-651>
- N, Radhika, & Rao, R. Tulasi. (2024). Application of Yoga in Adolescent/Teens to increase Resilience & Improve Emotional Well-Being with Emphasis on Yogic Principles - A Study. *Galore International Journal of Health Sciences and Research*, 8(4), 97–112. <https://doi.org/10.52403/gijhsr.20230413>
- Nascimento, Antje Frey, Gaab, Jens, Kirsch, Irving, Kossowsky, Joe, Meyer, Andrea, & Locher, Cosima. (2020). Open-label placebo treatment of women with premenstrual syndrome: study protocol of a randomised controlled trial. *BMJ Open*, 10(2), 1–9. <https://doi.org/10.1136/bmjopen-2019-032868>
- Nurbaiti, Nurbaiti, & Nurita, Suci Rahmani. (2020). Hubungan Tingkat Pengetahuan Prenatal Yoga dengan Minat Ibu Hamil dalam Mengikuti Kelas Prenatal Yoga di Puskesmas Putri Ayu Kota Jambi. *Jurnal Akademika Baiturrahim Jambi*, 9(1), 49. <https://doi.org/10.36565/jab.v9i1.179>
- Patel, Pooja, & Panchal, Dinesh. (2023). Effect of Yoga Based Intervention on Academic Anxiety Among Adolescent in Relation To Gender and Type of Family. *Vidya - a Journal of Gujarat University*, 2(2), 335–339. <https://doi.org/10.47413/vidya.v2i2.296>
- Patel, Sheila, Klagholz, Stephen, Peterson, Christine T., Weiss, Lizabeth, Chopra, Deepak, & Mills, Paul J. (2019). Psychosocial Effects of a Holistic Ayurvedic Approach to Well-being in Health and Wellness Courses. *Glob Adv Health Med*, 8, 1–8. <https://doi.org/10.1177/2164956119843814>
- Pratiwi, Ni Putu Dian, Meidiantari, Luh Putu, & Dewi, Ni Made Evi Kurnia. (2024). PENGARUH FILOSOFI HINDU DALAM PENGEMBANGAN TERAPI ALTERNATIF PADA YOGA DAN AYURVEDA. *Jurnal Prodi Teologi Hindu STAHN Mpu Kuturan Singaraja*, 4(1), 68–78.
- Ristanti, Hermalia Andra, & Windayanti, Hapsari. (2023). Tingkat Pengetahuan Remaja Putri Tentang Yoga Untuk Mengurangi Nyeri Haid Di Smp Negeri 5 Ungaran. *Midwifery Science Care Journal*, 2(1), 1–7.
- Romero, Lucena. (2022). Conocimiento Del Yoga En Alumnado Adolescente Y Yoga Knowledge In Adolescent Students And Their. *Revista Iberoamericana de Ciencias*, 11(3), 135–147. <https://doi.org/10.24310/riccafd.2022.v11i3.15051>
- Rotgansa, Jerome I., & Schmidtb, Henk G. (2017). The relation between individual interest and knowledge acquisition. *British Educational Research Journal*, 43(2), 350–371. <https://doi.org/10.1002/berj.3268>
- Saglam, Havva Yesildere, & Orsal, Ozlem. (2020). Effect of exercise on premenstrual symptoms: A systematic review. *Journal Complementary Therapies in Medicine*. <https://doi.org/10.1016/j.ctim.2019.102272>

The Influence of Knowledge Level on Adolescents' Interest in Practicing Ayurvedic Yoga to Alleviate Premenstrual Syndrome (PMS) Symptoms

- Shariati, Khatereh, Ghazavi, Hamed, Saedi, Masumeh, Ghahremani, Sara, & Shariati, Alireza. (2019). Psychotherapy for Depression and Anxiety in Premenstrual Syndrome (PMS): A Systematic Review and Meta-Analysis. *IJP*, 7(63), 9169–9179. <https://doi.org/10.22038/ijp.2018.36729.3197>
- Singh, ArunPratap, & Misra, Girishwar. (2018). How to facilitate yogic lifestyle education among school-going adolescents? Some psychological learnings. *International Journal of Yoga - Philosophy, Psychology and Parapsychology*, 6(1), 4. https://doi.org/10.4103/ijny.ijoyppp_27_17
- Tsai, Su Ying. (2016). Effect of Yoga Exercise on Premenstrual Symptoms among Female Employees in Taiwan. *Int J Environ Res Public Health*, 13(7), 1–11. <https://doi.org/10.3390/ijerph13070721>
- Waghe, Subhash. (2023). Ayurvedic Perspective of Yoga for Physical and Emotional Well-Being. *Physical and Emotional Well-Being, J Clinical Research and Reports*, 13(4), 01–04. <https://doi.org/10.31579/2690-1919/317>
- Widya, Annisa, Usman, Andi Mayasari, & Widowati, Retno. (2022). HUBUNGAN PENGETAHUAN DENGAN MINAT DALAM PENGGUNAAN MENSTRUAL CUP PADA MAHASISWI UNIVERSITAS NASIONAL. *Jurnal Keperawatan*, 10(1), 16–22.
- Yi, Su Jeong, Kim, Miok, & Park, Ina. (2023). Investigating influencing factors on premenstrual syndrome (PMS) among female college students. *BMC Women's Health*, 23(1), 1–9. <https://doi.org/10.1186/s12905-023-02752-y>

Copyright holder:

Nahdiyatul Mukaromah, Rifa'at Hanifa Muslimah (2024)

First publication right:

KESANS: International Journal Health and Science

This work is licensed under a [Creative Commons Attribution-ShareAlike 4.0 International License](https://creativecommons.org/licenses/by-sa/4.0/)

