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Original Research Article

Assessment of awareness and attitudes toward yoga as a preventive health practice among rural pharmacy students

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Abstract

Background: Yoga has garnered significant reputation as a preventative and promotive healthcare activity. Even while yoga is widely accepted, little is known about its awareness and attitudes among students studying rural health sciences, especially pharmacy students who will eventually contribute to healthcare.
Aim & Objective: The purpose of this study was to evaluate rural pharmacy students in Malshiras Taluka, Solapur District, Maharashtra, regarding their knowledge, attitudes and perceived advantages of yoga.
Materials and Methods: The purpose of this study was to evaluate rural pharmacy students in Malshiras Taluka, Solapur District, Maharashtra, regarding their knowledge, attitudes and perceived advantages of yoga.
Results: 88% (n=220) of the 250 participants have heard of yoga. However, just 12.8% (n=32) reported doing yoga every day and only 35.2% (n=88) said they did it at least once a week. In terms of awareness, 46% (n=115) were aware of yogas benefits for mental health, while 64% (n=160) could accurately identify it as a preventative health exercise. In terms of mindset, 71.6% (n=179) thought yoga may help people focus better and feel less stressed. Lack of time was the most frequent reason for not practicing (52%), followed by inadequate direction (38%) and low motivation (34%).
Conclusion: The results show that rural pharmacy students have a relatively high awareness level but a low frequency of regular yoga practice. To change attitudes and encourage the use of yoga as a preventative health strategy, educational interventions, organised yoga training programs and curriculum integration are advised.

Keywords: Yoga, Preventive health, Rural students, Pharmacy education, Awareness survey
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1. Introduction

Yoga, rooted in ancient Indian texts like the Rigveda, Upanishads, and Bhagavad Gita, dates back to the Indus-Sarasvati civilization around 3000 BCE. Sage Patanjali later codified its philosophy in the Yoga Sutras, introducing the eightfold path (Ashtanga Yoga), which emphasizes ethical living (Yama, Niyama), physical postures (Asana), breath regulation (Pranayama), and meditative absorption (Samadhi). At its core, yoga aims for self-realization and liberation (Moksha) through mind-body-spirit harmony. Over time, various schools emerged, each focusing on distinct elements like mental clarity, physical strength, or spiritual awakening.[1-2] Yoga has evolved from a spiritual tradition to a key component of global integrative healthcare. Scientific evidence highlights its positive effects on immune balance, metabolic health, respiratory efficiency, cardiovascular function, and cognitive well-being. It is now widely used in managing non-communicable diseases such as obesity, diabetes, depression, and hypertension. Institutions like WHO and India's Ministry of AYUSH endorse yoga as a cornerstone of preventive and promotive health.[3-4]

Health science students, including pharmacy undergraduates, often face stress, inactivity, and long screen exposure. Incorporating yoga into their routine can enhance resilience, mental clarity, and overall wellness. This practice not only benefits their personal health but also shapes their professional advocacy for holistic, patient-centered care.[5] Yoga supports psychophysiological balance by reducing

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stress hormones, improving heart rate variability, and fostering emotional stability. Studies link regular practice to improved academic focus, memory retention, and physical health—counteracting issues like poor posture and musculoskeletal strain common among students.6-7 [6, 7] Despite growing acceptance of yoga, rural pharmacy students may face barriers like limited access to trained instructors and wellness programs. Exploring their awareness and attitudes is crucial to designing tailored interventions. As future healthcare providers, their lifestyle choices and perceptions will influence community health education and promotion efforts in rural settings.[8]

The current study intends to systematically evaluate rural pharmacy student'sknowledge and attitudes on yoga as a preventative health measure in Malshiras Taluka, Solapur District, Maharashtra. Among the particular goals are:

1. To assess the degree of knowledge about yoga as a tool for health promotion and prevention.
2. To examine the attitudes and convictions of students on consistent yoga practice.
3. To determine the perceived advantages and typical obstacles to incorporating yoga into daily life.
4. To offer suggestions for incorporating yoga into pharmacy school in order to improve student'sprofessional competency and general well-being.[8]

Globally, yoga has gained recognition as a non-pharmacological tool for enhancing physical and mental health. In developed countries like the U.S., Germany, and Australia, over 70% of university students are aware of yoga, with 40–45% actively practicing it, mainly for stress relief and cognitive enhancement.[9] In India, despite its origin, student awareness varies across regions and academic streams. Urban institutions show higher engagement, often supported by wellness initiatives and national campaigns like International Yoga Day. However, in rural and semi-urban colleges, yoga remains more symbolic or extracurricular than academic.[10-11]

Health science students, particularly from MBBS and nursing backgrounds, generally exhibit greater awareness and positive attitudes toward yoga, attributed to curricular exposure and clinical integration. For instance, a study across Karnataka reported that over 75% of MBBS students recognized yoga's stress-relief benefits, with 60% practicing it regularly.[12] In contrast, pharmacy students show lower awareness (45–65%) and participation, likely due to a lack of formal inclusion of yoga or lifestyle medicine in their drug-focused curriculum, limiting exposure to holistic health concepts.[13]

Urban students benefit from structured yoga programs, trained instructors, and a culture that supports wellness, contributing to higher participation and understanding of its benefits.[14] Rural students, however, face barriers like inadequate access, socio-cultural misconceptions, and institutional apathy. A study in Maharashtra revealed that less than 30% of rural students had access to yoga training, with participation hindered by gender norms and lack of promotion.[15] Despite yoga's national health relevance, limited studies focus on rural pharmacy students, especially in Maharashtra. Most existing research centers on urban populations or MBBS/nursing students.[16] Contextual data on rural students from areas like Solapur and Malshiras—covering practice habits, demographic correlations, and attitudes—remain scarce. This lack of localized evidence restricts tailored wellness interventions. The present review aims to address this gap and support future curriculum and health policy planning.[17]

2. Materials and Methods[18]

2.1. Study design

The current study used a cross-sectional, survey-based approach to evaluate rural pharmacy student'sknowledge, attitudes and behavioural patterns regarding yoga as a preventative health intervention. The efficacy of this approach in gathering snapshot data from a specified population within a given time period led to its selection.

2.2. Study setting

Malshiras Taluka, in Maharashtras Solapur District, is primarily a rural area with little access to organised wellness initiatives. This is where the study was carried out. The purpose of focussing on this region was to assess the degree of yoga-related health literacy among young people from rural areas who are pursuing health science courses.

2.3 Study population

Students enrolled in pharmacy diploma and degree programs at rural institutions in the Malshiras region made up the target population. These students were thought to be perfect for evaluating attitudes that promote health and are a crucial group for the delivery of community-based healthcare in the future.

2.4. Sample size and sampling technique

About 250 students in all took part in the research. To guarantee proportionate representation across academic years (first to last year) and program levels (diploma and degree), a stratified random sampling technique was used. By using this method, selection bias was reduced and sample demographic diversity was guaranteed.

2.5. Tool for data collection

A standardised, pre-validated questionnaire created especially for this study was used to collect data. The following sections contained the instruments closed- and Likert-scale items:

1. Age, gender, academic year and place of residence make up the demographic profile.
2. Awareness Domain: Knowledge about yoga and its function in promoting preventive health
3. Attitude and Perception: Perceptions of the importance of academic life, students views and their willingness to practise yoga
4. Practice Behaviour: The frequency, length and kinds of yoga exercises performed
5. Practice Barriers: Self-reported issues that keep people from practicing often, such as lack of motivation, time and access
6. Subjective views on how yoga has improved ones physical, mental and academic well-being Prior to being administered on a large scale, the questionnaire was pilot tested for clarity and reliability on a small sample (n=20).

2.6. Data collection method

Depending on student convenience and institutional availability, data was gathered both online (Google Forms) and offline (in-person paper-based surveys). Prior to their involvement, students were told of the studys goals and their informed consent was acquired. Anonymity was rigorously preserved throughout the procedure and participation was entirely voluntary.

2.7. Statistical analysis

Both descriptive and inferential statistical methods were used to analyse the data. Demographic information and response frequencies were compiled using descriptive statistics, such as mean, standard deviation (SD) and percentage distributions. The Chi-square test was used to look at correlations between demographic characteristics and yoga awareness or attitudes. When appropriate, mean scores between subgroups (e.g., Diploma vs. Degree students) were compared using independent t-tests. Standard statistical software, such as SPSS or MS Excel, was used for all statistical analyses and $p < 0.05$ was considered significant.

3. Results

3.1. Demographic characteristics

250 rural pharmacy students registered in undergraduate and diploma programs at several institutions in Malshiras Taluka, Solapur District, were polled for the study. The mean age of the participants was 20.1 ± 1.9 years, with a range of 17 to 24 years. Males made up 47.2% (n=118) of the sample, while females made up 52.8% (n=132). Students in their first year (38.4%, n=96) comprised the largest category, followed by those in their second year (34.8%, n=87) and final year (26.8%, n=67). In keeping with the studys regional focus, every student came from a rural or semi-rural background. As indicated in charts inn diagram no.1 and given in table No.1: Demographic Profile of Participants.

3.2. Awareness assessment

Of the pupils, a sizable majority (88%, n=220) said they were already familiar with yoga. Only 64% of respondents (n=160) could accurately describe yoga as a health promotion and prevention practice as opposed to just a physical activity. When asked where they learnt, 43.2% (n=108) said they learnt it at school or college, 26% (n=65) said they learnt it from radio or television, 21.6% (n=54) said they learnt it from social media and a meagre 9.2% (n=23) said they learnt it from yoga instructors or medical experts.

3.3. Attitude assessment

The majority of people had positive opinions on yoga. A significant 71.6% (n=179) of students indicated that they would be interested in taking yoga classes under supervision. Additionally, 67.2% (n=168) concurred that yoga is a useful preventive healthcare therapy with scientifically proven health benefits. Interestingly, 58.8% (n=147) said they would be open to incorporating yoga into their daily schedules provided there were adequate facilities or organised classes offered on campus. As indicated in charts inn diagram no.1and given in table no. 2: Sources of Yoga Awareness.

3.4. Practice behavior

Even while yoga was well known and popular, not many people actually practiced it. Only 12.8% (n=32) reported doing yoga every day, compared to 22.4% (n=56) who did so once a week. 36.8% (n=92) had never done any yoga, while 28% (n=70) did it occasionally. The most popular type among those who practiced was asana (postures) (79.3%, n=98), followed by pranayama (breathing exercises) (52.6%) and meditation (35.4%). Just 10.4% (n=13) of the participants maintained regular routines for more than six months, with practice sessions typically lasting between 15 and 30 minutes.

3.5. Barriers to yoga practice

A number of obstacles to consistent practice were mentioned by the participants. Lack of time was cited by 52% (n=130) of respondents as the most frequent obstacle. 34.4% (n=86) cited inadequate motivation, while 38% (n=95) cited inadequate facilities or education. Furthermore, 17.6% (n=44) reported not knowing enough about proper yoga poses. Only 6.8% (n=17) of respondents reported feeling uncomfortable because of conservative standards or a lack of privacy during practice sessions, showing that gender-related or cultural limitations were not widely reported.As indicated in charts inn diagram no.1 and given in table no.3: Barriers to Practicing Yoga Regularly.

3.6. Perceived benefits reported

The reported advantages of yoga were generally accepted, notwithstanding the practice gap. 81.2% (n=203) of students concurred that yoga helps with emotional stability and mental calm. 74.4% of respondents (n=186) supported stress

alleviation, especially those final-year students who were under academic pressure. Sixty-eight percent (n=170) reported improved academic performance and increased concentration. Additionally, 61.6% (n=154) acknowledged the benefits of yoga for enhancing physical attributes including endurance and flexibility.

Table 1: Demographic profile of participants (n = 250)

Variable	Category	Frequency (n)	Percentage (%)
Age Group (years)	17–18	60	24
	19–20	102	40.8
	21–22	64	25.6
	≥23	24	9.6
Gender	Male	118	47.2
	Female	132	52.8
Academic Year	First Year	66	26.4
	Second Year	64	25.6
	Third Year	68	27.2
	Fourth Year	52	20.8
Residential Background	Rural	208	83.2
	Semi-rural	42	16.8

Table 2: Sources of yoga awareness (n = 250)

Source of Information	Number of Students (n)	Percentage (%)
School or College Programs	108	43.2
Television or Radio	65	26
Social Media Platforms	54	21.6
Family or Friends	36	14.4
Healthcare Professionals or Instructors	23	9.2
Books or Printed Literature	19	7.6

Table 3: Barriers to practicing yoga regularly (n = 250)

Barrier	Number of Students (n)	Percentage (%)
Lack of Time	130	52
Lack of Motivation	52	20.8
Inadequate Access to Trained Instructors	25	10
Lack of Awareness about Correct Techniques	18	7.2
Cultural/Privacy Concerns	10	4.0
No Suitable Practice Environment	15	6.0

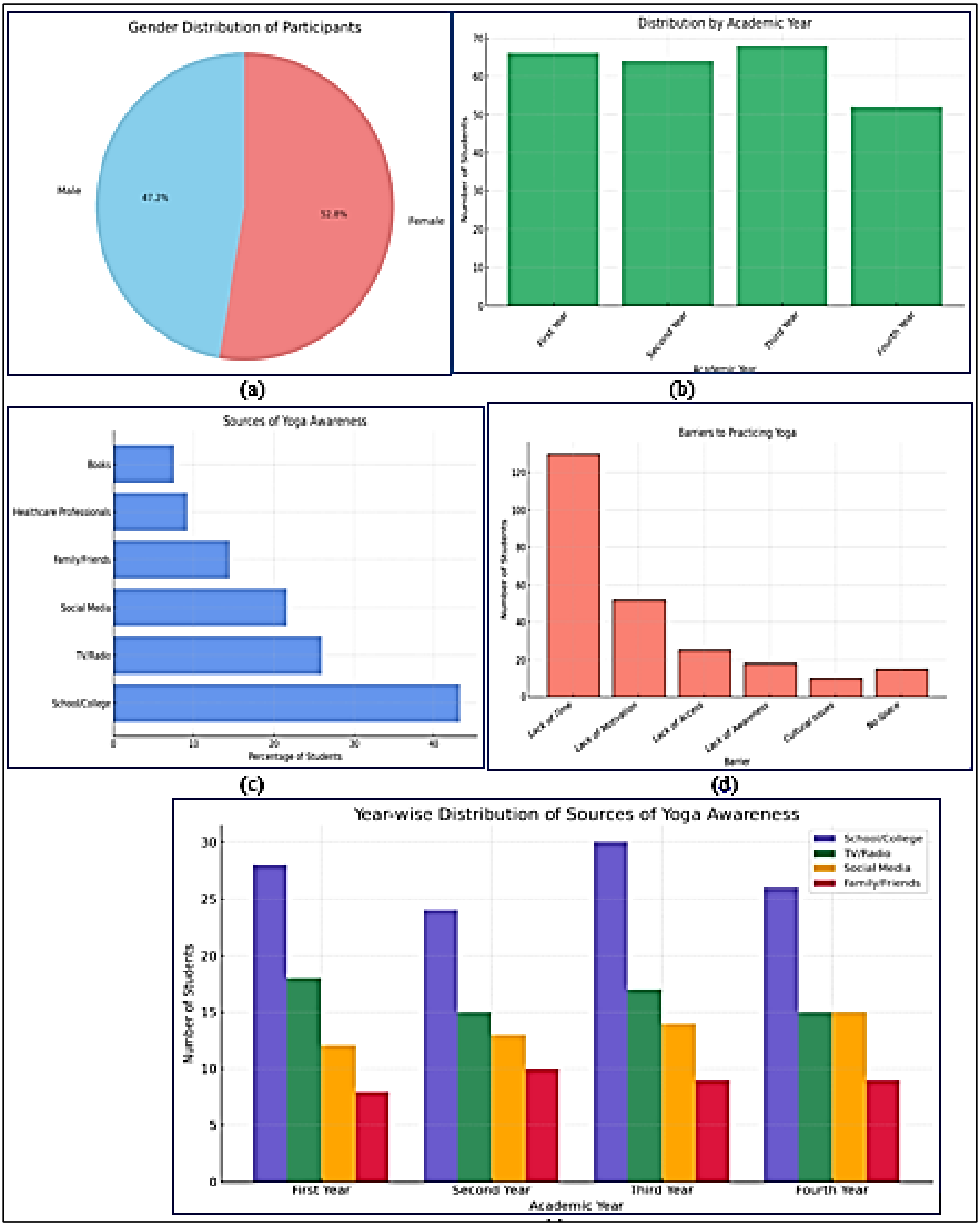

Diagram 1: Charts for **(a)** Gender distribution of participants, **(b)** Academic year distribution, **(c)** Sources of yoga awareness, **(d)** Barriers to practicing yoga, **(e)** Year-wise distribution of sources of yoga awareness

3. Discussion

4.1. Interpretation of findings

The current study reveals a contradiction in rural pharmacy student'sknowledge of and adherence to yoga in the Solapur District. Only 12.8% of students practiced yoga on a daily basis, despite the fact that a sizable number of them (88%) said they had heard of it. This discrepancy highlights the disconnect between theoretical understanding and real-world implementation. According to the research, people have a generally good opinion towards yoga, with 67.2% recognising its potential to promote health and 71.6% expressing interest in learning. Consistent participation is still hampered by behavioural and structural obstacles, such as a lack of time (52%) and insufficient access to qualified teachers (38%).

4.2. Comparison with national and international studies

These results are consistent with comparable research done both in India and abroad. According to Tiwari et al. (2022), for instance, just 15% of medical students in Uttar Pradesh frequently practiced yoga, despite 81% of them being aware of its preventive benefits. In a similar vein, university students in New Zealand indicated high awareness but low adherence in an international study conducted by Hagen and Nayar (2021). These similarities imply that the knowledge-practice gap is a widespread problem impacted by educational and infrastructure constraints rather than being region-specific.

4.3. Insights into rural student behaviortoward health and lifestyle practices

The rural student population has a distinct behavioural pattern that is defined by a dependence on traditional and communal values as well as restricted access to services that promote health. Even when students recognise the advantages of yoga, their personal health goals are sometimes overshadowed by conflicting academic demands and a lack of institutional support. Rural students depend more on informal or self-directed learning than their urban counterparts, who may have easier access to wellness centres or organised yoga courses. This may not be enough to promote long-lasting changes in health-related behaviour.

4.4. Cultural and educational influences on yoga awareness and practice

This study demonstrates that while cultural experience with yoga in India provides a foundational understanding, such cultural heritage does not always translate into habitual practice. Students were more interested in continuing their yoga studies if they said they had learnt it through family customs or school programs. However, in the face of academic pressures, these cultural foundations often erode in the absence of formalised training and curricular integration. Furthermore, societal norms and privacy concerns serve as subtle yet effective deterrents in some conservative rural settings, particularly for female students.

4.5. Importance of incorporating yoga awareness in pharmacy curriculum

Integrating wellness practices like yoga into the academic curriculum is necessary due to chemistsgrowing position as health educators and advocates for preventive treatment. Incorporating yoga courses into pharmacy education can benefit student'shealth and give aspiring pharmacists the holistic skills they need to help patients. Credit-based yoga electives, certified instructors and structured programs may promote professional competencies in line with preventive health paradigms as well as personal health advantages.

4.6. Addressing barriers through policy and institutional initiatives

Targeted institutional and policy-level initiatives are necessary to close the awareness-practice gap. To normalise yoga practice among students, institutions can implement yoga groups, morning sessions, or wellness courses that are credit-linked. Collaborations with the Ministry of AYUSH and regional health agencies can support accessible training programs, awareness campaigns and certified teacher visits at the policy level. Long-term adoption and impact will depend on customised strategies that take into account regional socio-cultural variables. Although yoga is well-liked by rural pharmacy students, its use is restricted by a lack of institutional support, direction and curriculum integration. Converting awareness into sustained, actionable health behaviour can be greatly aided by strengthening institutional structures and curriculum design.

4. Limitations of the Study

Although this study offers insightful information about rural pharmacy studentsunderstanding and attitudes towards yoga, it should be noted that it has a number of limitations. First off, the study was limited to the Solapur districts Malshiras Taluka, which restricts the findingsapplicability to other rural or urban populations in Maharashtra or elsewhere. Second, self-reported questionnaires were used for data collection, which makes them susceptible to errors in recollection or question comprehension. The studys cross-sectional approach limits the capacity to establish causal relationships between awareness levels, attitudes and behavioural patterns by only recording responses at one moment in time. Furthermore, participants may have been swayed by social desirability bias to give answers that represent their true habits or beliefs rather than those that conform to perceived favourable standards, especially when it comes to health-promoting practices like yoga.

5. Future Directions

To effectively enhance awareness and adoption of yoga as a preventive health practice among rural pharmacy students, it

is imperative to implement structured, institution-level interventions. Pharmacy colleges should regularly conduct yoga workshops, expert-led lectures, and interactive health discussions to facilitate experiential learning and dispel prevailing myths. These sessions, led by qualified professionals, can expose students to practical techniques such as asanas, pranayama, and meditation, while also emphasizing the scientific rationale behind yoga's role in preventive healthcare. Introducing a credit-based or value-added elective course titled "Yoga and Lifestyle Management" into the pharmacy curriculum would ensure formal and consistent exposure to yoga's physical and mental health benefits.

These academic reforms should be complemented by community-based outreach efforts to normalize yoga practices in rural academic environments. Focused awareness campaigns organized by National Service Scheme (NSS) volunteers, AYUSH representatives, or local NGOs can bridge the information gap between urban and rural areas. Appointing trained peer educators or "Yoga Ambassadors" on campus can foster peer-to-peer motivation and sustained participation. Collaborations with certified instructors from nearby Patanjali institutes, AYUSH centres, or wellness clinics can further ensure culturally appropriate and authentic yoga training.

For long-term impact assessment, future research should adopt longitudinal study designs that track changes in awareness, attitudes, and behaviours over time. Expanding the scope to include pharmacy colleges from various districts in Maharashtra would increase the external validity of findings and provide deeper insights into regional differences. Comparative studies between rural and urban student populations could identify specific barriers and enablers influencing yoga uptake. Interventional research incorporating structured yoga programs with follow-up assessments on physiological, psychological, and academic parameters will generate empirical evidence of yoga's effectiveness. Together, these multifaceted educational and research strategies are essential to institutionalizing yoga as a sustainable and impactful component of preventive healthcare education among pharmacy students, particularly in under-resourced rural areas.

6. Conclusion

This review examined the awareness, attitudes, and practices related to yoga among rural pharmacy students in Solapur. While 88% of students were aware of yoga primarily through media and educational sources only around 40% engaged in regular practice. Although 71.6% expressed interest in learning yoga, barriers such as lack of time, motivation, and access to guided instruction limited participation. Students widely recognized yoga's benefits, including stress reduction, improved focus, and enhanced physical stamina. However, positive attitudes did not consistently translate into practice. These findings suggest a need for targeted institutional strategies, such as integrating yoga sessions into the academic schedule, offering certified training programs, and establishing accessible wellness centres. Encouraging consistent yoga practice can improve students' personal well-being and better prepare them for their future roles in promoting holistic and preventive healthcare as pharmacy professionals. Developing these habits during training fosters lifelong commitment to health and resilience in demanding clinical environments.

7. Source of Funding

None.

8. Conflict of Interest

None.

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