

Perception and practice of the eight limbs of yoga in yoga teachers: A cross-sectional descriptive study

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ABSTRACT

Background: Yoga is an ancient wisdom that originated in India and encompasses eight limbs, including yama, niyama, asanas, pranayama, pratyahara, dharana, dhyana, and samadhi. Despite its holistic nature, many studies on yoga tend to focus solely on its physical aspects, breathing practices, and meditation, neglecting other essential components. To address this gap, a study was conducted to determine the perception and practice of all eight limbs of yoga among yoga teachers. **Method:** A self-designed questionnaire containing 28 items was used for assessing the knowledge, perception, and practice of the eight limbs of yoga among yoga teachers. A total of 37 yoga teachers participated in the study. Cross-tabulation was performed to analyze the data. **Results:** The majority of participants (>80%) in this study on the practice of astanga yoga reported that all limbs of yoga were essential in their practice. However, there were varying degrees of emphasis placed on each limb. Pranayama (91.9%) and asana (89.2%) were given the most emphasis, while niyama (75.7%), yama (73%), pratyahara (70.3%), dhyana (70.3%), and dharana (64.9%) were given slightly less emphasis. Interestingly, those with more experience placed greater emphasis on various aspects of yoga. **Conclusion:** Practitioners should embrace all eight limbs of yoga when introducing it to new populations to increase access to yoga. This will help promote the benefits of yoga and make it more accessible to those who may benefit from it. Health professionals should have a comprehensive understanding of the holistic practice of yoga, including its ethics, postures, breath, mindfulness, and meditation, to promote its maximum benefits and avoid potentially harmful practices.

Keywords: Astanga yoga, eight limbs of yoga, yoga, yoga teachers

Introduction

Yoga (from the Sanskrit word meaning “yoke” or “join”) is an ancient wisdom that originated in India. June 21 was declared the International Day of Yoga by the United Nations General Assembly in 2015, following a resolution from the Government of India.^[1] Since then, there has been an increase in the number of yoga practitioners.^[2] It has been estimated that 11.8% of the Indian population practices yoga across both rural and urban areas.^[3]

In *Patanjali's Yoga Sutras* (aphorisms), yoga has been defined as “chitta vritti nirodhah” (chapter 1, verse 2), which means restraining (nirodhah) the mind (chitta) from taking various forms (vrittis).^[4] It is believed that an eight-fold path called *astanga yoga*, when practiced holistically, leads to a state of sublimation of all mental modifications in the mind and superconsciousness.^[5] It includes eight limbs of yoga comprised of *yama* (universal ethics), *niyama* (individual ethics), *asanas* (physical postures), *pranayama* (breath control), *pratyahara* (control of senses), *dharana* (concentration), *dhyana* (meditation), and *samadhi* (pure consciousness).

According to *Patanjali's Yoga Sutras*, the initial stages of yoga, including *yama*, *niyama*, *asanas*, and *pranayama*, are considered the philosophical foundation of life. Later stages, including *pratyahara*,

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dharana, dhyana, and samadhi, are practices for the attainment of a higher purpose of life, which is the realization of ultimate truth or a bliss state.^[4]

Globally, yoga generally refers to the third and fourth limbs, “asana,” and “pranayama.” Studies on yoga often concentrate on postural exercises, breathing practices, and meditation. It is important to note, however, that yoga is not limited to just *asanas* and *pranayama*. According to Indian scriptures, yoga is a path to liberation (moksha) from suffering and attaining true nature or happiness.^[6-8]

The United Nations’ decision to declare June 21 as the International Day of Yoga in 2015 was motivated by the recognition of yoga as a comprehensive approach to health and well-being. One of the goals of this declaration is to spread awareness of the benefits of yoga. Therefore, promoting yoga in its entirety may lead to greater acceptance and accessibility among those who associate it solely with physical and breathing practices.^[9,10] Hence, yoga teachers can serve as a bridge to promote knowledge about traditional yoga to students and patients who engage in yoga practice.

Our research question was about the perception and practice of the eight limbs of yoga by yoga teachers. The present study was conducted with the primary objective of determining the perception, knowledge, and practice of the eight limbs of yoga among yoga teachers.

Material and Methods

Study design: A cross-sectional descriptive study based on a pretested and validated self-designed questionnaire was conducted.

Ethics consideration: The study was approved by the Institutional Ethical Committee (IECHR-2023-60-10). As this was an online survey, participants could not sign an informed consent form. Instead, they had to approve their consent by clicking the “yes option.” Thus, by clicking the “yes option” box and filling out the anonymous questionnaire, the participants consented to participate.

Study population: Yoga teachers who delivered a yoga session during the last 6 months were included in the study. There were no exclusion criteria *per se*. They were explained about the aim and objectives of the study, which would take about 10 minutes to complete. Prospective participants were then shared a link to a Google Form and participation was voluntary.

Sample size and sampling method: Since the prevalence of yoga teachers was unknown, the sample size was not calculated. A link to Google Form for all the known yoga teachers was shared through social networking groups, emails, and personally. Thirty-seven participants volunteered to participate in the study. They were selected through a convenience nonrandom sampling method.

Study tool: A self-designed questionnaire to assess the knowledge, perception, and practice of eight limbs of yoga teachers was prepared. The questionnaire was divided into two parts: (i) demographic information, including age, gender, yoga education level, current yoga teaching role, and years in practice; and (ii) questions to assess the knowledge (12), perception (9), and practice (7) of the eight limbs of yoga. In assessing the awareness of eight limbs of yoga participants, they were required to indicate their level of agreement with each statement using the 3-point Likert scale, where 1 = not at all, 2 = not much, and 3 = very much. Similarly, for assessing perception, a 3-point Likert scale was used, where 1 = not essential, 2 = less essential, and 3 = essential. For assessing, the practice 5-point Likert scale was used encompassing the responses from never (1) to always (5).

Face, content validation, and reliability test were conducted before the actual initiation of the study. For validation, a questionnaire was distributed to 12 yoga teachers who were asked to rank each question in two categories: (a) essential and (b) useful but not essential or not necessary. Further, content validity for every question was calculated by the following formula: $CVR = (ne - N/2)/(N/2)$, where CVR is the content validity ratio, *ne* is the number of participants indicating essential, and *N* is the total number of participants. Questions with positive CVR scores (more than 50% of the participants believed the question was essential) were included in the questionnaire.^[11]

The reliability analysis of the questionnaire was conducted by calculating Cronbach’s alpha, which was found to be >0.9. Reliabilities for the subscales (questions about knowledge, perception, and practice of the eight limbs of yoga) were also >0.7 and thus had a high internal consistency.^[12]

Data collection: Completed questionnaires were assessed every week by the principal investigator. Data were coded and entered into Microsoft Excel.

Statistical analysis: Descriptive analysis was performed. Continuous variables were presented as the mean and standard deviation (SD). Categorical variables were presented as percentages or frequencies. Cross-tabulation and Chi-square were performed to see the differences at the level of gender and duration of experience. Fisher’s exact test value was obtained, and the level of significance was < 0.05.

Results

Demographic characteristics of participants: Table 1 shows the socio-demographic characteristics of participants. The total number of participants who volunteered to participate and completed the questionnaire was 37. Females (70.3%) were more as compared to males (29.7%). The participant’s mean age was 39.11 (SD: 11.37) years. Moreover, 45.9% of participants were in the age range of

31–40 years. The majority were self-employed (73%), had a master’s degree in yoga (62.2%), and had been working for 1–18 years (7.27 ± 4.59).

First, responses to the knowledge were categorized as either “not at all” or “very much.” Second, their perception of the eight limbs of yoga as an essential practice was sorted into “essential” or “not essential” categories. The former included those who considered the eight limbs of yoga an essential part of yoga practice, while the latter included those who viewed them as a less essential or completely unimportant aspect of yoga.

Lastly, the extent to which participants practiced the eight limbs of yoga during yoga sessions was categorized as either “emphasized” or “not emphasized.” The former group consisted of those who reported practicing the eight limbs most of the

time or always, while the latter included those who practiced the eight limbs less frequently or not at all.

Knowledge regarding the eight limbs of yoga: Table 2 shows awareness of the purpose of the eight limbs of yoga among yoga teachers. The majority of participants (>70%) were aware of and knew the purpose of the eight limbs of yoga. Responses to statements regarding knowledge of some components of yoga were also noted. Regarding knowledge, they were more aware of asana (91.9%), followed by pranayama (86.5%), yama (86.5%), niyama (83.8%), dharana (78.4%), dhyana (75.7%), pratyahara (75.7%), and samadhi (62.2%).

Perception regarding the eight limbs of yoga: Table 3 shows how many yoga teachers consider each limb of yoga to be essential in practice. Participants (>80%) reported all limbs of yoga were essential in yoga practice. Pranayama (100%) and asanas (97.3%) were considered essential practices, followed by yama (94.6%), niyama (94.6%), dhyana (86.5%), pratyahara (83.8%), and dharana (81.1%). We have excluded samadhi as it is considered the ultimate state of pure bliss or consciousness where practitioner quest ends, which is the result of astanga yoga.

Practice regarding the eight limbs of yoga: Table 4 shows how much yoga teachers emphasize each limb of yoga during a yoga session. Participants placed varying emphasis on each limb of yoga. They gave more emphasis on asanas (89.2%) and pranayama (91.9%) and slightly less emphasis on yama (73%), niyama (75.7%), pratyahara (70.3%), dharana (64.9%), and dhyana (70.3%). Responses to the statements regarding the practice of some components of yoga were also noted.

To be able to compare groups, we categorized participants into two groups based on two parameters: gender (male and female) and length of practice in years (less than seven and more than seven) based on median (seven years) as a cut-off point.

Table 1: Socio-demographic characteristics of the yoga teachers

Variables	Categories	Numbers (%)
Gender	Male	11 (29.7)
	Female	26 (70.3)
Age (years)	21–30	8 (21.6)
	31–40	17 (45.9)
	41–50	7 (18.9)
	61–70	3 (8.1)
	71–80	2 (5.4)
	Mean±SD	39.11±11.37
Yoga qualification	Certificate	6 (16.2)
	Diploma	1 (2.7)
	Bachelor	7 (18.9)
	Master’s	23 (62.2)
Yoga teaching role	Self-employed	27 (73)
	Employed (private)	7 (18.9)
	Employed (government)	3 (8.1)
Experience in yoga teaching (years)	Mean±SD	7.27±4.59
	Median	7
	Range	1–18

SD=Standard deviation

Table 2: Knowledge of the eight limbs of yoga

Components (awareness and knowledge of)	Not at all/not much Numbers (%)	Very much Numbers (%)
Yama	5 (13.5)	32 (86.5)
Niyama	6 (16.2)	31 (83.8)
Asanas	3 (8.1)	34 (91.9)
Pranayama	5 (13.5)	32 (86.5)
Pratyahara	9 (24.3)	28 (75.7)
Dharana	8 (21.6)	29 (78.4)
Dhyana	9 (24.3)	28 (75.7)
Samadhi	14 (37.8)	23 (62.2)
Statements regarding knowledge of some components of yoga		
Satya, ahimsa, asteya, brahmacharya, and aparigraha are the components of which limb of yoga?	The correct response was yama	All participants responded correctly
Is niyama a component of yoga?	The correct response was yes	All participants responded correctly
Do you consider focusing on breathing to be an essential part of asana?	The correct response was yes	All participants responded correctly
“Controlling the senses, mind, and looking inward” is part of which limb of yoga?	The correct response was pratyahara	30 (81%) out of 37 responded correctly

Table 5: Table 5 shows the percentage of participants in each category of gender and experience who defined knowing the purpose of *astanga* yoga as very important, perceptions related to the eight limbs of yoga as essential practices, and emphasis on the eight limbs of yoga during a yoga session.

Males were more aware of asana and pranayama (100%), followed by yama (90.9%), and pratyahara (90.9%), whereas females were more aware of asana (88.5%), yama (84.6%), and niyama (84.6%). In perception toward the eight limbs of yoga, both males and females consider pranayama and asana (100%) to be essential practices, followed by yama and niyama. In the practice of the eight limbs of yoga, females put greater emphasis on pranayama and asana (96.2%), followed by niyama (69.2%), dhyana (69.2%), yama (65.4%), and pratyahara (65.4%). The male counterpart was putting more emphasis on niyama and yama (90.9%), followed by pranayama (81.8%), pratyahara (81.8%), and asana (72.7%).

Participants with >7 years of experience were more aware of pranayama and asanas (100%), followed by yama (93.8%), and pratyahara (87.5%). In their perception of the eight limbs of yoga, all participants consider pranayama (100%), followed by asana, yama, and niyama (93.8%), to be essential practices. In practice of the eight limbs of yoga, those >7 years put greater emphasis on pranayama, niyama, and yama (100%) followed by asana and dhyana (93.8%), which is highly significant for niyama, yama, and dhyana ($P < 0.01$).

Table 3: Perception toward the eight limbs of yoga

Components (how much each limb is essential in practice)	Not/less essential Numbers (%)	Essential Numbers (%)
Yama	2 (5.4)	35 (94.6)
Niyama	2 (5.4)	35 (94.6)
Asanas	1 (2.7)	36 (97.3)
Pranayama	0	37 (100)
Pratyahara	6 (16.2)	31 (83.8)
Dharana	7 (18.9)	30 (81.1)
Dhyana	5 (13.5)	32 (86.5)

Table 4: Practice of the eight limbs of yoga

Components (emphasis on each limb during a yoga session)	Not at all/little numbers (%)	Often/very often/always numbers (%)
Yama	10 (27)	27 (73)
Niyama	9 (24.3)	28 (75.7)
Asanas	4 (10.8)	33 (89.2)
Pranayama	3 (8.1)	34 (91.9)
Pratyahara	11 (29.7)	26 (70.3)
Dharana	13 (35.1)	24 (64.9)
Dhyana	11 (29.7)	26 (70.3)
Statements regarding practice of some components of yoga		
Do you tell your students/patients to live a life of awareness and live in the present?	Twenty-seven out of 37 always tell their students/patients, while the rest tell sometimes	
Do you tell your students/patients to live a life of contentment?	Twenty-five out of 37 always tell their patients/students, while the rest tell sometimes	

Discussion

In the present study, the majority of yoga teachers were female (70.3%). Most of them (45.9%) were in the age range of 31–40 years. Many were self-employed (73%), and they had been working for 1–18 years.

Knowledge regarding the eight limbs of yoga

Our study shows that more than 75% of yoga teachers were aware of the purpose of the eight limbs of yoga. All participants responded correctly to the question regarding the teachings of yoga. Our study had also shown that participants with more than 7 years of practice had greater awareness regarding the eight limbs of yoga.

Asana, pranayama (100%) was among the most well-known, followed by yama, pratyahara (92.9%), then dharana and niyama (85.7%) in practitioners with more length of experience (>7 years). Studies worldwide have suggested that yoga practitioners' knowledge and practice of the eight limbs are not in full range and may not be aware of all their practices.^[9,10,13,14] Findings in the present study showed that the majority of yoga teachers in India were aware of the teachings of yoga.

Perception about the eight limbs of yoga

Perception regarding the practice of *astanga* yoga: most of the participants (>80%) reported all limbs of yoga were essential in yoga practice. Similar to our results, a study by Brems *et al.*^[10] on the perception of the eight limbs of yoga among yoga practitioners showed that 82% and 88% of them endorsed the asana and pranayama, respectively. However, participants in the same study consider yama to be a less essential (47.56%) practice. On the contrary, in the present study, 94.6% of study participants considered yama and niyama to be essential practices.

In our study, more than 80% of participants considered pratyahara, dharana, and dhyana to be essential practices. In the study by Brems *et al.*,^[10] only 63%, 69%, and 58% of participants endorsed pratyahara, dharana, and dhyana as important. A study

Table 5: Knowledge, perception, and practice of the eight limbs of yoga based on gender and length of experience

	Gender		Experience (years)	
	Male (n=11) (%)	Female (n=26) (%)	<7 (n=21) (%)	>7 (n=16) (%)
Knowledge				
Yama	90.9	84.6	81	93.8
Niyama	81.8	84.6	81	87.5
Asanas	100	88.5	85.7	100
Pranayama	100	80.8	76.2	100
Pratyahara	90.9	69.2	66.7	87.5
Dhyana	81.8	73.1	76.2	75
Dharana	81.8	76.9	76.2	81.3
Samadhi	63.6	61.5	65.2	57.1
Perception				
Yama	90.9	96.2	95.2	93.8
Niyama	90.9	96.2	95.2	93.8
Asanas	90.9	100	100	93.8
Pranayama	100	100	100	100
Pratyahara	72.7	88.5	90.5	75
Dhyana	81.8	88.5	95.2	75
Dharana	72.7	84.6	85.7	75
Practice				
Yama	90.9	65.4	52.4	100*
Niyama	90.9	69.2	57.1	100*
Asanas	72.7	96.2	85.7	93.8
Pranayama	81.8	96.2	85.7	100
Pratyahara	81.8	65.4	61.9	81.3
Dhyana	72.7	69.2	52.4	93.8*
Dharana	72.7	61.5	57.1	75

*Highly significant at <0.01

by Ivztan and Shapiro suggested that as practitioner practice progresses, they become more focused on their spiritual journey. This shifting of intentions can be extended to the wider practice of yoga. Furthermore, it was suggested that physical intention does not decrease with time but remains constant, suggesting that practitioners may be more focused on their spiritual journey.^[15-17] One interesting finding was that yoga practitioners with less experience of practice were more likely to believe that all aspects of yoga were essential. So far, we have not found a sound explanation for this observation.

Practice of the eight limbs of yoga

Participants placed varying emphasis on the practice of each limb of yoga. They gave more emphasis on pranayama (91.9%) and asana (89.2%) and slightly lesser emphasis on niyama (75.7%), yama (73%), pratyahara (70.3%), dhyana (70.3%), and dharana (64.9%). Several studies have found that yoga providers tend to concentrate on asana and, to a lesser extent, on pranayama and meditation practices.^[7] Elwy AR *et al.*,^[18] in their scoping review, found that only 37% of yoga research had included asana, breathing practices, and meditation, excluding other components of yoga.

A cross-sectional study conducted in the United Kingdom found that 93.86% of yoga providers gave more time to asana, 46.19%

to pranayama, 34.91% to dhyana, 29.48% to dharana, 18.67% to pratyahara, 11.06% to yama, and 11.06% to niyama. Compared to yoga teachers, yoga therapists gave slightly higher emphasis on asana (91.04%), pranayama (62.69%), dharana (40.29%), pratyahara (35.82%), niyama (22.39%), and yama (20.9%). This indicates that even the most practiced yogis were not practicing the eight limbs of yoga holistically, which suggests that these aspects may not be a focus in modern-day classes.^[19] However, the present study shows that almost two-thirds of participants emphasize the eight limbs of yoga during practice sessions.

This study suggests that those with more experience are putting more emphasis on various aspects of yoga, while those with <7 years of experience tend to be focused on asana and pranayama. In addition, there was a significant difference in emphasis on various aspects of yoga as a function of length of practice. Practitioners with more than 7 years of experience tend to place more emphasis on yama, niyama, and dhyana. Engaging in yoga practice can significantly increase spirituality and mindfulness.^[20]

Others also found that as the number of years of yoga practice increased, yoga practitioners gave more emphasis to the mental, emotional, and spiritual benefits compared to the physical benefits.^[21,22] Studies had reported that length and frequency of yoga practice weekly were positive predictors of the physical, mental, emotional, and spiritual benefits of yoga.^[17,22,23]

Each of the eight limbs of yoga has a unique impact on various aspects of health. Each limb represents a distinct intervention, similar to different approaches to psychotherapy, including psychodynamic, cognitive-behavioral, and interpersonal therapies.^[23] Schmid *et al.*^[24] found that even when a yoga intervention does not explicitly include Sanskrit terms, definitions, or education about the eight limbs of yoga, participants still discuss the benefits related to all eight limbs. It could be possible that many yoga research trials could be linked to similar results.^[18,25]

Limitations

One major limitation of our study was the small sample size and could not be generalized to the population of interest. This may have been because the survey was conducted primarily online, resulting in a lower response rate. Additionally, the study aimed to investigate perceptions and practices related to the eight limbs of yoga, which may have deterred some individuals from participating. Additionally, there can be a risk of information bias as participants may be inclined to provide socially desirable responses.

Recommendations

Yoga is an ancient and comprehensive system that has well-documented emotional, mental, and physical health benefits, but its definitions remain narrow, and practitioners

often fail to grasp its full range of practices.^[14] Ongoing education and promotion of the entire philosophy are necessary to ensure accurate dissemination and to uncover potential benefits beyond those expected or promoted by mainstream media.^[7,24]

Yoga, if viewed holistically, could effectively contribute to manifesting the World Health Organization's definition of health as a "state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity."^[26]

Conclusion

It is clear from this study that the practice of astanga yoga is highly valued by its practitioners, who recognize the importance of all limbs of yoga in their practice. However, there are differences in emphasis placed on each limb, which may reflect individual preferences and experiences.

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Ethics committee approval

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Conflicts of interest

There are no conflicts of interest to declare.

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