

# An Assessment of Knowledge, Attitude, and Practice (KAP) towards Yoga among Healthcare Professionals of AIIMS, Raipur: A Cross-sectional Study

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## ABSTRACT

**Introduction:** Yoga is a comprehensive practice affecting well-being through various systems, it can be easily practiced by young and old, at home, and at work. We have done a survey based on knowledge, attitude, and practice domains to assess quantitative and qualitative information. This survey will help researchers to understand the challenges faced by healthcare professionals in practicing Yoga and suggest remedial measures/solutions.

**Materials and methods:** This study was a cross-sectional, observational, questionnaire-based survey. A total of 372 healthcare professionals, including faculty, junior residents, senior residents, nursing staff, MBBS, and nursing students of AIIMS, Raipur, were included in the study. Questionnaire-based data were collected over 2 months. All the questions were closed-ended.

**Results:** It was found that participants [210 (69.3%)] believed that Yoga is Mind-body and spiritual practices, whereas 73 (24.09%) believed that Yoga is stretching, breathing, and meditation techniques for stress relief. Only 14 (0.04%) defined Yoga as a kind of physical exercise. Interestingly, 169 (55.78%) people responded that practice of Yoga cannot lead to any kind of injury. Around 154 (50.83%) people gave physical fitness as a reason to start Yoga, and about one-fourth [76 (25.08%)] of the people started Yoga as a part of school education. Around 51.16% of people found Yoga to be better than the gym, dance, or Zumba. It was also observed that among health professionals who had been practicing Yoga since a long time in 73.60% quite due to various reasons but only 18.48% are currently practicing Yoga.

**Conclusion:** This survey indicates that adequate knowledge, the familiarity with Yoga, and a positive attitude toward Yoga are found to be present among healthcare professionals. However, future studies are warranted to identify the association between the knowledge and practice of Yoga.

**Keywords:** Health workers, Stress and awareness, Well-being, Yoga practice.

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## INTRODUCTION

Healthcare workers are constantly working in a stressful environment based on their job description and hierarchy and they often feel tired.<sup>1</sup> In recent years, after the COVID-19 pandemic, the mental health of healthcare providers was recognized as a major concern and threat to healthcare quality.<sup>2</sup> During the outbreak of COVID-19, healthcare professionals experienced elevated levels of psychogenic symptoms, such as anxiety, distress, somatic symptoms, and burnout.<sup>3</sup> Healthcare professionals (HCPs) usually undergo various stressful situations due to extensive patient loads, high risk of exposure, and unparalleled disruptions to normal life.<sup>4</sup>

Growing research demonstrated that Yoga might improve physical and mental health. Yoga is a holistic philosophy of mind, body, and spirit that encourages practitioners to lead ethical and balanced lives. Yoga is a holistic approach impacting the overall well-being of a person in an integrated manner. Even though individual aspects of Yoga are beneficial, composite aspects of Yoga such as physical and meditative parts may have greater benefits.<sup>5</sup>

Yoga can be easily practiced by young and old, at home and at work. Hence, in order to promote Yoga as a sustainable measure to improve and promote health, barriers and challenges in Yoga practice must be known. The Knowledge, Attitude, and Practices (KAP) survey is done through a quantitative method that provides information about health-related beliefs and behaviors. The KAP

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survey also reveals misconceptions or misunderstandings in a target population. This study will help researchers to understand the challenges faced by healthcare professionals of one of the premier health education institutes (AIIMS Raipur) in practicing Yoga and suggest remedial measures/solutions.

## MATERIALS AND METHODS

### Sample

The total population for the study which includes Faculty, Junior residents, Senior residents, Nursing staff, MBBS, and nursing students of AIIMS, Raipur were included in the study which was approximately 2869 at the time of the study. The sample size was calculated using the formula for the definite population. The total sample size for this study came out to be 339. Assuming a 10% non-response rate, we added 33 healthcare workers to our sample size so our net sample size was 372.

### Study Design and Settings

Our study was a cross-sectional, observational, questionnaire-based survey. It was studied on employees of AIIMS, Raipur which includes Faculty, Junior residents, Senior residents, Nursing staff, MBBS, and nursing students from 13/02/2023 to 13/04/2023. Semi-structured questionnaires were used to collect the data that consisted of closed-ended questions.

### Participants

Adults ( $\geq 18$  years) who are students, healthcare professionals, and nursing staff of AIIMS, Raipur, who were selected through computer-generated randomization software, with adequate knowledge of English or Hindi language to give consent and fill the questionnaire were included in the study. Those not willing to give consent to participate in the study were excluded from the study (Table 1).

### Development of the Questionnaire-based Survey

The KAP questionnaire was not available for this population; hence, a new questionnaire was developed as per the steps of test construction. The questionnaire was primarily developed in English, and then it was translated into Hindi (i.e., local language). The final version of the questionnaire was developed by the validation of three subject experts (one was a Yoga professional, and the other two were community medicine experts) to examine the precision, relevance, and content validity of the questions. Pilot testing of the questionnaires was done by 30 college students before to improve any potential problems while surveying the questionnaires. Another performance was designed to collect sociodemographic details.

### Data Collection

Sociodemographic records of all the participants were collected at the time of study enrolment. Past Medical history, lifestyle description, education details, knowledge, attitude, and practice towards Yoga were collected as per the case record form through online Google Forms from the period of 13/2/2023 to 13/04/2023.

### Ethical Considerations

The participant consent form was taken at the time of data collection. Information provided by participants was kept confidential and this study was submitted for ethical permission in AIIMS Raipur. After obtaining the Institutional Ethics Committee's approval the study was started. The informed written consent form shall be filled out through online forms.

### Data Analysis

Categorical variables were presented as frequencies and percentages, and numerical variables were presented as mean and standard deviations. The association between gender and Yoga practice in the past and present was analyzed by using the Chi-square test.

## RESULTS

Among 372 Healthcare professionals those who were approached, 303 had responded to participate in the study. This is 81.45% of the response rate and 89.38% of the power-calculated sample size. The age of the respondents was  $27.86 \pm 5.92$ . The most common reason for non-response was no interest. Among the healthcare professionals who were surveyed, 160 (52.8%) were males and 143 (47.1%) were females. Around 170 (56.1%) respondents have heard about Yoga through school/college education, while 100 (33.03%) have heard through mass media.

Under the knowledge domain, more than half of the participants [210 (69.3%)] believed that Yoga is Mind-body and spiritual practices for overall health and well-being, whereas

**Table 1:** Demographic information of the participants

Demographic status	N = 303	Percentage (%)
Gender		
Male	160	52.8%
Female	143	47.1%
Marital status		
Married	122	40.26%
Unmarried	181	59.7%
Family type		
Joint	87	28.71%
Nuclear	212	69.96%
Extended	4	1.32%
Education		
Undergraduate	94	0.31%
Graduate	121	0.39%
Postgraduate	84	0.27%
PhD/Superspecialist	4	0.13%
Occupation		
Student	95	31.35%
Nursing officer	149	49.17%
Faculty	11	3.63%
JRs/SRs	48	15.84%
Lifestyle		
Heavy activity	25	8.25%
Moderate activity	236	77.87%
Sedentary activity	42	13.86%
Physical activities		
Gym/Zumba/Dance, etc.	39	12.87%
None	67	22.11%
Others	13	4.29%
Outdoor games	53	17.49%
Walking/Jogging	131	43.23%
Health issues		
None I am healthy	243	80.19%
Allergy	3	0.99%
Sickle cell	4	1.32%
Diabetes	6	1.98%
Others	47	15.51%

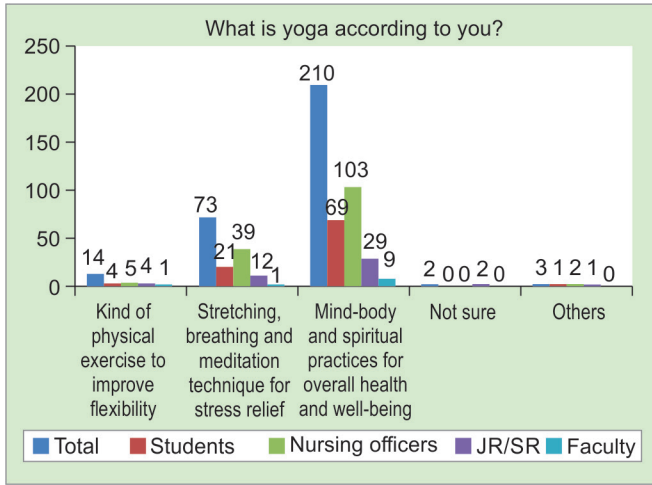


Fig. 1: Opinion of the participants of different strata about what is Yoga according to them

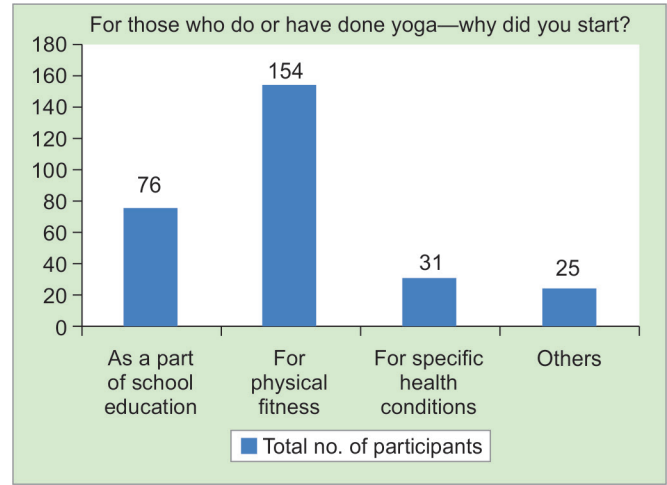


Fig. 3: Reasons for starting Yoga given by respondents

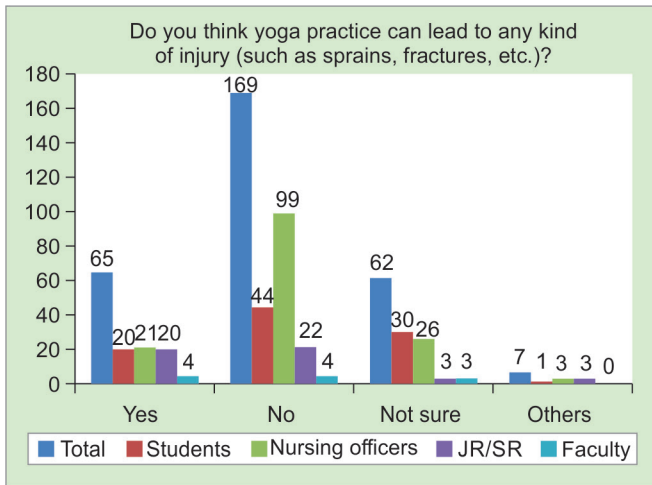


Fig. 2: Response of the participants on whether Yoga practice can lead to any kind of injury

73 (24.09%) believed that Yoga is stretching, breathing, and meditation technique for stress relief. Only 14 (0.04%) defined Yoga as a kind of physical exercise to improve flexibility (Fig. 1).

Interestingly, 169 (55.78%) people responded that Yoga practice cannot lead to any kind of injury. Only 65 (0.21%) people thought that Yoga practice could lead to sprains or fractures, whereas 62 (0.20%) were not sure about it (Fig. 2).

Under the attitude domain, almost half of the respondents [154 (50.83%)] gave physical fitness as a reason to start Yoga, and about one-fourth [76 (25.08%)] of the respondents have started Yoga as a part of school education. A positive attitude was observed toward Yoga (23.43%) for relieving their stress and benefits toward their health (Fig. 3).

Around 51.16% respondents found Yoga to be better than gym, dance, or Zumba (Table 2), and 84.48% were able to practice Yoga postures and breathing at home (Table 3).

Under the practice domain, 73.60% have practiced Yoga in the past, but only 18.48% are currently practicing Yoga, and among those, 70.30% are comfortable with men and women in the class (Table 3).

Table 2: Different reasons on benefits of Yoga experienced by healthcare workers

Benefits of Yoga experienced by healthcare workers?	N = 303	%
Feeling better	135	51.16
Got rid of some health conditions	12	3.96
Fitness	83	27.39
Others	3	0.99
Never practiced Yoga	70	23.10

Table 3: Responses by the healthcare workers on attitude and practice domain

Questions	Yes	No
	N (%)	N (%)
<b>Attitude domain</b>		
Yoga is better than gym, dance or Zumba?	155 (51.16%)	46 (15.18%)
Able to practice Yoga postures and breathing at home?	256 (84.48%)	47 (15.51%)
<b>Practice domain</b>		
Have you ever practiced Yoga in the past?	223 (73.60%)	78 (25.74%)
Are you currently practicing Yoga?	56 (18.48%)	247 (81.52%)
Are you comfortable with men and women in the class?	213 (70.30%)	36 (11.88%)

Very few of them, i.e., 18 (5.94%) healthcare professionals, take their classes at a commercial center, and around 19 (6.27%) of them take their classes at a non-commercial center (Fig. 4).

Self-motivation (51%) was the major inspiration for practicing Yoga daily. Around 25% of the healthcare professionals were interested to practice Yoga for improving their health conditions.

The barriers of the healthcare workers in practicing Yoga daily were as follows:

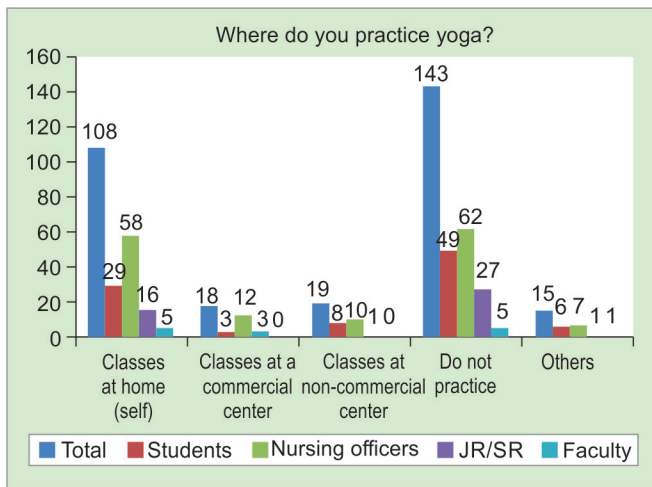


Fig. 4: Places where Yoga is practiced among healthcare professionals

- Lack of time ( $n = 189, 62.37\%$ ).
- Lack of information ( $n = 17, 5.61\%$ ).
- Already involved in other physical activities ( $n = 65, 21.45\%$ ).
- Some of the healthcare professionals were unable to perform Yoga because of unavailability of proper Yoga mentors, and some wished of having free online and offline classes to practice Yoga ( $n = 32, 10.56\%$ ).

## DISCUSSION

We explored the KAP of Yoga among healthcare professionals of tertiary healthcare settings.

### Knowledge Domain

In our study, a majority of healthcare professionals were aware of Yoga and believed that it is practiced to achieve mental, physical, emotional, and spiritual health altogether. Earlier studies have shown that 90% of patient visiting cardiology and neurology clinics in a tertiary care hospital in northern India have knowledge about Yoga, mainly through print and electronic media.

A cross-sectional online survey was designed to study the awareness and perceived health benefits of Yoga among adult population in Madhya Pradesh. Results have shown that around 41% of a population believed that Yoga is useful to control the physical body and mind, and 30% of a population believed that Yoga has a set of exercises that involve asana and pranayama.<sup>6</sup>

In our study, 69.3% believed that Yoga is Mind–body and spiritual practices for overall health and well-being, and 24.09% believed that Yoga is stretching, breathing, and meditation techniques for stress relief.

In a study conducted by Rukmani Iyer et al., 82.9% believed that one feels fatigue/tired after doing Yoga practice, and only flexible people can practice Yoga; however, in this study, 70.6% believed to get exhausted after doing Yoga, and 81.18% agreed that Yoga can be practiced by only flexible people. Similarly, other studies have shown the three most common negative perceptions about Yoga: (i) practicing Yoga inaccurately could be harmful (0.24%); (ii) Yoga practice could be exhausting (0.24%); and (iii) practicing Yoga could increase tiredness (0.12%).<sup>7</sup> The three most common adverse effects of Yoga reported in a cross-sectional survey from

India were: (i) pain and soreness; (ii) muscle injuries (most often sprains); and (iii) fatigue.<sup>8</sup>

### Attitude Domain

In our study, the majority of healthcare professionals (51.16%) felt better as a benefit of Yoga practice; while 27.39% pursue Yoga practice for fitness, only a few (3.96%) got rid of some health problems as benefits of Yoga.

In a previous study conducted by Amit Sharma et al., on being enquired about the reasons for giving preference to Yoga included stress relief (20%), increased body awareness (19%), reduced pain and increased flexibility (13%), improved sleep (9%), reduced weight (11%), considered a sport (2%) and believed to treat a specific illness (13%).<sup>9</sup>

In our study, the reasons for starting Yoga includes (i) physical fitness (50.82%); (ii) starting as a part of school education (25.08%); (iii) performing Yoga for specific health conditions (10.23%).

### Practice Domain

In a previous study conducted in India, a cluster sample survey constituted 162,330 participants, revealing that 11.8% of the population practiced Yoga.<sup>10</sup>

In our study, 73.9% have experienced Yoga in the past, and the remaining 26.07% have never practiced it. Currently, only 18.48% are practicing Yoga; if given a chance, only 24.42% could attend Yoga classes or practice at home only 1–2 times a week. Only 16.5% agreed to do it daily, and only 17.49% agreed to do 3–4 times a week.

In our study, a lack of time (62.37%) and a lack of information (5.61%), as well as involvement in other physical activities (21.45%), were the main hindrance for the participants. Similarly, a study conducted in Madhya Pradesh showed that a lack of time (42.7%) and a lack of inspiration (25.9%) were the barrier.<sup>6</sup> Also, a recent Indian study has reported a lack of time (34%) and a lack of knowledge about how to practice Yoga (35%), distance from the tertiary care center, and hesitation to come for therapy for an extended period of time were the main hindrance for not attending the Yoga practice session.<sup>9</sup>

### Limitations

First, the study has a lesser number of respondents from the calculated sample size because some of the participants were not interested to give their socio-demographic details and it was mandatory in the survey. Some of the participants had completed their term in the institution as the strata included SR/JR and interns (students) during the data collection, and the participants selected through randomization were not changed. There is no specific information about the type of Yoga and its physiological benefits as the questions in the knowledge domain were limited to the holistic benefits of Yoga.

## CONCLUSION

Adequate knowledge, awareness of Yoga, and a positive perspective toward Yoga appear to be present among healthcare professionals of AIIMS, Raipur, but there is a low practice of Yoga among them.

The study highlights the different opinion among different strata about the Yoga practice and concludes that 81.5% of the healthcare workers do not practice Yoga. However, future studies need to address the association between the knowledge and

practice of Yoga. The study also recommends education about Yoga need to be introduced to the practitioners as well as physicians. In addition, research studies on Yoga may help to integrate Yoga in public education, training, and treating diseases.

The more percentage of people were known about Yoga, and they think that Yoga is a tool to strengthen health and help to become disease free. However, some people think that Yoga is very time-consuming and prefer other physical activities like gym and Zumba. If participants understand that Yoga is not just exercise but a way of living, then many more people may get benefited from Yoga and for that self-motivation is necessary. Benefits of Yoga practice reported in this study are to feel better, physical exercise, fitness, spirituality, and stress-related and other health benefits.

Barriers among healthcare professionals include a lack of time and information and being involved in other physical activities.

### Author Contributions

All the authors contributed to the conception and design of the article.

Dr Sonali Jaiswal initiated the project, wrote the first draft, conducted the literature review, data collection and data analysis, and wrote the manuscript.

Dr Vikram Pal has conceptualized the study, critical review, and contributed in data analysis.

Dr Meghnath Verma has contributed in literature review, data analysis, and manuscript writing.

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