



Knowledge, Attitude and Practices Regarding Simplified Kundalini Yoga Among College Students in Tamilnadu

Panneerselvam Periasamy¹ , Vajiravelu Suganthi² and Sasikala Gunasekaran³

¹Research Scholar in Medical Physiology, Vinayaka Mission's Kirupananda Variyar Medical College & Hospital, Vinayaka Mission's Research Foundation (Deemed To Be University), Salem, Tamilnadu.

²Professor and Head, Department of Physiology, Vinayaka Mission's Kirupananda Variyar Medical College & Hospital, VMRF(DU), Salem, Tamilnadu.

³Staff Nurse, Government Erode Medical College and Hospital, Perundurai, Erode, Tamilnadu, India.

Abstract: Simplified Kundalini Yoga (SKY) is a physical, mental and spiritual discipline for developing strength, awareness, character, and consciousness. Simplified physical exercises, simplified Kundalini meditation, Kayakalpa practice, and introspection are its components. Health professionals consider yoga for skeletal symptoms, followed by psychological and physical ailments. Stress is a common issue for college students during their undergraduate studies. Short-term yoga has been proven to help pupils feel less stressed. The purpose of this study was to evaluate college students' knowledge, attitudes and practice of (KAP) Simplified Kundalini Yoga. A secondary objective was to compare KAP among medical, paramedical and non-medical students in Tamilnadu, India. A cross-sectional web-based online survey among the medical, paramedical and non-medical students were conducted. A semi-structured questionnaire using a non-probability volunteers sampling technique was used in this study. There were 323 responses in total: 101 medical students (40 males and 61 females), 100 paramedical students (19 males and 81 females), and 122 non-medical students (1 male and 121 females). All participants were given a pre-tested questionnaire about their awareness, attitudes, and practices related to SKY. The data collected were entered in MS Excel and presented in tables and graphs. Significant results were subjected to tests of significance like the Chi-square test at a 5% level of significance. In general, only 6.5% of them have adequate knowledge scores, 26 % of them have a good level of attitude score, and 8.7% of them have a good level of practice score. More than 80-90% of students lack knowledge, attitude and practice of SKY. Reasons for not taking up yoga were mainly lack of interest, laziness and poor time management. The study concluded that students have a positive outlook towards simplified Kundalini yoga but need motivation.

Keywords: Simplified Kundalini Yoga, medical and paramedical students, physical exercises, Kundalini meditation, Kayakalpa, introspection.

*Corresponding Author

Panneerselvam Periasamy, Research Scholar in Medical Physiology, Vinayaka Mission's Kirupananda Variyar Medical College & Hospital, Vinayaka Mission's Research Foundation (Deemed To Be University), Salem, Tamilnadu.

Received On 18 June, 2022

Revised On 5 August, 2022

Accepted On 20 August, 2022

Published On 1 November, 2022

Funding This research did not receive any specific grant from any funding agencies in the public, commercial or not for profit sectors.

Citation Panneerselvam Periasamy, Vajiravelu Suganthi and Sasikala Gunasekaran, Knowledge, Attitude and Practices Regarding Simplified Kundalini Yoga Among College Students in Tamilnadu.(2022).Int. J. Life Sci. Pharma Res.12(6), L9-20
<http://dx.doi.org/10.22376/ijpbs/lpr.2022.12.6.L9-20>

This article is under the CC BY- NC-ND Licence (<https://creativecommons.org/licenses/by-nc-nd/4.0>)



Copyright © International Journal of Life Science and Pharma Research, available at www.ijlpr.com

I. INTRODUCTION

Maintaining good health should be the most important goal of our lives. Many people take their well-being for granted and neglect their bodies by leading sedentary lifestyles, eating unhealthy foods, taking prescription drugs, and being under a lot of stress. Owing to genetic flaws, everyone is vulnerable to such illnesses that, if not treated, can lead to severe illnesses. As the body's energy is drained, the organs become sluggish and unable to work properly. The natural balance will be disrupted, and disorder results. Yoga reduces tension, keeps internal organs toned and protected, and maintains a proper harmony between the physical, emotional, and spiritual levels, both of which help avoid illnesses. With a mixture of breathing exercises, gentle exercise, and mind control, the focus is on uniting the system. This creates a sense of calm that pervades the mind and soul. It increases a person's health on all levels.¹ Literature suggests that yoga may be a relatively under used healthcare resource. However, there is ample evidence that it is an effective complement to treating many health conditions, both physical and mental.² Yoga is a way of life. It is primarily focused on preserving a condition of composure at all costs.³ All yoga schools place great emphasis on maintaining mental clarity. Kundalini is one of the oldest forms of yoga – it has been practiced by the Upanishads in India since 500 B.C.⁴ Maharishi Vethathiri said that, once the knowledge of science and spirituality are equal in the state of mind among the human, the world will get peace.⁵ The physical practice of yoga, known as asana, is what most people think of when they think about yoga. However, asana is only one of many techniques that can be used to help a person recover. Mindful breathing,

meditation, behavioral and diet adjustments, dreaming, and the use of sound are some of the techniques used in yoga. All aspects of the human system are addressed using these tools: body, breath, intellect, personality, and emotions.⁶ There are many kinds of physical exercises in the world. Vethathiri Maharishi has formulated simplified physical exercises after many years of research taking into consideration his medicinal experiences and their uses.⁷ There are two stages in physical exercise. One is posture, and another is movement. Blood circulation, heat circulation, and air circulation would be regulated. All endocrine glands would function well. Kayakalpa means strengthening our body for a healthy and long life, as the name defines. The prominent one is that, it prevents the onset of diseases, retains youth, delays old age and postpones death. Through years of research and rigorous practice, Vethathiri Maharishi has been able to simplify the technique of meditation and raise Kundalini power to become "enlightened".⁷ During meditation, sensory perceptions and the working of the mind are halted, as a result of which biomagnetism is conserved.⁵ According to Maharishi, it is a practice to begin with focusing the mind on the life force, when one during the process of practicing the mind would merge with the life force, which is the origin for the mind. The life force would automatically merge with the almighty if the practice were continued. Kundalini Yoga is the crown of yogic practices, which leads one to the Samadhi state in the end, according to Maharishi.⁸ Simplified physical exercises (Figure: 2,3&4), Kayakalpa yoga exercises (Figure:1), Simplified Kundalini meditation (Figure:5), and introspection are all part of simplified kundalini yoga.⁹

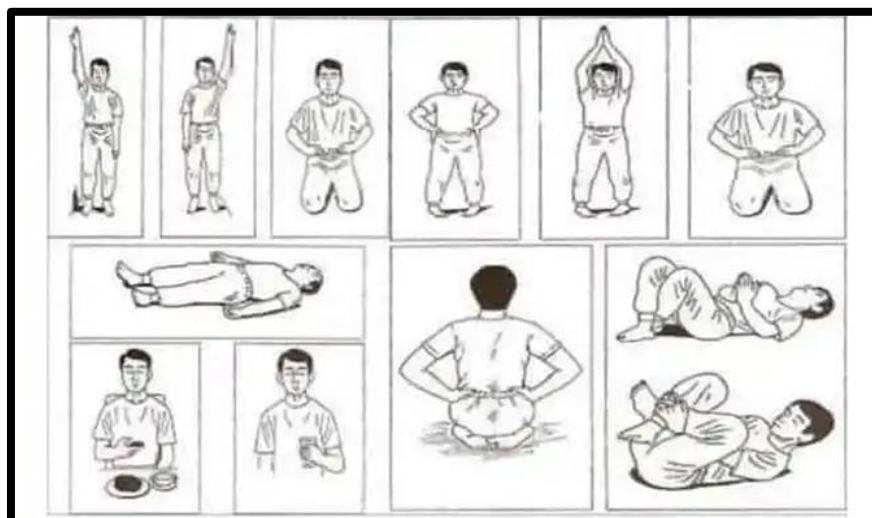


Fig 1: Shows Postures of Sky Kayakalpa Yoga⁴⁷

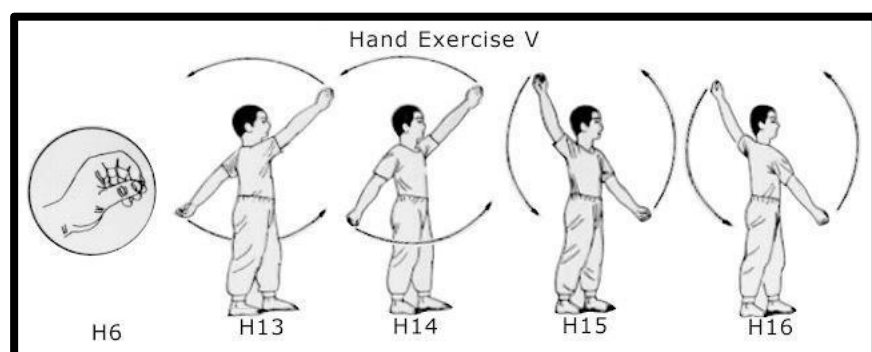


Fig 2: Simplified physical exercises- Hand Exercises⁴⁸

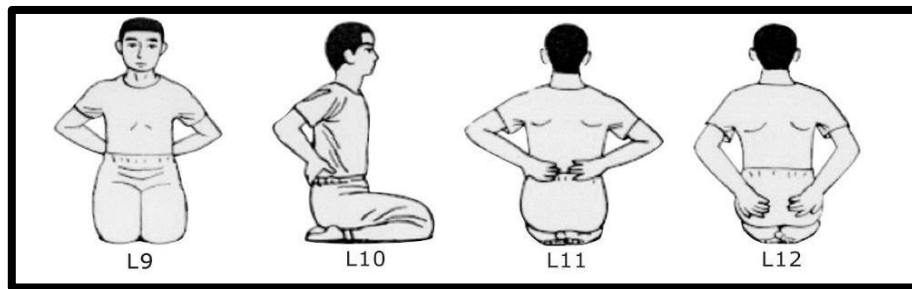


Fig 3: Simplified physical exercises - Leg Exercises⁴⁸



Fig 4: Simplified physical exercises – Makarasana⁴⁹

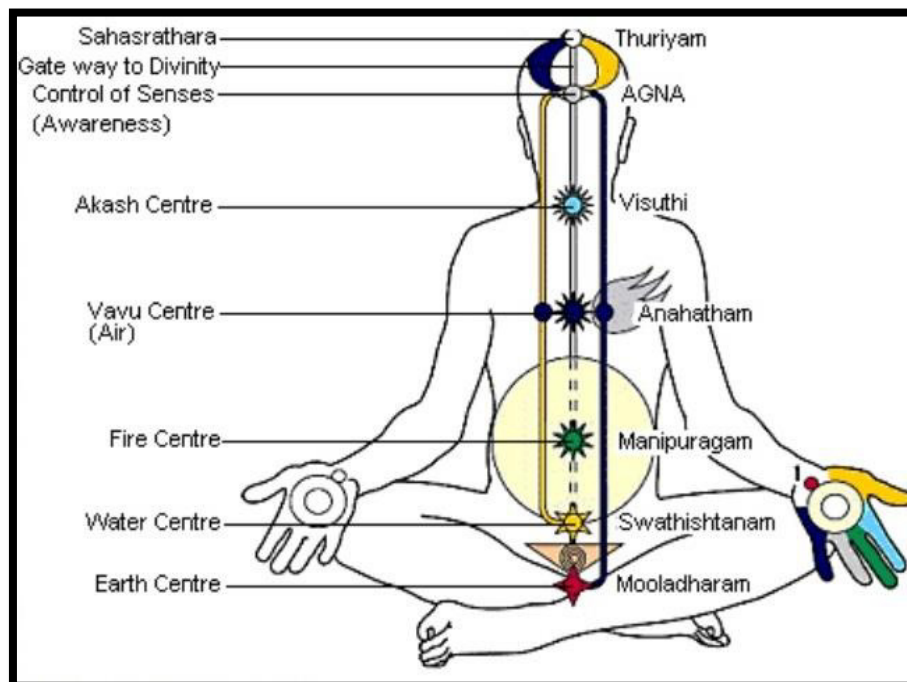


Fig 5: Simplified Kundalini meditation & it's Chakras⁵⁰

Only when an individual examines himself and sincerely works to remove the impurities in his personality can he have good physical and mental health and lead a successful life. Such an examination is called 'introspection' or self-analysis. Introspection consists of an analysis of thought, the moralization of desire, neutralization of anger, eradication of worries and realization of self. With the realization of self, whoever practices introspection with full effort can be able to keep his body and mind well. If we are physically well, our minds can automatically think about our mental health. Desikachar et al. suggest that yoga does not treat specific diseases. It rather addresses the entirety of the individuals: the physical body, the breathing body, the mind, the personality and the emotions⁶. Medical students often experience significant stress during their undergraduate training. Evidence

has shown short-term yoga to decrease stress in students¹⁰. The popular media and gym-based yoga classes confirm a narrow definition of yoga. Breathing and posture practices were the most commonly endorsed practices, even among the most experienced yoga practitioners¹¹. Despite their foundational nature in yoga philosophy, ethical practices and daily introspection, disciplined practice, or living with purity were least commonly associated with yoga in daily practice. The practice of concentration and meditation were only moderately endorsed as essential practices¹². Yoga exposure will make doctors become stronger yoga practitioners, but it will also influence them to recommend their patients to yoga as a therapeutic modality in the future. Chronic stress increases sympathetic discharge for a longer time leading to changes in the hypothalamo-pituitary axis activity, which

influences heart rate, blood pressure, temperature, respiratory rate, catecholamines and corticosteroids. Longer durations of sympathetic over activity are associated with cardiovascular morbidity and mortality. Regular practice of slow breathing exercises like pranayama for just 3 months is known to improve autonomic function by changing sympathetic or parasympathetic activity.⁴⁶ Teaching yoga to medical students is a big challenge, and it is important that yoga teachers have a knowledge of anatomy and physiology and use evidence-based teaching methods¹³. The modern education system has got more complicated and stressful. We live in a period of speed, constant change, and unending wants and needs, which can occasionally lead to stress, anxiety, negativity, and depression¹⁴. College study period and post study working environment will always be stressful in life¹⁵. Stress is a common issue for college students during their undergraduate studies. Short-term yoga has been proven to help pupils feel less stressed¹⁶. The purpose of this study was to evaluate college students' knowledge, attitudes and practice of (KAP) Simplified Kundalini Yoga. A secondary objective was to compare KAP among medical, paramedical and non-medical students in Tamilnadu.

2. METHODOLOGY

A cross-sectional, web-based online survey was developed by using Google forms. A non-probability volunteer sampling technique was used. The questionnaire link was sent through emails, WhatsApp and other social media to the medical college, paramedical college (Nursing, Physiotherapy and Allied health science) and non-medical (Arts, Science & Engineering) college students via respective college teachers. The participants were encouraged to roll out the survey to as many people as possible. Thus, the link was forwarded to people apart from the first point of contact. Students who are studying undergraduate courses like MBBS (Medical), Nursing (Paramedical) and Arts & Science (Non-medical group) in Tamilnadu and willing to take part in study are included, whereas non willing students, other than Tamilnadu students are excluded from the study. There were a total of 323 responses: 101 medical students (40 males and 61 females), 100 paramedical students (19 males and 81 females), and 122 non-medical students (1 male and 121 females). All the students completed a pre-tested questionnaire about their awareness, attitudes, and activities related to Simplified Kundalini yoga (SKY). Participants were automatically led to details about the research and informed consent after obtaining and clicking the connection. Participation was voluntary, and respondents were assured of confidentiality. Students were given a choice to decline participation without prejudice. They completed the demographic information after accepting the survey. Then a series of questions emerged, which the participants had to answer in order. It was an online study; the data collection was initiated on 12th October 2020 at 7.00 AM IST and closed on 23rd October 2020 at 5.00 PM IST. We were able to collect data from across the various districts of Tamil Nadu. The socio-demographic variables included age, gender, faculty of study, year of study, college administration, type of family, monthly family income, area of residence, native district and religion. The online self-reported questionnaire developed by the investigators contained 17 items questions, attitude contained 29 items questions and practice contained 12 items questions were asked. All the questions in the questionnaire allowed respondents to be dichotomized (Yes or No option).

3. STATISTICAL ANALYSIS

The data collected were entered in MS Excel and presented in tables and graphs. Knowledge, attitude and practice scores were given in mean and standard deviation. Correlation between knowledge, attitude and practice score was analyzed using the Pearson correlation method. A p-value of ≤ 0.05 was considered statistically significant, and two-tailed tests were used for significance testing. Statistical analysis was carried out using the Statistical Package for Social Sciences (SPSS, version 22) and STATA (version 12) software.

4. RESULTS

Approximately, 31% of the participants are medical, 38% of the participants are non-medical students, and 31% of the participants are Paramedical students. The mean age of the participants was 19.67±1.81 years. Among the participants, 81.5% were females, and 18.5% were males. Participants' year of study was first year (46.13%), second year (26%), third year (24.46%) and very few participants from 1.55% & 1.86% from 4th year and internship students respectively (table 4). More than 52.94% of participants were from urban areas. The participants belong to 31 districts of the Tamilnadu state with maximum representation from Erode district, followed by Tiruppur district, Salem District, Chennai District and Namakkal District. Approximately 90.71% of the participants were Hindus. Table1 shows the percentage level of SKY yoga knowledge score among college students. In general, 70.89% of the students have an inadequate level of the knowledge score, 22.61% have a moderate level of the knowledge score, and 6.50% have an adequate level of knowledge score. Table2 shows the percentage level of SKY yoga attitude score among college students. In general, 23.41% of the students have a poor level of attitude score, 50% of them have a moderate attitude score, and 26.59% of them have a good level of attitude score. Our study shows (72) 22.30% students are practicing SKY yoga. Out of this 55 students (76.38%) practice Simplified Kundalini Yoga daily, whereas 17 students (23.61%) practice Simplified Kundalini Yoga irregularly like weekly once or twice. Simplified Kundalini Yoga was Early morning only (83.33%), Evening only (44.44%) and Both morning and evening (20.83%). 37.5% of students also practicing other form of yoga Table 3 shows the percentage level of SKY yoga practice score among college students, 41.66% of the students have a poor level of yoga practice score, 50% of them have moderate level of yoga practice score and 8.33% of them have a good level of yoga practice score. Fig. 6 showed the percentage level of SKY yoga knowledge score among medical, paramedical and non-medical students. Paramedical students have more adequate knowledge (14%) compared to medical students having nil knowledge on SKY yoga. Medical students have 88.12% inadequate knowledge of simplified Kundalini yoga compared to 67.21% and 55% non-medical and paramedical students. Fig. 7 showed the percentage level of SKY yoga attitude score among medical, paramedical and non-medical students. Medical students have a good attitude (32.67%) compared to non-medical (31.15%) and paramedical (14%) students. Non-medical students have a 12.30% poor attitude on simplified Kundalini yoga compared to 21.78% and 40% medical and paramedical students, respectively. Fig. 8 showed the percentage level of SKY yoga practice score among medical, paramedical and non-medical students. Paramedical and non-medical students have good practice 13% and 13.11%, respectively, compared to medical (0.99%) students. Medical students have 54.46% poor practice of simplified Kundalini

yoga compared to 41% and 31.15% paramedical and non-medical students, respectively. Table 5 showed an association between level of SKY yoga knowledge ($p = 0.001$), Attitude ($p = 0.001$), and practice ($p = 0.01$) with faculty of course study variables, which is statistically very significant, indicating paramedical students are having better KAP than other students. The majority agreed that, Simplified Kundalini Yoga (SKY) is necessary for a healthy life (84.29%), SKY improves overall health (82.18%), SKY practice can improve memory

and concentration on studies (81.57%), SKY practice can cure diseases (71.90%), also SKY yoga could cure lifestyle diseases like obesity, hypertension, diabetes and mental illnesses. Some 73.41% agreed that patients might be referred to SKY yoga as a treatment modality. Table 6, Fig 9,10,11, also showed significant positive moderate correlation between knowledge score and attitude score, positive moderate correlation between attitude score and practice score.

Table I. Level of Knowledge Score		
Level of score	No. of students	Percentage (%)
Inadequate	229	70.89
Moderate	73	22.61
Adequate	21	6.5
Total	323	100

Table2. Level of Attitude Score		
Level of score	No. of students	Percentage (%)
Poor	22	23.41
Moderate	47	50.00
Good	25	26.59
Total	94	100

Table3. Level of Practice Score		
Level of score	No. of students	Percentage (%)
Poor	30	41.666
Moderate	36	50.00
Good	6	8.333
Total	72	100

Table 4. Demographic variables of the participants			
Demographic variables		Number of students	Percentage (%)
Age	18 years	76	23.53
	19 years	95	29.41
	20 years	98	30.34
	>20 years	54	16.72
Gender	Male	60	18.58
	Female	263	81.42
Faculty of study	Paramedical	100	30.96
	Non-Medical	122	37.77
	Medical	101	30.96
Year of study	1st Year	149	46.13
	2nd Year	84	26
	3rd Year	79	24.46
	4th Year	5	1.55
	Intern	6	1.86
Place of living:	Rural	152	47.06
	Urban	171	52.94%
Religion	Christian	21	6.50%
	Hindu	293	90.71%
	Muslim	9	2.79%

Table 5. Association between level of SKY yoga knowledge, attitude and Practice with faculty of study									
Faculty of study		Inadequate		Moderate		Adequate		N	Chi- square test
		n	%	N	%	n	%		
knowledge	Paramedical	55	55.00%	31	31.00%	14	14.00%	100	$\chi^2=32.07$ $p=0.001$ ***
	Non-Medical	82	67.21%	31	25.41%	9	7.38%	122	
	Medical	89	88.12%	12	11.88%	0	0.00%	101	

Attitude	Paramedical	14	40.00%	16	45.71%	5	14.28%	35	$\chi^2=28.12$ $p=0.001$ ***
	Non-medical	4	13.33%	17	56.66%	9	30.00%	30	
	Medical	6	20.68%	13	44.82%	10	34.48%	29	
Practice	Paramedical	9	41.00%	11	46.00%	3	13.00%	23	$\chi^2=20.96$ $p=0.01$ **
	Non-medical	8	31.15%	15	55.74%	4	13.11%	27	
	Medical	12	54.46%	10	44.55%	0	0.0%	22	

** $p \leq 0.01$ highly significant *** $p \leq 0.001$ very high significant

Table 6: Correlation between Knowledge, Attitude and Practices Regarding Yoga among Medical Students

Correlation between	Mean score Mean \pm SD	Karl Pearson Correlation coefficients	Interpretation
Knowledge score Vs Attitude score	6.48 \pm 4.32 17.85 \pm 7.63	$r=0.46$ $P=0.001$ ***	There is a significant positive moderate correlation between knowledge score and skill attitude score. It means knowledge increases their attitude score also increases moderately
Knowledge score Vs Practice score	6.48 \pm 4.32 17.85 \pm 7.63	$r=0.63$ $P=0.001$ ***	There is a significant positive substantial correlation between knowledge gain score and practice score. It means knowledge increases their practice score also increases substantially
Attitude score Vs Practice score	17.85 \pm 7.63 6.62 \pm 2.59	$r=0.54$ $P=0.001$ ***	There is a significant positive moderate correlation between attitude score and practice score. It means attitude increases their practice score also increases moderately

Table 7: Practicing Simplified Yoga

Sno	Statements	Yes		No	
		n	%	n	%
1	Do you practice other form of yoga other than Simplified Kundalini Yoga	27	37.5		
2	Was Simplified Kundalini Yoga taught in Your college	28	38.88%	44	61.11%
3	Desire to recommend Simplified Kundalini Yoga practice to your family & friends	56	77.77%	16	22.22%
4	Do you think Simplified Kundalini Yoga practice has increased your physical Fitness level	59	81.94%	13	18.05%
5	Are you aware that Simplified Kundalini Yoga practice helps your body withstand academic & peer group stress?	61	84.72%	11	15.27%
6	Do you think your anger is controlled by practicing Simplified Kundalini Yoga	64	88.88%	8	11.11%
7	Do you think Simplified Kundalini Yoga practice has increased your concentration in studies?	62	86.11%	10	13.88%
8	Do you think Simplified Kundalini Yoga practice has increased keep your mind calm (peace of mind) during exam time	64	88.88%	8	11.11%

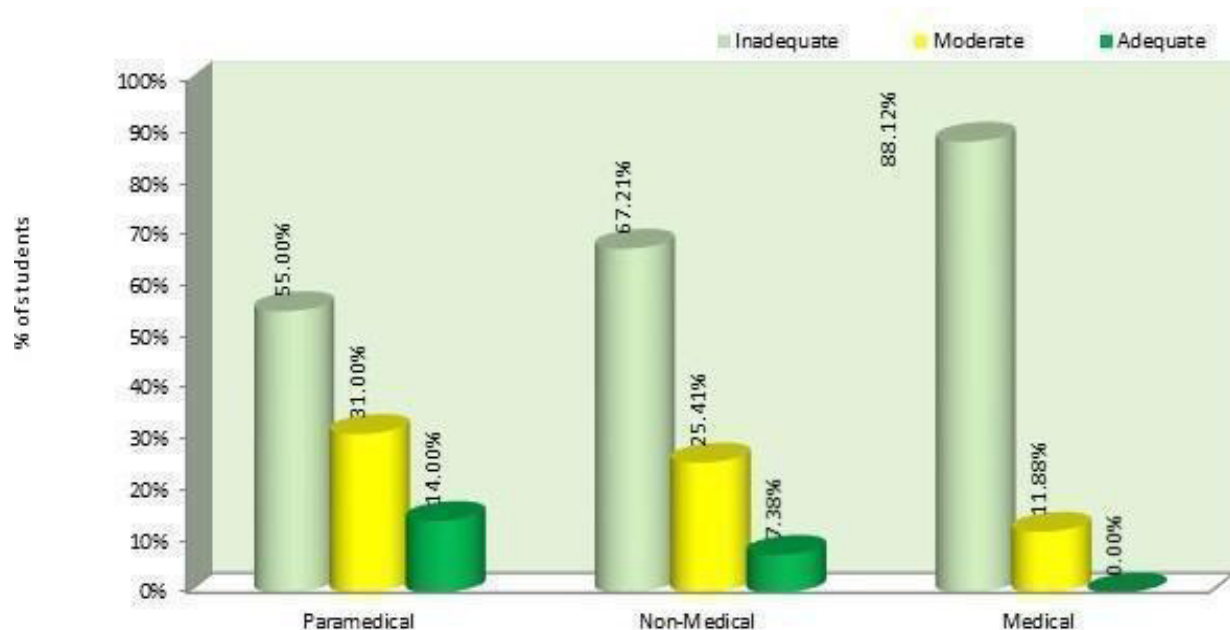


Fig 6. Level of SKY yoga knowledge score among students

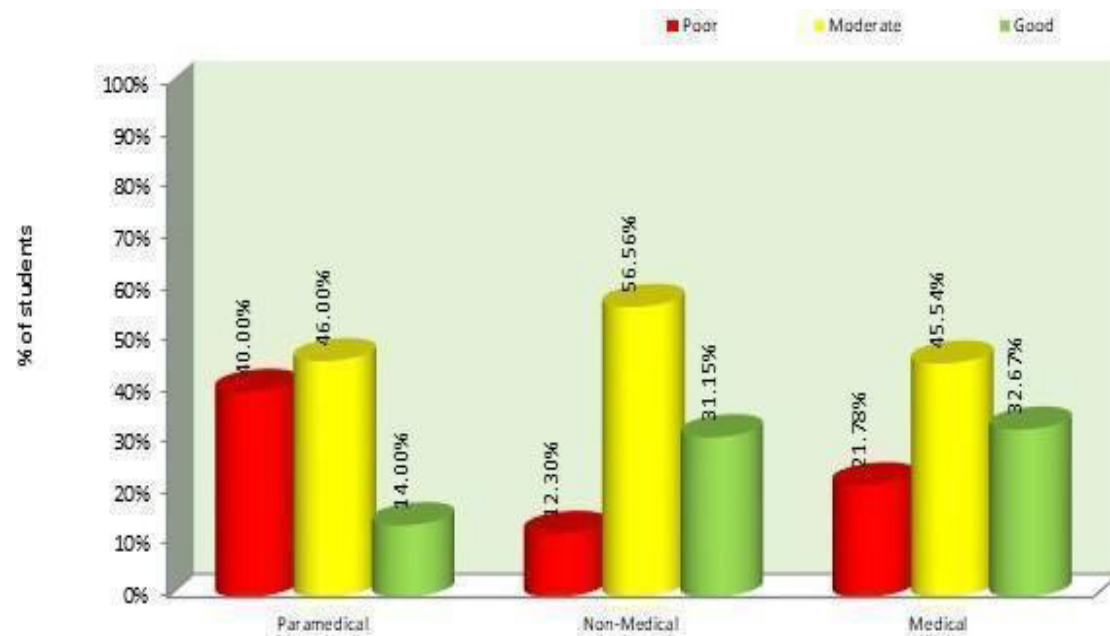


Fig 7. Level of SKY yoga attitude score among students

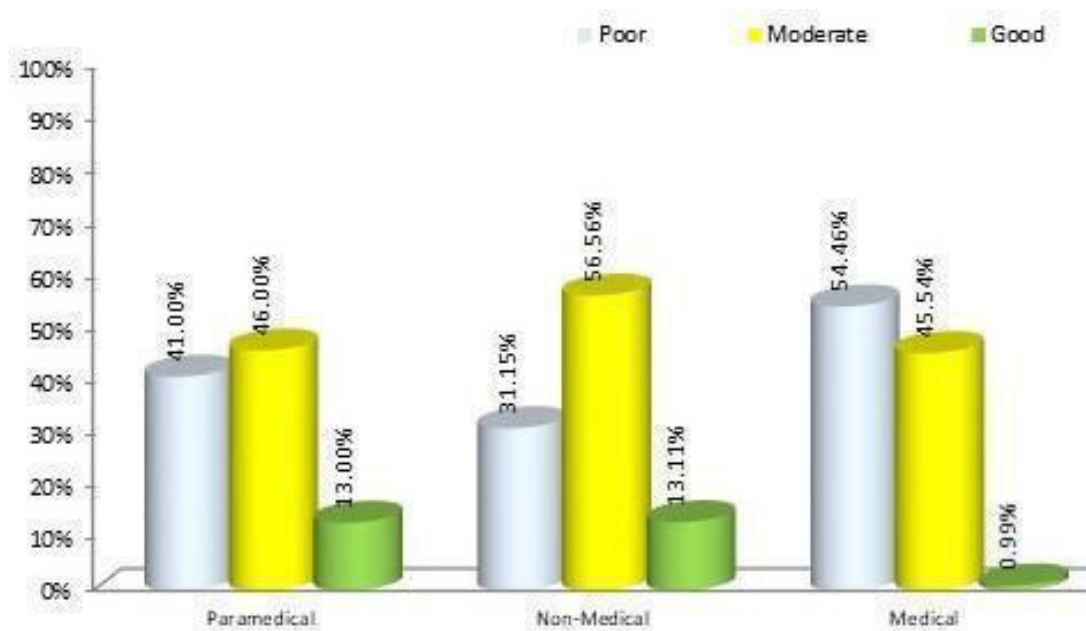


Figure 8. Levels of SKY yoga practice score among students

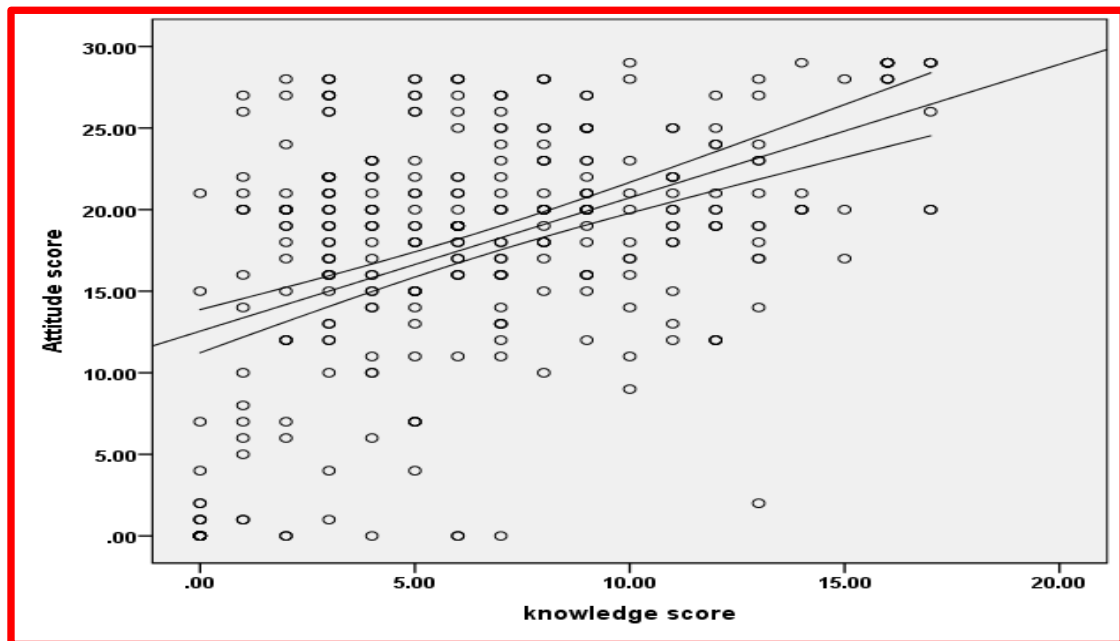


Fig 9: Scatter diagram with regression estimate shows the moderate positive correlation ($r=0.46$ $P\leq 0.001$) coefficient between knowledge score and attitude score

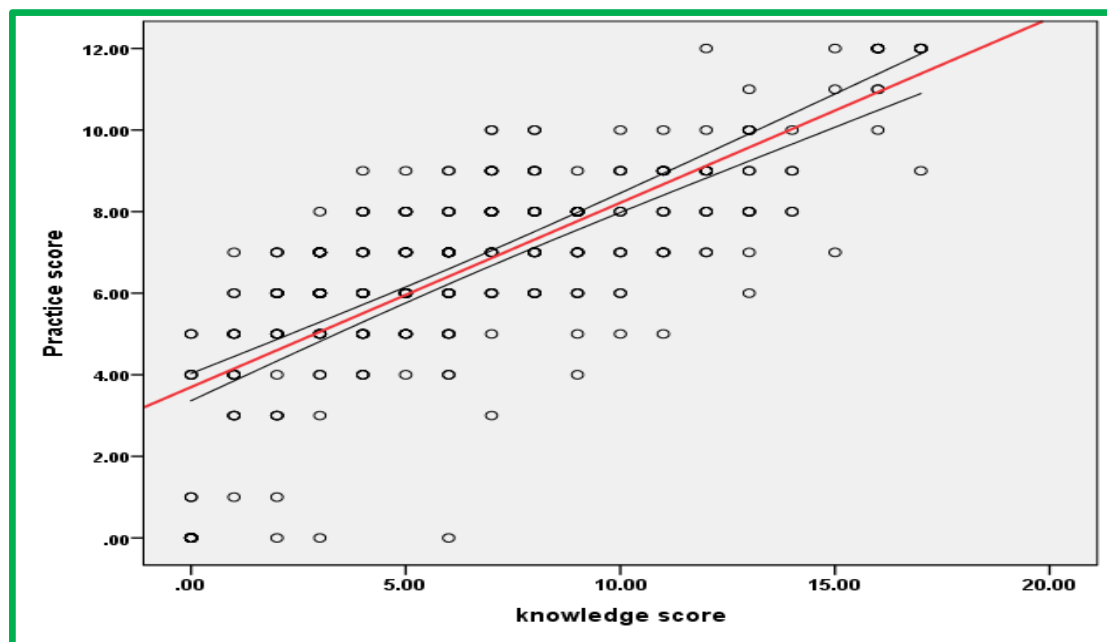


Fig 10: Scatter diagram with regression estimate shows the substantial positive correlation ($r=0.63$ $P\leq 0.001$) coefficient between knowledge score and practice score

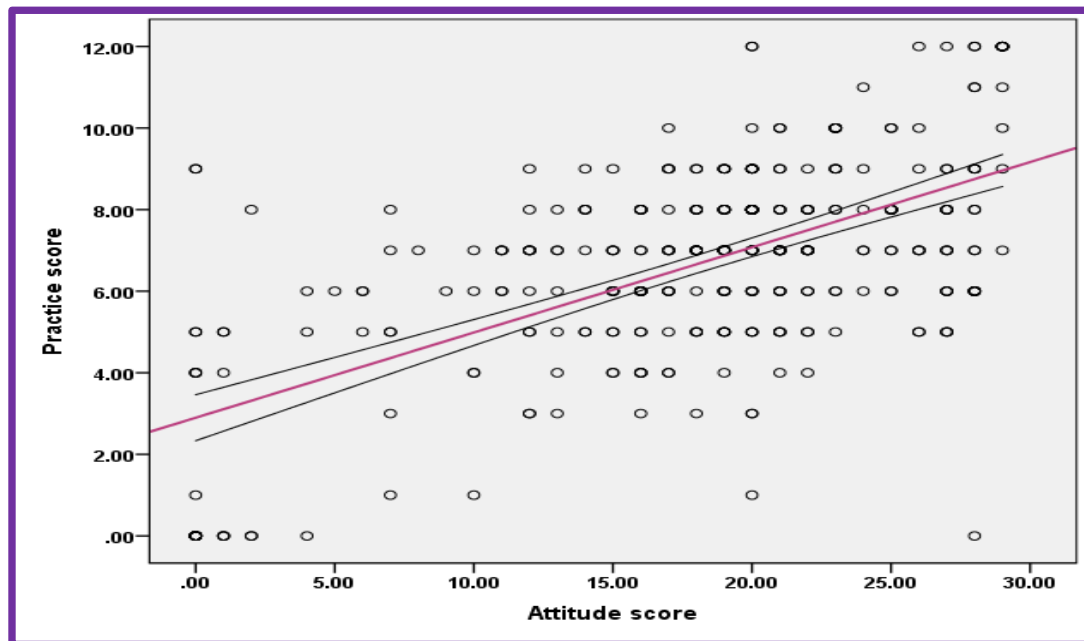


Fig 11: Scatter diagram with regression estimate shows the moderate positive correlation ($r=0.54$ $P\leq 0.001$) coefficient between attitude score and practice score

5. DISCUSSION

The advantages of practicing yoga range from little benefits to major life-changing benefits¹⁷. The advantages of practicing yoga range from little advantages to major life-changing advantages¹⁷. Out of 323 pupils, 22.3% have a regular practice of Simplified Kundalini Yoga. Health concerns are the main motivation for practicing yoga, followed by fitness, refreshment, and peace of mind¹⁸. Table 7 shows 61.11 % of pupils attended SKY school, while 38.88 % learnt it on the college campus. Studying SKY yoga, according to 81.94 % of pupils, enhanced physical fitness. Yoga has been used to treat a variety of physical and emotional conditions, including bronchitis, chronic pain, and menopausal symptoms¹⁹. 84.72 percent of students said that practicing SKY yoga helps to alleviate academic and peer pressure, and 77.77 % said that they would suggest it to their relatives and friends. Yoga practitioners frequently speak of feeling more energized, lively, and emotionally balanced¹⁷. Almost everyone is aware that practicing SKY yoga strengthens your body's ability to fend against stress. They claimed that managing time for yoga and fatigue was one of the hardest parts of practicing SKY yoga and that it was also one of the most prevalent initial anxieties. 88.88% of students believe that practicing SKY yoga reduces anger. Numerous chronic illnesses have been proven to be influenced by stress and anxiety²⁰. Despite medical interventions, it lowers overall quality of life. Yoga is one non-pharmacological approach, that has shown promising outcomes in the search for stress and anxiety relief²¹. About 88.88 percent of student's report being able to keep their minds quiet and be able to concentrate on their studies at test time, while 86.11 percent of students claim that practicing SKY yoga increases concentration in academic work. The pressure could be to blame for people's successes and failures in the academic environment. Therefore, the kind of stress (Academic Stress) is a key factor in explaining variations in academic achievement²³. Yoga's breath-movement combo helps calm tense bodies crammed into desks and slumped over computers while also reducing social and academic stress²³. Yoga and meditation are scientific practices that aim to reduce or eliminate stress and tension at their root²³. Meditation and

yoga boost self-esteem and internalized locus of control by reducing the impacts of stress on the students and promoting serenity and tranquility, battling despair and anxiety, counteracting helplessness and weakness²⁴. Many studies have been done to know the knowledge, attitude and practice (KAP) of yoga among college students^{13,25-28}. To the best of our literature search, only very few studies on simplified kundalini yoga. According to our literature survey, there were no studies on KAP among medical, paramedical and non-medical undergraduate college students reported in India. The present study revealed that medical students have very poor knowledge about SKY. Our results are in accordance with an earlier study by Anand et al²⁹, which showed that medical undergraduates have poor knowledge about types of exercise. Suresh and Ramachandran et al.,³⁰ conducted a study on the effect of SKY on college students, which showed significant improvement in psychological well-being, memory, sense of support and a significant reduction in anxiety and anger. Results in the literature regarding participants' knowledge about yoga are inconsistent. According to our research, major sources of knowledge regarding yoga among students were newspapers, mass media/internet, family, and school or college. The educational system was the chief source of knowledge among students. Students had multiple perceptions of yoga. Yoga was endorsed as a means to manage stress and improve concentration and overall academic performance. In terms of health benefits, students cited yoga for disease prevention, weight control, and psychological and overall personality improvement³¹. Medical education includes learning assignments, sports, social behavior, encouragement, and patient care and is a full-time obligation and duty for students. Long research and operating hours, lengthy course material, exams, peer rivalry, uninspiring conditions, sleep deprivation, and isolation, among other factors interfering with daily personal, social, and family life, all affect a medical student's mental health. Medical school is widely regarded as traumatic, and a high rate of psychological morbidity has been identified among medical students, ranging from depression to behavioral issues, suicidal ideation, and psychiatric disorders³²⁻³⁵. It has been shown that between 25% and 90% of medical students are depressed, a significant determinant of depression

and anxiety³⁶⁻³⁷. A comprehensive analysis of 183 studies from 43 countries found that, the overall rate of depression in medical students is about 27.2%, with 11.1% of medical students having suicidal thoughts³⁸. Students with an unstable emotional state need immediate attention and management; otherwise, their failure to cope effectively will have negative personal and professional repercussions³⁹. This study is very significant to understanding the knowledge, attitude and practice of simplified kundalini yoga by medical, paramedical and non-medical students. Teaching and making the college students practice yoga might be impactful by two manners; first, to overcome stress faced during the college study period⁴⁰⁻⁴¹ and medical and paramedical students can cope with stress and enhance well-being among students⁴², while handling the patients in extreme condition like the COVID-19 pandemic situation. Amongst all other careers, the medical career is filled with more hard work in terms of practice and learning skills, attitudes, ways of communication etc. The average medical student goes through many sleepless nights preparing for innumerable examinations and tests, clinical assignments, case taking etc., which fill him/her with anxiety and worry leading to depression and misery. Individuals are gradually turning to mind-body therapies to help them cope with stress. Yoga, a form of mind-body exercise, is becoming a more common treatment for maintaining wellness and treating a variety of health conditions and ailments. Yoga has been shown to increase feelings of well-being, increase feelings of relaxation, improve self-confidence and body image, improve performance, improve interpersonal relationships, increase attentiveness, and lower irritability in reduction of stress, anxiety, depression, as well other mental illnesses⁴³. In this study, it is seen that medical students have 88.12% inadequate knowledge on simplified Kundalini yoga compared to 67.21% and 55% non-medical and paramedical students, respectively. The reasons for not taking up yoga show poor student motivation. As reported by Bhavanani regarding the introduction of yoga lectures and practical sessions in medical professional colleges in Pondicherry, the feedback from students showed excellent responses. Students reported that the yoga sessions had helped them adjust to college life better. The stress management techniques enhanced their ability to do well in curricular and extracurricular activities⁴⁴. The performance and productivity of students under stress are usually very low. Yoga has a significant impact on stress factors, and participating in yoga and meditation training is the best way to reduce stress. It is suggested that college management should provide yoga and meditation regularly to their students. Yoga may reduce mental illness and improve well-being by teaching medical students to react mindfully to current internal and external stimuli¹. The scheduled practices must be taught by expert yoga instructors to motivate and inspire students to continue their practice even after the classes are over⁴⁵. Yoga could help students make the most of their situation and live a happy, productive life⁶. Students recommend that campaigns are developed to raise awareness of the benefits of yoga among health workers, regardless of

whether they are yoga practitioners themselves². Thus, it is becoming important to not only acquire data about the acceptability and perception about Simplified kundalini yoga in the non-medical student population but also health care medical & paramedical students in order to understand the knowledge–practice gap and availability of yoga resources in Tamilnadu. This would help in awareness of SKY yoga among students and also establishing more yoga wellness centers and the orientation of medical students to advocate its health-promoting etc. This would also provide the required evidence of the extent of acceptability of yoga with respect to its knowledge, acceptability, and practice before any new policy intervention. Thus, it is imperative that data from such a survey regarding yoga awareness, attitudes, and its practice are made available to lawmakers and scientists for research and translation.

6. CONCLUSIONS

Preliminary results of the KAP questionnaire showed that medical undergraduates having very poor knowledge about simplified Kundalini yoga. Lack of time and facilities was identified as major barriers that may have discouraged their active participation in SKY yoga. It is necessary to encourage the college administration regarding the importance of SKY yoga education. Medical university should place greater emphasis on educating learners about the importance of SKY yoga. However, more research is needed to determine the understanding, use and benefits of SKY yoga on medical students' learning and stress management during patient care throughout India. This study also recommends SKY yoga practice for practitioners as well as physicians.

7. AUTHORS CONTRIBUTION STATEMENT

Vajiravelu Suganthi: Conceptualization, Formal analysis, Project administration, Writing - original draft, Methodology, Writing - review & editing, Resources, Validation, Investigation and Supervision. Panneerselvam Periasamy: Conceptualization, Writing - review & editing, Formal analysis, Validation, Investigation, Visualization and Supervision. Sasikala Gunasekaran: Conceptualization, Methodology, Writing - review & editing, performed data collection and drafted the manuscript.

8. ACKNOWLEDGEMENTS

We sincerely thank each and every one of the participants for taking the time to complete our survey. The authors thank the Government Erode Medical College & Hospital, Perundurai, Tamil Nadu for providing the necessary facilities.

9. CONFLICT OF INTEREST

Conflict of interest declared none.

10. REFERENCES

1. Vimala L. London, England, Himalayan, a division of octopus publishing group limited. *J Yoga*. 2003;2(58):96-7.
2. Sulenes KH, Freitas J, Justice L, Colgan DD, Shean M, Brems C. Underuse of yoga as a referral resource by professions students. *J Altern Complement Med*. 2015;21(1):53-9. doi: 10.1089/acm.2014.0217, PMID 25268564.
3. Dr. Keswani J. Yoga therapy- an effective solution for menopausal problems. *Int J Creat Res Thoughts (IJCRT)*, ISSN: 2320-2882. September 2017;5(3):41-3.
4. Available from: <https://goldenyogi.co.nz/goldenyogiblog/2019/6/17/the-down-low-on-kundalini#:~:text=Kundalini%20is%20one%20of%20the,and%20was%20kept%20very%20secret>.
5. Lalitha R. Simplified Kundalini Yoga Practices for senior citizens. *J Yoga*. 2019;2(3):113-23.
6. Desikachar K, Bragdon L, Bossart C. The yoga of healing: exploring yoga's holistic model for health and well-being. *Int J Yoga Ther*. 2005;15(1):17-39. doi: 10.17761/ijyt.15.1.p501133535230737.
7. Kumar M. A study on the emotional intelligence of higher secondary school students. *Shanlax Int Educ*. 2020;8(3):108-13.
8. Nagarasan K, Saradha M. Effect of simplified kundalini yoga on selected psychological (DASS) variables of college women students. *Int J Sci Res*. 2020;9(1):461-63.
9. Dr. Nagarasan K, Kalavathi S. Simplified kundalini yoga for occupational stress. *Int J Sci Eng Res*, Volume 11. 2020;10-12, ISSN 2229-5518(2, February).
10. Brems C, Justice L, Sulenes K, Girasa L, Ray J, Davis M, et al. Improving access to yoga: barriers to and motivators for practice among health professions students. *Adv Mind Body Med*. 2015;29(3):6-13. PMID 26026151.
11. Brems C, Colgan D, Freeman H, Freitas J, Justice L, Shean M, et al. Elements of yogic practice: perceptions of students in healthcare programs. *Int J Yoga*. 2016;9(2):121-9. doi: 10.4103/0973-6131.183710, PMID 27512319.
12. Pal GK, Velkumary S, Madanmohan G. Effect of short-term practice of breathing exercises on autonomic functions in normal human volunteers. *Indian J Med Res*. 2004;120(2):115-21. PMID 15347862.
13. Hegde SV, Rao SK, Menezes RG, Kotian SM, Shetty S. Knowledge, attitude, and practice of yoga in medical students: assessment of anthropometry and lifestyle factors. *Int J Yoga Ther*. 2018;28(1):9-14. doi: 10.17761/2018-00005R1, PMID 29596004.
14. Fazel M, Hoagwood K, Stephan S, Ford T. Mental health interventions in schools I: Mental health interventions in schools in high-income countries. *Lancet Psychiatry*. 2014 October;1(5):377-87. doi: 10.1016/S2215-0366(14)70312-8, PMID 26114092, PMCID PMC4477835.
15. Yang C, Chen A, Chen Y. College students' stress and health in the COVID-19 pandemic: the role of academic workload, separation from school, and fears of contagion. *PLOS ONE*. 2021;16(2):e0246676. doi: 10.1371/journal.pone.0246676, PMID 33566824.
16. Tripathi MN, Kumari S, Ganpat TS. Psychophysiological effects of yoga on stress in college students. *J Educ Health Promot*. 2018 March 1;7:43. doi: 10.4103/jehp.jehp_74_17, PMID 29619394, PMCID PMC5868218.
17. Lovas JL. Perceived benefits of yoga participants enrolled in different yoga styles; 2011. doi: 10.1080/1750984x.2020.1827448.
18. Hanshika Ravi G. R. V. Dr. Vishnu Priya, benefits of yoga for college students – A questionnaire based study. Vol. 10(8, August); 2021.
19. Udupa K, Madanmohan, Bhavanani AB, Vijayalakshmi P, Krishnamurthy N. Effect of pranayam training on cardiac function in normal young volunteers. *Indian J Physiol Pharmacol*. 2003;47(1):27-33. PMID 12708121, Google Scholar.
20. Salleh MR. Life event, stress and illness. *Malays J Med Sci*. 2008 October;15(4):9-18. PMID 22589633, PMCID PMC3341916.
21. Li AW, Goldsmith CA. The effects of yoga on anxiety and stress. *Altern Med Rev*. 2012 March;17(1):21-35. PMID 22502620.
22. Bataineh MZ. Academic stress among undergraduate students: the case of education faculty at King Saud University. *Int Interdiscip J Educ*. 2013;2(1):82-8. doi: 10.12816/0002919.
23. Sivakumar A, Dr. Pazhanivelu G. Impact of yoga and meditation among the student community. *Int J Recent Innov Trends Comput Commun* ISSN;4(2) 092 - 094:2321-816.
24. Bourgoin KA. The effects of mindful yoga practice on psychological well-being among college students; 2011. Available from: http://purl.flvc.org/fsu/fd/FSU_migr_etd-4604.
25. Ankamreddy S, Nallapu SSR, Sai TSR. Knowledge, attitude and practices regarding yoga among medical students in Andhra Pradesh. *Int J Yoga*. 2019;8(1):34-41.
26. Sankhyani A, Gupta N, Gupta P, Priya K, Jindal S, Sharma A. Knowledge, attitude and practices (KAP) towards Ayurveda, yoga & naturopathy, Unani, Siddha, homeopathy (AYUSH) and its use in dentistry among dental professionals. *Int J Sci Res*. 2021;10(2):69-71. doi: 10.36106/ijsr/1217415.
27. Choi AN, Payakachat N, Harrington HP, Compadre C. Yoga therapy knowledge in third-year pharmacy students: an education intervention. *Curr Pharm Teach Learn*. 2021;13(6):665-71. doi: 10.1016/j.cptl.2021.01.041, PMID 33867062.
28. Agrawal NK, Kothari N, Gupta U, Verma SK, Pandey S. A cross-sectional evaluation of knowledge, attitude, and utilization of complementary and alternative medicine among medical students of North India. *Natl J Physiol Pharm Pharmacol*. 2019;9(9):893-989. doi: 10.5455/njppp.2019.9.0627129062019.
29. Anand T, Tanwar S, Kumar R, Meena GS, Ingle GK. Knowledge, attitude, and level of physical activity among medical undergraduate students in Delhi. *Indian J Med Sci*. 2011;65(4):133-42. doi: 10.4103/0019-5359.104776, PMID 23250343.
30. Suresh A, Ramachandran K, Malar J. Effect of Kundalini yoga on psychological health in young adults. *IJPP*. 2013;4(1):7-13.
31. Aktekin M, Karaman T, Senol YY, Erdem S, Erengin H, Akaydin M. Anxiety, depression and stressful life events among medical students: A prospective study in

- Antalya, Turkey. *Med Educ.* 2001;35(1):12-7. doi: 10.1046/j.1365-2923.2001.00726.x, PMID 11123589.
32. Eller T, Aluoja A, Vasar V, Veldi M. Symptoms of anxiety and depression in Estonian medical students with sleep problems. *Depress Anxiety.* 2006;23(4):250-56. doi: 10.1002/da.20166, PMID 16555263.
33. Dyrbye LN, Thomas MR, Shanafelt TD. Systematic review of depression, anxiety, and other indicators of psychological distress among U.S. and Canadian medical students. *Acad Med.* 2006;81(4):354-73. doi: 10.1097/00001888-200604000-00009, PMID 16565188.
34. Shah M, Hasan S, Malik S, Sreeramareddy CT. Perceived stress, sources and severity of stress among medical undergraduates in a Pakistani medical school. *BMC Med Educ.* 2010;10(1):2. doi: 10.1186/1472-6920-10-2, PMID 20078853.
35. Koochaki GM, Charkazi A, Hasanzadeh A, Saedani M, Qorbani M, Marjani A. Prevalence of stress among Iranian medical students: A questionnaire survey. *East Mediterr Health J.* 2011;17(7):593-98. doi: 10.26719/2011.17.7.593, PMID 21972483.
36. Sherina MS, Rampal L, Kaneson N. Psychological stress among undergraduate medical students. *Med J Malaysia.* 2004;59(2):207-11. PMID 15559171.
37. Rotenstein LS, Ramos MA, Torre M, Segal JB, Peluso MJ, Guille C, et al. Prevalence of depression, depressive symptoms, and suicidal ideation among medical students: A Systematic review and meta-analysis. *JAMA.* 2016;316(21):2214-36. doi: 10.1001/jama.2016.17324.
38. Ibrahim MB, Abdelreheem MH. Prevalence of anxiety and depression among medical and pharmaceutical students in Alexandria University. *Alex J Med.* 2015;51(2):167-73. doi: 10.1016/j.ajme.2014.06.002.
39. Fares J, Fares Y. The role of yoga in relieving medical student anxiety and stress. *N Am J Med Sci.* 2016;8(4):202-04. doi: 10.4103/1947-2714.179963, PMID 27213148.
40. Cocchiara RA, Peruzzo M, Mannocci A, Ottolenghi L, Villari P, Polimeni A, et al. The use of yoga to manage stress and burnout in healthcare workers: A systematic review. *J Clin Med.* 2019;8(3):284. doi: 10.3390/jcm8030284, PMID 30813641.
41. Saoji AA. Yoga: A strategy to cope up stress and enhance wellbeing among medical students. *N Am J Med Sci.* 2016;8(4):200-2. doi: 10.4103/1947-2714.179962, PMID 27213147.
42. Woodyard C. Exploring the therapeutic effects of yoga and its ability to increase quality of life. *Int J Yoga.* 2011;4(2):49-54. doi: 10.4103/0973-6131.85485, PMID 22022122.
43. Bhavanani AB. Integrating yoga in health professional education: the SBV experience. *J Educ Technol Health Sci.* 2011;4(2):42-6.
44. Narasimha TL, Ammani S. Stress Management: A Case Study of Professional Students on Impact of Meditation & Yoga on Stress Levels, i-manager's. *J Educ Psychol.* 2013;6(4):42-7.
45. Mishra AS, Sk R, Hs V, Nagarathna R, Anand A, Bhutani H et al. Knowledge, attitude, and practice of yoga in rural and Urban India, KAPY 2017: A nationwide cluster sample survey. *Medicines.* 2020;7(2):8. doi: 10.3390/medicines7020008.
46. Bhaskar L, Kharya C, Deepak KK, Kochupillai V. Assessment of cardiac autonomic tone following long sudarshan kriya yoga in art of living practitioners. *The Journal of Alternative and Complementary Medicine.* 2017 Sep 1;23(9):705-12.
47. S. Shanthi, "Sky Kayakalpa Yoga and Simplified Physical Exercises for Polycystic Ovarian Syndrome and Infertility - A Pilot Trial", *International Journal of Science and Research (IJSR)*, Volume 8 Issue 6, June 2019, pp. 2282-2286.
48. Available from: <https://anuradhaselvakumar.blogspot.com/2015/09/> [cited 7/9/2022].
49. Available from: <https://anuradhaselvakumar.blogspot.com/2015/> [cited 7/9/2022].
50. Available from: <http://www.skysociety.org.sg/courses/sky.htm> [cited 7/9/2022].