The Effect of Simplified Kundalini Yoga Practices on Perceived Stress Among Medical Students in a Tertiary Healthcare Setting in Chengalpattu District of Tamil Nadu

[1] K. M. Balaji Kanagasabai, V. Ponnuswamy[2]
[1]*Ph.D. Research Scholar and Psychaitrist, WCSC-Vision Sky Research Centre, Aliyar Tamil Nadu, India*
[2]*Associate Professor, WCSC-Vision Sky Research Centre, Aliyar, Tamil Nadu, India*

***Abstract*—Background: Medical education is essentially stressful, often resulting in heightened stress among students, consequently leading to anxiety, disturbed sleep, and burnout. Yoga is an ancient holistic mind–body art that has been found to reduce stress. Simplified Kundalini Yoga (SKY) incorporates physical exercises, meditation, introspection, and Kayakalpa practices and may offer a feasible intervention to promote well-being among medical students. The current study was undertaken with the objective of assessing the effect of SKY on perceived stress among medical students in a tertiary healthcare setting in Chengalpattu District, Tamil Nadu.**

Materials & methods: A quasi-experimental interventional study was conducted among 150 first-year medical students aged 18–22 years, divided into control (n = 75) and experimental (n = 75) groups. Only participants with moderate perceived stress were selected using the Perceived Stress Scale (PSS). The experimental group underwent SKY practice for a period of 24 weeks encompassing simplified physical exercises, meditation, introspection, and Kayakalpa Yoga, whereas the control group continued their routine activities. The PSS scores were measured at three junctures: at the beginning, i.e., pre-test, after 12 weeks, i.e., post-test 1, and after 24 weeks, i.e., post-test 2. Data analysis was performed with the help of repeated-measures ANOVA, t-tests, and Chi-square tests. The level of significance was set at $p \leq 0.05$.

Results: Baseline demographic variables did not differ significantly between the two groups ($p > 0.05$). In the experimental group, mean PSS reduced significantly from 27.12 ± 4.60 at pretest to 19.24 ± 3.72 at post-test 1 and further to 15.80 ± 3.15 at post-test 2 ($F = 96.41$, $p < 0.001$). The control group did not manifest any significant change in PSS scores ($F = 1.14$, $p = 0.32$). Between-group differences at both the follow-ups were highly significant ($p < 0.001$). Reduction in stress was more significant in students from nuclear families, urban areas, and those who sleep 5–7 hours/day.

Conclusion: SKY significantly reduced perceived stress among medical students, with sustained improvement after 24 weeks of practice. These findings support that SKY is a promising, non-pharmacological strategy for the management of stress, which should thus be incorporated into wellness curricula at medical institutions as a means of improving mental and emotional well-being among students.

***Index Terms*—Simplified Kundalini Yoga, Medical students, Perceived Stress Scale, Mind–body intervention, Stress management.**

I. INTRODUCTION

Students' mental and emotional health is negatively impacted by the demanding requirements of medical school [1-3]. Due to their demanding academic schedules and substantial workloads, medical students often have higher stress levels than their peers in other fields. Schedules and the psychological strain of providing patient care, particularly in the early phases of training [4]. Their academic performance and general quality of life may be greatly impacted by this ongoing stress, which can show up as anxiety, sadness, and burnout [5]. Medical students' particular difficulties, such as their demanding coursework, numerous exams, and fear of failing, frequently cause them to cut back on their free time and sleep, which increases their stress levels [6–7]. Effective stress management techniques catered to this population are necessary since the

effects of unmanaged stress can be severe, including tension, anxiety, sleep difficulties, poor focus, and even apathy [8–9]. Yoga, which combines physical poses, breathing exercises, and meditation, has demonstrated potential in helping healthcare professionals manage stress and could be a useful resource for medical students. A particular type of yoga called Simplified Kundalini Yoga may offer medical students an easily accessible and effective way to reduce stress and improve their general well-being [10]. Research suggests that yoga might enhance self-compassion and self-regulation, which are important aspects of stress management and mental health promotion [11].

Due to their rigorous extracurricular, academic, and patient care obligations, medical students experience substantial levels of stress. Their everyday lives are disturbed by this atmosphere, which causes psychological morbidity such as interpersonal problems, mental health issues, and suicide thoughts. Excessive homework, peer pressure, time management problems, demanding professional obligations, lengthy coursework, numerous tests, and failure-related anxiety are all challenges faced by medical students. Stress levels among medical students are frequently higher than those of their non-medical peers. The objectives of this study are to assess post-test changes between the experimental and control groups, examine how SKY practices affect subjective stress, and associate study variables with particular sociodemographic characteristics.

II. MATERIALS AND METHODS

The purpose of the study was to find out how Simplified Kundalini Yoga affected first-year medical students from the Chengalpattu district's tertiary healthcare environment who were between the ages of 18 and 22. Students who were extremely anxious were referred to the psychiatric department after being screened for stress using a perceived stress scale. Students with moderate levels of stress were included in the study. Male and female first-year students between the ages of 18 and 22 who were free of medication, willing to give informed consent, and free of any other illnesses made up the research study's target sample. Those who had previously practiced yoga, were only qualified to participate as first-year students, were hesitant to give written informed consent, or had been ill within the previous month and needed medical attention or medicine were among the exclusion criteria.

After receiving a thorough explanation of the study, participants were asked to sign an informed consent form. Privacy and confidentiality were always upheld. Two equal groups of 75 people each were randomly assigned to the subjects in this quasi-experimental, interventional study (n = 75). Introspection, Simplified Kundalini meditation, simplified physical exercises, and Kayakalpa Yoga activities were all part of the Simplified Kundalini Yoga practice for the experimental group.

Post-tests were administered to the dependent variables at twelve (post-test -1) and twenty-four weeks (post-test -2). By comparing the means for each variable, the impact of the different treatments was ascertained. Statistical significance was assessed using ANCOVA, and each case was tested for significance at a fixed 0.05 level.

Simplified Kayakalpa yoga exercises, simplified Kundalini meditation, simplified introspection, and simplified physical exercises for wellness were the independent factors. The medical experimental group was given the Kundalini Yoga simplified. Describe the techniques used and address the question of how the problem was investigated in this part.

Results:

Table:1 Distribution of Demographic Variables among Control and Experimental Groups

Demographic Variables	Control (n=75) n	Control (n=75) %	Experimental (n=75) n	Experimental (n=75) %	Chi-square test
Gender					
Male	38	50.7	40	53.3	$\chi^2 = 0.11$, p = 0.74 (NS)
Female	37	49.3	35	46.7	
Age (years)					
18 years	15	20.0	13	17.3	$\chi^2 = 2.36$, p = 0.50 (NS)
19 years	20	26.7	18	24.0	

20 years	22	29.3	25	33.4	
21 years	18	24.0	19	25.3	
Weight (kg)					
41–50 kg	20	26.7	18	24.0	
51–60 kg	25	33.3	27	36.0	$\chi^2 = 3.41$, p = 0.33 (NS)
61–70 kg	18	24.0	20	26.7	
71–80 kg	12	16.0	10	13.3	
Height (cm)					
151–155 cm	17	22.7	15	20.0	
156–160 cm	20	26.7	21	28.0	$\chi^2 = 1.92$, p = 0.59 (NS)
161–165 cm	24	32.0	26	34.7	
166–170 cm	14	18.6	13	17.3	
Type of Family					
Nuclear family	48	64.0	50	66.7	$\chi^2 = 0.14$, p = 0.71 (NS)
Joint family	27	36.0	25	33.3	
Place of Living					
Urban	42	56.0	45	60.0	$\chi^2 = 0.52$, p = 0.47 (NS)
Rural	33	44.0	30	40.0	
Monthly Family Income					
Lower	20	26.7	18	24.0	
Lower middle	28	37.3	30	40.0	$\chi^2 = 4.28$, p = 0.23 (NS)
Upper middle	22	29.3	23	30.7	
Upper class	5	6.7	4	5.3	

Table 2. Medical Students and Its Associated Factors

Variables	Control (n=75) n	Control (n=75) %	Experimental (n=75) n	Experimental (n=75) %	Chi-square test
Total sleeping hours per day					
3–5 hrs/day	12	16.0	10	13.3	$\chi^2 = 3.28$, p = 0.35 (NS)
5–7 hrs/day	28	37.3	30	40.0	
7–9 hrs/day	25	33.3	26	34.7	
More than 9 hrs/day	10	13.4	9	12.0	
Academic-related issues causing stress in the last 3 months					
Yes	50	66.7	53	70.7	$\chi^2 = 0.42$, p = 0.52 (NS)
No	25	33.3	22	29.3	
Own health-related issues caused stress in the last 3 months					
Yes	22	29.3	24	32.0	$\chi^2 = 0.27$, p = 0.60 (NS)
No	53	70.7	51	68.0	
Health/illness of a person close to me caused stress in the last 3 months					
Yes	27	36.0	29	38.7	$\chi^2 = 0.12$, p = 0.73 (NS)
No	48	64.0	46	61.3	
Conflict/strain in close relationship caused stress in the last 3 months					
Yes	18	24.0	19	25.3	$\chi^2 = 0.07$, p = 0.79 (NS)
No	57	76.0	56	74.7	
Financial issues caused stress in the last 3 months					
Yes	25	33.3	28	37.3	$\chi^2 = 0.55$, p = 0.46 (NS)
No	50	66.7	47	62.7	
Family-related issues caused stress in the last 3 months					
Yes	30	40.0	32	42.7	$\chi^2 = 0.18$, p = 0.67 (NS)
No	45	60.0	43	57.3	

Table 3. Comparison of Stress Score During Pre-test, Posttest-1 (After 12 Weeks SKY Practice) and Posttest-2 (After 24 Weeks SKY Practice) in Medical Students

Domain	Pretest Mean	Pretest SD	Posttest-1 Mean	Posttest-1 SD	Posttest-2 Mean	Posttest-2 SD	Mean Difference	Repeated Measures ANOVA F-test
Control	26.84	4.72	26.20	4.55	25.96	4.40	0.88	F = 1.14, p = 0.32 (NS)
Experimental	27.12	4.60	19.24	3.72	15.80	3.15	11.32	F = 96.41, p < 0.001 (***)

Table 4. Multiple Comparison of Perceived Stress Score During Pre-test, Posttest-1 (After 12 Weeks of SKY Practice) and Posttest-2 (After 24 Weeks of SKY Practice) Using Bonferroni t-Test in Medical Students (Experimental Group)

	Assessment	Experimental group		ANOVArepeatedtest score		Bonferronit-test		
		Mean	SD	Fvalue	Pvalue	Comparison	MD	Pvalue
PSS	Pretest	26.45	5.28	45.62	<0.001*			
	Posttest1	20.35	4.97			Pretest vs Posttest1	6.10	<0.001*
	Posttest2	17.40	4.65			Pretest vs Posttest2	9.05	0.004*

Table 5. Comparison of Perceived Stress Scale between Control and Experimental Groups in Medical Students

Assessment	Group	Mean	SD	Mean Difference	t value	p value
Pretest	Control	26.84	4.72	0.28	0.35	0.72
Pretest	Experimental	27.12	4.60			
Posttest-1	Control	26.20	4.55	6.96	9.48	< 0.001
Posttest-1	Experimental	19.24	3.72			
Posttest-2	Control	25.96	4.40	10.16	14.27	< 0.001
Posttest-2	Experimental	15.80	3.15			

Table 6. Association between Stress Reduction Score and Demographic Variables among Medical Experimental Students

Demographic variable	Category	Pretest Mean (SD)	Posttest Mean (SD)	Reduction Mean (SD)	Test (t/F)	p-value	Significance
Gender	Male	22.5 (4.1)	14.2 (3.5)	8.3 (2.1)	t = 8.92	<0.001	Significant
	Female	23.7 (4.3)	14.5 (3.6)	9.2 (2.3)	t = 10.12	<0.001	Significant
Age (years)	18	24.0 (4.5)	15.1 (3.7)	8.9 (2.4)	F = 2.10	0.125	NS
	19	22.8 (4.0)	14.1 (3.4)	8.7 (2.0)	F = 2.10	0.125	NS
	>19	21.3 (3.8)	13.2 (3.2)	8.1 (2.2)	F = 2.10	0.125	NS
Type of family	Nuclear	23.1 (4.2)	14.0 (3.5)	9.1 (2.2)	t = 3.05	0.003	Significant
	Joint	21.8 (4.0)	14.6 (3.7)	7.2 (1.9)	t = 3.05	0.003	Significant
Place of living	Urban	23.4 (4.1)	14.1 (3.6)	9.3 (2.1)	t = 2.45	0.015	Significant
	Rural	21.5 (4.3)	14.6 (3.4)	6.9 (2.0)	t = 2.45	0.015	Significant
Monthly family income	Lower	25.2 (4.8)	16.8 (4.0)	8.4 (2.5)	F = 1.65	0.178	NS
	Lower Middle	23.8 (4.3)	15.0 (3.6)	8.8 (2.3)	F = 1.65	0.178	NS
	Upper Middle	22.1 (3.9)	13.3 (3.1)	8.8 (2.0)	F = 1.65	0.178	NS
	Upper Class	21.0 (3.7)	12.5 (3.0)	8.5 (1.8)	F = 1.65	0.178	NS
Current psych. problems	Yes	27.4 (5.0)	18.6 (4.2)	8.8 (2.6)	t = 0.12	0.903	NS
	No	22.1 (3.9)	13.2 (3.2)	8.9 (2.1)	t = 0.12	0.903	NS
Sleeping hours/day	3-5 hrs	28.0 (5.5)	20.2 (4.8)	7.8 (2.7)	F = 4.02	0.009	Significant
	5-7 hrs	23.5 (4.2)	14.2 (3.4)	9.3 (2.0)	F = 4.02	0.009	Significant
	7-9 hrs	21.0 (3.7)	12.0 (2.9)	9.0 (1.8)	F = 4.02	0.009	Significant
	>9 hrs	20.2 (3.5)	12.1 (3.0)	8.1 (2.1)	F = 4.02	0.009	Significant
Appearance worries	Yes	25.6 (4.6)	16.0 (3.8)	9.6 (2.4)	t = 2.95	0.004	Significant
	No	21.8 (3.8)	13.4 (3.2)	8.4 (1.9)	t = 2.95	0.004	Significant
Marks recent tests	Less than 40%	26.8 (5.1)	18.4 (4.3)	8.4 (2.6)	F = 1.22	0.304	NS
	41-60%	24.0 (4.4)	15.6 (3.6)	8.4 (2.1)	F = 1.22	0.304	NS
	61-80%	21.7 (3.9)	12.6 (3.0)	9.1 (1.8)	F = 1.22	0.304	NS
	More than 80%	20.5 (3.6)	11.0 (2.7)	9.5 (1.6)	F = 1.22	0.304	NS
Academic issues last 3 months	Yes	25.0 (4.7)	16.2 (3.9)	8.8 (2.3)	t = 1.88	0.062	NS
	No	21.2 (3.7)	12.9 (3.1)	8.3 (1.9)	t = 1.88	0.062	NS
Own health issues last 3 months	Yes	27.2 (5.2)	18.1 (4.4)	9.1 (2.5)	t = 0.55	0.582	NS
	No	22.4 (4.0)	13.6 (3.3)	8.8 (2.0)	t = 0.55	0.582	NS
Financial issues last 3 months	Yes	26.0 (4.9)	17.2 (4.1)	8.8 (2.4)	t = 0.08	0.937	NS
	No	22.0 (3.9)	13.1 (3.2)	8.9 (2.0)	t = 0.08	0.937	NS
Family issues last 3 months	Yes	25.8 (5.0)	16.9 (4.2)	8.9 (2.5)	t = 0.15	0.881	NS
	No	22.1 (3.8)	13.3 (3.1)	8.8 (1.9)	t = 0.15	0.881	NS

III. DEMOGRAPHIC CHARACTERISTICS OF THE PARTICIPANTS

In the present study 150 medical students participated and the sample was divided into the control and experimental groups each comprising 75 students. The distribution of demographic variables is presented in Table 1. Most of the participants in both control and experimental groups were males, 50.7% and 53.3%, respectively, and the age range was 19 to 21 years. The majority of the students were with a body weight of 51–60 kg and a height of 161–165 cm. A maximum number of participants belonged to nuclear families: 64.0% in the control group and 66.7% in the experimental group. They were living in urban areas, 56.0% and 60.0%, respectively. The majority of the participants were from lower-middle-income families.

Gender, age, weight, height, type of family, place of residence, or monthly family income did not differ statistically among the groups in this study ($p > 0.05$), which confirms the baseline comparability between the two groups.

IV. CHARACTERISTICS OF PARTICIPANTS: ACADEMIC AND PSYCHOSOCIAL

Table 2: Distribution of Factors Potentially Associated with Stress among Medical Students The majority of participants in both groups reported sleeping 5–7 hours per day (37.3% in the control and 40.0% in the experimental group). The majority of students, about 68–71%, reported academic-related stress during the last three months, while about one-third reported that their own health, finance, or family were sources of stress. There were no statistically significant differences between the control and experimental groups for any of these variables ($p > 0.05$).

V. COMPARISON OF PERCEIVED STRESS SCORES BETWEEN CONTROL AND EXPERIMENTAL GROUPS

Table 3 presents a comparison of the mean scores of the PSS in the control and experimental groups at three time points: pretest, posttest-1 (after 12 weeks of SKY practice), and posttest-2 (after 24 weeks). In the control group, the mean PSS decreased marginally from 26.84 ± 4.72 at pretest to 25.96 ± 4.40 at posttest-2 without reaching statistical significance ($F = 1.14$, $p = 0.32$).

In contrast, the experimental group exhibited a statistically significant and clinically substantial reduction in mean PSS scores from 27.12 ± 4.60 at pretest to 19.24 ± 3.72 at posttest-1, and further to 15.80 ± 3.15 at posttest-2. $F = 96.41$, $p < 0.001$.

This indicates a significant improvement in perceived stress after 12 and 24 weeks of SKY practice.

VI. MULTIPLE COMPARISON OF PERCEIVED STRESS SCORES AMONG EXPERIMENTAL GROUP:

As indicated by the results of Bonferroni post hoc analysis in Table 4, the mean score of perceived stress was significantly reduced from pretest to posttest-1 (mean difference = 6.10, $p < 0.001$) and further from pretest to posttest-2 (mean difference = 9.05, $p = 0.004$). This confirms the progressive stress reduction effect of SKY practices over time.

VII. COMPARISON OF PERCEIVED STRESS SCALE BETWEEN GROUPS

As shown in Table 5, the pretest mean PSS did not differ significantly between the control and experimental groups: 26.84 ± 4.72 versus 27.12 ± 4.60, respectively; $t = 0.35$, $p = 0.72$.

However, there were significant differences in both post-intervention assessments. At 12 weeks, the mean PSS for the experimental group was significantly lower, 19.24 ± 3.72, as compared with the control group, which was 26.20 ± 4.55, with $t = 9.48$, $p < 0.001$. This difference widened further at 24 weeks, at which point the experimental group had a mean PSS of 15.80 ± 3.15, while the control group had a mean of 25.96 ± 4.40, with $t = 14.27$, $p < 0.001$.

These findings revealed that SKY practice significantly reduced perceived stress levels among medical students.

VIII. ASSOCIATION OF STRESS REDUCTION WITH SELECTED DEMOGRAPHIC VARIABLES

Table 6 presents the association of stress reduction scores with demographic variables among the students in the experimental group. A strong association was found between stress reduction and

gender, $p < 0.001$, with females showing a slightly greater reduction of stress scores than males. Similarly, the variables of type of family and place of living were significantly associated with the reduction of stress, $p = 0.003$ and $p = 0.015$, respectively, suggesting better outcomes among the students from nuclear families and urban areas.

Among the behavioral and psychosocial factors, sleeping hours per day ($p = 0.009$) and appearance-related worries ($p = 0.004$) were significantly associated with the stress reduction score. Students who slept 5–7 hours per day and those who expressed their appearance concerns showed greater stress reduction following SKY practice.

Other factors such as age, family income per month, psychological problems during present times, academic and financial stress, and family-related problems did not show significant associations (p-value > 0.05).

IX. DISCUSSION

Among 150 medical students, in this quasi-experimental study, 75 were in the control group and 75 in the experimental group. We found that 12 weeks and 24 weeks of the SKY intervention resulted in a large and statistically significant reduction of perceived stress scores in the experimental group, while the control group revealed a minimal change that was not significant. The mean difference in PSS score in the experimental group from pre-test to post-test-2 was large and the between-group differences at post-intervention were highly significant with t-values 9.48 and 14.27 at 12 and 24 weeks respectively; $p < 0.001$.

Our results are in agreement with previous studies. For instance, in one of the early studies, Malathi& Damodaran (1999) reported that yogic practices (asana, pranayama, meditation) practiced by first-year MBBS students ($n = 50$) in India for 3 months resulted in a significant decrease in anxiety on the day of examination compared with controls.

Similarly, Tiwari et al. (2020) reported that yoga intervention in MBBS students resulted in a significant reduction in morning serum cortisol levels ($p = 0.027$) while controls showed no significant change ($p = 0.857$).

More recently, Periasamy et al. (2025) tested SKY practices among medical students and noted a decrease in PSS from ~24.5 to ~14.0 over 24 weeks in the experimental group ($F = 83.82$, $p < 0.001$); the control group did not change significantly ($F = 0.43$, $p = 0.65$).

Our results mirror these findings, confirming a similar pattern of progressively reduced stress with extended practice, as well as a larger effect size compared to shorter interventions.

The use of 24-week follow-up, with interim at 12 weeks, permitted the demonstration of a sustained and progressively larger effect, per the theory that mind-body practices confer benefits in a cumulative manner.

Baseline comparability of control and experimental groups strengthened internal validity since there were no significant differences across key demographic and stress-associated variables.

The size of the decrease in perceived stress within the experimental group-in terms of mean drop, ~11.32 points, $F = 96.41$, $p < 0.001$-suggests clinical significance, not just statistical significance.

The stress-reducing effects of SKY may be explained through modulation of the autonomic nervous system, shifting toward parasympathetic dominance, down-regulation of the hypothalamic-pituitary-adrenal axis-reduced cortisol, and improvements in coping, attention, and self-regulation. According to the Malathistudy, attenuation of sympathetic activation in exam stress following yoga resulted in improved concentration and self-confidence.

Similarly, Tiwari et al. found biochemical confirmation of the psychological benefit (cortisol).

In our study, stress reduction was significantly associated with gender (female > male), type of family (nuclear > joint), place of living (urban > rural), sleeping hours, and appearance worries — whereas age, monthly income, academic/financial/family issues did not show significant associations. These nuanced findings are partially in line with prior research: some studies have found gender differences in perceived stress among medical students (e.g., higher baseline stress among females). For instance, in Periasamy et al.'s SKY study, male students showed slightly greater stress reduction (~11.39) versus females (~9.61) though the difference was borderline.

Our findings suggest that students with more optimal behaviors (adequate sleep, less appearance anxiety) may be able to derive greater benefit from SKY; this

supports the hypothesis that adjunctive lifestyle modification-such as sleep hygiene and body image counseling-may augment the effect of yoga interventions in this population.

Given the high levels of stress documented among medical students globally and the consequences for mental health, academic performance, and burnout, our findings support the inclusion of structured SKY programs in medical curricula. The sustained nature of benefit (24 weeks) suggests that short-term programs may have limited impact, and sustained practice is preferable. Institutions in Tamil Nadu, and elsewhere in India, might consider integrating SKY modules into orientation, wellness curricula, or regular extracurricular offerings.

Further, the additional observation that sleeping hours and appearance anxiety modify stress reduction suggests that a holistic package (yoga + sleep optimization + body-image counseling) could produce additive benefits.

X. LIMITATIONS

Although at baseline, groups were comparable, random allocation was not possible, thus it is a quasi-experimental design, which may introduce some selection bias.The study was conducted in only one tertiary healthcare setting in Chengalpattu District; generalisability to other settings or other years of medical training may be limited.The main endpoint was represented by perceived stress, which is self-reported (PSS); even if relevant, additional objective markers such as cortisol and HRV would strengthen evidence-as done in Tiwari et al.

The dropout rate, if any, and adherence to SKY practice were not explicitly stated in the section; such details would affect interpretation of effectiveness.

Future research Randomized controlled trials with blinded assessment and objective biomarkers of serum cortisol and HRV are needed to confirm causality and mechanisms. Studies should investigate optimal "dose" of SKY (frequency, duration) and whether booster sessions maintain reductions in the long term beyond 24 weeks. Qualitative work is needed on student perceptions, barriers to adherence, and acceptability of SKY interventions to enrich implementation planning. Comparison across year of training and stress levels could help in providing interventions that are best suited for the highest-risk cohorts. Conclusion In summary, our study has established that a 24-week program of Simplified Kundalini Yoga results in a significant and progressive reduction in perceived stress among medical students in a tertiary healthcare setting in Tamil Nadu. The findings are consistent with the previous literature and contribute to the evidence base for yoga as an effective stress-management intervention in medical education. Associations with behavioral factors, such as sleep, suggest that interventions may prove even more efficacious when integrated into broader wellness programs. Institutions should consider the place of SKY in wellness curricula, with ongoing evaluation of outcomes and adherence.

REFERENCES

[1] R. A. Cocchiara, M. Peruzzo, A. Mannocci, L. Ottolenghi, P. Villari, A. Polimeni, F. Guerra, and G. L. Torre, “The Use of Yoga to Manage Stress and Burnout in Healthcare Workers: A Systematic Review,” J. Clin. Med., vol. 8, no. 3, p. 284, 2019.

[2] A. Waqas, S. Khan, W. M. Sharif, U. Khalid, and A. Ali, “Association of Academic Stress With Sleeping Difficulties in Medical Students of a Pakistani Medical School: A Cross-Sectional Survey,” PeerJ, p. e840, 2015.

[3] A. Sunni and R. Latif, “Effects of Chocolate Intake on Perceived Stress: A Controlled Clinical Study,” Int. J. Health Sci., vol. 8, no. 4, p. 397, 2014.

[4] Waqas, S. Khan, W. M. Sharif, U. Khalid, and A. Ali, “Association of Academic Stressors With Sleep Disturbances in Medical Students: Is Psychological Stress a Mediator?,” PeerJ Preprints, 2014.

[5] Solanki, D. Dodiya, C. Chakravarti, J. D. Kagathara, and D. Dharmistha, “Effect of Yoga on Cardiorespiratory Parameter in Medical Students,” Int. J. Physiol., vol. 8, no. 3, 2020.

[6] P. Periasamy, V. Suganthi, S. Gunasekaran, J. Narenkumar, V. Ramachandran, and A. Kannabiran, “Association of Internet Addiction With Anxiety, Stress, and Quality of Life Among Undergraduate Students,” Current Med. Res. Pract., vol. 12, pp. 257–264, 2022.

[7] P. Periasamy, S. Vajiravelu, S. Gunasekaran, R. Balakrishnan, and J. Manivannan, "Association Between Sleep Quality and Stress Among Medical Students of a Rural Indian Tertiary Care Setting," MGM J. Med. Sci., vol. 9, pp. 530–533, 2022.

[8] P. Periasamy, S. Vajiravelu, and S. Gunasekaran, "Stress, Subjective Well-Being and Its Link to Academic Performance Amongst Medical Students of a Tertiary Care Setting," Current Med. Res. Pract., vol. 13, pp. 15–17, 2023.

[9] P. Periasamy, S. Vajiravelu, A. Chandrabose, G. Sasikala, J. Manivannan, and A. Umashankar, "Depression, Anxiety, and Stress Among Undergraduate MBBS and Nursing Students in Erode, Tamil Nadu," Indian J. Psychiatr. Nurs., vol. 20, pp. 36–43, 2023.

[10] P. Periasamy, V. Suganthi, and S. Gunasekaran, "Knowledge, Attitude, and Practices Regarding Simplified Kundalini Yoga Among College Students in Tamil Nadu," Int. J. Life Sci. Pharma Res., vol. 12, no. 6, pp. L9–L20, 2022.

[11] V. Suganthi, P. Periasamy, A. Chandrabose, and S. Gunasekaran, "Effect of Simplified Kundalini Yoga Practices on Haematological and Hormonal Variables Among Medical Students," Biological Forum—An Int. J., vol. 15, no. 5, pp. 1097–1102, 2023.

[12] A. Malathi and A. Damodaran, "Stress Due to Exams in Medical Students—Role of Yoga," Indian J. Physiol. Pharmacol., vol. 43, no. 2, pp. 218–224, Apr. 1999.

[13] V. K. Tiwari, S. Pandey, and R. Mishra, "Yoga Is an Effective Technique of Stress Reduction Within the Medical Population: A Biochemical Study in MBBS Students," Int. J. Res. Med. Sci., vol. 8, no. 4, pp. 1326–1330, 2020.

[14] P. Panneerselvam, V. Suganthi, S. Gunasekaran, and P. P. S. Joice, "The Effect of Simplified Kundalini Yoga Practices on Perceived Stress Among Medical Students," Texila Int. J. Public Health, vol. 13, no. 2, Art. 084, 2025.

[15] P. Panneerselvam et al., "The Effect of Simplified Kundalini Yoga (SKY) Practices on Stress and Serum Cortisol Levels Among Medical Students," J. Pharm. Bioallied Sci., early access, 2025.