

# THE EFFECT OF SHIV SANKALP SUKTA ON THE QUALITY OF SLEEP IN ADOLESCENTS

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## ABSTRACT

Sleep quality is thought to be crucial for the development of the body, mind, and brain during adolescence. Due to erratic daily schedules, academic demands, and psychological stress, sleep-related problems among teenagers are quickly increasing in the modern era. The current study's goal was to find out how chanting the *Shiva Sankalpa Sukta* affected teenagers' sleep quality. Seventy teenagers (ages 12 to 18) participated in this pre-post randomized controlled trial. They were split into two groups: an experimental group (n = 35) and a control group (n = 35). For 60 days, the experimental group engaged in frequent Om chanting, recitation of the *Shiva Sankalpa Sukta*, contemplation of its significance, and mantra-based meditation, while the control group carried on with their regular daily activities.

Sleep quality was assessed using the Pittsburgh Sleep Quality Index (PSQI). The experimental group's PSQI scores significantly improved (from  $14.71 \pm 5.608$  to  $7.74 \pm 4.083$ ;  $p < 0.001$ ), whereas the control group showed no discernible improvements. The effects of the sessions, the phases (pre- vs. post-intervention), and their interaction effects were further shown to be significant by statistical analysis (RMANOVA). These results imply that regular chanting of the *Shiva Sankalpa Sukta* enhances mental peace, cognitive stability, and autonomic nervous system balance, all of which contribute to better sleep. Thus, it can be said that the *Shiva Sankalpa Sukta* is a simple, effective, and culturally acceptable non-pharmacological intervention that can help teenagers sleep better and improve their general health. Further research is warranted in the future to explore its long-term effects and the underlying bio-physiological mechanisms involved.

**Keywords** - Shiva Sankalpa Sukta, Sleep Quality, Adolescence, Mantra Chanting, Pittsburgh Sleep Quality Index (PSQI), Yoga and Meditation

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## Introduction

Sleep is an inseparable part of human health and life, and is pivotal to learning and practice as well as physical and mental health [1]. Studies have suggested that insufficient sleep, increased frequency of short-term sleep, and going to sleep late and getting up early affect the learning capacity, academic performance, and neurobehavioral functions [2, 3]. Previous studies have indicated that the quantity of sleep reported by individuals as delayed or inappropriate sleep, waking up too late, especially at weekends and daytime sleepiness is associated with compromised academic performance in children and adults [2].

Chronic sleep loss in adolescence has been widely reported in the literature and is considered a public health epidemic [4]. Poor sleep quality causes a general imbalance in the body, especially in the brain chemicals that regulate the sleep-wake cycle, consolidation of memory and body temperature regulation. Poor sleep quality can result in poor quality of life, poor school performance [4] and may even lead to suicidal ideation [5]. Lack of sleep-related physiological restoration may also result in higher levels of stress [6], mnemonic and attention deficits [7], as well as behavioral and emotional problems [7].

There are of course specific sleep disorders that affect AYAs, the most common being delayed sleep phase syndrome. This develops in adolescence and can continue into young adulthood; it is reported to affect 7% of adolescents. Delayed sleep phase syndrome is a pathological shift of the normal delay in the timing of sleep onset that occurs at this age, those affected will typically go to bed between 1am and 4am and wake much later in the morning [8].

Adolescence is a period characterized by significant physical, emotional, behavioral, and social changes. As for biological phenomena, the sleep pattern commonly changes in this development phase, as young people tend to go later to sleep and wake up later as well [9]. Sleep deprivation in adolescence can have consequences not only to health but also to school obligations and social activities [9]. This phase of life is associated with high stress levels and irregular sleep, as it is a period of intense and decisive school and professional experiences – which, along with the abovementioned factors, intensify the students' risks of developing behavioral and health disorders [10].

In Indian scriptures, the word '*sankalpa*' is interpreted in two different senses having two diametrically opposite significances. *Sankalpa* means the strong desire for any involvement which leads to the series of

action – reaction cycle. *Sankalpa* also means the noblest desire for attaining and doing perfection [11].

*Shiva Sankalpa Sukta* glorifies the auspicious mind as: यज्ञाग्रतोद्वारमुदैतिदैवं तदुसुप्तस्य तथैवैति ॥ द्वरङ्गमं ज्योतिषां ज्योतिरेकं तन्मे मनः शिवसंङ्कल्पमस्तु ॥ ॥यजु./34/1 ॥

The *Shiva Sankalpa Sukta* praises the auspicious mind as follows: "That mind which in the waking state through the means of the senses roams through this world, and which in the dream state roams through many worlds and returns to its origin, that far wanderer, that light of knowledge, my mind, may you have good intentions (*sivasankalpamastu*) [12].

येन कर्माण्यपसो मनीषिणो यज्ञे कृण्वन्ति विदथेषु धीराः । यदपूर्वं यक्षमन्तः प्रजानां तन्मे मनः शिवसंङ्कल्पमस्तु ॥यजु./34/2 ॥[13]

Perhaps you have excellent intentions? The techniques by which a man who wishes to do good, whose senses are stilled, who is intelligent and industrious, and who also becomes excellent in yajnas and other karmas formed by the *shstras*, as well as that which is the primary and finest of the tools of knowledge, my mind [12].

यत्प्रज्ञानंमुत चेतो धृतिश्च यज्योतिरन्तरमृतं प्रजासुं। यस्मान्नऽरुते किञ्चन कर्म क्रियते तन्मे मनः शिवसंङ्कल्पमस्तु ॥यजु./34/3 ॥

May you have good intentions, my mind, that mind that is solely focused on knowledge while ignoring the demands of the senses, that mind that is aware of the eternal and constant aspects of the universe, that mind that resides within a man but can illuminate what is outside, without which no actions are possible [12].

येनेदं भूतं भुवनम्भविष्यत्यरिगृहीतममृतेन सर्वम्। येन यज्ञस्तायते सप्त होता तन्मे मनः शिवसंङ्कल्पमस्तु ॥यजु./34/4 ॥

May you have good intentions, my mind, which exists till mukti, is attentive of the past, present, and future, provides yogis immortality, and is utilized to conduct the yajna alongside seven priests [12].

Research reveals that this constitutes a distinct, underlying message regarding the *Dhriti Manas* (Mind of Steadfastness). Consequently, a specific designation—"New Mind"—has been ascribed to it. The term Amrita (Immortal) also appears solely in the capacity of an epithet for it. This Sattva (essence) of the mind is formed through the development—within the mind itself—of the *Dhriti* (steadfastness) associated with the knowledge of the Atman (Soul). And since the knowledge of the Atman is immortal, the epithet Amrita has been employed. This mind serves as the illuminator of knowledge; hence, the Rishi has aptly named it "Pratyakshan" (Direct Perception).

*Dhriti Manas | Vishwanath |*

यस्मिन् ऋचः सामयजूषि यस्मिन् प्रतिष्ठिता रथनाभार्विवाराः। यस्मैश्चित्तं सर्वमोतम्प्रजानां तन्मे मनः शिवसंङ्कल्पमस्तु ॥यजु./34/5 ॥

May you have excellent intentions, my mind, that mind that is the shaft of the chariot wheel drawn in one direction by the sense-horse, and that mind that is the

hub of the chariot wheel whose spokes are the Rks, Yajus, and Samans and whose axle is knowledge.

This specific aspect of the mind is, in reality, merely a deeper, inner manifestation of the *Dhriti-manas* (the mind characterized by steadfastness). Consequently, it was not accorded a distinct name in earlier contexts. This particular classification of the mind has emerged within the *Dhriti-manas* in accordance with the nature of Divine Knowledge. It is for this very reason that the foundation of all Vedic teachings is described as being established within it. In the preceding mantra, the foundation of the soul's self-knowledge was described as residing within the mind; therefore, its essential nature (*sattattva*) was not presented there as being co-existent with all forms of consciousness (*cittas*), for the individual soul (*avayava-atma*) shares this essential co-existence solely with its own specific consciousness. However, in the present mantra, the focus shifts to describing the establishment of Divine Knowledge within the mind. And since Divine Knowledge is omnipresent—existing everywhere—it is through this medium that the essential nature of all forms of consciousness is revealed. It is precisely for this reason that the Sage has designated this specific classification of the *Dhriti-manas* by the name *Nishchayatman* (the Decisive Mind).

सुषारथिरश्वानिव यन्मनुष्यान्नेनीयतेऽभीशुभिर्वाजिनऽइव । ह्यत्प्रतिष्ठं यदजिरं जविष्ठं तन्मे मनः शिवसंङ्कल्पमस्तु ॥यजु./34/6 ॥

The intellect has the ability to steer a person's impulses and, by taming animal instincts, lead to that immortal resident in the heart who is free of conflict. My thoughts, I hope you have excellent intentions. A skilful charioteer orders his horses to run where he wants them to go.

A person who has advanced significantly in the pursuit of divine knowledge and worship develops, alongside that knowledge, the capacity to harmonize and align with the minds of others. This state of being does not actively seek to compel anyone to follow; rather, people spontaneously begin to align their conduct with such a person's thoughts. This power of attraction arises within them as a result of their elevated thoughts. Since they possess this distinct magnetic force, this specific state of mind has been termed here as *Vashikaran* (the power of influence/subjugation).

#### Objective of the study

1. To assess the effect of *Shiva Sankalpa Sukta* on the Quality of Sleep in adolescents.

#### Hypothesis

H1. There will be a significant effect of *Shiva Sankalpa Sukta* on the Quality of Sleep in adolescents.

#### Methodology Participants

In this study eighty school students whose ages ranged between 10 and 19 years were selected as participants. 10 students were excluded due to not matching the study protocol. Statistical calculation of the sample size was not done prior to the experiment. However post-hoc analyses showed that for the present study, with the

sample size as 40 in both group [13], and with the Effect size of 1.24 the power calculation has been based on social self-esteem which was significantly different between groups in the RM ANOVA and post-hoc analysis comparing the after values of yoga and control groups [14]. All the participants were studying in Saraswati Vidya Mandir, Maholi which was randomly selected among schools in Sitapur, northern region of India. The inclusion criteria were: (i) participants of both sexes, studying in a school near the yoga center, (ii) those who were willing to follow the study conditions and (iii) those who were studying in grades 6 to 12 (age range 10 to 19 years for these grades). Exclusion criteria were (i) any physical or mental illness, or being on medication, based on a routine case history and medical examination. None of the participants had to be excluded for these reasons. The participants were recruited with prior approval from the Principal of the school. The baseline characteristics of the two groups are given in Table 1.

**Table 1: Baseline characteristics of yoga and control groups**

Groups	Yoga Group	Control Group
Age in years	14.08 (0.98)	14.03 (0.95)
Age range (years)	10-19	10-19
Gender ratio (B:G)	18:17	16: 19
Socio economic status	Lower middle class	Lower middle class

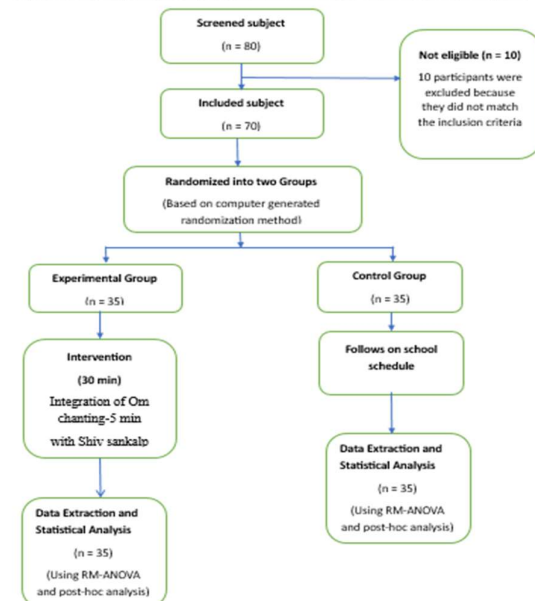
1. B = Boys; G = Girls.
2. Values are Group Mean (S.D.).

The Institutional Ethical Committee (IEC) of the University of Patanjali, Haridwar, Uttrakhand, India, granted their approval to this study.

**Study design**

The study screened 80 individuals: 10 individuals were excluded due to not meeting the inclusion criteria, and 35 were found suitable and agreed to participate in each group. Based on the computer-generated randomization method, participants were randomly assigned to either an experimental group or a control group. (i) Each participant received a unique serial number between 1 and 70, regardless of the sequence in which they enrolled; (ii) 35 random numbers were generated using a particular computer program; and (iii) the 35 random numbers were written next to the person's serial number. As a result, a unique random number was assigned to each participant. (iv) The random numbers were printed on identical white paper slips and folded similarly. (v) A participant who was not involved in the experiment alternately placed the paper slips in two boxes, one labelled (a) and the other (b). (vi) Members of the (a) group were assigned to the experimental group, whereas members of the (b) group were assigned to the non-experimental group. i.e., control group. This randomization technique assigned 35 people to each of

**Figure 1: Flow diagram showing the Randomization for the selection of the participants**



the two groups. The study is therefore a pre-post randomized controlled trial with assessments conducted before and after the 60-day intervention.

The flow diagram showing the randomization process for participant selection is presented in Figure 1.

**Assessments**

The following assessments were done for this study:

- (i) The Pittsburgh Sleep Quality Index (PSQI: Validation of Hindi version of the Sleep Quality Index [15].

**Procedure for Sleep Quality Assessment**

Sleep quality was measured using the Pittsburgh Sleep Quality Index (PSQI), a 19-item self-report tool that evaluates sleep patterns over the past month. Adolescents completed the questionnaire in a quiet setting after receiving standard instructions from trained research staff, who clarified wording when needed without influencing responses. The PSQI's seven components were scored according to the original guidelines and summed to obtain a global score ranging from 0 to 21, with higher scores indicating poorer sleep quality. A global score above 5 was used to classify poor sleepers. Completed forms were checked for completeness, de-identified, and stored securely.

**Scoring**

Score each of the seven components according to the PSQI scoring rules: each component yields a score of 0 (no difficulty) to 3 (severe difficulty). Sum the seven component scores to obtain the global PSQI score (range 0–21). Classify sleep quality: Global PSQI ≤ 5: good sleep quality & Global PSQI > 5: poor sleep quality. Record and store item-level and component-level scores in the data set to allow subgroup and sensitivity analyses.

**Intervention**

**Yoga Group**

The intervention program is thoughtfully structured to promote mental clarity, emotional stability, and inner peace through a daily spiritual and contemplative

routine. Spanning 8-week, this program is designed to be practiced six days a week (except Sunday) in school time.

Each daily session is carefully composed of four sequential practices, altogether lasting approximately 30 minutes per day. The classes were taught in a well ventilated and cleaned hall provided by the school administration. These practices are not just techniques, but transformative experiences drawn from ancient wisdom and adapted for modern application. The sequence is as follows:

**Om Chanting (5 minutes):** The session begins with the chanting of the sacred syllable "Om", a primordial sound believed to align the body, mind, and spirit. This simple yet profound practice helps to calm the nervous system, bring focus, and set a harmonious tone for the session. Over time, participants report a deepening sense of tranquillity and presence.

**Chanting of Shiv Sankalp Suktas (12 minutes):** Following Om chanting, participants engage in the rhythmic and melodic recitation of selected verses from the *Shiv Sankalp Suktas*, rooted in the Yajurveda. These ancient Vedic mantras are intended to awaken the divine resolve of the mind (Manas Tatva), invoking clarity, strength, and divine guidance. The vibrational quality of the chant enhances both meditative depth and emotional regulation.

**Contemplation on the Meaning of the Mantras (8 minutes):** After the vocal practices, a contemplative phase invites participants to reflect silently on the meanings, symbolism, and philosophical essence of the mantras just chanted. This contemplative practice deepens understanding, fosters spiritual insight, and allows the teachings to be internalized. It cultivates self-awareness and nurtures a reflective state of mind that bridges ancient knowledge with personal life experiences.

**Mantra-Based Meditation (5 minutes):** The session concludes with a focused Mantra-Based Meditation, where participants mentally repeat a selected mantra in silence. This meditative technique aids in stilling the fluctuations of the mind, reducing stress, and developing sustained attention. With consistent practice, it fosters inner stillness and emotional resilience.

The intervention for the yoga group is presented in Table 2.

**Table 2: Details about the yoga program mentioning a six-day sequence which was repeated throughout the 8-week.**

Sl. No.	Practice	Duration
1	Om Chanting	5 minutes
2	Chanting of <i>Shiv Sankalp Suktas</i>	12 minutes

3	Contemplation on the Meaning of the Mantras	8 minutes
4	Mantra-Based Meditation	5 minutes
Total Time		30 minutes

**Control Group:** Control group received no intervention during that time. The students of the control group were free to read any books of their class or complete their homework or make notes etc. in the classroom only under supervision of a school teacher.

**Results**

**Quality of Sleep and Shiv Sankalp Sukta:**

The effect of *Shiv Sankalp Sukta* on sleep quality was assessed using the Pittsburgh Sleep Quality Index (PSQI). The experimental group showed a marked improvement in sleep quality following the intervention, with mean PSQI scores decreasing from 14.71 ± 5.608 at baseline to 7.74 ± 4.083 post-intervention. This change was statistically significant (p < 0.001), indicating a substantial reduction in sleep disturbances. In contrast, the control group did not demonstrate a significant change in PSQI scores, with values decreasing only slightly from 14.77 ± 5.841 to 13.40 ± 6.241 (p = 0.083).

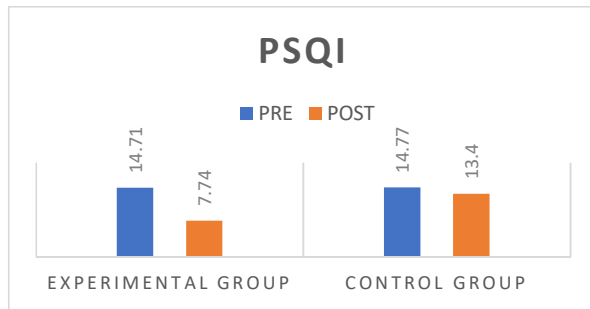
**Repeated measure analyses of variance (RMANOVA) for Pittsburgh Sleep Quality Index (PSQI)**

The mean interval demonstrated a variation between (1) Session (F = 5.716, df = 1,68, p = 0.020, η² = 0.078), (2) States (F = 57.394, df = 1,68, p = 0.001, η² = 0.458), (3) Session\*States (F = 25.859, df = 1,68, p = 0.001, η² = 0.276). The results are presented in Table 3. Figure 2 shows the graphical representation of the data for the experimental and control groups.

**Table 3: Variables of the Sleep Quality Assessment**

Variable	Factor	F value	Df	Huynh Feild epsilon	P-value	Mean Square	Partial Eta Square
PSQI	Session	5.716	1, 68	1	0.020	285.714	0.078
	States	57.394	1, 68	1	0.001	609.209	0.458
	Session*States	25.859	1, 68	1	0.001	274.400	0.276

**Figure 2: Graphical representation of Pittsburgh Sleep Quality Index (PSQI) in the Experimental and Control groups before and after assessment.**



## Discussion

The purpose of the present research was to find out the effect of *Shiv Sankalp Sukta* on the quality of sleep in adolescents. This trial was a pre-post randomized controlled trial, with assessments conducted before and after the 8-week intervention. The study was conducted with 70 adolescents. The subjects were separated into two groups: the control group (n = 35) and the experimental group (n = 35).

The primary aim of this study was to investigate the impact of *Shiv Sankalp Sukta* on the quality of sleep in adolescents, comparing an experimental group with a control group. The results indicate a statistically significant difference in sleep quality ( $p < 0.01$ ) between the experimental and control groups following the 8-week *Shiv Sankalp Sukta* intervention. Specifically, participants in the experimental group, who engaged in regular *Shiv Sankalp Sukta* chant sessions, demonstrated improvements in all parameters compared to those in the control group. This suggests that *Shiv Sankalp Sukta* may serve as an effective intervention for enhancing cognitive abilities in adolescents.

### 5.1 Shiv Sankalp Sookta and Quality of Sleep

**Hypothesis H<sub>A</sub>:** There will be a significant effect of *Shiva Sankalpa Sukta* on the Quality of Sleep.

**Hypothesis testing:** The results reveal that the practice of *Shiva Sankalpa Sukta* led to a significant improvement in sleep quality in the experimental group. Therefore, Hypothesis H<sub>A</sub> is accepted.

The improvement in sleep quality observed in the experimental group is consistent with earlier findings indicating that meditative sound repetition and slow, rhythmic chanting enhance parasympathetic activity and reduce cognitive hyper arousal [16, 17]. The chanting of the *Shiv Sankalp Sukta*, which emphasizes mental steadiness and intentional clarity, may help adolescents regulate intrusive thoughts and reduce pre-sleep arousal, a well-established contributor to sleep disturbances. The marked pre-post improvement in the experimental group, alongside minimal changes in the control group, suggests that the chanting practice itself was the primary active component rather than the passage of time or routine academic exposure.

Previous studies have also shown that practices such as Om chanting reduce academic anxiety and induce relaxation by modulating breathing patterns. Breathing serves as a direct pathway for influencing autonomic and cardiovascular functioning, allowing individuals to consciously reduce muscular, nervous, and emotional

tension [18]. Slow inhalation introduces controlled resistance that influences both physiological and mental states, while prolonged exhalation facilitates relaxation and emotional release. Through sustained awareness of the breath, chanting practices promote a state of tranquillity and autonomic balance [19]. Transcendental Meditation are associated with reductions in insulin resistance, blood pressure, and heart rate variability, indicating favourable autonomic modulation and reduced cardiometabolic risk. These effects underscore the broader role of mind-body practices in restoring physiological equilibrium through central autonomic regulation. Sleep regulation is closely linked to neuroendocrine mechanisms, particularly the activity of sleep-inducing hormones. Melatonin plays a central role in initiating sleep and improving sleep efficiency [20], while melanin-concentrating hormone contributes to energy conservation, reduced metabolism, and sleep promotion [21]. Yoga and mantra-based practices have been shown to influence hormonal balance, including melatonin secretion, which is associated with reductions in systolic and diastolic blood pressure and a shift toward parasympathetic dominance. Brief Om chanting sessions have been shown to enhance parasympathetic activity and induce relaxation within minutes [22]. Neurophysiological mechanisms may further explain these effects. Chanting produces vibratory sensations around the vocal cords and auditory pathways, which are transmitted through laryngeal and auricular branches of the vagus nerve [23]. This stimulation may influence limbic and hypothalamic centers, leading to reduced hypothalamic-pituitary-adrenal axis activation and a shift from sympathetic “fight-or-flight” responses toward parasympathetic “rest-and-digest” functioning [24]. Findings from the present study, including increased high-frequency heart rate variability, are suggestive of enhanced vagal tone and improved autonomic regulation.

Contemporary research, particularly school-based intervention studies, increasingly supports the cognitive, emotional, and stress-reducing effects of mantra chanting in children and adolescents. Neuroimaging studies of religious chanting have demonstrated increased low-frequency delta-band neural oscillations in regions such as the posterior cingulate cortex, which may support focused attention and inhibit distracting cognitive activity [25].

The present findings contribute to the growing body of evidence supporting traditional Indian practices as evidence-based wellness strategies. While much of the existing research focuses on generalized meditation or yoga programs, fewer studies have examined the effects of specific Vedic mantras. The results suggest that the structured rhythm, cognitive meaning, and emotional tone of the *Shiva Sankalpa Sukta* may offer distinct advantages for improving sleep quality and autonomic regulation. Participants also reported reductions in fatigue and improvements in daily functioning, aligning with prior findings on mantra-based interventions.

Causal relationships between sleep and health are inherently bidirectional: poor sleep can exacerbate psychological and physical health problems, while

adverse health conditions can further impair sleep quality [26]. A substantial body of literature has demonstrated that both physical exercise and meditative practices improve sleep quality in individuals with mild to moderate sleep disturbances as well as clinical insomnia. Alongside melatonin, other neurochemicals such as serotonin, prolactin, growth hormone, and corticotropin-releasing factors have been implicated in sleep regulation [27].

Overall, the findings support the view that chanting-based practices improve sleep quality through a combination of parasympathetic activation, hormonal regulation, attentional stabilization, and emotional calming. Incorporating mantra chanting into daily or evening routines may therefore represent a simple, culturally meaningful, and non-pharmacological strategy for improving sleep and overall well-being, particularly among adolescents experiencing academic stress and sleep difficulties.

### Conclusion

The results of the present investigation indicate that consistent chanting of the *Shiva Sankalpa Sukta* produces meaningful improvements in sleep quality among adolescents. The rhythmic pattern of breathing inherent in mantra recitation appears to offer a practical and accessible means of enhancing respiratory efficiency in this age group, which is often affected by stress, sedentary routines, and academic demands. Enhancements in sleep quality may be explained by greater parasympathetic dominance, improved neuroendocrine regulation, and a reduction in pre-sleep cognitive and emotional activation. In parallel, the chanting practice seems to foster mindfulness by providing a consistent focus of attention, lowering anxiety levels, and supporting emotional self-regulation. Taken together, these outcomes reflect the integrated influence of *Shiva Sankalpa Sukta* chanting on both mental and physiological processes.

In summary, the findings contribute to the growing body of evidence supporting the role of specific Vedic mantra practices as cost-effective, culturally grounded, and non-invasive strategies for promoting adolescent well-being in educational and community contexts. Considering the limited number of studies that have examined individual Vedic mantras in adolescent populations, the present results highlight the importance of future longitudinal research and mechanistic investigations to better understand the pathways underlying these observed benefits.

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