



AN APPLIED STUDY OF NINE-CENTER MEDITATION FOR REDUCING MOBILE PHONE ADDICTION IN SCHOOL STUDENTS

M. Vinoth Kumar Ph.D. Scholar^{1*}, Assistant Prof. Dr. B. Shalini², Principal Dr. V. Subbulakshmi³,
Dr. Muthukrishnan S.⁴

¹Meenakshi College of Yoga Science and Therapy, Meenakshi Academy of Higher Education and Research (Deemed to be University), Chennai.

²Meenakshi College of Yoga Science and Therapy, Meenakshi Academy of Higher Education and Research (Deemed to be University), Chennai.

³Meenakshi College of Yoga Science and Therapy, Meenakshi Academy of Higher Education and Research (Deemed to be University), Chennai.

⁴Ph.D. Yoga, Editorial Board Member, WJAHR.

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*Corresponding Author: M. Vinoth Kumar Ph.D. Scholar

Assistant Lecturer, Dept. of Child health Nursing, JSS College of Nursing.

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ABSTRACT

This randomized experimental investigation examined the effects of a structured Nine-Center Meditation programme on mobile phone addiction among school students. The investigators hypothesized that consistent participation in Nine-Center Meditation would result in significant reductions in problematic mobile phone usage and enhancements in self-regulation-related measures. A total of 30 school students were randomly assigned to two groups: an experimental group (n = 15), which underwent Nine-Center Meditation training, and a control group (n = 15), which continued with active rest without practicing meditation. The intervention comprised supervised sessions of selected meditation practices, breathing techniques, awareness exercises, and relaxation methods conducted five days per week. Assessments of mobile phone addiction, daily phone usage frequency, self-control, mindfulness, stress levels, and sleep disturbances were obtained before and after the 12-week intervention period. The collected data were statistically evaluated using Analysis of Covariance (ANCOVA), with the level of significance established at 0.05. The results indicated that participants in the meditation group showed significant improvement in mobile phone addiction when compared with the control group. Specifically, addiction scores declined, whereas self-control and mindfulness scores improved, together with favorable reductions in daily screen time and stress-related measures. No intervention-related adverse events were reported throughout the study. The findings confirmed the research hypothesis, suggesting that Nine-Center Meditation can positively affect behavioral regulation among school students. The study concluded that Nine-Center Meditation may serve as an effective complementary intervention for enhancing digital self-control in this population; however, further investigations with larger sample sizes and longer follow-up durations are recommended.

KEYWORDS: Nine-Center Meditation, Mobile Phone Addiction, School Students, Mindfulness, Self-Control.

1. INTRODUCTION

Mobile phone dependency is a growing behavioural issue among school-going students, particularly adolescents, as excessive smartphone utilization is linked with habitual checking, diminished self-regulation, sleep disturbances, psychological stress, and academic interference. Smartphone dependency among adolescents has been assessed consistently in previous studies through

standardized instruments such as the Smartphone Addiction Scale-Short Version (SAS-SV), which facilitates systematic school-based intervention research. While smartphones serve beneficial purposes for learning and social communication, their excessive usage may lead to detrimental behavioural tendencies that disrupt routine activities and educational performance. Mindfulness-oriented and meditation-oriented

interventions have progressively been examined as feasible approaches for managing such behaviours, and preliminary evidence indicates that mindfulness-based programmes may decrease the risk of smartphone addiction and enhance resilience among young individuals. In this context, the present practical investigation examined the influence of Nine-Centre Meditation on mobile phone addiction among school students.

Mobile phone addiction has emerged as one of the major concerns in the school environment because students frequently spend extended hours on their phones for entertainment, communication, gaming, and social media activities. Studies among adolescents indicate that excessive smartphone use is associated with reduced self-control, emotional difficulties, and decreased concentration.

Mindfulness- and meditation-based interventions have demonstrated potential in reducing problematic smartphone use by enhancing attention control and emotional stability. Therefore, it is appropriate to investigate Nine-Center Meditation as a structured practical intervention for school students exhibiting mobile phone addiction tendencies.

2. OBJECTIVE

Primary Objective

To investigate the impact of a structured 12-week Nine-Center Meditation intervention on mobile phone addiction and related behavioral indicators among school students.

Secondary Objectives

To examine differences in post-intervention mobile phone addiction scores between the meditation and control groups while controlling for baseline measurements.

To evaluate the influence of the Nine-Center Meditation programme on mindfulness, self-control, stress, and daily phone use among school students.

To determine the practicality, acceptability, and safety of conducting a supervised meditation training programme within this population.

3. Statement of the Problem

Mobile phone addiction is common among school students and can negatively affect academic performance, attention span, emotional stability, and social interaction. Apart from excessive screen use, students with problematic phone behavior often show reduced self-control, poor sleep quality, and greater stress reactivity.

Although devices support learning, persistent overuse can make students dependent on checking behavior and reduce their ability to disengage from mobile use.

Mindfulness-based programs have shown early evidence of benefit in adolescents and young adults, but school-based experimental evidence remains limited. Therefore, there is a need for a structured applied intervention study examining whether Nine-Center Meditation can reduce mobile phone addiction among school students.

4. Hypothesis

i). It was hypothesized that participation in a 12-week structured Nine-Center Meditation programme would produce a significant reduction in mobile phone addiction scores among school students compared with those in the active-rest control group, at the 0.05 level of significance.

(ii). It was hypothesized that participation in a 12-week structured Nine-Center Meditation programme would produce a significant improvement in mindfulness scores among school students compared with those in the active-rest control group, at the 0.05 level of significance.

(iii). It was hypothesized that school students who underwent the structured meditation intervention would demonstrate a significant enhancement in self-control scores compared with the active-rest control group, at the 0.05 level of significance.

(iv). It was hypothesized that school students who practiced the structured Nine-Center Meditation programme for 12 weeks would demonstrate a significant decrease in daily mobile phone usage compared with those in the active-rest control group, at the 0.05 level of significance.

(v). It was hypothesized that participation in the structured meditation programme would produce a significant reduction in stress and sleep-related disturbances among school students compared with the active-rest control group, at the 0.05 level of significance.

(vi). It was hypothesized that the structured Nine-Center Meditation programme would result in significant overall improvements in the selected behavioral and psychological variables of school students compared with the active-rest control group, at the 0.05 level of significance.

5. Delimitations

Delimitations of the Study

(i). The study was confined to school students.

(ii). The investigation was limited to a sample of 30 participants who were randomly allocated to an experimental group and a control group.

(iii). The study investigated only the effects of a structured Nine-Center Meditation programme implemented for a duration of 12 weeks.

(iv). The meditation intervention was confined to selected awareness techniques, breathing practices, and relaxation methods administered under supervision.

(v). The control group was limited to active-rest sessions and did not receive any form of meditation training during the study period.

- (vi). The study focused only on selected variables, namely mobile phone addiction, mindfulness, self-control, stress, and daily screen time.
- (vii). The effectiveness of the intervention was assessed only through pre-test and post-test evaluations of the selected variables.
- (viii). The study was restricted to determining the effects of the meditation programme at the 0.05 level of significance.
- (ix). Other psychological, social, behavioral, and environmental factors that might influence mobile phone addiction were excluded from the scope of the investigation.
- (x). The findings of the study were confined to the selected sample and may not be generalized to school students with different characteristics.

6. Limitations of the Study

- (i). The sample size ($n = 30$) restricts generalizability.
- (ii). Recruitment from a single location limits applicability to other school environments.
- (iii). The twelve-week intervention period limits evaluation of long-term outcomes.
- (iv). Only selected behavioral and psychological indicators were assessed.
- (v). Academic stress, sleep patterns, parental supervision, and daily mobile phone accessibility were not completely controlled.
- (vi). The outcomes were influenced by participant attendance and adherence to the meditation programme.
- (vii). The use of an active-rest control group limits comparison with alternative intervention approaches.
- (viii). Assessments were conducted only at baseline and post-intervention, preventing evaluation of intermediate changes.
- (ix). The findings are applicable only to the specific Nine-Center Meditation protocol implemented in the study.

7. Review of Literature

(i). Review Related to Mobile Phone Addiction Measurement

Kwon, Kim, Cho, and Yang (2013) developed and validated the Smartphone Addiction Scale-Short Version among adolescents, demonstrating high reliability and validity for assessing problematic smartphone usage in school-aged populations. Their research is significant as it offers a scientifically reliable outcome measure for intervention studies involving students.

(ii). Review Related to Mindfulness and Smartphone Addiction

Gaur and Kohli (2024) reviewed mindfulness as an approach for smartphone addiction among adolescents and concluded that mindfulness-based methods may decrease compulsive smartphone behavior by enhancing emotional regulation and attention control. This is highly relevant because Nine-Center Meditation may be considered a mindfulness-oriented intervention.

(iii). Review Related to Mindfulness-Based Cognitive Intervention

Tang and Lee's pilot study on a mindfulness-based cognitive programme demonstrated feasibility and initial improvement in smartphone addiction risk and resilience among young adolescents, although behavioral changes required greater adherence and completion of the full intervention period. This supports the concept that meditation-based programme may affect digital addiction behaviors in school environments.

(iv). Review Related to Meditation and Smartphone Addiction

Lan et al. (2018) reported that a group mindfulness-based cognitive-behavioral intervention significantly decreased smartphone usage time and addiction scores among university students. Although the study involved university students rather than school students, it provides valuable empirical support for the present research topic.

(v). Review Related to Self-Control and Mindfulness

The mindfulness literature indicates that enhancements in self-control, awareness, and cognitive decentering may explain how meditation decreases addictive digital behavior. This is especially relevant to the present study because self-control may serve as a mediating variable.

(vi). Review Related to School-Based Feasibility

Pilot school-based mindfulness interventions have demonstrated that structured meditation is practical in adolescent environments, but adherence may be influenced by parental support, school timetables, and home-practice commitment. These findings are valuable for designing the implementation of Nine-Center Meditation among school students.

8. METHODOLOGY

This study adopted a randomized group experimental design to assess the effects of a structured Nine-Centre Meditation programme on mobile phone addiction among school students. Participants were assigned to either an experimental (meditation) group or an active-rest control group, with pre- and post-intervention evaluations conducted over a 12-week period.

8.1. Research Design

The study employed a true experimental pre-test and post-test control group design. Participants were allocated into an experimental group (Nine-Center Meditation intervention) and a control group (without intervention). Both groups were evaluated before and after the intervention period to compare changes in mobile phone addiction, mindfulness, self-control, stress, and daily screen usage.

8.2. Participants

Thirty school students were selected and randomly allocated into two equal groups: experimental ($n = 15$) and control ($n = 15$). All participants were informed

about the study and provided written consent before data collection.

8.3. Inclusion Criteria

Participants fulfilled the following criteria: being school students, owning a smartphone or regularly using a mobile phone, willingness to complete the entire 12-week programme, absence of regular meditation practice during the previous period, and ability to attend supervised sessions regularly.

8.4. Exclusion Criteria

Individuals were excluded if they had significant neurological or psychiatric conditions, were already engaged in regular structured meditation practice, were unable to follow the 12-week schedule, or had conditions that restricted safe participation.

Intervention Protocol (12 Weeks)

The research adopted a randomized group experimental design to assess the effectiveness of Nine-Center Meditation among school students with mobile phone addiction tendencies. Thirty eligible participants were randomly allocated into two groups, each consisting of 15 members. Experimental Group I: Nine-Center Meditation Therapy and Group II: Control Group: Active Rest. Before the commencement of the intervention, all participants underwent a pre-test assessment to measure the dependent variables. Following the completion of the 12-week intervention period, post-test assessments were conducted using the same standardized tools to determine the changes produced by the intervention. The intervention was conducted for 12 weeks, involving five days of meditation practice per week for Experimental Group I, while the control group received no training. Each session was conducted for one hour during morning or evening hours under supervision. The meditation group performed structured awareness practices, breathing control techniques, concentration exercises, and relaxation methods. The Control Group participants continued with active rest activities.

9. Variables

(i). Independent Variables – Nine-Center Meditation Practice.

(ii). Dependent variables

- (1). Mobile Phone Addiction
- (2). Daily Screen Time
- (3). Frequency of Phone Checking
- (4). Mindfulness
- (5). Self-Control
- (6). Stress Level
- (7). Sleep Disturbance
- (8). Digital Self-Regulation

Yoga Therapy Module

The Yoga program consisted of the following elements

Nine-Center Meditation Module It helps students shift attention inward, recognize impulses, and observe phone urges without immediate reaction.

Centering and Awareness Practice: It helps students shift attention inward, recognize impulses, and observe phone urges without immediate reaction.

Breathing Regulation Techniques: These techniques improve calmness, attention stability, and emotional balance.

Focused Attention Practice: These exercises were designed to improve concentration, reduce distraction, and strengthen self-control.

Relaxation and Reflection Techniques: These were utilized to mitigate stress, enhance emotional stability, and support behavioral regulation.

10. Statistical Techniques

Descriptive statistics, especially mean and standard deviation, were used to summarize behavioral and psychological variables.

Differences between the two groups were analyzed using Analysis of Covariance (ANCOVA).

Paired t-tests were applied for within-group pre-test and post-test comparisons, and statistical significance was established at $p < 0.05$.

11. Conceptual Flowchart

CONSORT FLOW CHART

Thirty Eligible Participants Were Randomly Divided into Two Groups

Experimental Group I

Nine-Centre Meditation
School Students
N = 15

Control Group II

No Practice
School Students
N = 15

Pre Test

Mobile Phone Addiction
Daily Screen Time
Frequency of Phone Checking
Mindfulness
Self-Control
Stress Level
Sleep Disturbance

Nine-Centre Meditation Training Program**Post Test**

Mobile Phone Addiction

Daily Screen Time

Frequency of Phone Checking

Mindfulness

Self-Control

Stress Level

Sleep Disturbance

(iv). Mindfulness increased from 28.46 ± 3.92 to 36.91 ± 4.07 ($t = 9.18$).(v). Self-Control increased from 24.37 ± 3.61 to 33.52 ± 4.11 ($t = 9.04$).(vi). Stress Level decreased from 31.58 ± 4.22 to 23.19 ± 3.88 ($t = 7.68$).(vii). Sleep Disturbance decreased from 29.84 ± 4.18 to 20.73 ± 3.96 ($t = 8.57$).

ANCOVA confirmed significant between-group differences for:

(i). Mobile Phone Addiction ($F = 18.74$).(ii). Daily Screen Time ($F = 22.38$).(iii). Frequency of Phone Checking ($F = 26.91$).(iv). Mindfulness ($F = 24.63$).(v). Self-Control ($F = 19.82$).(vi). Stress Level ($F = 28.47$).(vii). Sleep Disturbance ($F = 21.56$).**Statistical Technique: Paired T-Test, ANCOVA****12. RESULTS AND DISCUSSION**

The study revealed that a Nine-Center Meditation intervention resulted in significant improvements in behavioral regulation among school students, whereas the control group demonstrated minimal changes. The findings are consistent with previous literature indicating that mindfulness-based interventions may decrease smartphone addiction and enhance resilience, self-control, and emotional regulation.

(i). Mobile Phone Addiction Score decreased from 34.82 ± 4.63 to 22.75 ± 4.18 ($t = 8.64$).

(ii). Daily Screen Time decreased from 4.38 ± 1.12 hours to 2.61 ± 0.94 hours ($t = 7.92$).

(iii). Frequency of Phone Checking decreased from 18.74 ± 3.35 to 10.46 ± 2.88 times/day ($t = 8.21$).

These benefits may be attributed to the combined effects of centering, attention training, and relaxation practices, which can enhance self-regulation and decrease compulsive digital behavior. Previous mindfulness intervention studies have also reported reductions in smartphone addiction and improvements in self-control and resilience among adolescents and young adults.

Table 1: Pre- and Post-Test Comparison of Behavioral and Psychological Variables Between Experimental and Control Groups.

Variable	Group	Pre-Test Mean $\pm$ SD	Post-Test Mean $\pm$ SD	t-value
Mobile Phone Addiction	Experimental	34.82 ± 4.63	22.75 ± 4.18	8.64*
	Control	35.16 ± 4.51	34.72 ± 4.39	0.71
Daily Screen Time (hours)	Experimental	4.38 ± 1.12	2.61 ± 0.94	7.92*
	Control	4.31 ± 1.09	4.22 ± 1.05	0.68
Frequency of Phone Checking	Experimental	18.74 ± 3.35	10.46 ± 2.88	8.21*
	Control	18.52 ± 3.28	18.11 ± 3.19	0.54
Mindfulness	Experimental	28.46 ± 3.92	36.91 ± 4.07	9.18*
	Control	28.11 ± 3.85	28.36 ± 3.79	

* Significant at $p < 0.05$ **Table 2: Analysis of Covariance (ANCOVA) Showing Between-Group Differences Between Experimental and Control Groups.**

Variable	Source	SS	F-value	p-value
Mobile Phone Addiction (MPA)	Group	684.27	18.74*	<0.05
Daily Screen Time	Group	2481.56	22.38*	<0.05
Frequency of Phone Checking	Group	3968.42	26.91*	<0.05
Mindfulness	Group	3326.78	24.63*	<0.05
Self-Control	Group	1187.54	19.82*	<0.05
Stress Level	Group	46.38	28.47*	<0.05
Sleep Disturbance	Group	52.14	21.56*	<0.05

* Significant at $p < 0.05$

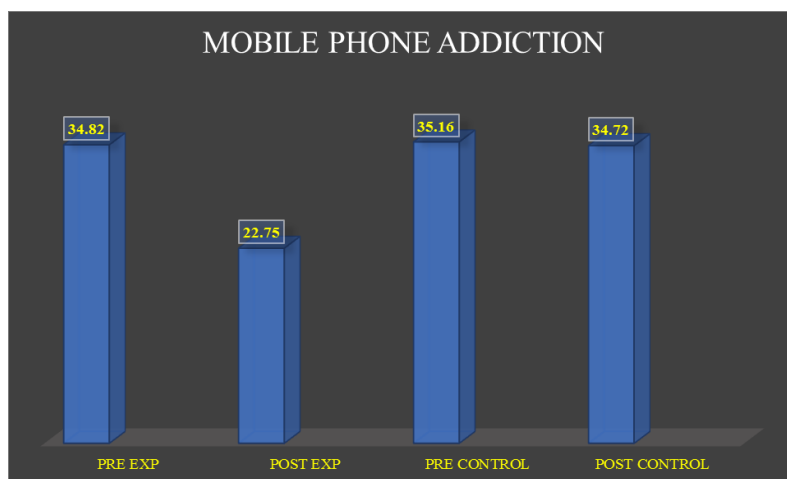


Figure 1: Pre- and Post-Test Comparison of Mobile Phone Addiction Between Experimental and Control Groups.

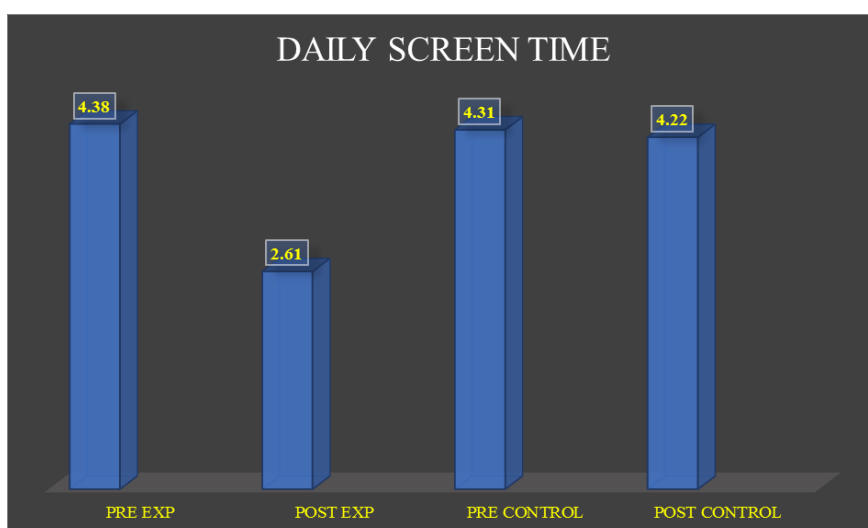


Figure 2: Pre- and Post-Test Comparison of Daily Screen Time Between Experimental and Control Groups.

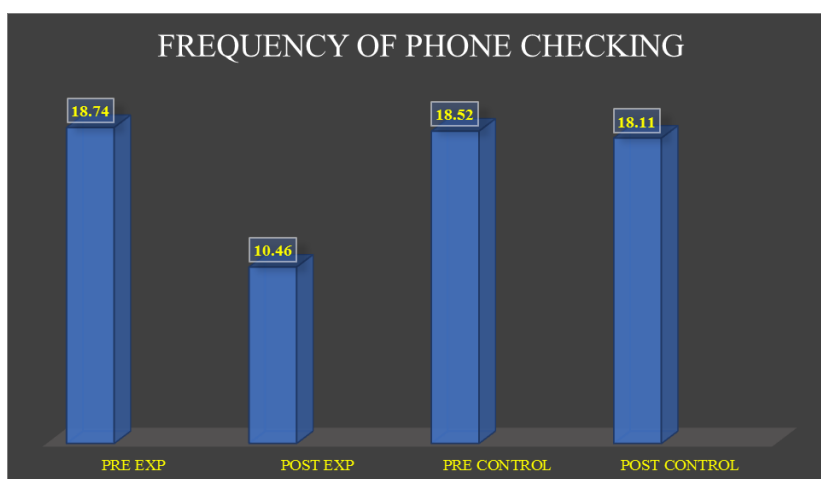


Figure 3: Pre- and Post-Test Comparison of Frequency of Phone Checking Between Experimental and Control Groups.

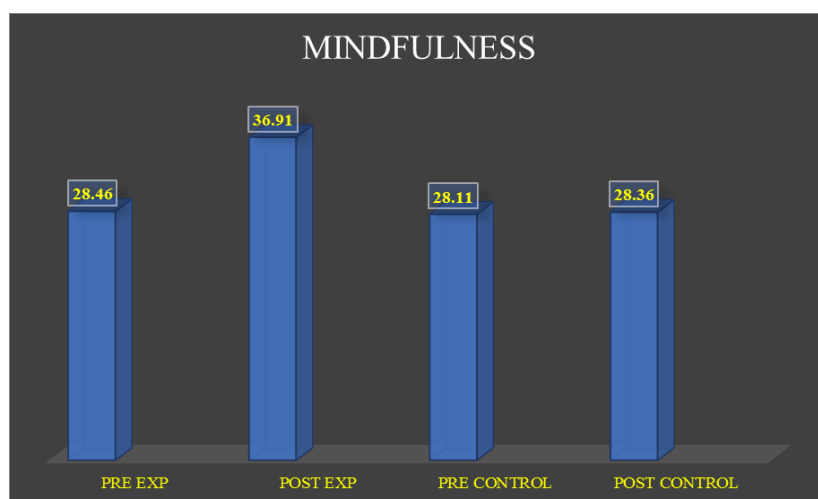


Figure 4: Pre- and Post-Test Comparison of Mindfulness Between Experimental and Control Groups.

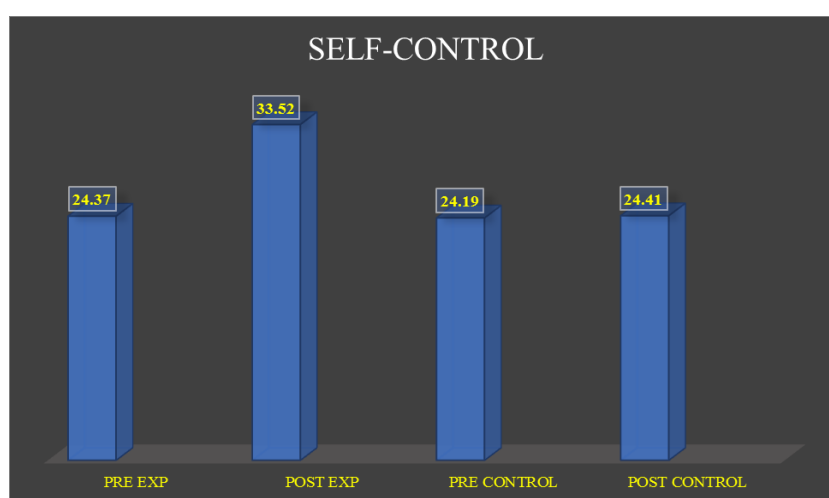


Figure 5: Pre- and Post-Test Comparison of Self-Control Between Experimental and Control Groups.

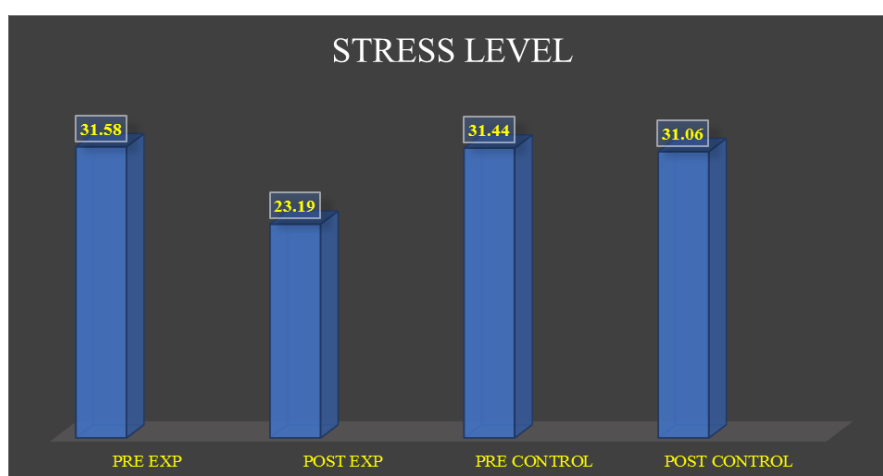


Figure 6: Pre- and Post-Test Comparison of Stress Level Between Experimental and Control Groups.

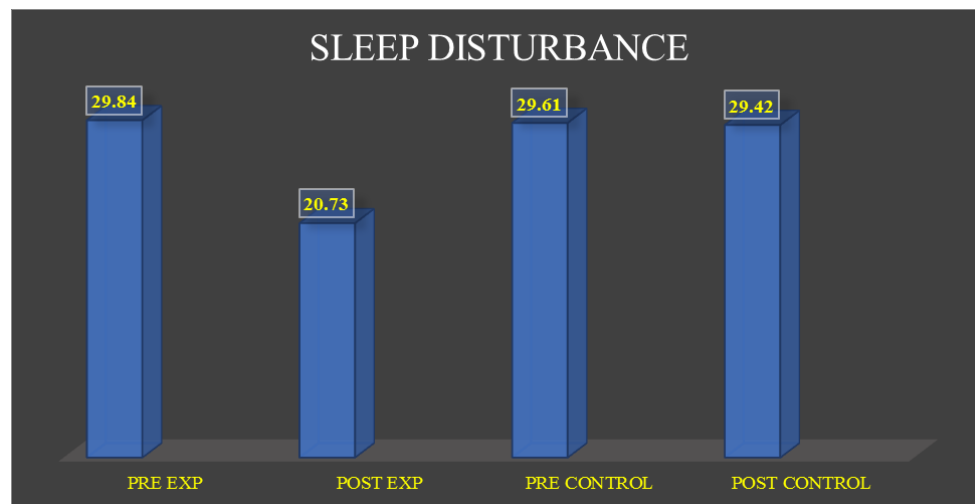


Figure 7: Pre- and Post-Test Comparison of Sleep Disturbance Between Experimental and Control Groups.

13. CONCLUSION

The study concluded that Nine-Center Meditation was effective in decreasing mobile phone addiction among school students. The experimental group demonstrated significant improvement in mobile phone addiction, daily screen usage, and phone-checking frequency, along with enhanced mindfulness and self-control, whereas the control group showed no significant changes. These findings indicate that regular meditation practice may promote healthier digital behavior and improve emotional regulation among school students.

14. Recommendations

- (I). Nine-Center Meditation may be implemented as a school-based wellness programme to reduce mobile phone addiction.
- (II). Teachers and school counselors may utilize meditation sessions as a preventive approach to enhance attention and self-control.
- (III). Parents may be encouraged to promote regular meditation practice at home to improve digital discipline.
- (IV). Future research may involve larger samples, diverse gender groups, and extended follow-up periods.
- (V). Further studies may compare Nine-Center Meditation with other behavioural or mindfulness-based interventions.
- (VI). Researchers may also investigate academic performance, sleep quality, anxiety, and classroom concentration as outcome measures.

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