Effectiveness Of Mindfulness Meditation On Reduction Of Perceived Stress Among College Going Students Of Selected Nursing College

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Abstract: A pre-experimental study was conducted to evaluate the effectiveness of mindfulness meditation in reducing perceived stress among college-going students in a selected nursing college in Gujarat. A 20-item Likert scale was used to assess stress levels before and after a 7-day mindfulness meditation intervention. The majority of respondents were aged 17–18 years (63.3%), predominantly female (76.7%), and mostly from urban areas (56.7%). Half of the students lived either in hostels or at home with family. All participants used mobile phones, with most (76.7%) using them for less than 3 hours daily.Common leisure activities included sleeping (30%), mobile phone use (20%), and reading books (13.3%). Most respondents (76.7%) slept 7–8 hours a day. Stress was previously experienced by 63.3% of students. Popular coping mechanisms were talking with friends or loved ones (36.7%), deep breathing exercises (26.7%), and using social media (20%). Only a few practiced meditation (3.3%), and none consulted a therapist.In the pre-test, 53.3% of students had moderate stress, 43.3% had low stress, and 3.3% had high stress. After the intervention, 76.7% reported low stress and only 23.3% moderate stress, indicating a clear shift toward lower stress levels. The pre-test and post-test mean scores were 27.63 and 21.67, respectively, with a mean difference of 5.96 (7.45% reduction). The paired t-test value of 6.919 (df=29, p<0.001) demonstrated a statistically significant reduction in perceived stress, supporting the research hypothesis (H1). A significant association was also observed between post-test stress levels and current living arrangements. The study suggests that mindfulness meditation is effective, though longer interventions with larger samples are recommended.

 Keywords:- Mindfulness Meditation, Perceived Stress, College going students.

I. INTRODUCTION

"We can't always change what's happening around us, but we can change what happens within us"- Andy

Puddicombe

1.1 Background of the study

Stress has become an inseparable part of human life, emerging whenever challenges or threats exceed an individual's perceived ability to cope. It triggers psychological and biological changes that may increase the risk of illness, especially among students who face high academic expectations from parents and teachers. Excessive pressure often leads to anxiety, depression, reduced daily functioning, and in severe cases, suicidal tendencies. Global statistics highlight this growing concern: **WHO (2019)** reports suicide as the third leading cause of death among 15–19-year-olds; **APA (2017)** notes that 30% of students seek psychiatric counseling; **ADAA (2016)** states that 85% of college students feel overwhelmed, 41.6% identify anxiety as their major issue, and nearly a quarter use psychotropic medications. In India, the **NCRB (2018)** reports one student suicide every hour, with failures contributing to 2% of cases, while **NIMHANS** surveys show that 11% of college students and 7–8% of high school students have attempted suicide. Early identification of stress and its stressors

is thus crucial. Among various stress-management techniques, mindfulness meditation is simple, requires minimal effort, and is widely practiced to enhance well-being. Originating in Asia as early as the 6th century BC, meditation focuses on regulating internal processes through awareness. Mindfulness, an open-monitoring technique, encourages nonjudgmental observation of present-moment experiences, enabling individuals to detach from emotional reactions. This retraining of the mind promotes resilience, reduces stress, and improves cognitive functions such as attention, concentration, memory, problem-solving, and executive functioning, making it especially beneficial for college-going adolescents.

1.2 Objectives

1. To assess the pretest perceived stress level score among college-going students of selected nursing college of selected district of Gujarat state before the administration of mindfulness meditation
2. To assess the post-test perceived stress level score among college-going students of selected nursing college of selected district of Gujarat state after administration of mindfulness meditation.
3. To evaluate the effectiveness of mindfulness meditation on the reduction of perceived stress among college-going students of selected nursing college of selected district of Gujarat state.
4. To find the association between the post-test score of perceived stress level with selected demographic variables among college-going students of selected nursing college of selected district of Gujarat state.

1.3 Hypothesis

H_0:- There will be no significant difference between the pre-test score and the posttest score of perceived stress level among college-going students of selected nursing college of selected district of Gujarat state.
H_1:- There will be a significant difference between the pre-test score and the post-test score of perceived stress level among college-going students of selected nursing college of selected district of Gujarat state.
H_2:- There will be a significant association between a post-test score of perceived stress level with the selected demographic variables among college-going students of selected nursing college of the selected district of Gujarat state.

II. RESEARCH METHODOLOGY

The methodology section outline the plan and method that how the study is conducted. This includes Universe of the study, sample of the study, Data and Sources of Data, study's variables and analytical framework. The details are as follows;
The research design selected for the present study was pre-experimental one group pre-test post-test design.

3.1 Population and Sample

Target population of the study included college going students of selected nursing colleges of Bhavnagar district. From the sample population the investigator had included 30 college-going students of selected nursing colleges of Bhavnagar district of Gujarat state. Non probability – purposive sampling was used for the study.

3.2 Data and Sources of Data

To collect the data for present study following tool was selected and constructed. Based on the objectives of the study. The investigator developed data collection tool in order to obtain necessary information. A total of 20 items were used to assess the perceived stress level among college-going students of selected Nursing colleges of selected districts of Gujarat state. The expert's opinion and the personal experience of the investigator were the basis of the construction of the Likert scale to assess the perceived stress level among college going students. It helped to rate the individual from total number 20 items.

Section-I consists of demographic data:- Participants were asked to provide details regarding their Age in years, Gender, Area of Residence, Currently staying at, Use of mobile phones, Use of leisure time, Duration of sleep, Previous experience of stress and ways used to overcome previous experience of stress.

Section-II consists of structured Likert's rating scale. It was used to assess perceived stress and to measure the degree of one's life situation was appraised as stressful. The scale was designed to find the stressful items of unpredictable, uncontrollable and overload respondents in their lives. It included direct sentences that dealt with current experience of stress level. In this, the items were general in nature, easy to understand, asking about the feelings and thoughts experienced during the last month. The scale has 20 items In that, answers consist of following options and its scoring are 0= Never 1= Seldom /Once in 2 weeks 2= Often/ Twice a week 3= Very Often/ Every Alternate day 4= Always/ Everyday. The individual scores on the Perceived Stress Scale range from 0 to 80.

Table 3.9.1. Description of division of items for structured Likert's rating scale to assess Perceived stress

Category	No. Of Items	Total No. Of Items	Percentage
Positive (Perceived Selfefficacy)	3,5,6,8,9,10,13,15,16,18	10	50
Negative (Perceived Helplessness)	1,2,4,7,11,12,14,17,19,20	10	50
Total		20	100

3.3 Theoretical framework

Variables of the study contains dependent and independent variable. **Independent variable:** In this study, Mindfulness meditation was the Independent variable to evaluate reduction in perceived stress. **Dependent variables:** In this study, perceived stress was the dependent variable to evaluate reduction in perceived stress. The representation of research design to assess the effectiveness of mindfulness meditation on reduction of Perceived stress among college-going students of selected nursing students is explained below:-

1. Pre-test to assess the level of Perceived stress among college going students of selected nursing colleges of selected District of Gujarat state. **Tool:** Likert rating scale to assess Perceived stress .Time for pre-test: 20 minutes
2. Administration of structured intervention on Mindfulness Meditation two times a day for 7 days
3. Post -test to assess the level of Perceived stress among college going students of selected nursing colleges of selected District of Gujarat state. **Tool:** Likert rating scale to assess Perceived stress Time for post -test: 20 minutes

III. RESULTS AND DISCUSSION

The data collection was based on the objectives of the study and organized, tabulated, analyzed and interpreted by using descriptive and inferential statistics and described with help of tables and graphs.

Table-4.1 Frequency and percentage distribution of pretest and post test level of perceived stress among college going students
         [n=30]

Level of perceived stress		Pre-test		Post-test	
	Score	Frequency	Percentage (%)	Frequency	Percentage (%)
Low level	0-26	13	43.3	23	76.7
Moderate level	27-52	16	53.3	7	23.3
High level	53-80	1	3.3	0	0
Total		30	100%	30	100%

Table 4.1 Shows that in pretest majority samples 16 (53.3%) samples had moderate stress level, 13(43.3%) samples had low stress level and only 1 (3.3%) had high stress level. Whereas in post test most of the samples 23 (76.7%) samples had low stress level and only 7(23.3%) had moderate perceived stress level. This shows the shifting of perceived stress from moderate to level.

Table 4.2 Mean, Mean %, Median, Mode and Standard Deviation (SD) of pre test and post test perceived stress score

[n=30]

Perceived stress score	Mean	Mean%	Median	Mode	SD	Percentage of decrease in perceived stress
Pre-test	27.63	34.53%	28.50	29	14.27	5.96 (7.45%)
Post-test	21.67	27.09%	24	24	11.54	

Table 4.2 shows the mean pre test perceived stress score is 27.63 ± 14.27 with mean percentage 34.53%, median 28.50, mode 29. Whereas the mean posttest perceived stress score was 21.67 ± 11.54 with mean percentage 27.09%, median 24, mode 24. Total percentage of decrease in perceived stress was 7.45%. This difference in perceived stress score is tested using inferential statistics in the next section.

Table 4.3 Effectiveness of mindfulness meditation on reduction of perceived stress   **N=30**

Perceived stress score	Mean	SE	Mean difference	SD	Df	Paired 't'test value	p value
Pre test	27.63	0.864	5.96 (7.45%)	14.27	29	6.919	P<0.001*
Post test	21.67			11.54			

Table 4.3.1. Shows the comparison of pre-test and post-test perceived stress scores. The pre-test mean score was 27.63, while the post-test mean score was 21.67. The mean difference between pre and post-test was 5.96, representing a 7.45% reduction of stress. The standard deviation (SD) for the pre-test was 14.27, and for the post-test, it's 11.54. The paired 't' test value was 6.919 with a p-value <0.001, indicating a statistically significant decrease in post test stress score. The degrees of freedom (df) for the analysis were 29. This suggests a substantial decrease in perceived stress levels after the intervention. Hence research hypothesis H_1 was accepted. This indicates that the mindfulness meditation was effective in decreasing the perceived stress of College going students.

Figure 4.3. : Bar graph showing the percentage wise distribution of sample according to the level of perceived stress level in Pre-test and Post-test
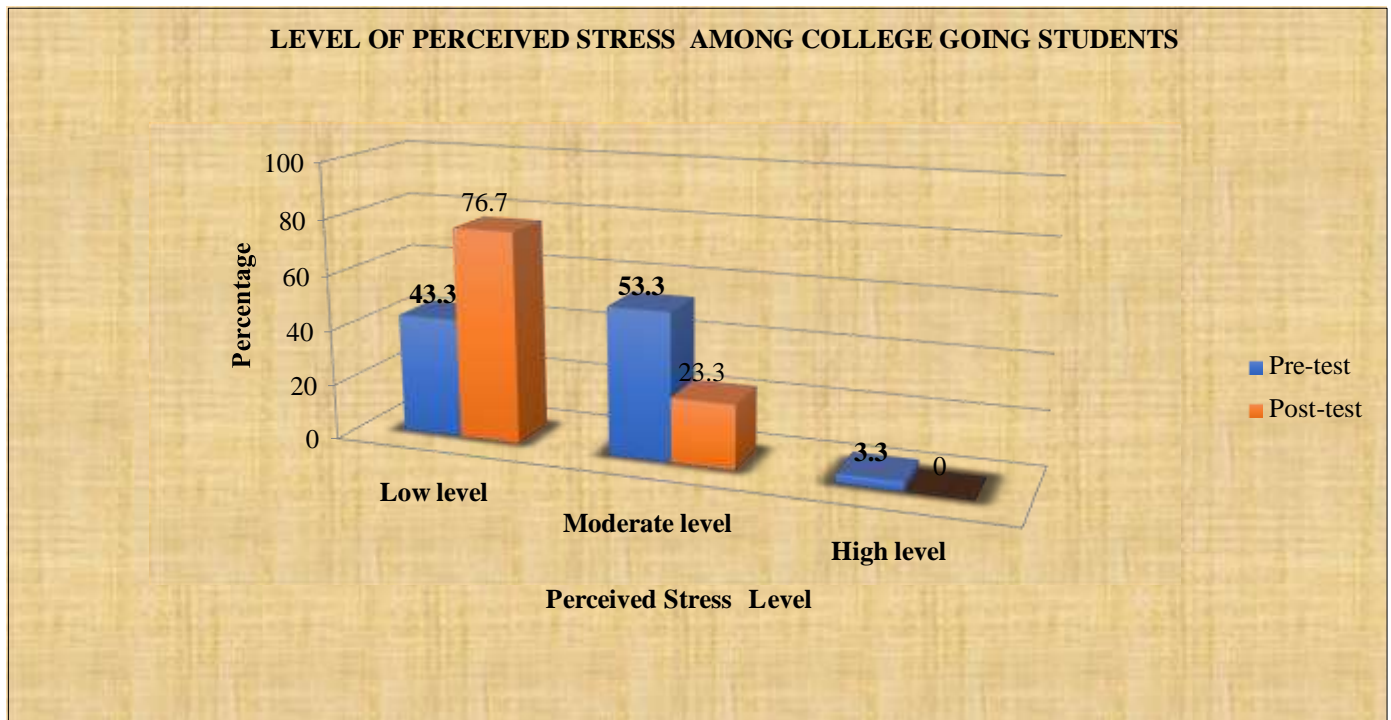
Figure 4.1.2 Bar graph showing the percentage wise distribution of samples according to their demographic variable
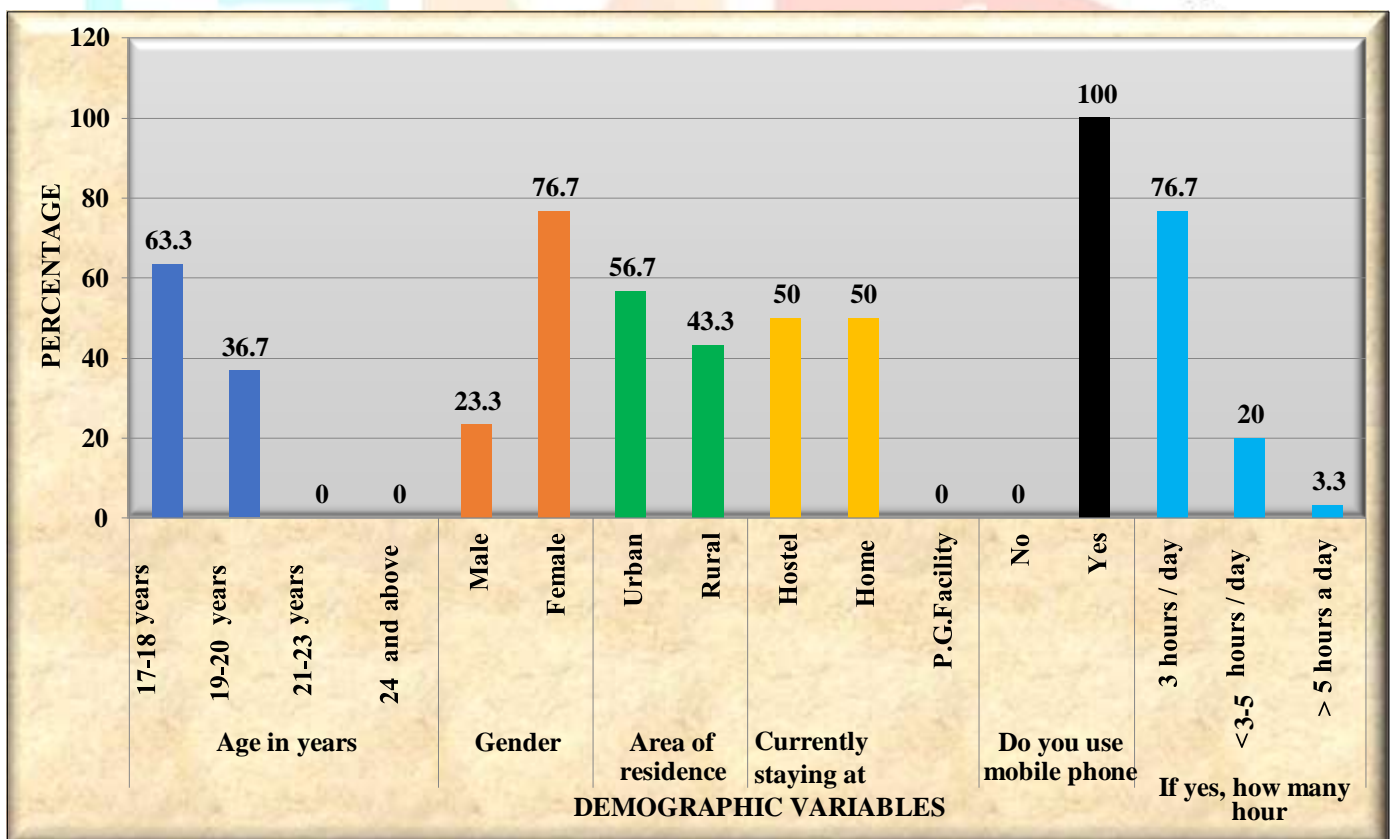
Figure 4.1.2 Bar graph showing the percentage wise distribution of samples according to their demographic variable
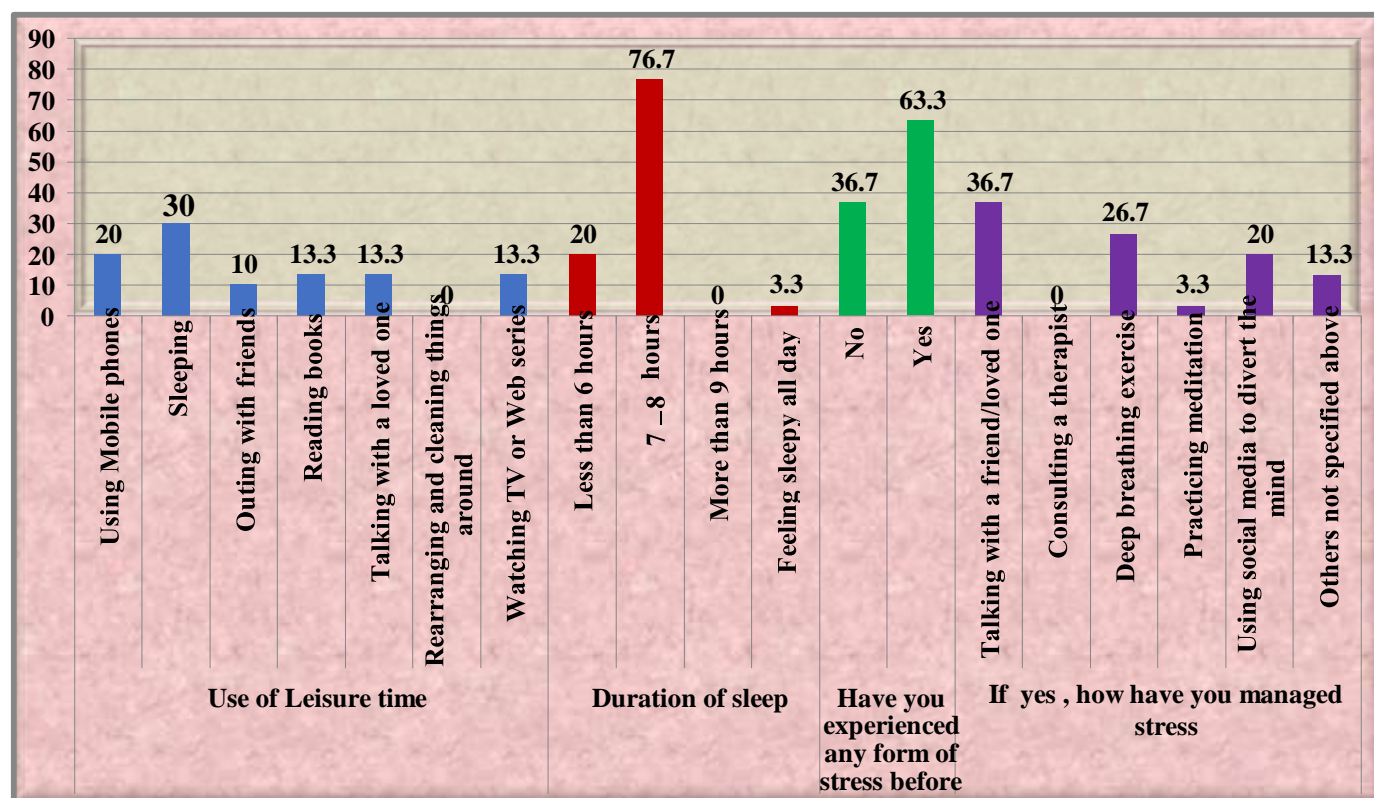
Figure 4.1 Illustrate the data on various demographic variables and lifestyle factors among respondents. In terms of age, the majority (63.3%) fell within the range of 17-18 years, while the rest were evenly split between 19-20 years and above. Gender distribution showed a higher representation of females (76.7%) compared to males (23.3%). Residence was also evenly divided between urban (56.7%) and rural (43.3%) areas. Regarding living arrangements, half of the respondents stayed either in a hostel or at home with family, with none in PG facilities. All respondents reported using mobile phones, with the majority (76.7%) using them for less than 3 hours a day. When it comes to leisure activities, mobile phone usage was the most common (20.0%), followed by sleeping (30.0%) and reading books (13.3%). Sleep duration varied, with most (76.7%) getting 7-8 hours of sleep, while a few reported less than 6 hours (20.0%) or feeling sleepy all day (3.3%). Stress was prevalent among respondents, with 63.3% having experienced it before. Coping mechanisms included talking with friends or loved ones (36.7%), deep breathing exercises (26.7%), and using social media to divert the mind (20.0%), among others. Interestingly, very few respondents reported consulting a therapist (0%) or practicing meditation (3.3%) as stress management strategies.

IV. ACKNOWLEDGMENT

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