IMPACT OF MEDITATION INCLUDING SOUND UTTERING AND A PERIOD OF SILENCE ON ANXIETY REDUCTION AMONG COLLEGE STUDENTS

VAIBHAV SHARMA[1], PROF. INA SHASTRI[2], DR. SHVEATA MISHRA[3]
1 Research Scholar, Department of Performing Arts, Banasthali University (Rajasthan)
2 Professor, Department of Performing Arts, Banasthali University (Rajasthan)
3 Adjunct Faculty, New Jersey

Abstract: This randomized controlled trial investigates the efficacy of "Sound to Silence Meditation" in alleviating anxiety among college students aged 18 to 24. A sample of 200 students from PSP College, Partapur, encompassing both genders, was divided into experimental and control groups. The experimental group underwent a 4-week meditation intervention, while the control group received no intervention. Anxiety levels were measured pre- and post-intervention using Sinha's Comprehensive Anxiety Test (SCAT). The findings indicate a significant reduction in anxiety levels in the experimental group, substantiating the potential benefits of this meditation technique.
Keywords: Meditation, Sound Uttering, Silence, Anxiety Reduction, College Students

INTRODUCTION

Anxiety is a pervasive issue among college students, often exacerbated by academic demands and social pressures (Beiter et al., 2015). The American College Health Association (2018) reported that over 60% of college students experience overwhelming anxiety. Traditional methods for managing anxiety include cognitive-behavioral therapy and pharmacological treatments, which have shown efficacy but may not be accessible to all due to cost and availability (Hofmann, Asnaani, Vonk, Sawyer, & Fang, 2012).

Complementary therapies such as meditation have gained prominence for their potential to promote mental well-being (Goyal et al., 2014). Meditation practices can vary widely, but many focus on mindfulness, breathing exercises, or mantra recitation to foster a state of relaxation and mental clarity (Kabat-Zinn, 1990). This study explores the impact of "Sound to Silence Meditation," a technique integrating humming, Aumkar sounds, and periods of silence, on anxiety reduction. This meditation method is hypothesized to enhance relaxation and mindfulness, thereby mitigating anxiety (Lynch, Gander, Kohls, Kudielka, & Walach, 2011).

METHODOLOGY

RESEARCH DESIGN
The study employed a randomized controlled trial with a pre-test post-test design.

POPULATION
The target population comprised college students aged 18 to 24 from PSP College Partapur.

SAMPLE
A total of 200 students (100 in the experimental group and 100 in the control group) were selected using a combination of purposive and convenience sampling methods.

VARIABLES

- Independent Variable: Type of intervention (Sound to Silence Meditation vs. no intervention). This variable is manipulated to determine its effect on anxiety levels.

- Dependent Variable: Anxiety levels as measured by Sinha's Comprehensive Anxiety Test (SCAT). This variable is observed and measured to assess the impact of the intervention.

PROCEDURE

PHASE 1: PRE-TESTING

Step 1. Approval was secured from the college principal via a formal application on the university letterhead of Banasthali University.

Step 2. Students reporting anxiety or other mental health issues were selected. Participants were randomly assigned to the experimental and control groups.

Step 3. Informed consent was obtained from participants, detailing the research process, confidentiality assurances, and their right to withdraw at any time.

Step 4. Sinha's Comprehensive Anxiety Test (SCAT) was administered to both groups. Baseline anxiety levels were established using an independent sample t-test.

PHASE 2: INTERVENTION

The experimental group participated in the "Sound to Silence Meditation" for 4 weeks, 6 days per week. The control group did not receive any intervention.

PHASE 3: POST-TESTING

Post-intervention, SCAT was re-administered to both groups. Statistical analyses were conducted to interpret the results.

ETHICAL CONSIDERATIONS

Ethical approval was obtained from the institution. Consent forms, including detailed research information, potential benefits, side effects, and confidentiality assurances, were signed by all participants.

INTERVENTION

- Name: Sound to Silence Meditation

- Duration: 48 minutes per session

- Content: 16 minutes of humming, 16 minutes of Aumkar, and 16 minutes of silence with eyes closed in all stages.

PSYCHOLOGICAL TOOL

Sinha's Comprehensive Anxiety Test (SCAT) comprises 90 items with yes/no responses.

STATISTICAL ANALYSIS

Step 1: Establishing Baseline with Pre-Test Scores

1. Shapiro-Wilk Test for Normality:

    Experimental Group Pre-Test Scores:

    Statistic: 0.913

    p-value: 6.21×10^{-6}

    Control Group Pre-Test Scores:

    Statistic: 0.933

    p-value: 7.77×10^{-5}

    Both groups displayed p-values less than 0.05, indicating a deviation from normality.

2. Levene's Test for Homogeneity of Variances:

    Statistic: 1.451

    p-value: 0.230

    The p-value was greater than 0.05, indicating homogeneity of variances.

3. Independent Sample t-Test to Establish Baseline:

    t-statistic: -0.656

    p-value: 0.512

    The p-value was greater than 0.05, suggesting no significant difference between the pre-test scores of the experimental and control groups, thereby establishing a baseline.

Step 2: Paired Sample t-Tests within Each Group

1. Experimental Group Pre-Test vs. Post-Test Scores:

    t-statistic: 8.877

    p-value: 3.07×10^{-14}

    The p-value was significantly less than 0.05, indicating a substantial reduction in anxiety levels post-intervention in the experimental group.

2. Control Group Pre-Test vs. Post-Test Scores:

    t-statistic: 0.180

    p-value: 0.858

    The p-value was greater than 0.05, indicating no significant change in anxiety levels in the control group.

Step 3: Difference Scores and Independent Sample t-Test

1. Calculate Difference Scores:

    Experimental Group: Pre-test - Post-test

    Control Group: Pre-test - Post-test

2. Shapiro-Wilk Test for Normality on Difference Scores:

    Experimental Group:

    Statistic: 0.970

    p-value: 0.023

    Control Group:

    Statistic: 0.989

    p-value: 0.590

The experimental group showed a slight deviation from normality, while the control group indicated a normal distribution.

3. Levene's Test for Homogeneity of Variances:

Statistic: 3.004

p-value: 0.085

The p-value was greater than 0.05, indicating homogeneity of variances.

4. Independent Sample t-Test on Difference Scores:

t-statistic: 6.652

p-value: 2.75×10^{-10}

The p-value was significantly less than 0.05, indicating a substantial difference between the difference scores of the experimental and control groups. This supports the main hypothesis that the "Sound to Silence Meditation" effectively reduces anxiety levels.

DISCUSSION

The findings from this study demonstrate that "Sound to Silence Meditation" significantly reduces anxiety levels among college students. The substantial reduction in the experimental group's anxiety levels compared to the control group suggests that this meditation technique is highly effective. These results align with previous research highlighting the benefits of meditation on mental health (Goyal et al., 2014; Lynch et al., 2011).

LIMITATIONS

This study has several limitations. First, the sample was drawn from a single college, which may limit the generalizability of the findings. Second, the use of self-reported measures for anxiety could introduce response biases. Additionally, the lack of a long-term follow-up limits the understanding of the sustained effects of the intervention.

FUTURE SCOPE

Future research should consider a more diverse sample across multiple institutions to enhance generalizability. Longitudinal studies are also recommended to assess the long-term benefits of "Sound to Silence Meditation." Moreover, incorporating objective measures of anxiety, such as physiological indicators, could provide a more comprehensive assessment of the intervention's efficacy.

CONCLUSION

'Sound to Silence Meditation' is a potent intervention for reducing anxiety among college students. Incorporating this technique into mental health programs could offer a valuable complementary approach to conventional anxiety management strategies, enhancing overall student well-being.

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