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Original Article

Comparative Study on Mindfulness Meditation Vs Deep Breathing Exercises in Reducing Stress Among Nursing Students

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Abstract

Background: Nursing students' stress levels are rising as a result of emotional demands, clinical exposure, and academic pressure. Deep breathing techniques and mindfulness meditation are common non-pharmacological stress management techniques.

Methodology: A quasi-experimental comparative study was conducted among 60 nursing students selected through purposive sampling. Participants were divided into two groups: Group A (Mindfulness Meditation) and Group B (Deep Breathing Exercises). Stress levels were assessed using the Perceived Stress Scale (PSS) before and after intervention. Data were analyzed using descriptive and inferential statistics.

Results: Both interventions significantly reduced stress levels, but mindfulness meditation showed greater effectiveness compared to deep breathing exercises ($p < 0.05$).

Conclusion: When it comes to lowering stress levels among nursing students, mindfulness meditation works better than deep breathing techniques.

Keywords: Mindfulness Meditation, Deep Breathing, Stress, Nursing Students, Comparative Study

INTRODUCTION

Stress is a psychological and physiological response to demands that exceed an individual's coping ability[1]. Nursing students are particularly vulnerable due to academic workload, clinical responsibilities, and emotional exposure to patients[2].

Excessive stress can have a detrimental impact on professional development, mental health, and academic achievement. Effective stress-reduction techniques are therefore crucial.

Mindfulness meditation is a mental practice that focuses on present-moment awareness without judgment[4]. It has been shown to recover emotional regulation and reduce stress.

Deep breathing exercises, also known as diaphragmatic breathing, activate the parasympathetic nervous system, promoting relaxation[5].

Although both techniques are widely used, imperfect studies compare their effectiveness among nursing

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students. Hence, this study was conducted[6].

OBJECTIVES

1. To assess the pre-test stress level among nursing students
2. To evaluate the effectiveness of mindfulness meditation in reducing stress
3. To evaluate the effectiveness of deep breathing exercises in reducing stress
4. To compare the effectiveness of both interventions

HYPOTHESES

H_0: There is no significant difference between mindfulness meditation and deep breathing exercises in reducing stress.

H_1: There is a significant difference between mindfulness meditation and deep breathing exercises in reducing stress.

METHODOLOGY

Research Approach

Quantitative research approach

Research Design

Quasi-experimental two-group pre-test post-test design

Setting

Selected nursing college

Population

All nursing students

Sample

Nursing students meeting inclusion criteria

Sample Size

60 students (30 in each group)

Sampling Technique

Purposive sampling

Inclusion Criteria

- Nursing students willing to participate
- Available during data collection
- Experiencing mild to moderate stress

Exclusion Criteria

- Students with diagnosed psychiatric illness
- Students practicing similar techniques regularly

Tool for Data Collection

Section A: Demographic variables
Section B: Perceived Stress Scale (PSS)

Intervention

Group A: Mindfulness Meditation

- Duration: 20 minutes/day
- Period: 4 weeks

Group B: Deep Breathing Exercises

- Duration: 20 minutes/day
- Period: 4 weeks

Data Collection Procedure

- Pre-test stress assessment
- Intervention for 4 weeks
- Post-test assessment

Data Analysis

- Descriptive: Mean, SD, frequency
- Inferential: Paired t-test, independent t-test

RESULTS

The data collected from the nursing students was carefully reviewed and organized in line with the objectives of the study. Both descriptive and inferential statistics were used to interpret the findings. The results, which are shown as tables, are described below.

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Table 1: Pre-test Stress Level n=60

Stress Level	Group A (n=30)	Group B (n=30)
Mild	8 (26.7%)	7 (23.3%)
Moderate	18 (60%)	19 (63.3%)
Severe	4 (13.3%)	4 (13.3%)

Table 2: Mean Stress Score Comparison

Group	Pre-test Mean ± SD	Post-test Mean ± SD	Mean Difference
Mindfulness	24.5 ± 4.2	14.2 ± 3.8	10.3
Breathing	25.1 ± 4.5	17.8 ± 4.1	7.3

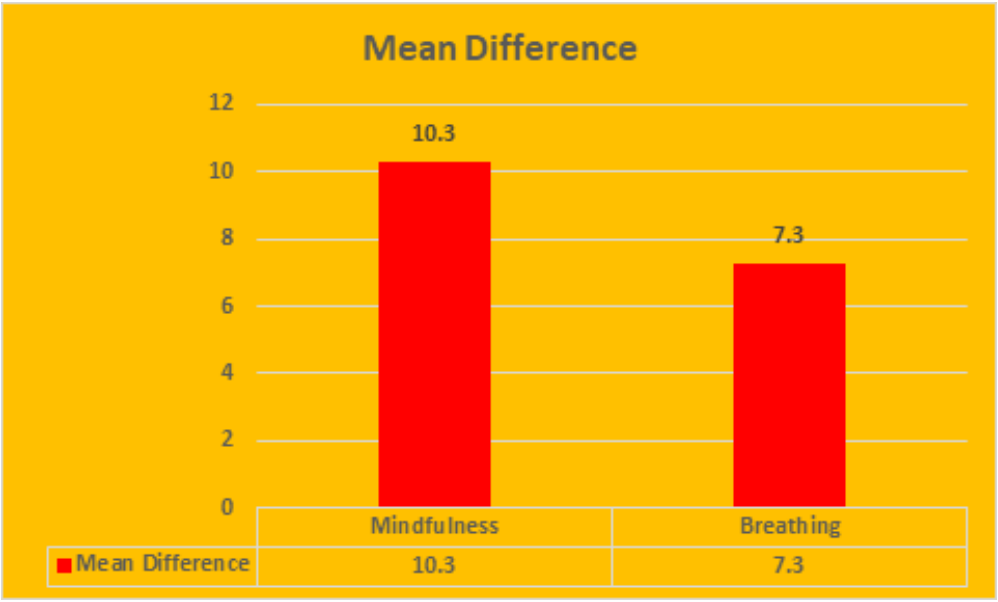

Figure 01: Mean Stress Score Comparison

Table 3: Comparison Between Groups (Post-test)

Group	Mean	SD	t-value	p-value
Mindfulness	14.2	3.8	2.45	<0.05
Breathing	17.8	4.1		

Interpretation: Mindfulness meditation is significantly more effective.

DISCUSSION

The study findings indicate that both mindfulness meditation and deep breathing exercises effectively reduce stress among nursing students. However, mindfulness meditation showed greater reduction[7].

This aligns with previous studies showing mindfulness improves emotional regulation and coping ability. Deep breathing also reduces stress but may have a slower or less profound effect[8].

The results validate the use of mindfulness-based interventions in nursing education.

CONCLUSION

According to the study's findings, deep breathing techniques are less successful than mindfulness meditation at lowering stress levels in nursing students. Both therapies have advantages and can be integrated into everyday activities.

RECOMMENDATIONS

- Similar studies can be conducted with larger samples
- Long-term effectiveness can be evaluated
- Can be implemented in nursing curriculum
- Comparative studies with other techniques can be done

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CONFLICT OF INTEREST: None

REFERENCES

1. Lazarus RS, Folkman S. Stress, appraisal, and coping. New York: Springer; 1984.
2. Gibbons C. Stress, coping and burn-out in nursing students. Int J Nurs Stud. 2010;47(10):1299–309.
3. Pulido-Martos M, Augusto-Landa JM, Lopez-Zafra E. Sources of stress in nursing students. Nurse Educ Today. 2012;32(1):15–20.
4. Kabat-Zinn J. Mindfulness-based interventions in context. Clin Psychol Sci Pract. 2003;10(2):144–56.
5. Jerath R, Edry JW, Barnes VA, Jerath V. Physiology of long pranayamic breathing. Med Hypotheses. 2006;67(3):566–71.
6. Shapiro SL, Astin JA, Bishop SR, Cordova M. Mindfulness-based stress reduction. J Behav Med. 2005;28(6):581–92.
7. Brown KW, Ryan RM. Benefits of mindfulness. J Pers Soc Psychol. 2003;84(4):822–48.
8. Varvogli L, Darviri C. Stress management techniques. Health Sci J. 2011;5(2):74–89.

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