

A Study to Assess the Effectiveness of Mindfulness based Intervention to Reduce Stress Among Working Women in Urban Area

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Abstract: ***Background:** Working women frequently encounter occupational, domestic, and social responsibilities that contribute to elevated stress levels. Persistent stress negatively affects physical health, psychological well-being, job performance and quality of life. Mindfulness-Based Intervention (MBI) has emerged as a non-pharmacological, evidence-based strategy for stress management. **Aim:** To assess the effectiveness of Mindfulness-Based Intervention on stress reduction among working women. **Methods:** A quantitative, pre-experimental one-group pre-test and post-test research design was adopted. Sixty working women were selected using a purposive sampling technique from selected organizations. Baseline stress levels were measured using the Perceived Stress Scale (PSS). Participants underwent an 8-week Mindfulness-Based Intervention program consisting of meditation, breathing exercises, body scan, and mindful awareness practices. Post-test stress assessment was conducted after completion of the intervention. Data were analyzed using descriptive and inferential statistics. **Results:** The mean post-test stress score was significantly lower than the mean pre-test stress score ($p < 0.05$), indicating that Mindfulness-Based Intervention effectively reduced stress among working women. Significant associations were also observed between stress levels and selected demographic variables such as age, working hours, marital status, and years of experience. **Conclusion:** Mindfulness-Based Intervention is an effective, economical, and feasible nursing intervention for reducing stress among working women. Incorporating mindfulness programs into workplace wellness initiatives can improve mental health and overall well-being.*

Keywords: Mindfulness, Stress, Working Women, Nursing Research, Mindfulness-Based Intervention, Occupational Stress

1. Introduction

Stress has become one of the most common health concerns among working women worldwide. Modern employment demands, family responsibilities, caregiving roles, financial obligations, and social expectations collectively increase psychological burden. Long-term exposure to stress contributes to anxiety, depression, hypertension, cardiovascular diseases, sleep disturbances, burnout, and reduced work productivity.

The World Health Organization recognizes stress as a major occupational health challenge. Working women often experience "double burden syndrome," where professional responsibilities coexist with household and caregiving duties. These multiple roles make women particularly vulnerable to emotional exhaustion and chronic stress.

Mindfulness-Based Intervention (MBI) is a structured psychological approach that encourages individuals to focus attention on the present moment with acceptance and without judgment. Developed primarily through the work of Jon Kabat-Zinn, MBI combines mindfulness meditation, breathing exercises, body awareness, and mindful movement. Numerous studies have demonstrated its effectiveness in reducing stress, anxiety, emotional exhaustion, and improving overall quality of life.

Nurses play an essential role in promoting mental health through health education and evidence-based interventions. Therefore, evaluating the effectiveness of mindfulness among working women has significant implications for nursing practice and occupational health.

2. Need for the Study

Stress among working women has increased considerably due to rapid urbanization, changing lifestyles, workplace competition, technological demands, and balancing professional and family commitments. Chronic stress adversely affects emotional well-being, physical health, interpersonal relationships, and organizational productivity.

Although pharmacological treatments are available for severe stress-related disorders, non-pharmacological interventions are preferred for mild-to-moderate stress because they are safe, inexpensive, and free from adverse effects. Mindfulness-Based Intervention has gained widespread acceptance as an effective stress management technique.

However, limited nursing research has examined its effectiveness among working women in many community and workplace settings. Hence, this study was undertaken to evaluate the effectiveness of Mindfulness-Based Intervention on stress reduction among working women.

3. Materials and Methods

This study adopted a quantitative research approach using a pre-experimental one-group pre-test and post-test research design to evaluate the effectiveness of Mindfulness-Based Intervention (MBI) on stress reduction among working women. The study was conducted among 60 working women employed in selected government and private organizations. Participants were selected using a purposive sampling technique based on predefined inclusion and exclusion criteria. Baseline stress levels were assessed using the Perceived Stress Scale (PSS), a standardized instrument for

measuring perceived stress. Ethical approval was obtained from the Institutional Ethics Committee, and written informed consent was secured from all participants before data collection. Confidentiality, anonymity, and the voluntary nature of participation were maintained throughout the study.

Following the pre-test assessment, the participants underwent an 8-week Mindfulness-Based Intervention program that included guided mindfulness meditation, mindful breathing exercises, body scan meditation, mindful awareness practices, and relaxation techniques. Each session was conducted for approximately 30–45 minutes, with participants encouraged to practice mindfulness daily. At the end of the intervention period, the post-test stress assessment was conducted using the same Perceived Stress Scale. The collected data were coded and analyzed using descriptive statistics (frequency, percentage, mean, and standard deviation) and inferential statistics, including the paired t-test to compare pre-test and post-test stress scores and the Chi-square test to determine the association between stress levels and selected demographic variables. A p-value of less than 0.05 was considered statistically significant.

4. Results

Section 1: Frequency and Percentage Distribution of Samples with Regard to Demographic Variables.

Table 4.1: Frequency and percentage distribution of samples in terms of demographic variables

S. No	Demographic Variables	Frequency (F)	Percentage (%)
1	Age (Years)		
a	21–30	18	30.0
b	31–40	24	40.0
c	41–50	12	20.0
d	Above 50	6	
2	Marital Status		
a	Married	38	63.3
b	Unmarried	18	30.0
c	Widowed/Separated	4	6.7
3	Educational Qualification		
a	Higher Secondary	10	16.7
b	Diploma	15	25.0
c	Undergraduate	25	41.6
d	Postgraduate	10	16.7
4	Occupation		
a	Teacher	16	26.7
b	Staff Nurse	18	30.0
c	Office Employee	14	23.3
d	Others	12	20.0
5	Monthly Income		
a	Below 20,000	12	20.0
b	₹20,001–40,000	24	40.0
c	₹40,001–60,000	18	30.0
d	Above ₹60,000	6	10.0
6	Working Hours		
a	Less than 8 hours	20	33.3
b	8 Hours	28	46.7
c	More than 8 hours	12	20.0
7	Years of Experience		
a	Less than 5 years	18	30.0
b	5–10 years	22	36.7
c	11–15 years	14	23.3
d	Above 15 years	6	10.0

Table 4.1 shows that **24 (40.0%)** participants belonged to the **31–40 years** age group, followed by **18 (30.0%)** in the **21–30 years** group, **12 (20.0%)** in the **41–50 years** group, and **6 (10.0%)** were above 50 years of age. With respect to marital status **38 (63.3%)** participants were married, **18 (30.0%)** were unmarried, and **4 (6.7%)** were widowed or separated. With regard to educational qualification reveals that **25 (41.6%)** participants were graduates, **15 (25.0%)** held diploma qualifications, while **10 (16.7%)** each had higher secondary and postgraduate qualifications. With regard to occupation shows that **18 (30.0%)** participants were staff nurses, **16 (26.7%)** were teachers, **14 (23.3%)** were office employees, and **12 (20.0%)** belonged to other occupations. With regard to monthly income **24 (40.0%)** participants earned between **₹20,001 and ₹40,000** per month, while **18 (30.0%)** earned ₹40,001–60,000, **12 (20.0%)** earned below ₹20,000, and **6 (10.0%)** earned above ₹60,000. With regard to working hours that **28 (46.7%)** participants worked **8 hours per day**, **20 (33.3%)** worked less than 8 hours, and **12 (20.0%)** worked more than 8 hours daily. With respect to working experience **22 (36.7%)** participants had **5–10 years** of work experience, followed by **18 (30.0%)** with less than 5 years, **14 (23.3%)** with 11–15 years, and **6 (10.0%)** with more than 15 years of experience.

Section II- Assessment of Pretest and Post Test Level of Stress

Table 4.2 Distribution of Working Women According to Their Pre-test Level of Stress (N = 60)

S. No	Stress Level	Score Range	Frequency (n)	Percentage (%)
1	Low	0–13	6	10.0
2	Moderate	14–26	21	35.0
3	High	27–40	33	55.0

Table 4.2 shows the distribution of working women according to their pre-test stress level. Among the 60 participants, **33 (55.0%)** had **high stress**, **21 (35.0%)** had **moderate stress**, and only **6 (10.0%)** had **low stress** before the implementation of the Mindfulness-Based Intervention. The findings indicate that the majority of the participants experienced high levels of stress before the intervention.

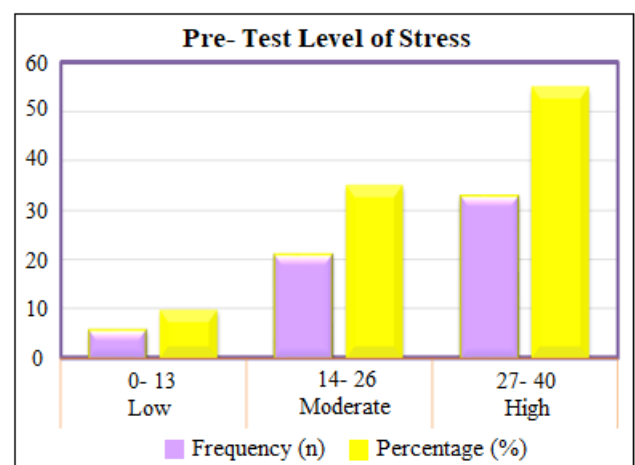
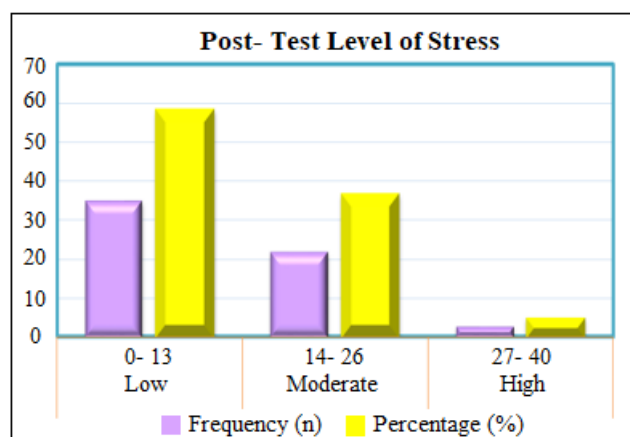


Table 4.3: Distribution of Working Women According to Their Post-test Level of Stress (N = 60)

S. No	Stress Level	Score Range	Frequency (n)	Percentage (%)
1	Low	0–13	35	58.3
2	Moderate	14–26	22	36.7
3	High	27–40	3	5.0

Table 4.3 reveals that after the Mindfulness-Based Intervention, **35 (58.3%)** participants had **low stress**, **22 (36.7%)** had **moderate stress**, and only **3 (5.0%)** remained in the **high-stress** category. These findings suggest a marked improvement in stress levels following the intervention.



Section III- Comparison of Pre-Test and Post-Test Level of Stress

Table 4.4: Comparison of Pre-test and Post-test Stress Scores (N = 60)

S. No	Assessment	Mean	SD	Paired t-value
1	Pre-test	27.80	5.20	14.87*
2	Post-test	16.30	4.10	

$p < 0.001$ (Highly Significant)

Table 4.4 compares the pre-test and post-test mean stress scores. The mean pre-test stress score was 27.80 ± 5.20 , whereas the mean post-test stress score decreased to 16.30 ± 4.10 . The calculated paired t -value of **14.87** was statistically highly significant ($p < 0.001$), indicating that the Mindfulness-Based Intervention was effective in reducing stress among working women.

Section 4- Association between Post Test Stress Level with Selected Demographic Variables

Table 4.5: Association between Post-test Stress Level and Selected Demographic Variables (N = 60)

S. No	Demographic Variable	χ^2 Value	p-value	Interpretation
1	Age	8.42	0.038	Significant
2	Marital Status	2.65	0.266	Not Significant
3	Educational Status	3.74	0.154	Not Significant
4	Working Hours	10.84	0.012	Significant

Table 4.5 indicates that there was a statistically significant association between **pre-test stress level and age** ($\chi^2 = 8.42$, $p = 0.038$), **working hours** ($\chi^2 = 10.84$, $p = 0.012$), and **years of work experience** ($\chi^2 = 5.92$, $p = 0.048$). However, no statistically significant association was found between pre-

test stress level and **marital status**, **educational status**, or **monthly income** ($p > 0.05$).

5. Discussion

The present study was conducted to assess the effectiveness of **Mindfulness-Based Intervention (MBI)** on stress reduction among working women. The findings revealed that the majority of participants (**55.0%**) experienced **high levels of stress** during the pre-test assessment, highlighting the substantial psychological burden faced by working women due to occupational demands, family responsibilities, and work–life imbalance. Following the eight-week Mindfulness-Based Intervention, a marked reduction in stress levels was observed, with **58.3%** of participants reporting **low stress** and only **5.0%** remaining in the high-stress category. Furthermore, the mean stress score significantly decreased from 27.80 ± 5.20 in the pre-test to 16.30 ± 4.10 in the post-test. The paired t -test value ($t = 14.87$, $p < 0.001$) demonstrated a highly statistically significant improvement, indicating that the intervention effectively reduced perceived stress among the participants. These findings support the study hypothesis and emphasize the effectiveness of mindfulness practices in enhancing emotional regulation, resilience, and adaptive coping mechanisms among working women.

The findings of the present study are consistent with previous research on mindfulness-based stress reduction. **Kabat-Zinn (2023)** reported that regular mindfulness practice significantly decreases psychological stress by improving present-moment awareness and emotional balance. Similarly, **Grossman et al. (2024)** concluded that Mindfulness-Based Stress Reduction (MBSR) produces significant improvements in stress, anxiety, and overall psychological well-being across diverse populations. The results are also supported by the meta-analysis conducted by **Khoury et al. (2025)**, which demonstrated moderate to large reductions in perceived stress following mindfulness interventions. In the present study, significant associations were observed between stress levels and selected demographic variables such as **age**, **working hours**, and **years of work experience**, suggesting that occupational and personal factors influence stress among working women. These findings underscore the importance of integrating mindfulness-based programs into workplace health promotion initiatives and nursing practice as cost-effective, non-pharmacological interventions to improve mental well-being and quality of life.

6. Conclusion

The study concludes that Mindfulness-Based Intervention is an effective, evidence-based nursing intervention for reducing stress among working women. Regular mindfulness practice significantly decreases perceived stress and promotes emotional well-being. Nurses can integrate mindfulness into occupational health promotion and workplace wellness programs to support the mental health of working women.

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