

Impact of Stress Management Training Program on Work Life Balance and Job Satisfaction among Nurses: A Quasi-Experimental Study

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ABSTRACT

Background: Nurses are exposed to multiple workplace stressors, including high workload, emotional demands, interpersonal conflicts, and long working hours, which may negatively affect work–life balance and job satisfaction.

Aim: To evaluate the impact of a stress management training program on work–life balance and job satisfaction among nurses.

Methods: A quasi-experimental pre–post study was conducted among 108 staff nurses working in inpatient departments at Ahad Rafidah General Hospital, Saudi Arabia. Data were collected using four instruments assessing stress management knowledge, job stress, work–life balance, and job satisfaction.

Results: Nurses' knowledge of stress management improved substantially following the program, with the proportion of nurses demonstrating a high level of knowledge increasing from 47.2% before the intervention to 96.3% immediately afterward. Job stress levels decreased considerably, with 83.3% of nurses reporting low stress after the program compared with 46.3% reporting high stress before the intervention. Work–life balance also improved markedly, as the proportion of nurses with a high level of work–life balance increased from a predominantly low level before the program (64.8%) to 73.1% after the intervention. A significant negative correlation was found between stress management knowledge and job stress ($p < 0.001$), while significant positive correlations were observed between stress management knowledge, work–life balance, and job satisfaction ($p < 0.001$).

Conclusion: The stress management training program significantly improved nurses' knowledge, reduced job stress, and enhanced work–life balance and job satisfaction. Although slight declines were observed during follow-up, outcomes remained better than baseline.

Recommendation: Regular stress management training should be integrated into continuing professional development programs for nurses.

Keywords: *Stress Management, Training Program, Work Life Balance, Job Satisfaction, Nurses.*

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INTRODUCTION

Nursing is widely recognized as one of the most demanding healthcare professions, exposing nurses to multiple occupational stressors, including heavy workloads, emotional demands, interpersonal conflicts, role ambiguity, and extended working hours (Sudha et al., 2025; Goudarzian et al., 2024). Nurses frequently care for multiple patients simultaneously while managing complex clinical situations and supporting distressed families, which can contribute to elevated stress levels and increase the risk of burnout. Furthermore, unclear job responsibilities, workplace conflicts, and irregular work

schedules may negatively affect nurses' psychological well-being and overall quality of life (Jadidi et al., 2024).

Stress management has therefore become a critical component of nursing practice. Effective stress management strategies, including time management, mindfulness techniques, peer support, and professional counseling, can help nurses cope with workplace pressures and reduce the adverse effects of occupational stress (Chahbounia & Gantare, 2023; Egger et al., 2023). Previous studies have demonstrated that improved stress management contributes to better physical and

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psychological health, lower burnout levels, enhanced job performance, and improved patient care outcomes (Epstein et al., 2023; Glawing et al., 2024). Conversely, unmanaged stress may lead to anxiety, depression, burnout, and an increased likelihood of clinical errors, potentially compromising patient safety and quality of care (Valizadeh et al., 2023).

Work-life balance is another important factor influencing nurses' well-being and professional performance. It refers to an individual's ability to effectively balance work responsibilities with personal, family, and social commitments (Rony et al., 2024). A healthy work-life balance has been associated with higher productivity, improved psychological well-being, stronger interpersonal relationships, and greater job satisfaction (Permadi et al., 2023). In contrast, excessive work demands and difficulties disconnecting from work may contribute to work-family conflict, stress, and reduced professional satisfaction (Zaitouni et al., 2024; Ingstad & Haugan, 2024).

Job satisfaction remains a key determinant of nurse retention, workforce stability, and healthcare quality (Aung et al., 2023). Factors such as professional autonomy, supportive leadership, positive workplace relationships, fair compensation, and opportunities for professional development have been shown to enhance nurses' job satisfaction and organizational commitment (Permadi et al., 2023). Since stress management can positively influence both work-life balance and job satisfaction, healthcare organizations should prioritize interventions aimed at strengthening nurses' coping skills and resilience.

Despite growing evidence supporting the benefits of stress management interventions, limited research in Saudi Arabia has examined the effect of stress management training programs on nurses' work-life balance and job satisfaction (Rashmi & Kataria, 2023). Addressing this gap is important for promoting nurses' well-being and developing supportive workplace environments within healthcare organizations (Shdaifat et al., 2023). Therefore, this study aimed to evaluate the impact of a stress management training program on work-life balance and job satisfaction among nurses at Ahad Rafidah General Hospital, Saudi Arabia.

METHODS

Study Design and Setting

A quasi-experimental pre-post research design was conducted to evaluate the impact of a stress management training program on nurses' work-life balance and job satisfaction. The study was carried out in all inpatient departments of Ahad Rafidah General Hospital, a referral hospital in the Asir Region of Saudi Arabia.

Participants

A convenience sample of 108 staff nurses was recruited. Eligible participants were nurses with at least one year of

clinical experience, available during the data collection period, and willing to participate in the study.

Data Collection Instruments

Data were collected using four instruments. The first was a researcher-developed Stress Management Knowledge Assessment Questionnaire, based on relevant literature, which assessed nurses' knowledge of stress management. The second was the Job Stress Scale developed by Jamal and Baba (1992), which measures perceived job stress. The third was the Work-Life Balance Scale developed by Brough et al. (2009), which evaluates the balance between work and non-work activities. The fourth was the Job Satisfaction Scale developed by Muya et al. (2014), which assesses job satisfaction across four domains: positive emotions toward work, support from supervisors, workplace significance, and work environment. For all scales, scores were categorized as low (<60%), moderate (60–75%), or high (>75%).

Validity and Reliability

Face and content validity were established through expert review, and modifications were made accordingly. Internal consistency was assessed using Cronbach's alpha coefficients, which demonstrated high reliability for the knowledge questionnaire (0.89), job stress scale (0.93), work-life balance scale (0.89), and job satisfaction scale (0.93).

Pilot Study

A pilot study was conducted on 10 nurses (10% of the sample) to assess the clarity and feasibility of the instruments. Participants included in the pilot study were excluded from the final analysis.

Intervention and Data Collection Procedure

After obtaining institutional approvals, baseline data were collected using the four study instruments. The stress management training program was implemented from December 2024 to June 2025. Participants were divided into small groups of four to five nurses according to work schedules and availability. The program consisted of four sessions (2 hours each; total duration 8 hours) delivered three days per week. Educational methods included lectures, group discussions, brainstorming activities, videos, and handouts. Program content covered stress concepts, common nursing stressors, stress symptoms, coping strategies, stress management techniques, teamwork approaches, and management of chronic stress. Following completion of the program, participants completed the same instruments immediately after the intervention and during follow-up assessment.

Ethical Considerations

Ethical approval was obtained from the Research Ethics Committee of the Faculty of Nursing, Mansoura University (IRB No. 669). Official permission was obtained from Ahad Rafidah General Hospital. Written informed consent was obtained from all participants, and confidentiality, anonymity, and the right to withdraw at any stage were assured.

Statistical Analysis

Data were analyzed using Statistical Package for the Social Sciences version 25. Descriptive statistics were presented as frequencies, percentages, means, and standard deviations. Repeated measures were analyzed using two-way analysis of variance for continuous variables and the Friedman test for ordinal variables. Statistical significance was set at $p < 0.05$.

RESULTS

Sociodemographic of the Participants

Table (1) illustrates the personal characteristics of the studied nurses. This table revealed that three-quarters of the studied nurses (75.0%) were aged between 30 and less than 40 years, with a mean age of 33.78 ± 5.87 years. The majority were female (84.3%). Regarding educational qualification, about two-thirds of them (62.0%) held a Bachelor's degree in Nursing. In relation to experience, less than half (48.1%) had 6 to 10 years of experience, with a mean of 9.74 ± 4.35 years. Concerning the working unit, more than half (58.3%) were working in inpatient clinics.

Table (1): Personal characteristics of the studied nurses (n=108).

Personal characteristics	The studied nurses (n=108)	
	n	%
■Age years		
20< 30	21	19.4
30< 40	81	75.0
40 years and more	6	5.6
Mean± SD	33.78± 5.87	
■Gender		
Male	17	15.7
Female	91	84.3
■Educational qualification		
Diploma in nursing	36	33.3
BSC in nursing	67	62.0
MSc in nursing	5	4.6
■Experience years		
1-5 Years	14	13.0
6-10 Years	52	48.1
More than 10 Years	42	38.9
Mean± SD	9.74±4.35	
■Unit		
Outpatients clinics	27	25.0
Inpatients clinics	63	58.3
Intensive Care Unit	14	13.0
Others	4	3.7

Presenting the Results

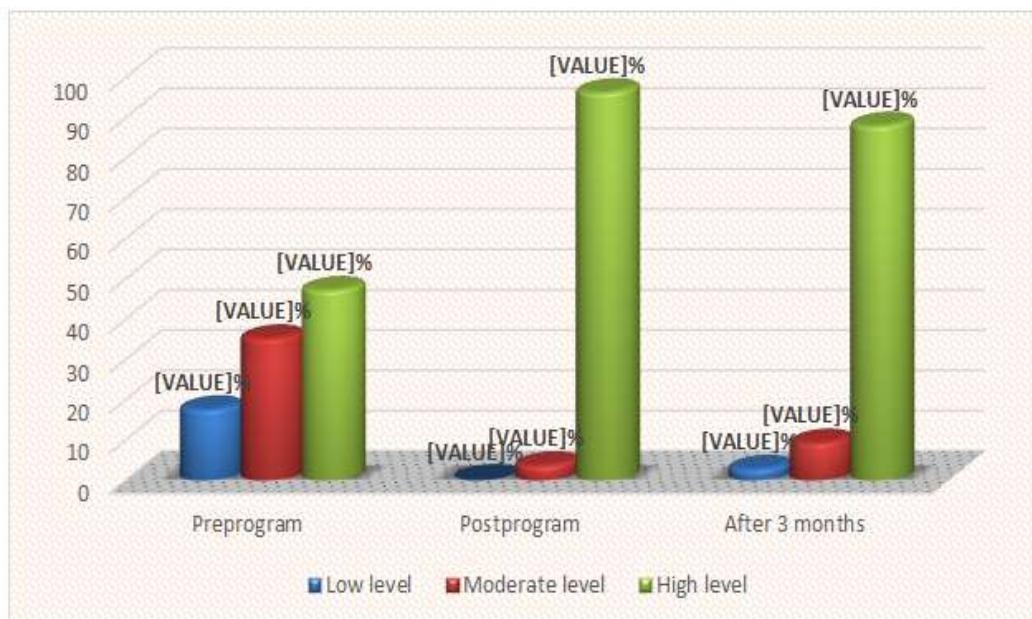


Figure (1): Total stress management knowledge levels of the studied nurses throughout the training program phases (n=108).

Figure (1) shows total stress management knowledge levels of the studied nurses throughout the training program phases. Before the program, less than half of the nurses (47.2%) had a high level of knowledge, which

markedly increased to (96.3%) immediately after the program and slightly declined to (88.0%) after three months.

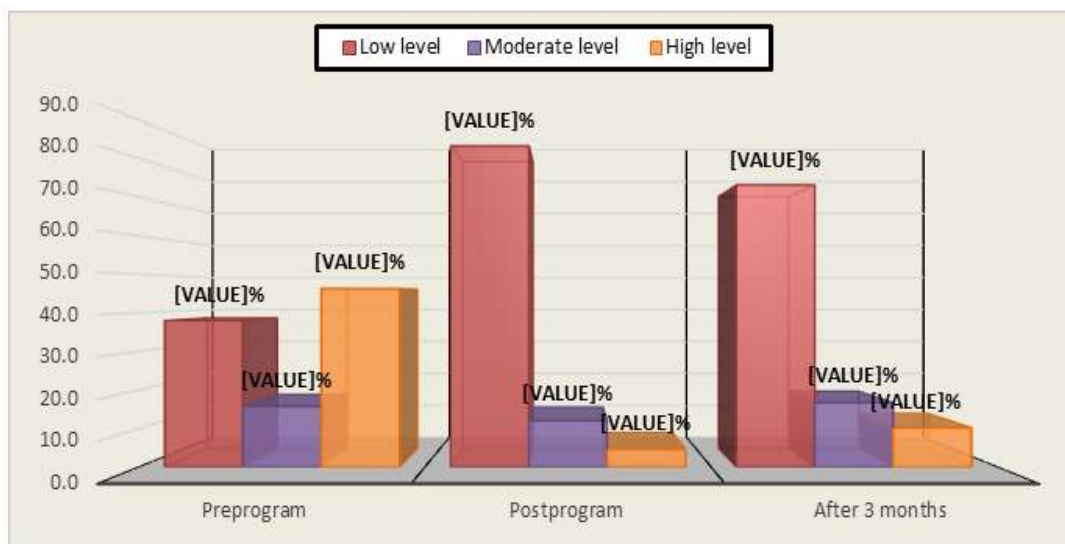


Figure (2): Total job stress level of the studied nurses throughout the training program phases (n=108).

Figure (2) shows the job stress level of the studied nurses throughout the training program phases. Before the program, nearly half of the studied nurses (46.3%) had a high level of job stress, while (38.0%) had a low level. Post-program, the proportion of nurses with a low level of

job stress increased markedly to (83.3%), and only (4.6%) had a high level. After three months, there was a slight increase in high-stress levels to (10.2%), while most nurses (73.1%) still maintained a low level.

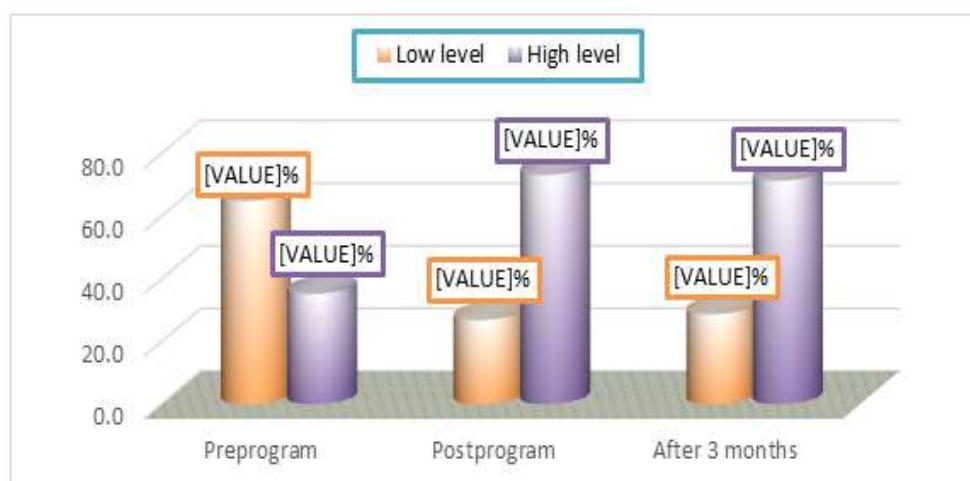


Figure (3): Total work-life balance level of the studied nurses throughout the training program phases (n=108).

Figure (3) shows the total work-life balance levels throughout different phases of the training program. Before the program, nearly two-thirds of the studied nurses (64.8%) had a low level of work-life balance, while (35.2%) had a high level. Post-program, the proportion of

nurses with a high level of work-life balance increased markedly to (73.1%), and those with a low level decreased to (26.9%). After three months, (71.3%) of the nurses still maintained a high level of work-life balance.



Figure (4): Total job satisfaction level of the studied nurses throughout the training program phases (n=108).

Figure (4) illustrates the total job satisfaction levels throughout the training program phases. Before the program, the majority of nurses (71.3%) had a low level of job satisfaction, while only 13.9% reported a high level. Post-program, the proportion of nurses with a high satisfaction level rose substantially to 60.2%, with a corresponding decline in those at the low level (22.2%). After three months, there was a slight decrease, with 40.7% of nurses maintaining a high satisfaction level.

Table (2) illustrates the correlation between total stress management knowledge, job stress, work-life balance, and

job satisfaction among the studied nurses throughout the training program phases. The table revealed a statistically significant negative correlation between total stress management knowledge and job stress at all program phases ($p < 0.001^{**}$), indicating that as nurses' knowledge of stress management increased, their job stress decreased. Conversely, there was a significant positive correlation between total stress management knowledge and both work-life balance and job satisfaction during all program phases ($p < 0.001^{**}$), suggesting that improved stress management knowledge was associated with better work-life balance and higher job satisfaction.

Table (2): Correlation between total stress management knowledge, job stress, work-life balance, and job satisfaction of the studied nurses throughout the training program phases (n=108).

Variable	Total stress management knowledge					
	Pre program		Post program		After 3 months	
	r	p	r	p	r	p
■ Job stress	- 0.547	0.000**	- 0.410	0.000**	- 0.450	0.000**
■ Work – life balance	0.455	0.000**	0.281	0.003**	0.389	0.000**
■ Job satisfaction	0.319	0.001**	0.267	0.005**	0.496	0.000**

**Correlation is significant at the 0.01 level (2-tailed).

r, Pearson Correlation

DISCUSSION

The findings of the present study demonstrated a substantial improvement in nurses' stress management knowledge following the implementation of the training program, with knowledge levels remaining higher than baseline during the follow-up period. This improvement may be attributed to the effectiveness of the structured educational intervention in enhancing nurses' understanding of stress management strategies and coping mechanisms. However, the slight decline observed at follow-up may reflect knowledge erosion over time and the absence of ongoing reinforcement. These findings are consistent with previous studies reporting significant improvements in nurses' stress management knowledge following educational interventions, with some decline occurring during longer follow-up periods (Chesak et al., 2019; Alkhawaldeh et al., 2020).

The study also revealed a marked reduction in job stress levels after the training program, although a slight increase was observed during follow-up. The immediate reduction in stress may be explained by nurses' acquisition of practical coping strategies, stress recognition skills, and effective stress management techniques. The modest increase during follow-up could be related to ongoing workplace stressors and the gradual decline of intervention effects over time. Similar findings have been reported in previous studies demonstrating the effectiveness of structured stress management interventions in reducing occupational stress among nurses and healthcare professionals (Benarfa et al., 2025; Liljestrand & Martin, 2021).

Furthermore, the training program was associated with considerable improvements in work-life balance and job satisfaction. Enhanced stress management knowledge may have enabled nurses to better regulate work demands, manage emotional challenges, and maintain a healthier balance between professional and personal responsibilities. Improved coping abilities and reduced stress levels may also explain the significant increase in job satisfaction observed after the intervention. These findings are supported by previous research indicating that stress management programs positively influence work-life balance and job satisfaction among nurses (Ghawadra et al., 2020).

The present study also identified a significant negative correlation between stress management knowledge and job

stress, alongside significant positive correlations between stress management knowledge, work-life balance, and job satisfaction. These findings suggest that increased knowledge of stress management equips nurses with effective coping skills that reduce occupational stress while promoting better work-life balance and greater job satisfaction. Similar relationships have been reported in previous studies highlighting the role of stress management knowledge and competencies in improving workplace outcomes and psychological well-being among healthcare professionals (Altindag, 2020; Dewi et al., 2021).

CONCLUSION

The study results indicate that the stress management training program significantly improved nurses' knowledge and work-related outcomes. The nurses' knowledge of stress management significantly improved after program implementation and remained high during the follow-up period. This improvement was associated with a significant decrease in workplace stress levels and significant improvements in work-life balance and job satisfaction among the studied nurses. Although some decreases were observed during the follow-up period, most nurses had superior levels compared to the pre-program phase. Furthermore, the study results indicate that increased expertise in stress management was significantly correlated with decreased workplace stress and increased levels of work-life balance and job satisfaction. These findings highlight the significance of continuous educational and supportive initiatives to improve nurses' coping skills and to promote a healthier and more satisfying work environment.

RECOMMENDATIONS

For Nurses

- Participate actively in stress management training programs to enhance deal with strategies plus maintain psychological well-being.
- Apply learned stress management techniques in daily practice to reduce occupational stress and further work-life stability.

For Head Nurses

- Encourage and support nurses' participation in educational programs related to stress management and workplace well-being.
- Provide understanding supervision and promote an upbeat work environment that helps nurses manage job demands efficiently.

For Hospital Administration

- Incorporate regular stress management training programs as part of ongoing professional development for nursing staff.
- Explain organizational procedures and supportive work conditions that augment nurses' work-life balance and improve total job satisfaction.

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Conflict of interest

The authors declare no conflict of interest in the preparation of this study.

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