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DOI: 10.34172/jcs.36502

Please cite this article as: Fatemi M, Sadooghiasl A.-Effectiveness of a Coaching Leadership Training Program for Nurse Managers on Nurses' Job Satisfaction and Professional Commitment: A Quasi-Experimental Study. J Caring Sci 2026; 15(3):x-x. doi: 10.34172/jcs.36502

This PDF file is an Accepted Manuscript (AAM) version, which has not been typeset or copyedited, but has been peer reviewed. Journal of Caring Sciences publishes the AAM version of all accepted manuscripts upon acceptance to reach fast visibility.

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Effectiveness of a Coaching Leadership Training Program for Nurse Managers on Nurses' Job Satisfaction and Professional Commitment: A Quasi-Experimental Study

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Original Research

Received: October 01, 2025

Revised: December 03, 2025

Accepted: December 06, 2025

ePublished: September 16, 2026

Masoud Fatemi, Afsaneh Sadooghiasl*. Effectiveness of a Coaching Leadership Training Program for Nurse Managers on Nurses' Job Satisfaction and Professional Commitment: A Quasi-Experimental Study. JCS

Abstract

Introduction: The global nursing workforce crisis, characterized by high turnover and burnout, threatens patient safety. Although nurse managers' leadership strongly impacts nurses' job satisfaction and commitment, interventional studies on coaching leadership in healthcare remain scarce. This study evaluated the effectiveness of a coaching leadership training program for nurse managers on staff nurses' job satisfaction and professional commitment.

Methods: A quasi-experimental pretest-posttest study was conducted in two matched private hospitals in Tehran, Iran, involving 132 nurses (65 in the intervention group and 67 in the control group) and 49 nurse managers. Intervention group managers completed a 12-hour coaching leadership training program. Nurses' job satisfaction (MSQ) and professional commitment (NPCQ) were assessed at baseline and three months post-intervention. Data were analyzed using Analysis of Covariance (ANCOVA), adjusting for baseline scores.

Results: ANCOVA revealed significantly higher scores in the intervention group compared to controls for job satisfaction [$F(1, 129) = 92.45, P < 0.001, \eta^2 = 0.42$; adjusted mean: 84.10 (0.52) vs. 75.30 (0.51)] and professional commitment [$F(1, 129) = 105.71, P < 0.001, \eta^2 = 0.45$; adjusted mean: 94.80 (2.00) vs. 61.20 (2.00)]. Additionally, four subscales of professional commitment showed notable improvements ($P < 0.01$), while no significant change was noted in the self-sacrifice subscale ($P = 0.120$).

Conclusion: Coaching leadership training for nurse managers effectively enhances staff nurses' job satisfaction and professional commitment. Fostering coaching skills among leaders may offer

a practical strategy to cultivate sustainable professional commitment, grounded in professional growth and perceived support, without an increase in reliance on self-sacrifice.

Keywords: Leadership, Job Satisfaction, Professional Commitment, Nurses, Inservice Training

Introduction

Healthcare systems globally are confronting an escalating workforce crisis among nurses, characterized by high rates of burnout, staff turnover, and persistent staffing shortages. These challenges pose considerable risks to both the quality of care and patient safety.^{1,2}

Two pivotal psychological constructs namely, nurses' job satisfaction and professional commitment are central to cultivating a stable, motivated, and high-performing nursing workforce.^{3,4} Job satisfaction, reflecting a positive appraisal of one's job, is associated with lower turnover intention and better work performance.⁵ Professional commitment, reflecting nurses' psychological attachment to the nursing profession, supports sustained engagement and professional development.⁶ These outcomes are interrelated, highlighting the importance of addressing both in nursing workforce strategies.⁷

Among the factors influencing these outcomes, the leadership style of nurse managers emerges as a critical and modifiable environmental determinant.⁸ Nurse managers shape the work environment, support their teams, and address operational challenges.⁹ However, conventional leadership models may not fully address the complex demands and motivational needs of contemporary healthcare settings.¹⁰

In this context, coaching leadership has been proposed as a potentially transformative alternative. This approach is based on a collaborative, developmental partnership between managers and employees, emphasizing dialogue, constructive feedback, and facilitated learning.^{11,12} By supporting nurses' needs for autonomy, competence, and relatedness,¹³ coaching leadership may enhance intrinsic motivation, job satisfaction, and professional commitment.¹⁴

Despite its theoretical foundations, evidence regarding the effectiveness of coaching leadership remains limited.¹⁵ Although existing studies suggest potential benefits of coaching leadership, rigorous intervention studies, particularly those using controlled designs, remain scarce.¹⁶ In nursing, however, the effects of coaching leadership interventions on nurses' job satisfaction and professional commitment remain insufficiently established.^{17,18} This gap limits the availability of evidence-based leadership strategies for addressing nursing workforce challenges.¹⁹ Therefore, this study aimed to evaluate the effect of a coaching leadership training program for nurse managers on staff nurses' job satisfaction and professional commitment using a quasi-experimental design.

Materials and Methods

Study Design and Setting

This study employed a quasi-experimental, pretest-posttest design with a non-equivalent control group. The research was conducted in 2024 at two comparable private hospitals in Tehran, Iran, designated as Hospital A and Hospital B for the intervention and control groups, respectively. The

hospitals were selected based on convenience and the willingness of their authorities to participate, and were subsequently matched for size, services offered, and organizational structure in order to enhance baseline comparability between the two groups.

Participants and Sampling

The study population included all nursing managers (head nurses and supervisors) (intervention recipients) and clinical nurses working in the selected hospitals (outcome evaluators).

Inclusion and Exclusion Criteria

For managers, inclusion criteria were as follows: (a) holding a position as a head nurse or supervisor, (b) willingness to participate in all training sessions, (c) no prior formal training in coaching leadership, (d) having at least six months of work experience in a managerial position. Managers who missed more than one training session were excluded from the study.

For nurses, inclusion criteria comprised: (a) at least two years of clinical work experience, (b) full-time employment status, and (c) provision of written informed consent. Nurses who submitted incomplete questionnaires at either time point were excluded from the final analysis.

An a priori power analysis was performed using G*Power software to determine the required sample size. For a medium effect size ($f = 0.25$), a statistical power of 0.80, and an alpha level of 0.05, the analysis yielded a required sample size of 64 nurses per group. To accommodate an anticipated 10% attrition rate, the target sample was increased to 70 nurses per group, resulting in a total of 140 participants.

A multi-stage sampling approach was adopted. In the first stage, all 49 eligible nursing managers across both hospitals were included using a census method. Subsequently, stratified random sampling was employed for nurse selection. Wards within each hospital served as strata, and a proportional number of nurses were randomly selected from each ward's personnel list using a random number generator. The groups were comparable at baseline, with no statistically significant differences observed in key demographic and professional variables ($P > 0.05$).

Participant flow and baseline characteristics

A total of 140 nurses (70 per group) were initially enrolled. During the three-month follow-up, eight participants were lost to attrition. The final analysis was conducted on a sample of 132 nurses ($n = 65$ in the intervention group; $n = 67$ in the control group). The flow of participants is illustrated in **Figure 1**.

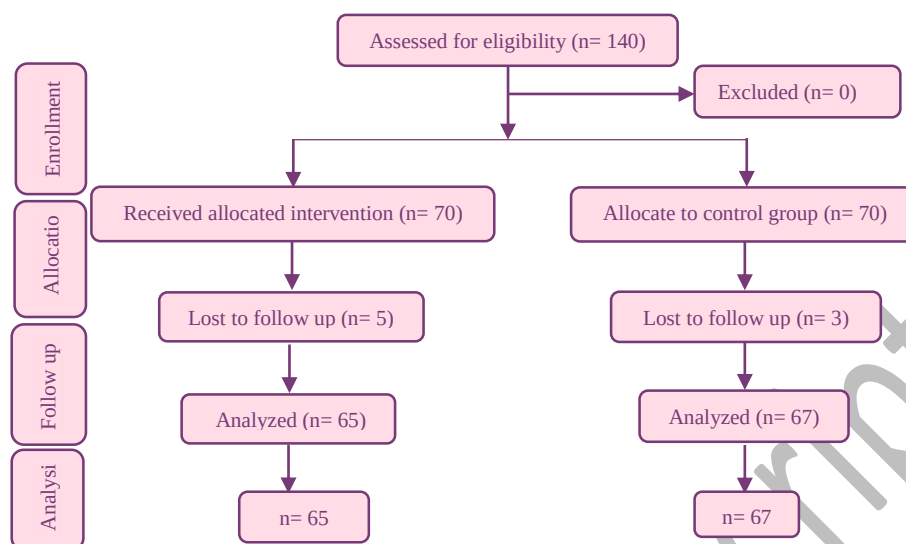


Figure 1. *Participant Flow Diagram*

The Intervention

The intervention group managers participated in a structured Coaching Leadership Training Program. The program consisted of a 12-hour workshop delivered in-person over three 4-hour sessions. The content, validated by a panel of six nursing management experts, was based on established leadership and coaching literature and adapted from previous successful coaching interventions. The program focused on developing practical coaching skills through interactive lectures, case study discussions, and extensive role-playing exercises. Key topics are detailed in Table 1.

To ensure the transfer of training, managers were instructed to actively apply these coaching techniques in their daily interactions with their staff nurses over a three-month follow-up period. The staff nurses received no direct training; their role was to evaluate their job satisfaction and professional commitment, reflecting the clinical translation of their managers' newly acquired coaching behaviors.

To reinforce learning, a structured follow-up was implemented. For three months post-workshop, participants engaged in scheduled peer-coaching sessions and had access to the researcher for consultation via virtual platforms.

Table 1. Overview of the coaching leadership training program

Session (Duration)	Module Title	Key Learning Objectives and Skills Covered	Core Activities
Session 1 (4 hours)	Foundations of coaching & advanced communication	Objectives: - Differentiate between a directive vs. a coaching leadership style. - Apply active listening and powerful questioning techniques. - Manage difficult conversations. Skills: - Active Listening, Empathic Communication - Emotional Intelligence in Leadership	- Interactive lecture - Group discussions - Paired role-playing

Session 2 (4 hours)	Giving effective performance feedback	Objectives: •Distinguish between feedback, criticism, and evaluation. •Deliver behavior-focused feedback. •Utilize the Situation-Behavior-Impact (SBI) model. Skills: •The SBI Feedback Model •Receiving feedback constructively •Creating psychological safety	•Case study analysis •Triad role-playing •Peer feedback sessions
Session 3 (4 hours)	Empowerment, delegation, and team support	Objectives: •Apply principles of effective delegation. •Identify key influencing tactics. •Implement strategies to build team cohesion. Skills: •5 Rights of Delegation •Building Trust and Accountability •Fostering a Supportive Team Culture	•Interactive lecture •Group problem-solving •Action planning

To reinforce learning, a structured follow-up was implemented. For three months post-workshop, participants engaged in scheduled peer-coaching sessions and had access to the researcher for consultation via virtual platforms.

Data collection and instruments

Data were collected at two time points: baseline (pretest, T1) and three months after the completion of the intervention (posttest, T2). The following instruments were used:

1. **Demographic Questionnaire:** Collected data on age, gender, and work experience.
2. **Minnesota Satisfaction Questionnaire (MSQ):** The 20-item short form was used to measure job satisfaction. Items are rated on a 5-point Likert scale (1= *Very Dissatisfied* to 5= *Very Satisfied*). The MSQ is a widely used instrument with established validity. Content validity was confirmed through expert opinion, and reliability was assessed using Cronbach's alpha coefficient, yielding a value of 0.74.²⁰ In this study, Cronbach's alpha for the MSQ was 0.80.
3. **Nursing Professional Commitment Questionnaire:** This 26-item instrument measures professional commitment across five domains. Items are rated on a 5-point Likert scale (1 = *Strongly Disagree* to 5 = *Strongly Agree*). The validity of the Persian version has been confirmed. Content validity of the tool was confirmed by expert consensus. To assess reliability, the internal consistency of the items was examined using Cronbach's alpha, which yielded a coefficient of 0.92.²¹ In the present study, its internal consistency was acceptable (Cronbach's alpha= 0.78).

Data Analysis

Data were analysed using SPSS Statistics for Windows, Version 21.0. Descriptive statistics were employed to summarize the characteristics of the participants. The homogeneity of the groups at baseline was evaluated using independent t-tests and chi-square tests. To test the main hypothesis, an Analysis of Covariance (ANCOVA) was performed on the post-test scores, including the

respective pre-test scores as a covariate. A P value of < 0.05 was considered statistically significant.

Results

The demographic characteristics and baseline scores are presented in **Table 2**. The mean age of the participants was 34.2 (SD= 6.1) years in the intervention group and 33.8 (SD= 5.9) years in the control group. The majority of the participants in both the intervention (89.2%) and control (91.0%) groups were female. No significant between-group differences were observed at baseline in age, gender, work experience, job satisfaction, or professional commitment ($P > 0.05$), indicating comparable baseline characteristics between the two groups.

Table 2. Baseline demographic and clinical characteristics of participants

Characteristic	Mean (SD)		Test Statistic	P value
	Intervention group (n=65)	Control group (n=67)		
Age (years)	34.2 (6.1)	33.8 (5.9)	$t = 0.38$	0.705
Female, n (%)	58 (89.2)	61 (91.0)	$\chi^2 = 0.12$	0.729
Work experience (years)	11.5 (5.2)	10.9 (4.8)	$t = 0.69$	0.491
Baseline job satisfaction	61.1 (5.4)	61.7 (4.9)	$t = -0.67$	0.504
Baseline prof. commitment	58.8 (20.6)	60.7 (20.7)	$t = -0.52$	0.604

Group differences were assessed using independent t-tests for continuous variables and Chi-square tests for categorical variables.

Effects of the Intervention on Primary Outcomes

Before the main analyses, the assumptions for ANCOVA were verified and met (e.g., homogeneity of variances, Levene's test, $P > 0.05$; homogeneity of regression slopes, $P > 0.05$). Two separate one-way ANCOVAs were conducted.

1. **Job Satisfaction:** A significant main effect for the intervention was found on post-test job satisfaction scores, $F(1, 129) = 92.45$, $P < 0.001$, with a large effect size ($\eta^2 = 0.418$). The intervention group's adjusted post-test mean ($M = 84.1$, $SE = 0.52$) was significantly higher than the control group's ($M = 75.3$, $SE = 0.51$).
2. **Professional Commitment (Total Score):** A significant main effect was also found on total professional commitment scores, $F(1, 129) = 105.71$, $P < 0.001$, with a large effect size ($\eta^2 = 0.451$). The intervention group's adjusted post-test mean ($M = 94.8$, $SE = 2.0$) was significantly higher than the control group's ($M = 61.2$, $SE = 2.0$). Descriptive statistics and ANCOVA results are summarized in **Table 3**.

Table 3. Descriptive statistics and ANCOVA results for primary outcomes

Outcome variable	Mean (SD)		Mean (SE)	F(1, 129)	P value	ηp²
	Pre-test	Post-test	Adjusted Post-test			
Job satisfaction						
Intervention	61.11 (5.42)	83.86 (4.33)	84.1 (0.52)	92.45	< 0.001*	0.418
Control	61.74 (4.87)	75.82 (4.48)	75.3 (0.51)			
Prof. commitment (Total)						
Intervention	58.77 (20.61)	94.47 (19.38)	94.8 (2.0)	105.71	< 0.001*	0.451

Control	60.69 (20.66)	61.50 (20.02)	61.2 (2.0)			
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η^2 = Partial eta squared. Results are from ANCOVA, with pre-test scores as a covariate. * $P < 0.001$.

Subscale Analysis of Professional Commitment

Exploratory ANCOVAs on the five subscales revealed that the intervention had a significant effect on four subscales: 'Perception of Nursing' ($P < 0.001$), 'Job Satisfaction in Nursing' ($P < 0.001$), 'Engagement in the Profession' ($P = 0.004$), and 'Retention in Nursing' ($P < 0.001$). No significant effect was found for the 'Self-Sacrifice' subscale ($P = 0.120$), as detailed in **Table 4**.

Table 4. ANCOVA results for the subscales of professional commitment

Subscale	Adjusted Post-test M (SE)		F(1, 129)	P value	η^2
	Intervention	Control			
Perception of Nursing	24.5 (0.4)	18.2 (0.4)	65.31	$< 0.001^*$	0.336
Job Satisfaction in Nursing	16.8 (0.3)	12.1 (0.3)	88.12	$< 0.001^*$	0.406
Engagement in the Profession	22.1 (0.5)	19.5 (0.5)	8.75	0.004*	0.063
Retention in Nursing	35.2 (0.8)	21.0 (0.8)	112.45	$< 0.001^*$	0.466
Self-Sacrifice for the Profession	18.5 (0.6)	17.8 (0.6)	2.45	0.120	0.019

η^2 = Partial eta squared. Results are from ANCOVA for each subscale, with the respective pre-test subscale score as a covariate, * statistically significant.

Discussion

This study provides compelling evidence that a structured coaching leadership training program for nursing managers significantly enhances nurses' job satisfaction and professional commitment. The substantial improvements observed, particularly the large effect sizes, suggest that equipping nurse managers with specific coaching competencies is a potent strategy for addressing critical workforce challenges within the nursing profession. After controlling for baseline scores, the intervention group demonstrated significantly higher levels of both job satisfaction and professional commitment compared to the control group, indicating a practically meaningful impact.

The significant increase in job satisfaction aligns with the theoretical framework of this study, which posits that coaching leadership fulfills nurses' fundamental psychological needs for autonomy, competence, and relatedness.¹³ By equipping managers with skills in active listening, constructive feedback (e.g., using the SBI model), and empowering delegation, the intervention likely fostered a work environment where nurses felt more valued, supported, and in control of their professional practice. This result is consistent with a large body of literature showing that supportive and developmental leadership styles, such as transformational and authentic leadership, are positively correlated with employee satisfaction.^{10,22} For instance, our findings resonate with El-Sayed et al¹⁷, who reported that leadership coaching behavior was strongly associated with, and the strongest predictor of, incident reporting culture among critical care nurses, and with Pradelli et al²³, whose meta-synthesis identified communication skills and positive team climate among the facilitators of multidisciplinary teamwork in acute care settings.

The profound impact on professional commitment is a key finding of this study. This aligns with a systematic review study on transformational leadership in nursing, which found that such practices boost commitment through vision sharing, motivation, career development, communication, and a positive environment.²⁴ Our specific coaching skills directly support these mechanisms, enhancing interpersonal communication and work environment quality. The improvement across multiple subscales, particularly 'Retention in Nursing', which had the largest effect size, suggests that the intervention did more than just improve daily work life; it reinforced nurses' connection to their profession as a whole. A coaching approach, by investing in individual growth and career development, signals to employees that the organization and its leaders are committed to their long-term professional journey. This fosters a reciprocal sense of loyalty and commitment to the profession. This is further supported by research linking coaching cultures to reduced turnover intention.^{25,26}

The absence of a statistically significant change in the 'Self-Sacrifice' subscale ($P = 0.120$) warrants careful consideration. Because this result did not reach statistical significance, its interpretation remains exploratory and requires confirmation in future studies. Nevertheless, it may be contextualized within the broader literature. Nursing has historically been associated with a cultural expectation of self-sacrifice, in which high professional commitment is equated with enduring excessive demands and personal deprivations. A qualitative study of practicing nurses found that this self-sacrificing culture, rooted in the stereotypical image of the 'ideal nurse,' was

linked to job dissatisfaction, presenteeism, burnout, and retention problems, particularly among younger nurses.²⁷ Meta-analytic evidence further indicates that burnout markedly increases nurses' odds of turnover intention, underscoring the risk associated with a sacrifice-dependent form of commitment.⁵ In contrast to this sacrifice-based view, an alternative empowerment-based model proposes that sustainable professional commitment is fostered by professional growth, perceived organizational support, and empowering leadership rather than by personal deprivation. Consistent with this model, a recent scoping review identified nurse empowerment, supportive nursing leadership, and organizational welfare as key strategies for maintaining and enhancing professional commitment in nursing.²⁸ Viewed against this background, it is plausible — although not proven by the present data — that the coaching intervention supported commitment through professional growth and perceived support, while leaving the self-sacrifice dimension unchanged. This observation invites reflection on the assumption that high professional commitment necessarily entails a degree of self-deprivation. Caution is warranted, however, as a non-significant result ($P = 0.120$) does not establish that the intervention actively reduced reliance on self-sacrifice, nor can it be interpreted as evidence of a reduced risk of burnout. Future research employing direct measures of burnout, larger samples, and longer follow-up periods would be valuable to clarify these associations.

Strengths and limitations

This study has several strengths, including its quasi-experimental design with a control group, a theory-driven validated intervention, a priori power analysis, and ANCOVA to control for baseline differences. However, several limitations warrant consideration. First, non-random hospital assignment may introduce selection bias, although baseline comparisons indicated group homogeneity. Second, the study was confined to two private hospitals in Tehran, limiting generalizability to public hospitals or other cultural settings. Third, reliance on self-report measures may be subject to social desirability bias. Fourth, the absence of blinding inherent to this educational intervention may have introduced performance or expectancy bias. Finally, the three-month follow-up, while adequate for detecting short-term effects, precludes assessment of the intervention's long-term sustainability.

Implications for practice and policy

This study offers practical, actionable insights for enhancing leadership within healthcare systems. Healthcare organizations can strategically invest in coaching leadership training to improve nurse job satisfaction and professional commitment by integrating these modules into existing leadership development programs, allocating adequate resources and time, and fostering a supportive culture. Implementing pilot programs before a wider rollout can further enhance effectiveness. At the policy level, these findings underscore the need for formal training support for nursing leaders, equipping them with essential coaching skills to ultimately improve care quality and reduce nurse burnout.

Recommendations for future research

Future research should aim to build on these findings. Randomized Controlled Trials (RCTs) are needed to establish causality more definitively. Longitudinal studies with longer follow-up periods could assess the sustainability of the effects. It would also be valuable to replicate this study in different settings, such as public hospitals, and to incorporate objective outcome measures (e.g., staff turnover rates, patient satisfaction scores).

Conclusion

In conclusion, this quasi-experimental study provides empirical evidence that a targeted coaching leadership training program for nursing managers can enhance nurses' job satisfaction and professional commitment. By equipping managers with practical coaching skills, healthcare organizations may foster a more supportive and developmentally oriented work environment. Although direct measures of nurse retention and patient care quality were beyond the scope of this investigation, the observed improvements in job satisfaction and professional commitment are widely recognized as important precursors to these broader organizational outcomes. Accordingly, the implementation of such training programs may represent a promising strategy for cultivating a positive nursing environment, with potential implications for workforce stability and care quality in the longer term.

Acknowledgments

This article is based on a master's thesis submitted by the first author to the Faculty of Medical Sciences at Tarbiat Modares University. The authors wish to express their gratitude to the Research Deputy of Tarbiat Modares University for their support. We also extend our sincere thanks to the nursing managers and nurses who generously participated in this study, and to the authorities of the participating hospitals for facilitating this research.

Authors' Contributions

Conceptualization: Masoud Fatemi, Afsaneh Sadooghiasl

Data curation: Masoud Fatemi

Formal Analysis: Masoud Fatemi, Afsaneh Sadooghiasl

Investigation: Masoud Fatemi, Afsaneh Sadooghiasl

Methodology: Masoud Fatemi, Afsaneh Sadooghiasl

Project administration: Afsaneh Sadooghiasl

Supervision: Afsaneh Sadooghiasl

Validation: Masoud Fatemi, Afsaneh Sadooghiasl

Visualization: Masoud Fatemi, Afsaneh Sadooghiasl

Writing – original draft: Masoud Fatemi, Afsaneh Sadooghiasl

Writing – review & editing: Masoud Fatemi, Afsaneh Sadooghiasl

Conflict of Interest

The authors declare that they have no competing interests.

Data Accessibility

The datasets generated during and/or analyzed during the current study are available from the corresponding author upon reasonable request.

Ethical Issues

The study protocol was approved by the Institutional Review Board of Tarbiat Modares University (Ethics Code: **IR.MODARES.REC.1401.199**). Permission was obtained from the participating hospitals. All participants provided written informed consent. Confidentiality and anonymity were ensured. The educational content was offered to the control group after final data collection.

Funding

The authors have declared that there was no funding.

Research Highlights
What is the current knowledge? • Nurses' job satisfaction and professional commitment are important outcomes for a stable and high-performing nursing workforce, but evidence on effective leadership training strategies remains limited. What is new here? • This study provides novel evidence demonstrating the efficacy of a coaching leadership skills training program specifically designed for nursing managers. • The targeted training improved nurses' job satisfaction and professional commitment while promoting a more supportive and developmental work environment.

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