



Enhancing Nursing Care Quality: The Critical Role of Time Management and Self-Efficacy in Professional Success

Mehdi Mahmoudzadeh^{1,2} , Sana Khalilzadeh Zia^{1,3} , Mohammad Ali Mohammadi⁴ , Behrouz Dadkhah^{4*} 

¹Students Research Committee, School of Nursing and Midwifery, Ardabil University of Medical Sciences, Ardabil, Iran

²Department of Nursing, Khoy University of Medical Sciences, Khoy, Iran

³Department of Pediatric Nursing, School of Nursing and Midwifery, Urmia University of Medical Sciences, Urmia, Iran

⁴Department of Nursing, Faculty of Nursing and Midwifery, Ardabil University of Medical Sciences, Ardabil, Iran

*Corresponding Author: Behrouz Dadkhah, Email: behrouz.dadkhah@gmail.com

Abstract

Background: Growing demands on healthcare systems necessitate streamlined nursing practices. Two interrelated competencies, time management and professional self-efficacy, play a decisive role in determining nursing performance and patient care outcomes. This study investigated the impact of these abilities on nursing care quality, providing evidence-based recommendations for professional development.

Methods: A descriptive–correlational survey was conducted in 2024 at teaching and healthcare facilities affiliated with Ardabil University of Medical Sciences, Iran. Using stratified random sampling, 350 nurses were selected. Data were gathered through validated instruments: the Time Management Questionnaire, the Professional Self-Efficacy Scale, and the Quality of Nursing Care Inventory. Analyses were performed using SPSS version 24, applying t-tests, one-way ANOVA, Pearson’s correlation, and multiple linear regression.

Results: Most respondents reported moderate levels of time management (80.3%), self-efficacy (61.7%), and nursing care quality (57.1%). Notable associations emerged between these competencies and demographic characteristics, including age, gender, work tenure, and prior training in time management. Regression analysis identified age, work experience, self-efficacy, coordination, and organizational ability as significant predictors, jointly accounting for 30% of the variance in care quality.

Conclusion: The findings reveal scope for improvement in nurses’ time use and self-efficacy. Structured educational initiatives targeting these skills could substantially enhance the quality of inpatient care.

Keywords: Time management, Self-efficacy, Nursing care, Quality of health care, Hospitals

Citation: Mahmoudzadeh M, Khalilzadeh Zia S, Mohammadi MA, Dadkhah B. Enhancing nursing care quality: the critical role of time management and self-efficacy in professional success. *Journal of Kerman University of Medical Sciences*. 2026;33:4187. doi:10.34172/jkmu.4187

Received: August 2, 2025, Accepted: October 1, 2025, ePublished: February 3, 2026

Introduction

Nursing serves a broad spectrum of patients, demanding substantial time, energy, and resources to deliver thorough care across diverse clinical settings. An accomplished nurse aligns efficiency and effectiveness with established standards, recognizing time management as an essential pillar of high-quality care delivery (1, 2). Systematic time use improves patient outcomes through intentional prioritization and optimized workflows. This ability is anchored in three core competencies: planning, organization, and control (3). By embedding these principles into daily practice, healthcare teams can reduce inefficiencies and maximize productivity. Central to this process is providing nurses with targeted education in time management strategies (4, 5).

A substantial body of literature demonstrates that the adoption of these approaches can lead to notable

improvements in workflow efficiency, decreased work-related strain, greater innovation, enhanced standards of care, and stronger professional fulfillment (6-8). Equally noteworthy is the construct of professional self-efficacy, a key psychological factor influencing both job effectiveness and the optimal use of time. Rooted in Bandura’s social cognitive theory, this concept describes a person’s confidence in their capability to carry out professional duties successfully (9). This confidence is shaped by four main contributors: experiential mastery, observational learning through role models, constructive verbal encouragement, and both physical and emotional regulation (10). Practitioners with elevated self-efficacy levels are generally more adaptable in demanding clinical settings and more consistent in delivering high-quality patient care (11, 12).

In contrast, insufficient self-efficacy may lead to



reluctance in confronting professional challenges, increased stress or anxiety, and reduced persistence in problem-solving—factors that can intensify both ethical fatigue and workplace pressures (13–15).

Studies consistently show that enhanced self-efficacy correlates with better clinical performance, more substantial professional commitment, and improved patient outcomes (16). When combined with advanced time-management skills, self-efficacy significantly bolsters job performance and care quality (17).

The quality of care, a foundational tenet of nursing, remains a central focus for researchers and practitioners (18, 19). Striving toward quality-centered care aims to optimize patient well-being while enhancing job satisfaction for care providers. Evidence-based interventions and systemic improvements can address underlying causes of dissatisfaction (20, 21).

The present investigation stands out for its combined examination of time management and self-efficacy as interrelated personal abilities that have a direct impact on the quality of nursing services and career progression pathways.

Departing from prior studies that have addressed these elements separately, the present study adopted an integrative perspective, regarding them as complementary assets for enhancing healthcare delivery. This perspective promotes a forward-looking, strengths-based framework for nursing capacity-building, with direct implications for curriculum design, workforce strategies, and health policy. Consequently, the study aimed to evaluate the impact of these competencies on nursing care standards and to propose data-driven strategies for enhancing professional practice.

Methods

Study Design and Setting

This research employed a descriptive–correlational design and was implemented in 2024 across several teaching and healthcare institutions affiliated with Ardabil University of Medical Sciences, located in northwestern Iran.

Participants and Sampling

Eligible participants were nurses with education levels of bachelor's degree or higher, with at least one year of professional practice, willingness to participate, and fully completed survey responses. Nurses experiencing major recent personal stressors, withdrawing during data collection, or declining consent were excluded. Using the statistical formula for detecting Pearson's correlation, a minimum sample size was calculated, and with an allowance for attrition, the final cohort comprised 350 nurses. Stratified random sampling ensured proportional representation across hospitals and work shifts.

Sample size

The number of participating nurses was determined

using the statistical formula for estimating a Pearson's correlation coefficient outlined by Khalasi et al. (2022) (22). Parameters included an anticipated correlation of $r=0.15$, a 95% confidence level ($\alpha=0.05$), and 80% statistical power ($\beta=0.20$), applying Fisher's z transformation. This computation indicated a requirement of approximately 347 individuals. Allowing for an anticipated attrition rate of 10%, the target enrollment was increased to 350 nurses. Data collection spanned April to July 2024, ensuring broad coverage and adequate participant engagement.

$$n \geq \left[0.5 \times \ln(1-r) + r \right] z_{1-\frac{\alpha}{2}} + z_{1-\beta} \Big]^2 + 3$$

Data Collection Instruments

Data were collected using four validated instruments: a demographic profile form, the Time Management Questionnaire, the Professional Self-Efficacy scale, and an assessment tool measuring quality of nursing care.

Personal Profile Form

A demographic survey was administered to capture baseline characteristics of participants, including gender, age, level of academic qualification, and total years of professional nursing experience.

Time Management Questionnaire

Adapted from an extensive synthesis of prior scholarly work (23–25) and validated time-management scales (26), this instrument comprises 17 items distributed across three domains: Planning (items 1–6), Coordination (items 7–10), and Organization (items 11–17). Each item is rated on a five-point Likert scale ranging from “Never” (1) to “Always” (5), yielding a total score between 17 and 85. A forward–backward translation procedure between Persian and English was undertaken to preserve semantic integrity. Face and content validity were confirmed by a panel of 10 academics specializing in nursing and time management, utilizing the Walters and Bausell framework (CVI=0.86, CVR=0.90). Internal consistency reliability was demonstrated with Cronbach's alpha values of 0.93 in earlier studies and 0.90 in the present study.

Professional Self-Efficacy Questionnaire

Initially developed by Polit and Yang (27) and subsequently standardized for the Iranian context by Lazemi and Barkhordari (28), this instrument includes 19 items divided into three subscales: Care Situations (items 1–6), Supportive Situations (items 7–11), and Professional Situations (items 12–19). Responses are rated from “Not confident at all” (1) to “Completely confident” (5), producing a total score range of 19–95. Construct validity was established in its original form, and internal reliability was supported by robust Cronbach's alpha coefficients reported in both the adaptation and present research.

Quality of Nursing Care Questionnaire

Developed by Liu et al. (2021) (29) and psychometrically validated in Turkish by Anita Karaca (2022) (30), this instrument comprises 38 items within six dimensions: Physical Environment (1–6), Staff Characteristics (7–14), Preconditions (15–21), Task-Oriented Activities (22–27), Human-Oriented Activities (28–32), and Patient Outcomes (33–38). Items are scored based on a 5-point scale from “Strongly Disagree” (1) to “Strongly Agree” (5), for a possible total of 38–190. Forward-backward translation procedures into Persian ensured linguistic accuracy. Ten subject-matter experts verified face and content validity ($CVI=0.90$, $CVR=0.85-1.00$). Reliability was reported at 0.96 in earlier studies and 0.924 in this study.

Scoring Approach

To classify performance levels in time management, self-efficacy, and care quality, the quartile method was applied. Each criterion value was determined using the formula: The criterion score was calculated using the following formula: maximum obtained score minus minimum obtained score divided by two plus the minimum obtained score (31).

Ethical Considerations

Institutional approval was secured from the Ethics Review Board of Ardabil University of Medical Sciences. Nursing staff at Imam Khomeini, Imam Reza, Fatemi, BouAli, and Alavi hospitals were invited to participate after receiving a detailed explanation of the study. Written consent and assurances of data confidentiality were obtained from all respondents.

Data Analysis

Statistical processing was employed using SPSS version 24. Descriptive statistics summarized quantitative (mean, SD, quartiles) and categorical (frequencies, percentages) variables. Data normality was checked using the Kolmogorov-Smirnov test. Inferential tests included independent-samples *t*-tests, one-way ANOVA, Pearson's correlations, and multiple regression analyses. Time management and self-efficacy served as independent variables, with nursing care quality as the dependent variable. Model assumptions, including residual normality and absence of multicollinearity, were confirmed, and the results were expressed with regression coefficients, significance levels, and explained variance.

Results

Sample characteristics

The average age of the participants was 32.78 years, with a standard deviation of 7.11 years, and the average work experience was 8.95 years, with a standard deviation of 4.42 years. The majority of nurses (59.1%) were female, and 62.9% of nurses were married. Independent samples

t-tests revealed statistically significant differences between genders and time management workshops in terms of quality of nursing care ($P<0.05$). These findings suggest that gender and time management workshops influence nurses' quality of care-provided skills. Additionally, the Pearson's test revealed a correlation between nurses' age and work experience with the quality of nursing care skills (Table 1).

Among the sample, 80.3% of nurses reported moderate time management skills, 61.7% indicated moderate professional self-efficacy, and 57.1% reported moderate quality of nursing care.

Mean score for time management was 59.79 ($SD=10.37$), for professional self-efficacy was 72.53 ($SD=12.22$), and for quality of nursing care was 151.45 ($SD=16.78$).

Regarding the components, organizational components had a mean of 26.36 ($SD=5.21$), professional situations had a mean of 30.7 ($SD=5.38$), and physical environment had a mean of 32.76 ($SD=4.15$) (Table 2).

Pearson's correlation analysis revealed a strong, significant positive correlation among the demographic indicators, age, and work experience, as well as between the components and subcomponents of time management, professional self-efficacy, and quality nursing care (Table 3).

Table 4 presents the results of the regression analyses aimed at identifying predictors of nursing care quality among nurses.

Univariate analyses (Model 1) identified age, gender, work experience, professional self-efficacy, all self-efficacy subscales, time management, and its subdomains as significant predictors ($P<0.05$).

In the multivariate model (Model 2), age ($\beta=0.29$, $P=0.009$), work experience ($\beta=-0.26$, $P=0.023$), professional self-efficacy ($\beta=0.16$, $P=0.011$), coordination ($\beta=0.14$, $P=0.012$), and organizational skills ($\beta=0.30$, $P<0.001$) remained significant. The model accounted for 30% of variability in care quality (Adjusted $R^2=0.29$;

Table 1. Demographic characteristics of participants and their correlation with the quality of nursing care

Variable		Mean $\pm$ SD	(<i>r</i> , <i>P</i> -value)
Age (years)		32.78 $\pm$ 7.11	0.165 (0.002)
Work experience (years)		8.95 $\pm$ 4.42	0.106 (0.04)
Variable		N (%)	P-value
Gender	Man	143 (40.9)	0.03
	Female	207 (59.1)	
Marital Status	Married	220 (62.9)	0.5
	Single	126 (36)	
	Others	4 (1.1)	
Education level	Bachelor	307 (87.7)	0.72
	Master	43 (12.3)	
Time Management workshop	No	113 (32.3)	0.02
	Yes	237 (67.7)	

Table 2. Distribution of time management, professional self-efficacy, and quality of nursing care levels and subcomponents among participants

Variable/Subcomponent		N (%)	Mean $\pm$ SD	Min	Max
Time management	Low Level	2.6			
	Moderate Level	80.3	59.79 $\pm$ 10.37	19	85
	High Level	17.1			
	Planning		18.65 $\pm$ 4.63	6	30
	subcomponents				
		Coordination	14.77 $\pm$ 3.38	4	20
		organization	26.36 $\pm$ 5.2	7	35
Professional self-efficacy	Low Level	2.7			
	Moderate Level	61.7	72.53 $\pm$ 12.22	26	95
	High Level	35.6			
	Professional situation		30.7 $\pm$ 5.38	12	40
	subcomponents				
		Care situation	22.76 $\pm$ 4.36	6	30
		Support situation	19.07 $\pm$ 3.92	5	25
Quality of nursing care	Low Level	-			
	Moderate Level	57.1	151.45 $\pm$ 16.78	81	190
	High Level	42.9			
	Physical environment		32.76 $\pm$ 4.15	10	68
	Staff characteristics		32.55 $\pm$ 4.98	8	65
	Precondition		28.17 $\pm$ 4.02	14	35
	subcomponents				
		Task-orientated activities	23.78 $\pm$ 3.58	8	30
		Human-oriented activities	19.86 $\pm$ 2.89	8	25
		Patient outcomes	23.4 $\pm$ 3.77	11	30

Table 3. Correlation between time management, professional self-efficacy, demographic characteristics, and quality of nursing care

Variable/Subcomponent		r	P value*
Time management	Total score	0.479	<0.001
	Planning	0.211	<0.001
	Coordination	0.393	<0.001
	organization	0.499	<0.001
Professional Self-efficacy	Total score	0.455	<0.001
	Professional situation	0.426	<0.001
	Care situation	0.380	<0.001
	Support situation	0.408	<0.001
Demographic information	Age	0.165	0.002
	Work experience	0.106	0.04

*Pearson's correlation coefficient.

 $F = 29.45$, $P < 0.001$).

Discussion

The present study revealed statistically significant associations between time-management proficiency, professional self-efficacy, and the overall quality of nursing care. Nurses demonstrating greater competence in these interpersonal and organizational domains reported delivering more coordinated, effective, and patient-centered care. These findings align with earlier empirical evidence suggesting that efficient time utilization, combined with strong professional self-

confidence, enhances clinical performance, increases occupational satisfaction, and leads to improved patient experiences. Furthermore, the observed pattern highlights the potential value of targeted professional development initiatives, whether through formal education or structured empowerment programs, in promoting sustainable improvements in both workforce performance and healthcare service quality.

The findings of the present study converge with some prior reports and diverge from others, potentially reflecting cultural, structural, or system-level distinctions among practice environments. For instance, studies reporting lower performance in time management and self-efficacy often cite causes such as inadequate training, overwhelming caseloads, or economic constraints. These variations underscore the multidimensional and context-dependent nature of the issue, warranting further exploration into the environmental, social, and cultural determinants of both time use and self-belief within nursing practice.

Alignment with Wulandari et al. (2022) is evident, as their work identified sufficient time-management skills in more than half of the nursing workforce, which is consistent with the results of the present study (32). Additional research by Persian Mehr (2024), Hashemi-Zadeh et al. (2013), and Khalasi et al. (2023) has likewise documented acceptable performance in this domain (22, 33, 34). Conversely, Hoseini et al.

Table 4. The results of multiple regression to determine the predictors of quality of nursing care (n=350)

Predictor variables	Model 1			Model 2	
	Beta	F	P	Beta	P value
Age	0.17	9.72	0.002	0.29	0.009
Gender	0.11	4.01	0.046	-	-
Marital status	0.10	3.79	0.052	-	-
Time management workshop	0.12	5.12	0.024	-	-
Work experience	0.11	3.97	0.047	-0.26	0.023
Professional self-efficacy	0.45	87.45	<0.001	0.16	0.011
Care situation	0.39	60.47	<0.001	-	-
Professional situation	0.41	71.41	<0.001	-	-
Support situation	0.34	46.05	<0.001	-	-
Time management	0.47	100.25	<0.001	-	-
Planning	0.21	16.19	<0.001	-	-
Coordination	0.39	63.53	<0.001	0.14	0.012
Organization	0.50	115.63	<0.001	0.30	<0.001
Model characteristics	R ² =0.30, Adjusted R ² =0.29, R=0.548, F=29.45, P<0.001				

Note: Model 1 includes unadjusted beta coefficients (β), F statistics, and P-values for each predictor. Model 2 contains adjusted beta coefficients (β) and p-values after controlling for other significant predictors. Significance level was set at $P<0.05$.

(2020) reported stronger time-management capacity than observed here (2), a divergence possibly linked to variation in departmental density, shift configuration, and workload intensity.

Self-efficacy levels in the present sample were generally moderate, implying nurses feel competent overall but recognize the need for targeted improvement. This result is consistent with the results of the study by Naboureh et al. (2014) yet conflicts with the higher scores recorded by Behnouri et al. (2024) (35, 36). Contributing factors to such inconsistencies may include insufficient access to ongoing education, workplace stress from extended shifts, staffing shortages, low institutional recognition of skilled nurses, and organizational cultures that inadvertently erode confidence.

Additional correlations emerged between demographic factors, gender, employment status, professional tenure, and training participation, and the quality of care. Such results agree with those reported by Ebrahimi et al. (2023) and Raesi et al. (2021), although they do not match the outcomes reported by Katebi et al. (2018) (37-39). Possible explanatory mechanisms include the adaptability of younger nurses to new technologies, the experiential advantage of seasoned staff in complex decision-making, socio-cultural influences of gender, and the stress-reducing benefits of effective time management.

Overall, these findings confirm that structured workshops focused on time-management techniques and self-efficacy development can yield measurable improvements in both skill areas, ultimately leading to higher-quality patient care. This conclusion is consistent with the results of the study by Hoseini et al. (2020) (2). Educational interventions of this nature may also reshape

nurses' attitudes toward task prioritization and patient safety.

One methodological limitation involved reliance on self-report measures and the constrained timeframe for questionnaire completion. To mitigate response bias, the researcher selected optimal administration times, allotted adequate completion periods, clearly conveyed the significance of study goals, and emphasized participant engagement.

Conclusion

The analysis indicated that most nurses displayed mid-range competence in both time management and professional self-efficacy, with corresponding moderate scores for nursing care quality. These findings imply that moderate proficiency in these domains may constrain professional confidence and, in turn, influence patient care standards. The observed benefits of attending time-management workshops highlight the importance of structured, skills-based educational strategies. Integrating such programs, paired with initiatives to build self-confidence in professional roles, could help strengthen clinical efficiency and elevate the quality of inpatient services.

Acknowledgments

The research team extends sincere thanks to the faculty, colleagues, and the Student Research Committee at the Faculty of Nursing and Midwifery, Ardabil University of Medical Sciences, for their essential contributions. Special appreciation is given to the nursing professionals at the participating educational and medical centers for their active cooperation and valuable input throughout the project.

Authors' Contribution

Conceptualization: Behrouz Dadkhah and Mehdi Mahmoudzadeh.

Data curation: Sana Khalilzadeh Zia.

Formal analysis: Mohammad Ali Mohammadi.

Investigation: Mehdi Mahmoudzadeh.

Methodology: Mehdi Mahmoudzadeh.

Project administration: Mehdi Mahmoudzadeh.

Resources: Mehdi Mahmoudzadeh and Behrouz Dadkhah.

Software: Mehdi Mahmoudzadeh.

Validation: Sana Khalilzadeh Zia and Mehdi Mahmoudzadeh.

Writing – original draft: Mehdi Mahmoudzadeh.

Competing Interests

The authors declare that they have no financial or personal conflicts of interest influencing this study.

Data Availability Statement

The data generated and analyzed during this study can be accessed from the corresponding author [Behrouz dadkhah] upon reasonable request.

Ethical Approval

The Ethics Committee for Nursing and Midwifery Research at Ardabil University of Medical Sciences approved this research (Ethical Code: IR.ARUMS.REC.1402.160). All participants provided written informed consent, and the study adhered to the principles outlined in the Declaration of Helsinki. Confidentiality was maintained at every stage.

Funding

This work did not receive financial support from governmental, commercial, or non-profit institutions.

References

- Yildiz DB, Fidanci B, Boyraz G, Kiziler E. Time management skills of nursing students. 2016. Available from: https://www.sigmarepository.org/inrc/2016/presentations_2016/214/.
- Hoseini SA, Rokhfarz D, Tahery N, Latifi SM. Investigating the relationship between Time Management and the Quality of Nursing Care and Satisfaction of patients admitted to teaching hospitals in Khuzestan Province, 2020. *Scientific Journal of Nursing, Midwifery and Paramedical Faculty*. 2021 Dec;7(2):85-95. [Persian]
- Moadii M, Parandini S. The Role of Emotional Intelligence and Time Management in Predicting Job Satisfaction among Bank Employees in Kermanshah (A Correlation Study). *Zanko J Med Sci* 2018;19(60):83-92. [Persian]
- Bamipoori s, Ghaljeh M, Navidian A. The Effect of Time Management Training on Stress and Burnout of Nurses in Educational Hospitals of Zahedan University of Medical Sciences 2018. *Sadra Medical Journal* 2019;7(4):401–12. doi:10.30476/smsj.2019.83493.1062
- Chen HM, Liu CC, Yang SY, Wang YR, Hsieh PL. Factors Related to Care Competence, Workplace Stress, and Intention to Stay among Novice Nurses during the Coronavirus Disease (COVID-19) Pandemic. *Int J Environ Res Public Health* 2021;18(4):2122. doi:10.3390/ijerph18042122
- Kebriaei A, Sabahi BM, Saeedi A. Relationship between use of time management skills and satisfaction with spending time among Zahedan University of Medical Sciences students. 2014 Mar;6(12):79-88.
- Abd-Elmoghith NGA. Examining the Time Management Training Program on Delegation Skills Regarding Nurse Manager. *American Journal of Nursing Research* 2019;7(4):589–97. doi:10.12691/ajnr-7-4-21
- Xie J, Liu M, Ding S, Zhuqing Z, Zeng S, Liu A, et al. Time management disposition and related factors among nursing managers in China: A cross-sectional study. *J Nurs Manag* 2020;28(1):63–71. doi:10.1111/jonm.12890

- Bahrami M, Alavi A, Zargham-Boroujeni A. Clarification of caring Self-efficacy perception of pediatric nurses' perspectives: A qualitative study. *Iranian Journal of Pediatric Nursing* 2019; 5(3) :26-36. doi:10.21859/jpen- 05034.
- Osei HV, Osei-Kwame D, Osei Amaniampong L. The effects of individual mechanisms on work self-efficacy of nurses: The mediating role of organisational commitment. *International Journal of Healthcare Management* 2017;10(4):219–37. doi: 10.1080/20479700.2016.1268798
- Norouzinia R, Ebadi A, Yarmohammadian M H, Chian S, Aghabary M. Relationship between resilience and self-efficacy with professional quality of life in EMS personnel. *Journal of Hayat* 2021;27(2):176-189 .
- Marashi SA. A Theory on the Nonlinear Relationship of Sexual Behavior and Aggression. *Iran J Psychiatry* 2024;19(4):453–62. doi:10.18502/ijps.v19i4.16560
- Li L, Jiang L, Zeng Y, Chen X, Li Y, Fan X. Nursing behaviors relevant to pressure injury in the general hospitals of Changsha, China. *Zhong Nan Da Xue Xue Bao Yi Xue Ban* 2020;45(6):722–32. doi:10.11817/j.issn.1672-7347.2020.190630
- Ghasempour S, Abbasi A, Basirinezhad MH, Dadgari A, Ebrahimi H. Relationship between resilience and self-efficacy among Iranian nurses: a cross-sectional study during the post-Corona era. *BMC Nurs* 2024;23(1):243. doi:10.1186/s12912-024-01894-0
- Salmani N, Keshmiri F, Bagheri I. The effect of combined training (theoretical-practical) of palliative care on perceived self-efficacy of nursing students. *PLoS One* 2024;19(7):e0302938. doi:10.1371/journal.pone.0302938
- Tazakori Z, Etebari Asl Z, Mohammadi Z, Nemati K. Moral Sensitivity and Its Relationship with Self-Efficacy in Operating Room Nurses Affiliated to Educational-Therapeutic Centers in Ardabil University of Medical Sciences, 2017. *Iranian Journal of Medical Ethics and History of Medicine* 2018;11:231-241. [Persian]
- Oh J, Cho H, Kim YY, Yoo SY. Validation of the Korean Version of the Nursing Profession Self- Efficacy Scale: A Methodological Study. *Int J Environ Res Public Health* 2021;18(3):1080. doi:10.3390/ijerph18031080.
- Dong X, Lu H, Wang L, Zhang Y, Chen J, Li B, et al. The effects of job characteristics, organizational justice and work engagement on nursing care quality in China: A mediated effects analysis. *J Nurs Manag* 2020;28(3):559–66. doi:10.1111/jonm.12957
- Lu H, Zhao Y, While A. Job satisfaction among hospital nurses: A literature review. *Int J Nurs Stud* 2019;94:21–31. doi:10.1016/j.ijnurstu.2019.01.011
- Rahimi A, Hamedani B, Rasoulzadeh N. Investigating the Relationship between Professional Self- Concept and the Lifestyle of Nurses in Hospitals Affiliated with Mazandaran University of Medical Sciences. *Journal of Arak University of Medical Sciences* 2024 ;27(1):24-30. doi: 10.61186/jams. 27.1.24.
- Izadi F, Bijani M, Fereidouni Z, Karimi S, Tehranineshat B, Dehghan A. The Effectiveness of Teaching Nursing Ethics via Scenarios and Group Discussion in Nurses' Adherence to Ethical Codes and Patients' Satisfaction with Nurses' Performance. *ScientificWorldJournal* 2020;2020:5749687. doi:10.1155/2020/5749687
- Khalasi F, Heidari MR, Norouzadeh R, Haghani S. Investigating the Relationship between Time Management and Occupational Stress of Nurses Working in Critical Care Units of Teaching Hospitals in Tehran, 2022: A Multicenter Cross-Sectional Study. *Journal of Critical Care Nursing*

- 2022;15(4):110. doi:[10.30491/JCC.15.4.1](https://doi.org/10.30491/JCC.15.4.1).
23. Ghanizadeh SM, Mohammadi MA, Dadkhah B, Raisi L, Mozaffari N. Parenting stress and social support in mothers of children with disability in Ardabil, 2020. *J Adv Pharm Educ Res* 2023;13(1):105-10. doi:[10.51847/fnQM7IC3Lb](https://doi.org/10.51847/fnQM7IC3Lb)
 24. Mehri S, Habibi Soola A, Mohammadi MA, Hamidkholg G, Dadkhah B. Exploring managers' experiences of hospital disaster preparedness: A qualitative study. *J Qual Res Health Sci*. 2022;11(3):156-163. doi:[10.34172/jqr.2022.02](https://doi.org/10.34172/jqr.2022.02)
 25. Britton B, Tesser A. Effects of Time-Management Practices on College Grades. *Journal of Educational Psychology* 1991;83:405-10. doi:[10.1037/0022-0663.83.3.405](https://doi.org/10.1037/0022-0663.83.3.405)
 26. Zyoud RN. Psychometric properties of Nursing Time Management Scale (NTMS), Arabic version. *BMC Nurs* 2023;22(1):153. doi:[10.1186/s12912-023-01316-7](https://doi.org/10.1186/s12912-023-01316-7)
 27. Polit-O'Hara D, Yang FM. Measurement and the measurement of change: a primer for the health professions. Wolters Kluwer; 2016.
 28. Lazemi Z, Barkhordari-Sharifabad M. Translation and psychometric evaluation of the persian version of the "Nursing Profession Self-Efficacy Scale". *BMC Nurs* 2023;22(1):24. doi:[10.1186/s12912-023-01182-3](https://doi.org/10.1186/s12912-023-01182-3)
 29. Liu Y, Aungsueroch Y, Gunawan J, Sha L, Shi T. Development and psychometric evaluation of a quality nursing care scale from nurses' perspective. *Nurs Open* 2021;8(4):1741-54. doi:[10.1002/nop2.816](https://doi.org/10.1002/nop2.816)
 30. Karaca A, Kaya L, Kaya G, Harmanci Seren AK. Psychometric properties of the quality nursing care scale-turkish version: a methodological study. *BMC Nurs* 2022;21(1):370. doi:[10.1186/s12912-022-01153-0](https://doi.org/10.1186/s12912-022-01153-0)
 31. Waltz CF, Bausell BR. Nursing research: design, statistics, and computer analysis: Davis, F. A.; 1981.
 32. Wulandari R, Yunitasari E, Hakim A, Prasandi A. Correlation Between Nurse Time Management with Documentation of Nursing Care in The Inpatient Room of Muhammadiyah Hospital in Metro. *Jurnal Aisyah : Jurnal Ilmu Kesehatan* 2022;7. doi:[10.30604/jika.v7iS1.1202](https://doi.org/10.30604/jika.v7iS1.1202)
 33. Hashemizadeh H. 574 – Analysis of relation between time management behaviors and occupational stress of nurses. *European Psychiatry* 2013;28:1. doi:[10.1016/S0924-9338\(13\)75855-3](https://doi.org/10.1016/S0924-9338(13)75855-3)
 34. Parsian Mehr MJ, Sayadi N, Haghighizadeh MH, Rokhafrooz D. Evaluation of the Relationship between Knowledge Management and Time Management in the Head Nurses of Intensive Care Units: A Cross-Sectional Study. *Critical Care Nursing* 2024;16(4):41-9. doi:[10.30491/JCC.16.4.42](https://doi.org/10.30491/JCC.16.4.42)
 35. Naboureh A, Imanipour M, Salehi T, Tabesh H. The Relationship between Moral Distress and Self-Efficacy among Nurses in Critical Care and Emergency Units in Hospitals Affiliated to Ahvaz Jundishapur University of Medical Sciences in 2015. *JRUMS* 2015; 14(6):443-454. doi:[20.1001.1.17353165.1394.14.6.6.4](https://doi.org/10.1001.1.17353165.1394.14.6.6.4)
 36. Behnoori S, Sadeghi A, Pourfarzad Z, Tapak L. The relationship between organizational justice, self-efficacy, and nurses' job burnout in critical care units in Hamadan University of Medical Sciences' medical training centers. *Nursing and Midwifery Journal* 2023 ;21(6):475-87. doi: [10.61186/unmf.21.6.475](https://doi.org/10.61186/unmf.21.6.475).
 37. Ebrahimi F, Jafarjalal E, Najafi Ghezaljeht, Haghani S. The quality of nursing care in nurses working in the intensive care unit of COVID-19 in Arak medical training centers in 2021-2022. *Journal of Hayat* 2023;29(1):89-100.
 38. Raesi R, Abbasi Z, Bokaie S, Raei M, Hushmandi K. Investigation of the relationship between work-family conflict and the quality of nursing care among nurses in the Covid-19 ward. *EBNESINA* 2021;23(4):33-43.
 39. Katebi MS, Ghalenoei M, Zalbeiki S, Barzegari Esfeden Z. Quality of patient care from the viewpoint of nurses and patients in the teaching hospitals of Shohadah Qaen. *Journal of Sabzevar University of Medical Sciences* 2021;28(3):339-46.