

Work environment and its Effect on Retaining Nursing Staff in Health Facilities of Hospitals in Saudi

Ahlam Rasheed Alanazi¹, Athbah Ahmed Hazazi², Khulud Mohammed Abutaleb³, Laila Mohammed Albariqi⁴, Alonazi Mohammed Reem⁵, Samirah Abdullah Turki Alanazi⁶, Abeer Warad Alenazi⁷, Ahmed Fahad Al Salboud⁸

1. Senior Nursing Specialist, Riyadh Third Health Cluster, Riyadh.
2. Nursing Technician, Dhahran long term care hospital, Dammam.
3. Nursing Technician, Dhahran long term care hospital, Dammam.
4. Health Assistant, Primary Health Care Center in Bariq, Bariq
5. Nursing technician, Al Yamama Hospital, Riyadh
6. Nursing specialist, Al yamama hospital, Riyadh.
7. Nursing specialist, Aloreja western PHC, Riyadh
8. Nursing Technician, Primary health care in Al Sahafah, Riyadh

Abstract

This study aimed to analyze the relationship between the work environment and nurse retention in hospitals in Saudi Arabia. An online questionnaire was used, consisting of two parts: the first part gathered demographic characteristics of the participants, and the second part assessed the work environment and nurse retention. The study was conducted between October and November 2024, with 357 nurses from Saudi hospitals participating. The results indicated that the work environment significantly influences nurse retention, with high levels of agreement on factors such as the availability of equipment, appropriate working hours, and a fair compensation system. However, there were concerns regarding the alignment between salary and the perceived importance of the work, as well as limited professional development opportunities. The findings also showed a generally positive intention to stay in the job, although many participants expressed a willingness to leave if a better opportunity arose. Simple linear regression analysis revealed that the work environment contributed significantly to explaining 26% of the variance in nurse retention. The study recommends enhancing working conditions, adjusting salary structures to reflect the value of the work, and providing more effective professional development opportunities to improve nurse satisfaction and retention in the healthcare sector.

Keywords: Work environment, nurse retention, professional development, compensation, Saudi hospitals.

Introduction:

Organizations of all types are witnessing major changes in our current era, the most important of which is cognitive and informational development, which prompts organizations to strive to achieve administrative efficiency and effectiveness. Therefore, organizations seek to pay attention to the work environment, especially with the increasing pressures of work and life, which requires providing a work environment that is compatible with the developments and changes in our era [1].

The work environment includes several factors with varying effects on workers and is not limited to a specific factor or a group of separate factors, but rather is the result of the interaction between multiple environmental factors, even if some of them have a controlling effect on a specific behavior or a group of behavioral phenomena [2,3].

The importance of analyzing and studying the work environment in which nurses work is that it is a window through which pressures related to the nature of work conditions or changes in health systems and others can be identified [4]. Thus, determining their negative impact on nursing workers and ways to address them in order to provide appropriate conditions for nursing workers, which contributes to retaining nursing staff, attracting competencies and increasing loyalty [5,6].

Working in the nursing profession is considered a profession that is characterized by hardship and continuous pressure. The nature of work in the nursing profession is characterized by many intertwined relationships that affect job compatibility and satisfaction [7]. Therefore, providing a suitable work environment will increase compatibility and satisfaction among nursing workers, which will lead to nurses remaining in their work, being motivated to achieve, and providing distinguished services to patients [8].

Despite the health efforts made by the Kingdom of Saudi Arabia in developing and preparing human cadres in the field of nursing, there is an ongoing problem, which is the leakage of nursing cadres from hospitals by moving to other hospitals inside and outside the Kingdom in pursuit of higher financial returns or a better work environment or looking forward to a better standard of living in another city or in another country, and thus the hospital loses huge amounts of money spent on training the leaked nursing cadres, in addition to the increasing burden faced by the hospital administration in attracting new nursing cadres [9,10].

Therefore, the current study seeks to identify and analyze the variables that contribute to maintaining nursing staff and ensuring their sustainability within the health facility.

Methods

Study design

This cross-sectional study used a validated online questionnaire on Google Forms. The questionnaire items for this study were developed using previous studies relevant to the study topic [6,7,11]. The questionnaire was divided into two parts. The first part was designed to obtain the socio-demographic characteristics of the respondents, including gender, age, educational level, etc. The second part included 20 items and investigated the work environment and retention of nurses in Saudi Arabia. A five-point Likert scale (strongly agree - strongly disagree) was used. The survey was conducted from October 2024 to November 2024.

Study Participants and Sample Size

All nursing staff working in hospitals in Saudi Arabia were included. Nurses working for at least one year were randomly selected and formed the study population. Given a total nursing workforce of 196,701 in Saudi Arabia [10], the minimum sample size required was calculated using Raosoft®, using a 95% confidence level and a 5% margin of error (significance $\alpha = 0.05$) with a 50% response distribution. It was found to be 357 respondents for data analysis.

Data collection

The questionnaire was distributed electronically to a diverse group of nursing professionals through online channels, including email and social media platforms (Facebook, WhatsApp and telegram). Participants were informed that participation was voluntary and that they could withdraw, and participants' identities were kept confidential to encourage open and honest responses. The questionnaire was administered in English and Arabic to accommodate the linguistic diversity of participants.

Data analysis

Statistical analysis was carried out using the Statistical Package for the Social Sciences (SPSS Inc., Chicago, IL, USA), version 26. Frequency and percentages were obtained for the categorical variables, while mean and standard deviation (SD) were calculated for the scale variables. Various inferential statistical tests were employed to identify significant variations within the study groups, including the independent t-test, one-way analysis of variance (ANOVA), Pearson's correlation (r), multiple linear regression, and logistic regression. The primary outcome of the analysis is the relationship between work environment and nurse retention.

Results

Socio-Demographic Characteristics of the Respondents

A total of 357 responses were collected from nursing professionals. The study group falls within the age group of 18-60 years. About (34.9%) of the participants were less than 25 years old, (42.3%) were between 25 and 30 years old, followed by (15.1%) between 31 and 40 years old, and (7.7%) were over 40 years old. Among the study groups, (39.5%) of the participants were male and (60.5%) female. Besides, the majority of participants, (30.5%) of the participants had a diploma, (64.7%) had a bachelor's degree, while (4.8%) had a master's degree. Most respondents were working as nursing managers (26.1%), and (73.9%) were nurses. As for years of experience, (30.3%) of the workers had experience between 1-5 years, (54.0%) had experience between 6-10 years, and (15.7%) had experience of more than 11 years, as shown in Table (1).

Table 1. demographic traits of participants (n=357)

	Categories	Frequency	Percent %
Age (years)	< 25 years old	21	34.9%
	25-30 years old	225	42.3%
	31-40 years old	69	15.1%
	> 40 years	42	7.7%
sex	male	141	39.5%
	Female	216	60.5%
Educational level	Diploma	109	30.5%
	Bachelor's degree	231	64.7%
	MSc	17	4.8%
Occupation	Nurse manager	93	26.1%
	Nurse	264	73.9%
Years of experience	1-5 years	108	30.3%
	6-10 years	193	54.0%
	≥ 11 years	56	15.7%

Analysis of the work environment and its impact on nurse retention

Table 2. Mean, Standard Deviation, and Chi-Square for the work environment and its impact on nurse retention.

	Paragraph	Mean	Std. Deviation	Chi-Square	p-value
Working conditions					
1	The tasks assigned to me are clear and specific	3.87	1.36	164.69	.000
2	I feel independent at work	4.33	0.98	352.07	.000
3	Facilities and equipment are adequately available in the workplace	4.24	0.92	270.13	.000
4	The number of staff in the hospital is appropriate	4.08	1.10	209.86	.000
5	The number of working hours is appropriate	4.34	0.86	337.66	.000
6	I get enough vacations	4.17	1.06	257.69	.000
7	Working conditions are appropriate in terms of ventilation, temperature and noise	4.01	1.11	221.55	.000
8	The services provided to patients are adequate and appropriate	3.88	1.36	171.67	.000
The Average		4.32	0.88		
Compensation and Incentives					
1	The hospital has an effective salary system according to the job ladder	4.44	0.85	424.51	.000
2	My salary is proportional to the importance of the work I do	3.75	1.46	149.05	.000
3	Discounts and reductions are few and clear	4.23	0.96	274.45	.000
4	I am thinking of leaving the job and looking for another job	3.88	1.36	171.67	.000
The Average		4.08	1.16		
Nurse Retention					
1	I will leave as soon as another alternative becomes available	4.17	1.04	251.22	.000
2	I intend to stay in the job for years to come	4.32	0.93	334.66	.000
3	I feel uncomfortable and miss out on a lot with every day I work in the hospital	4.24	1.05	307.72	.000
4	I seek professional development to advance my position within the hospital	4.06	1.11	200.71	.000
The Average		4.20	1.03		
Professional Development					
1	The hospital provides a suitable environment that stimulates professional development	4.29	0.96	316.96	.000
2	The hospital administration organizes work meetings periodically	4.11	1.06	218.41	.000
3	The hospital administration encourages the exchange of experiences between nurses with other hospitals	4.16	1.08	261.04	.000
4	The hospital administration seeks to increase knowledge and provide the necessary technologies	4.26	0.91	288.41	.000
The Average		4.21	1.00		

As is clear from the results of the first dimension, the paragraph that states "The number of working hours is appropriate." obtained first place with an arithmetic mean of (4.34), and the paragraph that states "The tasks assigned to me are clear and specific." obtained last place with an arithmetic mean of (3.87). According to the results of the second dimension, the paragraph states "The hospital has an effective salary system according to the job ladder." The first place was taken with an arithmetic mean of (4.44), while the paragraph that states "My salary is proportional to the importance of the work I do." was taken last with an arithmetic mean of (3.75). As is clear from the results of the third dimension, the paragraph that states "I intend to stay in the job for years to come." ranked first with an arithmetic mean of (4.32), while the paragraph that states "I seek professional

development to advance my position within the hospital." ranked last with an arithmetic mean of (4.06). According to the results of the fourth dimension, the paragraph that states "The hospital provides a suitable environment that stimulates professional development." ranked first with an arithmetic mean of (4.29), while the paragraph that states "The hospital administration organizes work meetings periodically." ranked last with an arithmetic mean of (4.11).

The relationship between work environment and nurse retention.

There is a statistically significant effect at the significance level (0.05) of the work environment and conditions on the retention of nurses.

Table 3. Simple linear regression between (work environment) and (nurse retention).

Model	β	t	Sig.	F	p-value	R	R-Square
(Constant)	13.504	9.138	.000	114.84	0.000	.509	.259
Health Information System	1.204	10.716	.000				

Dependent Variable: nurse retention.

Table (3) shows the simple linear regression between the variables (nurse retention) and (work environment). We find that the value of the statistical significance level for the F-test was (0.000), which is less than (0.05). This means that the relationship between the variables is linear and can be relied on in predicting the dependent variable based on the independent variable. In addition, the R-Square was (0.259). This means that the independent variable (work environment) contributes to the dependent variable (nurse retention.) by 26%, and the remaining effects on the dependent variable are due to other variables.

Discussion

The work environment is one of the most important determinants of nursing staff retention in hospitals in the Kingdom of Saudi Arabia. The results of the analysis of the work environment and its relationship to the retention of nursing staff indicated a high degree of agreement among the study sample regarding the work environment. This is consistent with the results of a study that showed that the majority of nursing workers believe that the availability of a suitable work environment is one of the most important reasons that motivate them to keep their job [12].

The results show a high level of approval of the working conditions in Saudi hospitals, where the capabilities and equipment are available, and the number of working hours is suitable for nurses. This result is consistent with many studies that have shown the importance of functional aspects in achieving professional compatibility for nurses and raising their level of psychological health and thus the ability to retain nurses [13,14].

This indicates the existence of an effective nursing work environment in Saudi hospitals, which enhances the quality of services provided to patients. Moreover, the quality of resources along with different variables reflect good work environments for nurses in Saudi Arabia [11,15].

Also, the results of the current study agree with the study [16,17] that the salary system, incentives and promotions are among the most important determinants of professional compatibility and retention in work among nurses. Moreover, the results indicate a lack of interest in professional development in terms of increasing nurses' knowledge, developing their capabilities, and exchanging experiences. This is consistent with the findings of the study [18], on the weakness of training programs and exchanging experiences in many health organizations.

On the other hand, the study participants estimate of nurses' retention was average in Saudi hospitals, and the results expressed nurses' desire for professional development and staying in work for years to come. However, they expressed their intention to leave work if an alternative opportunity was available. This is consistent with the findings of the study of both [19,20], that nurses' retention is linked to the organization's work environment, professional development components, incentives, promotions, and other determinants.

Conclusion

The results of the studies show that nurses are satisfied with their jobs in a work environment that provides appreciation and empowerment. More efforts are needed, with a particular focus on ambiguous opportunities, and specifications may help in conducting more studies. However, as the studies show, appreciation and empowerment are assets that keep nurses and increase their level of job satisfaction and task assignments. However, more research is needed, focusing on different perspectives, rewarding expectations, and involving other units to evaluate the extent of the studies.

Reference

1. Rasool SF, Wang M, Tang M, Saeed A, Iqbal J. How Toxic Workplace Environment Effects the Employee Engagement: The Mediating Role of Organizational Support and Employee Wellbeing. *Int J Environ Res Public Health*. 2021 Feb 26;18(5):2294. doi: 10.3390/ijerph18052294. PMID: 33652564; PMCID: PMC7956351.
2. Zhenjing G, Chupradit S, Ku KY, Nassani AA, Haffar M. Impact of Employees' Workplace Environment on Employees' Performance: A Multi-Mediation Model. *Front Public Health*. 2022 May 13;10:890400. doi: 10.3389/fpubh.2022.890400. PMID: 35646787; PMCID: PMC9136218.

3. Marin-Garcia JA, Bonavia T. Empowerment and Employee Well-Being: A Mediation Analysis Study. *Int J Environ Res Public Health*. 2021 May 28;18(11):5822. doi: 10.3390/ijerph18115822. PMID: 34071574; PMCID: PMC8198432.
4. Ferramosca FMP, De Maria M, Ivziku D, Raffaele B, Lommi M, Tolentino Diaz MY, Montini G, Porcelli B, De Benedictis A, Tartaglini D, Gualandi R. Nurses' Organization of Work and Its Relation to Workload in Medical Surgical Units: A Cross-Sectional Observational Multi-Center Study. *Healthcare (Basel)*. 2023 Jan 4;11(2):156. doi: 10.3390/healthcare11020156. PMID: 36673524; PMCID: PMC9858832.
5. Pressley C, Garside J. Safeguarding the retention of nurses: A systematic review on determinants of nurse's intentions to stay. *Nurs Open*. 2023 May;10(5):2842-2858. doi: 10.1002/nop2.1588. Epub 2023 Jan 16. PMID: 36646646; PMCID: PMC10077373.
6. Alharbi, F. , Mustafa, Z. and Benoy, M. Nurses Turnover: Retention of the Staff. *Open Journal of Nursing*. 2022, 12, 199-219. doi: 10.4236/ojn.2022.123013.
7. Babapour AR, Gahassab-Mozaffari N, Fathnezhad-Kazemi A. Nurses' job stress and its impact on quality of life and caring behaviors: a cross-sectional study. *BMC Nurs*. 2022 Mar 31;21(1):75. doi: 10.1186/s12912-022-00852-y. PMID: 35361204; PMCID: PMC8968092.
8. Impact of Work Environment on Nurse's Retention at Hospital: Scoping Review. (2024). *Evidence-Based Nursing Research*, 4(2), 39-53. <https://doi.org/10.47104/ebnrojs3.v4i2.239>
9. Alsadaan N, Jones LK, Kimpton A, DaCosta C. Challenges Facing the Nursing Profession in Saudi Arabia: An Integrative Review. *Nurs Rep*. 2021 May 31;11(2):395-403. doi: 10.3390/nursrep11020038. PMID: 34968216; PMCID: PMC8608082.
10. Alluhidan, M., Tashkandi, N., Alblowi, F. et al. Challenges and policy opportunities in nursing in Saudi Arabia. *Hum Resour Health* 18, 98 (2020). <https://doi.org/10.1186/s12960-020-00535-2>
11. Al-Dossary RN. The effects of nursing work environment on patient safety in Saudi Arabian hospitals. *Front Med (Lausanne)*. 2022 Jul 22;9:872091. doi: 10.3389/fmed.2022.872091. PMID: 35935794; PMCID: PMC9354615.
12. Gassas R, Salem O. Nurses' professional values and organizational commitment. *J Taibah Univ Med Sci*. 2022 Aug 10;18(1):19-25. doi: 10.1016/j.jtumed.2022.07.005. PMID: 36398009; PMCID: PMC9643521.
13. Al Mutair A, Al Bazroun MI, Almusalami EM, Aljaramiez F, Alhasawi AI, Alahmed F, Saha C, Alharbi HF, Ahmed GY. Quality of Nursing Work Life among Nurses in Saudi Arabia: A Descriptive Cross-Sectional Study. *Nurs Rep*. 2022 Dec 16;12(4):1014-1022. doi: 10.3390/nursrep12040097. PMID: 36548170; PMCID: PMC9783332.
14. Almalki, M.J., FitzGerald, G. & Clark, M. Quality of work life among primary health care nurses in the Jazan region, Saudi Arabia: a cross-sectional study. *Hum Resour Health* 10, 30 (2012). <https://doi.org/10.1186/1478-4491-10-30>
15. Al Sherim M, AL Hamidi SA. Exploring the Significance of Nurse Introduction for Positive Patient Experience in Saudi Arabia. *Journal of Patient Experience*. 2024;11. doi:10.1177/23743735241273576
16. Daniels K, Odendaal WA, Nkonki L, Hongoro C, Colvin CJ, Lewin S. Incentives for lay health workers to improve recruitment, retention in service and performance. *Cochrane Database Syst Rev*. 2019 Dec 3;2019(12):CD011201. doi: 10.1002/14651858.CD011201.pub2. PMCID: PMC6999880.
17. Karami A, Farokhzadian J, Foroughameri G. Nurses' professional competency and organizational commitment: Is it important for human resource management? *PLoS One*. 2017 Nov 8;12(11):e0187863. doi: 10.1371/journal.pone.0187863. PMID: 29117271; PMCID: PMC5678726.
18. Najafi B, Nasiri A. Explaining Novice Nurses' Experience of Weak Professional Confidence: A Qualitative Study. *SAGE Open Nurs*. 2023 Mar 20;9:23779608231153457. doi: 10.1177/23779608231153457. PMID: 36969365; PMCID: PMC10031601.
19. Pressley C, Garside J. Safeguarding the retention of nurses: A systematic review on determinants of nurse's intentions to stay. *Nurs Open*. 2023 May;10(5):2842-2858. doi: 10.1002/nop2.1588. Epub 2023 Jan 16. PMID: 36646646; PMCID: PMC10077373.
20. Al Ahmari, R. , Al Qannass, S. , Govallen, P. , Moorkan, N. and Homoud, Z. The Impact of Nurses Recognition, and Empowerment Related to Nurses Job Satisfaction at KFSH-D. *Open Journal of Nursing*. 2023. 13, 81-94. doi: 10.4236/ojn.2023.132006.