

"The Effect of Physical Work Environment on the Job Satisfaction of Nurses in the Rural Health Care Settings of Punjab, Pakistan"

IQRA NAWAZ¹, ASHFAQ AHMED MAAN², IZHAR AHMAD KHAN³, BABAR SHAHBAZ⁴

¹Ph.D. Scholar, Department of Rural Sociology, University of Agriculture, Faisalabad, Pakistan.

²Retired Professor of Department of Rural Sociology, University of Agriculture, Faisalabad, Pakistan.

³Associate Professor, Department of Rural Sociology, University of Agriculture, Faisalabad, Pakistan.

⁴Associate Professor, Department of Agri Extension and Rural Development, University of Agriculture, Faisalabad, Pakistan.

Correspondence to: Iqra Nawaz, Email: iqranawaz21@gmail.com

ABSTRACT

Pakistan faces a severe shortage of nurses because of high turnover rates. Job dissatisfaction is one of the leading causes of turnover intentions. An excellent physical environment in the workplace setting can play a positive role in enhancing the satisfaction level among the employees. The present study investigated the effect of the physical work environment on the job satisfaction level of the nurses working in rural health settings. Data were collected from 452 randomly selected nurses from the rural health care settings of the Punjab province. The quantitative survey design was used to collect data. The five-point Likert scale was used to collect the data on the conditions of physical work environment and job satisfaction of the nurses. A structured questionnaire was developed. The mean score and standard deviations were used to describe the data collected. The study's findings suggest adequate levels of job satisfaction and a comfortable physical environment among nurses working in Punjab's rural health care settings. The physical environment at the workplace is responsible for 43 % variation in the job satisfaction level of the nurses. The physical environment at the workplace is the strongest predictor of the job satisfaction level among nurses. By improving the physical work environment of the workplace, the retention rate of nurses can be improved.

Keywords: Physical environment, Workplace, Job satisfaction, Turnover intentions, Nurses, Rural health care settings

INTRODUCTION

The health care industry is one of the biggest industries globally, with more than sixty million employees (Ghaffari et al., 2017). The employees serving in the health care system worldwide are exposed to the potential risks to their safety and health, including artificial and natural (Serdar et al., 2013). The shortage of health care workers is a growing concern by society. The main reason for the lack of health care workers in developing nations is brain drain. Health care professionals prefer to serve in countries with good pay packages and working conditions.

The excellent working conditions pull the workers to migrate to developed countries (Kovner et al., 2014). The government of Pakistan has started to expand its health care facilities to the rural areas after the Alma Ata Declaration of 1978. The health care facilities have expanded many folds till now to fulfill the ever-increasing demand for health care facilities. The expansion came with serious concerns for the human resources planning, management, and development of health care professionals. It is acknowledged by the World Health Organization (2011) the importance for the understanding and promotion of job satisfaction and motivation forces among nurses for their retention at the workplace. World Health Organization proposed a list of fifty-seven countries facing the human resources crisis in their health care system; Pakistan is one of those countries. There is only one nurse for 3,626 people. The majority of the nurses served in the health care settings in the urban areas.

Low productivity and high turnover intentions are the expected consequences of low job satisfaction. The work environment in which the services are performed is vital to employee satisfaction (Schien, 2011). Workplace environment includes those physical and emotional aspects of the workplace that influence employee productivity, commitment, and job satisfaction (Aikenwale, 2019). Around the country, nurses are more stressed and dissatisfied with their profession (Shader et al., 2001). The nurse's satisfaction from their job is essential in the workforce's day-to-day operations because it has significant impacts on patient outcomes, general health care delivery, patient care, and satisfaction. It's a well-searched fact that dissatisfaction from the job is the main factor for high turnover among health care workers (Chamal and Dilina, 2018). Healthcare professionals' quality of service delivery and organizational commitment is adversely affected by low job satisfaction. The objective of the present study was to investigate the effect of physical environment factors at the workplace on job satisfaction of nurses in rural health

care settings. Understanding the environmental factors will clarify the different aspects responsible for nurses' lower satisfaction, reduced productivity, and higher turnover rates.

Literature Review: Working conditions are among the main attributes of job satisfaction (Liu et al., 2016). The employee's total quality of life depends on the workplace conditions. Good working conditions contribute to employee job satisfaction, which is productive for both the employee and organization (Locke, 1976). The physical environment might impact a nurse's stress and job satisfaction. A healing environment was born from a mix of environmental elements and rising consumer desire for safety, security, competence, and physical and psychological comfort to ensure people access to resources and services (Applebaum, 2010).

The greater competency and creativity are the sure outcomes of well-satisfied employees because the satisfaction from work gives them an edge to get absorbed and align themselves with the organization's goals (Ogbolu et al., 2015). The health care providers' satisfaction is directly associated with client satisfaction (Keever et al., 2018). Hospital executives were adept at creating a work atmosphere that appeals to and excites staff who will be better positioned in the competitive healthcare market, where cost-effective and quality operations are expected (Eme et al., 2014). A positive work environment is critical for boosting employee job satisfaction, especially in the healthcare profession, which is beset by constant strikes due to poor working conditions. A physical and emotional environment defines working conditions, employee rights, employee voice, safe work conditions, cooperative team members, and friendly supervisors (Akinwale, 2019). Poor job satisfaction is caused by income, little autonomy, and a stressful work schedule (Goetz et al., 2015). An organization's work productivity may be increased by improving the physical features of the work environment and the internal climate, both of which can have a favorable impact on productivity (Raziq and Maulabakhsh, 2015). Employee happiness is influenced by various psychological and work climate elements, including workplace conditions and social support, as increased remuneration advantages failed to improve low satisfaction among workers (Sell and Cleal, 2011). Poor working conditions are the main stressors responsible for low job satisfaction among nurses (Murta et al., 2011). Due to the challenges and hazards surrounding the profession internationally, job satisfaction and work environment in the healthcare industry have become contentious subjects. Nurses in the healthcare business have a driving factor that causes them to be satisfied. Some healthcare

service providers inspire their employees by ensuring that they are satisfied with their jobs by improving their work environment (Akinwale and George, 2020). The relationship between the environment of the organization and unit work affects the job satisfaction of nurses (Tumulty et al., 1994). In Pakistan's healthcare industry, workplace safety is positively related to job satisfaction. According to a report by the World Health Organization, in Pakistan, acts of violence such as threats of attacks, harassment, actual assaults, verbal abuse, and being compelled to work in specific ways are fundamental safety challenges. All healthcare employees must confront these challenges (Amman-ullah et al., 2021). Employees cannot have positive feelings about their jobs if they work in an unsafe environment (Binmadi and Alblowi, 2019). A nurse's work environment is a complex system, and the workplace characteristics hold power to facilitate or hampers nursing practices (Hayes et al., 2015). The workplace environment directly or indirectly influences nurses' performance.

The health care system settings are among the fourth most challenging and sixth most unhealthy workplace settings (Aiken et al., 2008; Gu and Zhang, 2014). Workplace spirituality, emotional ownership at the workplace correlates with the employees' job satisfaction. (Chand and Koul, 2012). The environmental factors such as light, color, odor, and noise act as stressors that lower the satisfaction level of the employees from their job and lead towards higher turnover intentions among nurses. (Applebaum et al., 2010). the equipment availability affects job satisfaction (Xuan Tran et al., 2013). Less sophisticated equipment is a source of low job satisfaction (Witter et al., 2011). poor working conditions lower the job satisfaction level among the employees (Ahmadi and Alireza, 2007; Mengistu and Bali, 2015; Pawirosumarto et al., 2017).

MATERIAL AND METHODS

The current study used the quantitative study design, and a face-to-face survey approach was used to investigate the effect of physical working conditions on the nurse's job satisfaction. All the graduated nurses who are currently employed at tehsil and rural health care facilities were the study population. The data were collected from 452 randomly selected nurses working in the rural health care settings of Punjab province, Pakistan, to meet the minimum criteria of 10% representation for the sample. The data was collected with the help of a structured questionnaire constructed on a five-point Likert scale ranging from 1 to 5; 1 stands for strongly disagree and 5 for strongly agree.

Data and Data Analysis: The questionnaire was constructed in two parts. One part assessed the nurse's perception of the physical work environment, and the second part of the questionnaire covered the questions to determine the job satisfaction level of nurses. The ten questions were asked to assess the physical work environment, and the concept of job satisfaction was evaluated by asking nine questions.

The Cronbach's alpha values of each concept are calculated to ensure the internal consistency of the construct. The calculated values of Cronbach alpha for both constructs are .89. The effect of workplace environment on job satisfaction was checked using simple linear regression.

Table 1: Reliability Analysis Report

Scale variables	N	No of Items	Cronbach's alpha value
Job satisfaction	452	9	.893
Work environment	452	10	.897

Empirical Findings and Discussion: The descriptive analysis was performed by calculating the mean score and standard deviation for each variable related to physical work environment and job satisfaction.

Descriptive Statistics: The calculated mean scores for job satisfaction at the workplace range from 3.96 to a minimum of 3.62.

Table 2: Job Satisfaction

Satisfaction with different aspects of the job	Mean Score	Std. Deviation	Mid-point
Satisfaction with the nature of the job	3.96	.89	2.5
Satisfaction with the societal respect	3.48	1.2	2.5
Satisfaction for the relationships with other colleagues	3.96	.82	2.5
Joy for the overall hospital management	3.86	.90	2.5
Satisfaction for the ward/ working unit supervision and management	3.77	.96	2.5
Satisfaction for the appreciation	3.65	.96	2.5
Satisfaction with the rules and procedural simplicity and effectivity	3.62	.95	2.5
Joy for the time spent with colleagues as quality time	3.88	.79	2.5
Satisfaction with the monetary aspects of the job	3.76	1.0	2.5
Satisfaction for the affordability of good lifestyle	3.75	.93	2.5
Satisfaction with the communication system	3.80	.88	2.5
Satisfaction for the physical environment at the job place	3.65	.97	2.5

The mean score for nurses' satisfaction with the nature of the job is 3.96, which is above the midpoint of the rating scale and indicates that the nurses have good pleasure with the job nature. The mean score for societal respect is 3.48, also above the midpoint of the rating scale, which indicates an adequate level of satisfaction. The mean score for the relationship with other colleagues is 3.96, which is also above the midpoint of the rating scale. The mean score for the management and supervision is 3.77, and satisfaction for the appreciation is 3.65, which is also above the rating scale's midpoint. The mean score for procedural simplicity and effectivity is also 3.62, above the midpoint of the rating scale. The mean score for the quality time spent with colleagues is 3.88. The mean score for the monetary aspect of job satisfaction is 3.76. The pay's mean score for the affordability of a good lifestyle is 3.75. The mean score for the communication system is 3.80, above the midpoint of the rating scale. The mean score for the physical environment is 3.65, which is also above the midpoint of the rating scale. Nurses scored on all the aspects of the satisfaction above the midpoint of the rating scale, depicting that the nurses serving in the rural areas have adequate satisfaction.

The mean score and standard deviation for each variable related to the physical work environment are calculated. The mean scores for physical settings range from 4.05 to a minimum of 3.51.

Table 3: Physical Work Environment

Different Aspects of Physical Work Environment	Mean	Std. Deviation	Midpoint
Physical settings	3.72	1.04	2.5
Ventilation of ward	3.93	1.01	2.5
Cleanliness conditions at the workplace	4.05	.890	2.5
Availability of health safety measures	3.74	.917	2.5
Availability of personal safety measures	3.52	.964	2.5
Availability of adequate space for the performance of the duty related task	3.59	1.03	2.5
Safety from extreme weather	3.52	1.1	2.5
Availability of electricity	3.51	1.06	2.5
Availability of safe drinking water	3.62	1.16	2.5
Availability of Procedural instruments	3.74	.97	2.5

The mean score for the physical settings of the wards is 3.72 above the midpoint of the rating scale. The mean score for the ventilation situation of the ward is 3.93 above the midpoint of the rating scale.

The cleanliness condition at the workplace, mean score is 4.05 above the midpoint of the rating scale. The availability of the health safety measures means the score is 3.74. the mean score for the availability of personal safety measures is 3.52. The mean

score for the availability of adequate space to perform different procedures is 3.59, also above the midpoint of the rating scale. The mean score for safety from extreme weather is 3.52 above the midpoint of the rating scale indicates an adequate level of safety measures from the harsh weather. The mean score for the availability of uninterrupted electricity is 3.51 above the midpoint of the rating scale. The mean score for the availability of safe drinking water and instruments for different procedures are 3.62 and 3.74, respectively both are above the midpoint of the rating scales. The mean scores for all the elements of the physical work environment are above the midpoint of the rating scale, indicating that the physical work environment of the wards in which the rural nurses perform their duties is adequate.

The simple linear regression is used to investigate the effect of the physical environment at the workplace on the job satisfaction of the nurses working in the rural settings of Punjab.

Table 4: Model Summary

R	R-square	Adjusted-R square	Std. Error	F. Statistics	P-value
.661	.437	.436	5.9785	348.981	.000

Predictor: Physical work environment
Dependent variable: Job satisfaction

The R-square value of .43 in the above table indicates that the workplace's physical environment is accounted for a 43 percent variation in the job satisfaction level among nurses working in the rural health care settings of Punjab. The F-value of 348.9 and P-value of 0.00 signifies the effect of the physical environment on the job satisfaction level of nurses.

The beta coefficient value and t-ratio were also calculated to investigate the effect of change in each unit of the independent variable, workplace environment, on nurses' job satisfaction level,

Table 5: Coefficients

Regressor	Beta Coefficients	Std. Error	T-Ratio	Sig.
Constant	18.788	1.439	13.059	.000
Physical work environment	.713	.038	18.681	.000

The beta value of .713 signifies the effect of the physical environment on the job satisfaction of nurses. With each unit change in job satisfaction, the physical work environment changes .71. So, the physical environment at the workplace is a significant determinant of job satisfaction among nurses working in rural health care settings.

A study by Al-Sabei et al. (2020) also reported that a better working environment reduced turnover intentions and raised job satisfaction among nurses. Amman-Ullah et al., (2021) study reported the positive relationship between safety in the workplace environment and job satisfaction. Xuan Tran et al., 2013 said the positive connection between equipment availability and job satisfaction. Witter et al., (2011) study reported less sophisticated equipment as a source of low job satisfaction. The findings of the study are consistent with the Ahmadi and Alireza (2007), Applebaum et al., (2010), Sell and Cleal (2011), Mengistu and Bali (2015), Pawirosumarto et al., (2017), Binmadi and Alblowi, (2019) and Akinwale and George (2020).

CONCLUSION

Overall, the physical work environment at the workplace has a significant impact on the job satisfaction level of nurses working in the rural health settings of Punjab.

Recommendations: The policymakers and managers should focus on providing a healing work environment in the workplace settings to reduce the stress level among nurses working in rural health care settings. It will help improve the retention rate of nurses at rural health care facilities.

Limitations of the Study: The study is limited to the nurses of the rural health care facilities and the physical environment at the workplace.

Acknowledgement: Any organization did not fund the study. The paper is extracted from the thesis completed for the doctoral degree.

Authors Contribution: Study design and manuscript preparation: Iqra Nawaz, Ashfaq Ahmad Mann, Izhar Ahamad Khan, Babar Shahbaz. Data collection and analysis: Iqra Nawaz. Study supervision: Ashfaq Ahmad Mann, Izhar Ahmad Khan, Babar Shahbaz

REFERENCES

- Ahmadi, K., & Alireza, K. (2007). Stress and Job Satisfaction among Air Force Military Pilots. *Journal Of Social Sciences*, 3(3), 159-163. <https://doi.org/10.3844/jssp.2007.159.163>
- Aiken, L., Clarke, S., Sloane, D., Lake, E., & Cheney, T. (2008). Effects of Hospital Care Environment on Patient Mortality and Nurse Outcomes. *JONA: The Journal Of Nursing Administration*, 38(5), 223-229. <https://doi.org/10.1097/01.nna.0000312773.42352.d7>
- Akinwale, O. E., & George, O. J. (2020). Work environment and job satisfaction among nurses in government tertiary hospitals in Nigeria. *Rajagiri Management Journal*, 14(1); 71-92.
- Akinwale, O. (2019). Employee voice: Speaking up in organisation as a correlate of employee productivity in oil and gas industry: an empirical investigation from Nigeria. *Serbian Journal Of Management*, 14(1), 97-121. <https://doi.org/10.5937/sjm14-15308>
- Al Sabei, S., Labrague, L., Miner Ross, A., Karkada, S., Albashayreh, A., Al Masroori, F., & Al Hashmi, N. (2019). Nursing Work Environment, Turnover Intention, Job Burnout, and Quality of Care: The Moderating Role of Job Satisfaction. *Journal Of Nursing Scholarship*, 52(1), 95-104. <https://doi.org/10.1111/jnu.12528>
- AMAN-ULLAH, A., AZIZ, A., & Ibrahim, H. (2021). Anomalies of the Healthcare Sector Using Workplace Safety and Job Satisfaction: A Case Study of Pakistan. *The Journal of Asian Finance, Economics and Business*, 8(3), 1181-1191.
- Applebaum, D., Fowler, S., Fiedler, N., Osinubi, O., & Robson, M. (2010). The Impact of Environmental Factors on Nursing Stress, Job Satisfaction, and Turnover Intention. *JONA: The Journal Of Nursing Administration*, 40(7/8), 323-328. <https://doi.org/10.1097/na.0b013e3181e9393b>
- Binmadi, N., & Alblowi, J. (2019). Prevalence and policy of occupational violence against oral healthcare workers: systematic review and meta-analysis. *BMC Oral Health*, 19(1). <https://doi.org/10.1186/s12903-019-0974-3>
- Chand, P. and Koul, H. (2012). Organizational emotional ownership, workplace spirituality and job satisfaction as moderators of job stress. *International Journal of Humanities and Applied Sciences*. 1(2): 58-64.
- Chamal, G. S., & Dilina, H. (2018). Employee satisfaction and related factors among public health workers in Sri-Lanka: a case study on regional directorate of hambahthota. *JOJ Nurse Health Care*, 8(4), 1-7. <https://doi.org/10.19080/ijnhc.2018.08.555742>
- Ghaffari, M., Alinaghizadeh, H., Ghalichi, L., Pournik, O., & Vingard, E. (2017). Assessment of the Psychosocial Work Environment among Health Care Workers and Its Association with Work and Socioeconomic Status. *Archives Of Neuroscience*, In Press (In Press). <https://doi.org/10.5812/archneurosci.13576>
- Goetz, K., Marx, M., Marx, I., Brodowski, M., Nafula, M., & Prytherch, H. et al. (2015). Working Atmosphere and Job Satisfaction of Health Care Staff in Kenya: An Exploratory Study. *Biomed Research International*, 2015, 1-7. <https://doi.org/10.1155/2015/256205>
- Gu, L., & Zhang, L. (2014). Assessment tools of nursing work environment in magnet hospitals: A review. *International Journal of Nursing Sciences*, 1(4), 437-440. <https://doi.org/10.1016/j.ijnss.2014.10.013>
- Hayes, B., Bonner, A., & Douglas, C. (2015). Haemodialysis work environment contributors to job satisfaction and stress: a sequential mixed methods study. *BMC Nursing*, 14(1). <https://doi.org/10.1186/s12912-015-0110-x>
- Innocent, E. O., Uche, O. A., & Uche, I. B. (2014). Building a solid health care system in Nigeria: challenges and prospects. *Academic Journal of Interdisciplinary Studies*, 3(6), 501-510. <https://doi.org/10.5901/ajis.2014.v3n6p501>
- Kever, R. T., Oyibo, S. S., Gana, A. M., Ukende, J. F., Damkor, P. I., & Danlami, S. (2018). Survey of factors influencing job satisfaction among nurses in Ahmadu Bello University Teaching Hospital Zaria, Nigeria. *Asian Journal of Research in Nursing and Health*, 1(1), 1-14.

- Retrieved from <https://www.journalajrn.com/index.php/AJRNH/article/view/25388>
17. Kovner, C., Brewer, C., Fatehi, F., & Jun, J. (2014). What Does Nurse Turnover Rate Mean and What Is the Rate? Policy, Politics, & Nursing Practice, 15(3-4), 64-71. <https://doi.org/10.1177/1527154414547953>
 18. Liu, Y., Aunguroch, Y., & Yunibhand, J. (2016). Job satisfaction in nursing: a concept analysis study. International Nursing Review, 63(1), 84-91. <https://doi.org/10.1111/inr.12215>
 19. Locke, E. A. 1976. The nature and causes of job satisfaction. Handbook of industrial and organizational psychology, 1: 1297-1343.
 20. Mengistu, M. M., & Bali, A. G. (2015). Factors associated with job satisfaction among health care workers at public hospitals of West Shoa Zone, Oromia, Regional staff, Ethiopia: a cross-sectional study. Science journal of public health, 3(2), 161-167. <https://doi.org/10.11648/j.sjph.20150302.12>
 21. Murta, S., Sanderson, K., & Oldenburg, B. (2007). Process Evaluation in Occupational Stress Management Programs: A Systematic Review. American Journal of Health Promotion, 21(4), 248-254. <https://doi.org/10.4278/0890-1171-21.4.248>
 22. Pawirosumarto, S., Sarjana, P., & Gunawan, R. (2017). The effect of work environment, leadership style, and organizational culture towards job satisfaction and its implication towards employee performance in Parador Hotels and Resorts, Indonesia. International Journal of Law and Management, 59(6), 1337-1358. <https://doi.org/10.1108/IJLMA-10-2016-0085>
 23. Raziq, A., & Maulabakhsh, R. (2015). Impact of Working Environment on Job Satisfaction. Procedia Economics And Finance, 23, 717-725. [https://doi.org/10.1016/s2212-5671\(15\)00524-9](https://doi.org/10.1016/s2212-5671(15)00524-9)
 24. Ogbolu, Y., Johantgen, M., Zhu, S., & Johnson, J. (2015). Nurse reported patient safety in low-resource settings: a cross-sectional study of MNCH nurses in Nigeria. Applied Nursing Research, 28(4), 341-346. <https://doi.org/10.1016/j.apnr.2015.02.006>
 25. Schein, E. H. 2011. Organizational Culture and Leadership. (2ed). San Francisco; Jossey- Bass.
 26. Sell, L., & Cleal, B. (2011). Job satisfaction, work environment, and rewards: Motivational theory revisited. Labour, 25(1), 1-23. <https://doi.org/10.1111/l.1467-9914.2010.00496.x>
 27. Serdar, T., Đerek, L., Unic, A., Marijancevic, D., Markovic, D., Primorac, A., & Petroveckii, M. (2013). Occupational exposures in healthcare workers in University Hospital Dubrava-10-year follow-up study. Central European journal of public health, 21(3), 150-154. <https://doi.org/10.21101/cejph.a3803>
 28. Shader, K., Broome, M. E., Broome, C. D., West, M. E., & Nash, M. (2001). Factors influencing satisfaction and anticipated turnover for nurses in an academic medical center. JONA: The Journal of Nursing Administration, 31(4), 210-216. <https://doi.org/10.1097/00005110-200104000-00010>
 29. Tumulty, G., Jernigan, I. E., & Kohut, G. F. (1994). The impact of perceived work environment on job satisfaction of hospital staff nurses. Applied Nursing Research, 7(2), 84-90. [https://doi.org/10.1016/0897-1897\(94\)90037-x](https://doi.org/10.1016/0897-1897(94)90037-x)
 30. Witter, S., Ha, B. T. T., Shengalia, B., & Vujicic, M. (2011). Understanding the 'four directions of travel': qualitative research into the factors affecting recruitment and retention of doctors in rural Vietnam. Human resources for health, 9(1), 1-14. <https://doi.org/10.1186/1478-4491-9-20>
 31. World Health Organization. 2011. WHO global code of practice on international recruitment of health personnel. Implementation Strategy Report: Pakistan. Islamabad. Retrieved from <http://www.who.int>.
 32. Xuan Tran, B., Minh, H. V., & Hinh, N. D. (2013). Factors associated with job satisfaction among commune health workers: implications for human resource policies. Global health action, 6(1), 18619. : <https://doi.org/10.3402/gha.v6i0.18619>