
WORKPLACE FACTORS AND TRAINING SATISFACTION AMONG HEALTHCARE PROFESSIONALS IN WESTERN UTTAR PRADESH: A COMPARATIVE ANALYSIS OF DOCTORS AND NURSES

Akanksha Arora^{1*}, Vipin Jain²

^{1*}Research Scholar, Teerthanker Mahaveer University, Moradabad, Uttar Pradesh, India, Orcid Id: 0009-0007-5413-9090, aakankshakapoor.17@gmail.com

²Professor, Teerthanker Mahaveer University, Moradabad, Uttar Pradesh, India, Orcid id: 0000-0001-5519-5704, vipin555@rediffmail.com

Article History

Received : 2026-08-02

Revised : 2026-08-29

Accepted : 2026-09-12

Published : 2026-09-30

Abstract

Background

For healthcare professionals to sustain and improve their knowledge and abilities, ongoing professional development is crucial. However, the total training experience may be impacted by how well workplace environment encourage training participation and satisfaction. The combined role of certain workplace characteristics in the context of healthcare professionals in Western Uttar Pradesh has received little attention, despite the fact that earlier research has looked at aspects related to training satisfaction and continuing education.

Objective

The objective of the study was to assess the relationship between a few workplace variables and healthcare professional's satisfaction with their training.

Methods

A quantitative cross-sectional study approach was used. An adapted standardized questionnaire was used to gather information from 200 doctors and 200 nurses. Training satisfaction was measured on 5 Likert scale while the organizational workplace factors were assessed through descriptive statistics. The independent sample *t* test and multiple linear regression methods were applied in SPSS to evaluate the overall relationship between the six workplace factors and training satisfaction.

Results

The study offers an empirical evaluation of the relationship between training satisfaction among healthcare professionals and various employment situations. In the independent-samples *t*-test, supportive supervision was the only one of the six workplace factors that showed a statistically significant difference in training satisfaction ($t(198) = -2.084, p = .038$). There were no significant variations in satisfaction amongst the other categories ($p > .05$), including staff support, infrastructure, equipment access, administrative load, and team coordination. The six workplace characteristics taken together in the multiple regression analysis showed the model as a whole was not statistically significant ($F(6,193) = 1.861, p = .089$). However, training satisfaction was significantly positively correlated with supportive supervision and negatively correlated with equipment access at the individual predictor level.

Conclusion

The results imply that workplace factors, especially supportive supervision, may have an impact on healthcare professionals' training satisfaction. However, there was no statistically significant correlation found between the six workplace characteristics and training satisfaction. While in order to get a better understanding of the workplace variables that influence training satisfaction, bigger sample sizes and more thorough measurements of workplace and training-related characteristics are required in future research.

Keywords: Western Uttar Pradesh, healthcare professionals, training satisfaction, workplace support, work environment, upskilling, professional development.

Introduction

A workforce that can stay up to date, retain professional abilities, and adjust to evolving clinical practices, technology, and care models is becoming more and more important in the delivery of healthcare. But the success of professional development cannot be evaluated in isolation from the setting in which healthcare professionals operate. Healthcare professionals learn while managing clinical duties, patient care obligations, collaboration, administrative expectations, and resource limitations.

As training does not occur in isolation from everyday professional practice, the workplace factors may be particularly relevant. This study focuses at the relationship between training satisfaction among healthcare professionals and six workplace factors including staff support, infrastructure, equipment access, administrative burden, team coordination and supportive supervision.

Literature Review

Healthcare professionals must constantly update their knowledge, skills, and competences throughout their careers, making continuing professional development (CPD) a crucial part of workforce development. In their meta synthesis of the literature on nurses' continuing professional development, Mlambo et al. (2021) recognized CPD as a crucial element of lifelong learning and emphasized that professional development is impacted by both individual motivation and the learning environment. They analyzed in their study that organizational culture, workplace learning opportunities, managerial support, time availability, workload, and relationship with coworkers all influenced nurses' experiences with continuing professional development. These results imply that rather than taking place apart from regular work, professional learning is integrated into the organizational environment. Thus, the workplace is a crucial setting in which healthcare professionals encounter and assess training. Although a training program may offer relevant educational material, participants' experiences may also be influenced by whether or not their place of employment offers enough chances, resources, and support for them to interact with and implement what they have learned.

Further, Price and Reichert (2017) emphasized the need of ongoing professional development for nurses at all career levels. Their study highlighted the need of attending to nurses' professional development requirements throughout their career span and linked CPD with career satisfaction and attitudes regarding patient care. The evidence highlighted the wider significance of professional development to the work experiences of healthcare professionals, even if career satisfaction and training satisfaction are conceptually distinct outcomes.

In particular, Muñoz-Castro et al. (2020) observed factors that predict health professionals' satisfaction with continuing education. In their cross-sectional study, 1,228 continuing health education programs in Andalusia, Spain, were linked to 25,281 satisfaction surveys. As indicators of satisfaction, the study looked at organizational, methodological, and resource-related traits. The authors discovered that many aspects of pleasure were linked to various aspects of educational activities, such as modality, duration, kind of educational activity, and accreditation. Because it shows that training satisfaction may be analyzed as an outcome impacted by features around the educational experience, this study is very pertinent. But the study's main focus was on the features of the instructional activities themselves. This makes it possible to investigate if healthcare professionals' satisfaction with their training is also influenced by their employment environment.

In their analysis of human resource issues in Indian healthcare, Saxena and Godfrey (2023) noted infrastructure constraints, disparities between the public and private sectors, shortages and unequal distribution of skilled healthcare professionals, and the necessity of upskilling and strengthening the current workforce. They placed particular focus on expanding the use of online training, enhancing infrastructure, and supporting training as elements India's healthcare workforce growth. Thus, professional development cannot be taken into account separately from the organizational setting in which healthcare workforce operate.

Because healthcare professionals' function in a variety of institutional settings with variations in infrastructure, staffing, workload, supervision, and organizational procedures, the Indian healthcare context offers a crucial setting for investigating workplace issues. Singh et al. (2019) looked at healthcare professionals' job satisfaction at public health institutions in Punjab, India. Their study took into account a variety of factors of the workplace and found variations in satisfaction in areas such as communication, supervision, colleague relationships, and working conditions. It was found in the study that workplace settings are relevant to healthcare professionals' experiences in an Indian environment, even though the

study's focus was on job satisfaction rather than training satisfaction. This distinction is crucial since job satisfaction and training experience satisfaction are two independent concepts.

Objectives of the study

Primary objective

To evaluate the influence of workplace factors on the satisfaction of healthcare professionals with existing training opportunities in Western Uttar Pradesh.

Secondary objectives

- To study the relationship between workplace factors and training satisfaction among doctors.
- To find the workplace factors that significantly affects training satisfaction among doctors and nurses.
- To study the relationship between workplace factors and training satisfaction among nurses.

Research Methodology

The study is cross-sectional in design and the data collection was done by using questionnaire adapted from Hennessy and Hicks TNA tool. The survey was conducted in six different divisions of Western Uttar Pradesh including Agra, Aligarh, Bareilly, Moradabad, Meerut and Saharanpur. The sample size was 200 doctors and 200 nurses from government and NABH accredited private hospitals.

Null hypothesis (H_{01}): Workplace factors are not significantly associated with doctors' satisfaction with existing training opportunities.

Null hypothesis (H_{02}): Workplace factors are not significantly associated with nurses' satisfaction with existing training opportunities.

Statistical Analysis

For null hypothesis (H_{01}): Workplace factors are not significantly associated with doctor's satisfaction with existing training opportunities.

In order to find association between workplace factors individually and collectively, independent sample t - test was applied to compare mean satisfaction between respondents who selected that individual workplace factor or not and multiple linear regression was applied to analyze whether the six workplace factors are collectively associated with training satisfaction.

Following data is generated after applying independent sample T-test to determine if satisfaction level varied according to workplace-support factors.

Workplace factor	Levene's p	t	df	p-value	Mean Difference	Interpretation
Staff support	0.442	-0.001	198	0.999	0	Not significant
Infrastructure	0.072	0.84	198	0.402	0.092	Not significant
Equipment access	0.002	1.665*	85.086*	.100*	0.221	Not significant
Administrative burden	0.016	0.708*	142.962*	.480*	0.081	Not significant
Team coordination	0.103	0.463	198	0.644	0.05	Not significant
Supportive supervision	0.245	-2.084	198	0.038	-0.237	Significant

Interpretation

*Levene's tests were significant for administrative burden and equipment access; hence the unequal-variance findings were employed for interpretation.

As per above table, staff support, infrastructure, equipment access, administrative load, and team coordination did not show statistically significant variations in satisfaction ($p > .05$). Only supportive supervision, demonstrated a statistically significant difference in satisfaction levels, ($p = .038$).

So, the values $t(198) = -2.084$ and p value if 0.038 shows that there was a statistically significant difference in training satisfaction between respondents who reported supportive supervision and those who did not.

In order to find association between workplace factors individually and collectively, independent sample t -test was applied to compare mean satisfaction between respondents who selected that individual workplace factor or not and multiple linear regression was applied to analyze whether the six workplace factors are collectively associated with training satisfaction.

Following data is generated after applying independent sample T -test to determine if satisfaction level varied according to workplace-support factors.

ANOVA ^a						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	6.236	6	1.039	1.861	.089 ^b
	Residual	107.759	193	.558		
	Total	113.995	199			
a. Dependent Variable: Satisfactionlevel						
b. Predictors: (Constant), supportive_supervision, less_adminburden, team_coord, equipment_access, infrastructure, staff_support						

Interpretation

From the above table, the overall regression model was not found statistically significant at 5% level of significance, $F(6, 193) = 1.861$, $p = .089$.

Coefficients ^a													
Model		Unstandardiz ed Coefficients		Stan dar dize d Coef ficie nts	T	Sig.	95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Err or				Beta	Low er Boun d	Uppe r Boun d	Zer o- orde r	Part ial	Part	Tole ranc e
1	(Constant)	3.627	.117		30.931	.000	3.396	3.859					
	staff_ suppot	.081	.131	.054	.618	.537	-.178	.340	.000	.044	.043	.648	1.543
	infrastruct ure	-.001	.134	- .001	-.010	.992	-.266	.263	- .060	- .001	- .001	.652	1.535
	euipment_ access	-.294	.128	- .178	-2.297	.023	-.547	-.042	- .134	- .163	- .161	.811	1.233
	less	-.016	.118	-	-.134	.894	-.248	.217	-	-	-	.833	1.201

adminburden			.010					.053	.010	.009		
team_coord	-.107	.122	-.071	-.872	.384	-.348	.135	-.033	-.063	-.061	.746	1.340
supportive_supervision	.307	.118	.190	2.602	.010	.074	.540	.147	.184	.182	.921	1.085
a. Dependent Variable: Satisfactionlevel												

Interpretation

Equipment access ($p = .023$) and supportive supervision ($p = .010$) showed statistically significant coefficients at the individual predictor level. However, as the regression model as a whole was not statistically significant. There were no statistically significant individual relationships between training satisfaction and staff support ($p = .537$), infrastructure ($p = .992$), decreased administrative load ($p = .894$), or team coordination ($p = .384$) for doctors.

Linear regression equation

Training Satisfaction = $3.627 + 0.081(\text{Staff Support}) - 0.001(\text{Infrastructure}) - 0.294(\text{Equipment Access}) - 0.016(\text{Reduced Administrative Burden}) - 0.107(\text{Team Coordination}) + 0.307(\text{Supportive Supervision})$

The above regression equation included unstandardized regression coefficients because the objective was to find which individual predictor associated with training satisfaction.

Thus, the null hypothesis (H_{01}) is failed to reject that workplace factors are not associated with training satisfaction, when assessed collectively. However, equipment availability and supportive supervision were found statistically significant.

For Null hypothesis (H_{02}): Workplace factors are not significantly associated with nurses' satisfaction with existing training opportunities.

As for doctors, for nurses also independent sample t -test was applied to compare mean satisfaction between the individual workplace factor selected and workplace factors individually and multiple linear regression was applied to analyze whether the six workplace factors are collectively associated with training satisfaction.

Workplace factor	Levene's p	T	df	p-value	Mean difference	Interpretation
Staff support	0.344	2.101	198	0.037	0.26	Significant
Infrastructure	0.962	2.603	198	0.01	0.293	Significant
Equipment access	0.731	2.942	198	0.004	0.332	Significant
Administrative burden	0.76	2.203	198	0.029	0.251	Significant
Team coordination	0.814	3.514	198	0.001	0.454	Significant

Supportive supervision	0.37	4.098	198	<.001	0.453	Significant
------------------------	------	-------	-----	-------	-------	-------------

Interpretation

As the per result generated, by applying independent sample t test, every factor was found individually statistically significant.

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	15.039	6	2.507	4.217	.001 ^b
	Residual	114.716	193	.594		
	Total	129.755	199			
a. Dependent Variable: Mean Satisfaction						
b. Predictors: (Constant), supportive_supervision, less_adminburden, team_coord, staff_support, equipment_access, infrastructure						

Interpretation

As per the ANOVA table the result is:

F (6,193) =4.217, p=.001

The six workplace factors were collectively found associated with nurse's training satisfaction.

Coefficients ^a													
Model		Unstandardize d Coefficients		Stand ardize d Coeffi cients	t	Sig.	95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Error				Beta	Low er Bou nd	Upp er Bou nd	Zero - orde r	Part ial	Part	Tole ranc e
1	(Constant)	4.074	.150		27.23 2	.000	3.77 9	4.36 9					
	staff_suppo t	-.048	.155	-.027	-.312	.755	-.353	.257	-.148	-.022	-.021	.592	1.689
	infrastructu re	.090	.353	.056	.256	.798	-.605	.786	-.182	.018	.017	.096	10.451
	euipment_a ccess	-.321	.152	-.198	-2.115	.036	-.621	-.022	-.205	-.151	-.143	.521	1.919
	less_admin burden	.019	.314	.012	.061	.951	-.599	.638	-.155	.004	.004	.122	8.172
	team_coor d	-.343	.162	-.183	-2.119	.035	-.663	-.024	-.242	-.151	-.143	.613	1.632
	suppotive_ supervision	-.226	.143	-.139	-1.573	.117	-.508	.057	-.280	-.113	-.106	.585	1.708
a. Dependent Variable: Mean Satisfaction													

Interpretation

As per the regression analysis, equipment access ($p=.036$), and team coordination ($p=.035$) are found statistically significant.

Regression equation

Mean Satisfaction = $4.074 - 0.048$ (staff support) + 0.090 (Infrastructure) – 0.321 (equipment access) + 0.019 (Administrative burden) – 0.343 (team coordination) – 0.226 (supportive supervision)

Interpreting the ANOVA and above regression equation, only equipment access and team coordination are significant and negatively associated with mean training satisfaction.

Since, $F(6,193) = 4.217$, $p=.001$, the null hypothesis (H_{02}) gets rejected that workplace factors are not significantly associated with nurses' mean satisfaction.

Findings and Implications

- For doctors, as per independent sample t test results, staff support ($p=0.999$), infrastructure ($p=.402$) and team coordination ($p=.480$) were found statistically insignificant while for equipment access, Levene's test was statistically significant, thus unequal variance result was interpreted. The results were not statistically significant for equipment access ($p=0.100$). However, supportive supervision ($p=.038$) was found statistically significant in training satisfaction implying that healthcare organizations must encourage supervisors to discuss employee training needs, facilitate participation, give constructive feedback and promote newly acquired knowledge application in the workplace. While for nurses, the independent sample t test results implied that each of the six workplace factors were significantly associated with mean satisfaction.
- For doctors, overall regression model was not statistically significant at 5% level of significance which implies all the workplace factors collectively did not show any association with training satisfaction. Also, it can be interpreted that equipment access ($p=.23$) and supportive supervision ($p=.010$) were significantly associated with training satisfaction. The remaining predictors were not found statistically significant by showing staff support ($p=.537$), infrastructure ($p=.992$), less administrative load ($p=.894$) and team coordination ($p=.384$) with p values higher than 0.05.
- While for nurses, the overall regression model was found statistically significant. However, at individual predictor level, equipment access ($B = -.321$, $\beta = -.198$, $p = .036$) and team coordination ($B = -.343$, $\beta = -.183$, $p = .035$) were shown negative association with mean training satisfaction.
- As per regression equation, for doctors, the supportive supervision showed positive coefficient which implies there is potential value of integrating supervision with training. While equipment access showed negative coefficient for doctors as well as nurses, which can be interpreted as there is a lack of availability of equipment or better equipment access is required. Similarly in case of nurses, team coordination was found negative relation with training satisfaction which can be implied that the coordination amongst team members must be improved for the training satisfaction or effectiveness of training programs.
- Further, for doctors, individually as well collectively, infrastructure, staff support, team coordination and administrative load did not show significant association with training satisfaction which can be implied as the presence of these workplace factors were insufficient to explain variation in satisfaction with trainings. While in case of nurses, all the six factors were significant in bivariate analysis only equipment access and team coordination were significant individual predictor in the regression model.
- It can be implied that for nurses, there is a requirement for improving the overall workplace environment as the results generated by applying independent sample t-test depicted all the six factors were significant for improving the training satisfaction.

Implications for future research

Larger sample sizes and verified multi-item measures of training satisfaction and workplace assistance should be used in future research. Additionally, longitudinal study might look at whether training satisfaction transfers into professional competence and workplace application, as well as if working circumstances are linked to satisfaction over time.

Discussion

The study looked at the relationship between a few workplace variables and nurses' and doctors' training satisfaction. Multiple regression analysis and independent-samples t-tests were used to look at six workplace factors including staff support, infrastructure, equipment access, less administrative load, team coordination, and supportive supervision. The results show that the association between training satisfaction and the working environment varies depending on the professional group and whether workplace aspects are looked at separately or combinedly.

The results provide evidence to the concept that training satisfaction shouldn't be only attributed to the educational activity for both doctors and nurses, as depicted by Hughes et al. (2020) and Muñoz-Castro et al. (2020). For nurses, as stated by Mlambo et al. (2021), the work environment in which healthcare workers engage in, experience, and subsequently use training seems to be important. Training satisfaction is a multifaceted result that cannot be described by workplace characteristics alone, as seen by the small explained variation and the disparities between bivariate and multivariable findings.

Conclusion

This study investigated the relationship between training satisfaction and workplace factors including staff assistance, infrastructure, equipment access, decreased administrative load, team coordination, and supportive supervision among doctors and nurses. The results from statistical analysis demonstrate the different patterns for doctors and nurses. Among doctors, the supportive supervision was found significant while in case of nurses all the six factors were found associated with training satisfaction when measured individually using independent sample t -test. While the multiple regression analysis results showed that supportive supervision was significant for doctors while for equipment access both the groups showed scope of improvement. In case of nurses, team coordination also required attention as per the regression results. Overall, by showing that the working environment surrounding professional development should be taken into account in addition to the features of the training activity itself, the study adds to the growing conversation on training satisfaction. The distinctions between doctors and nurses further suggest that while creating and assessing continuing professional development programs, workplace and professional-group factors should be taken into account.

References

1. Mlambo, M., Silén, C., & McGrath, C. (2021). Lifelong learning and nurses' continuing professional development, a metasynthesis of the literature. *BMC nursing*, 20(1), 62. <https://doi.org/10.1186/s12912-021-00579-2>
2. Muñoz-Castro, F. J., Valverde-Gamero, E., & Herrera-Usagre, M. (2020). Predictors of health professionals' satisfaction with continuing education: A cross-sectional study. *Revista Latino-Americana de Enfermagem*, 28, e3315. <https://doi.org/10.1590/1518-8345.3637.3315>
3. Hughes, A. M., Zajac, S., Woods, A. L., & Salas, E. (2020). The role of work environment in training sustainment: A meta-analysis. *Human Factors*, 62(1), 166–183. <https://doi.org/10.1177/0018720819845988>
4. Saxena, S. G., & Godfrey, T. (2023). India's opportunity to address human resource challenges in healthcare. *Cureus*, 15(6), e40274. <https://doi.org/10.7759/cureus.40274>
5. Singh, T., Kaur, M., Verma, M., & Kumar, R. (2019). Job satisfaction among health care providers: A cross-sectional study in public health facilities of Punjab, India. *Journal of Family Medicine and Primary Care*, 8(11), 3268–3275. https://doi.org/10.4103/jfmpe.jfmpe_600_19
6. Price, S., & Reichert, C. (2017). The importance of continuing professional development to career satisfaction and patient care: Meeting the needs of novice to mid- to late-career nurses throughout their career span. *Administrative Sciences*, 7(2), 17. <https://doi.org/10.3390/admsci7020017>
7. Arora, A., & Jain, V. A Data-Driven Approach to Upskilling Western Uttar Pradesh's Healthcare Professionals.
8. Arora, A., & Jain, V. Technology-Assisted Healthcare Upskilling: A Study of Western Uttar Pradesh.

9. Nanda¹, S., Jain, V., & Purohit, A. The Importance of Mental Development in Addressing Youth Unemployment: A Psychological Case Study of Skill Retention in Development Programmes.
10. Hashim, N. A. A. N., Batool, H., Jain, V., Julca-Guerrero, F., & Cruz-Castillo, N. (2023). A systematic study of mobility and innovation and technology management for skilled enhancement with operational frameworks. *International Journal of Intellectual Property Management*, 13(3-4), 227-251.
11. Jain, V., Arya, S., Sharma, P., & Verma, A. (2022). Impact of soft skills training on employees' performance in BPO industry: A study of BPOs in Delhi and NCR region. *The Journal of Oriental Research Madras*, 93(2), 1–26.
12. Jain, V. COACHING AND MENTORING IN EDUCATION SERVICE: AN ASSESSMENT. *COMMUNICATION SKILLS FOR PROFESSIONALS*, 71.