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THE IMPACT OF WORK-RELATED STRESS ON THE PERFORMANCE OF STAFF NURSES

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Abstract

Work-related stress remains a major challenge in healthcare settings, particularly in public hospitals where staff nurses frequently operate under heavy workloads, limited resources, unclear roles, and demanding physical environments. This study examined the impact of work-related stress on the performance of staff nurses working in government teaching hospitals in Lahore, Pakistan. A quantitative research design was adopted, and data were collected from 382 staff nurses selected from 20 government teaching hospitals through proportionate stratified random sampling. The study measured work overload stress, lack of motivation stress, physical environment stress, role ambiguity stress, burnout, professional experience, and job performance using a structured questionnaire. Data were analysed through the Statistical Package for Social Sciences (SPSS) and Analysis of Moment Structures (AMOS), while structural equation modelling (SEM) was applied to assess direct, mediating, and moderating relationships among the variables. The findings revealed that role ambiguity, poor physical environment, work overload, and lack of motivation contributed to burnout symptoms among nurses, which in turn negatively affected their job performance. However, professional experience strengthened nurses' ability to cope with stressful conditions and positively influenced performance outcomes. The study concludes that reducing workplace stress, improving hospital environments, clarifying job roles, strengthening motivation systems, and supporting experienced nursing staff can enhance nurses' performance and improve the quality of patient care in public teaching hospitals.

Keywords: Work-Related Stress, Job Performance, Staff Nurses, Lack of Motivation, Environment of Hospitals

1. Introduction

Healthcare is one of the sectors that suffers unique challenges, which worsen stress in work related tasks (Bilal et al., 2024). It is because the health sector is low funded (Finance Division, Government of Pakistan, 2026). In Pakistan, Punjab healthcare system often suffers lack of resources, trainings and understaffing at government hospitals with even more devastating situation in some cities like Rajanpur (Gallup Pakistan, 2025). The lack of facilities in government hospitals in backward regions of the Punjab also created inflow of patients across the metropolitan cities like Lahore. This context encourages the examination of ways to avoid stress, and how to improve performance in these circumstances among the nursing staff. The present study focuses to investigate the impact of work-related stress and make its recommendation for betterment of the staff nurses in government teaching hospitals. It stresses that targeted interventions such as improving working conditions, clarifying roles and introducing fair compensation systems are needed for nurses to be able to reach their best (Abdulsalam & Mawoli, 2012).

Despite essential role of nurses in healthcare delivery system, their well-being often overlooked in hospital management and health policy (Rashed et al., 2022). Persistent to work-related stress could possibly

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decrease job satisfaction, increase absenteeism and decline in job performance directly affecting patient care quality (Chang et al., 2006; Naveed et al., 2023). However, in Pakistan, the few empirical studies have debated on investigating direct impact of work-related stress on performance of nurses, specifically in public sector teaching hospitals. The research pointed out that public hospitals have shown greater impact of work-related stress on nurses' job satisfaction indicating that type of hospital stayed crucial in determining the direction of relationships (Qattan, 2017; Naveed et al., 2023).

This study's objective was to find out the impact of work-related stress staff nurses' performance in government teaching hospitals. Data was collected from 382 nurses working in 20 government teaching hospitals. The structural equation modelling (SEM) analysis was performed using Statistical Package for Social Sciences (SPSS) and Analysis of Moment Structures (AMOS) to evaluate relationships between study variables.

2. Literature Review

Stress has close relationship with environment in the workplace; excessive job demands and pressures accelerates difficult responses amid work stress (Peter & Siegrist, 1997). Another definition of workplace stress highlights it as the emotional or physical response happens when resources, capabilities or worker needs are not matched with the job requirement. Simply, workplace stress represents the result of an imbalance between tools available to the workplace in comparison with job assigned. The workplace stress has been an important issue for researchers that has named this phenomenon as work stress, job stress and occupational stress (Qattan, 2017; Pamela & James, 2002).

Job performance is considered as a multidimensional rather than single unified construct that has explained productivity levels of nurses related to their behaviours related to work in research (Abdulsalam & Mawoli, 2012). The research has highlighted that work performance of nurses has been affected by both situational factors, for example organizational, environmental and co-worker characteristics, and internal factors, for example needs, personality, traits, motivations, attitudes, entrepreneurship, preferences and their beliefs, where the internal factors have reacted as motivators of reaction upon situational factors (Akgunduz, 2015). The job performance has also affected due to desire of achievement, self-confidence, capacity, span of control and interaction among these (Asadzadeh, 2019). The performance of nurses must be accompanied by updated knowledge and kind managerial skills to ensure safety of patients (Naveed et al., 2023).

Work related stress is very impactful on cognitive and physical abilities leading to decreased performance. This however affects matter, as stress reduces efficiency with which tasks can be completed, including affecting cognitive functions such as memory, attention, and decision making. Exposure to stress increases the cognitive overload in a prolonged manner which eventually renders an individual irritable and unable to process information or make sound decisions (Kim, 2021). This is worrying, particularly, in high-stake environments, such as healthcare, where decisions need to be made quickly and accurately under pressure.

Bilal et al. (2024) conducted cross-sectional study using PLS-SEM to investigate the stress impact on performance in nurses of Pakistan. The study found occupational stress lowered well-being of nurses and enhanced emotional strain and created workplace hazing. The major objective of study was to examine well-being of nurses more thoroughly, but less emphasis was on job performance. The research demonstrated that workplace stress inversely affected capacity of performance of nurses and supported further investigation into the field over cities of Pakistan.

The study conceptualised effect of work overload on job performance by taking mediation-moderation model of burnout, personality traits and coping styles on healthcare workers. The results provided theoretical causal relationship between work overload and job performance through burnout, personality traits and coping style as intervening factors of the relationship. The study suggested to create work supportive environment in the organization, educational opportunities and counselling services, to mitigate impact of burnout on performance of healthcare workers.

Hee and Kamaludin (2016) investigated that impact of extrinsic and intrinsic motivation on nurses' performance working in private hospitals of Malaysia. The analysis employed Herzberg Two Factor theory

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which classified factors affecting motivation into two types, the hygiene factors and motivator. Hygiene factors, also known as extrinsic motivation, included relationships with colleagues, work conditions, supervisor quality, wages, policies and rules. Motivator, also known as intrinsic motivation, consisted of recognition, achievement, responsibility, advancement, work and personal growth. The results indicated that both types of motivation were positively associated to performance of nurses. The study empirical analysis excluded public hospitals which made the results questionable for public hospitals.

Alayoubi et al. (2022) analysed effect of workplace stress on nursing worker's performance in Al-Awda Hospital located on Gaza Strip. Empirics of study revealed that the agreement percentages of nurses over the work stress causes was 75.23 percent from physical work environment. Rashed et al. (2022) pointed out that low collaboration and least support shared in nursing teams created the uncomfortable unit environment which ultimately lowered contextual performance of nurses. Cho and Han (2018) investigated the interrelationships among unit-level health improving attitudes, work environment and perceived nursing performance in South Korea using data from 432 nurses performing duties in 57 units at 5 hospitals. The study estimated nursing performance using six dimensions scale of nursing performance, nursing work environment using practice environment scale of the nursing work index, and health-promoting behaviours using health promoting lifestyle profile-II.

Empirical results revealed that nurses which were working with managers in units provided better ability, more support and leadership showed significantly more physical activity and health responsibility. The study indicated that nurses with appropriate staff and resources had better stress management, among them those with high health responsibility and spiritual growth were perceiving better nursing performance. The study recommended that healthy lifestyle, sufficient staffing, promoting responsibility and improved working conditions should be provided to improve nursing performance.

Abd Elhamid et al. (2013) examined role ambiguity and work performance of nurses in Minia University Hospital. The analysis was conducted through descriptive correlational approach on 85 nurses working in inpatient units at the hospital. The study included three tools namely, personal data sheet, questionnaire for role conflict and ambiguity and observation checklist for assessing nurses' performance. The results revealed negative correlation of role ambiguity with performance of nurses, indicating that whenever an increase in either role conflict or role ambiguity would accompany lower performance of nurses. The results highlighted positive correlation between role conflict and role ambiguity while increase in anyone of these would be associated with increase in the other as well. The study concluded that many nurses who took part in the sample faced huge role ambiguity and role conflict irrespective of their demographic characteristics. The results provided that married nurses had high role ambiguity than the single nurses as single workers emphasis more on the education and training. Moreover, the study found females had more role ambiguity than males. Similarly, the results revealed that young workers faced more role ambiguity. The study recommended conducting an orientation program for providing awareness and knowledge of nurses relating to hospital policy, job description, rules, regulations, responsibilities, equipment, facilities, expectations and standards for performance evaluation. However, the study was limited to one hospital only which lacked generalizability.

Based on extensive literature review, the following hypotheses were developed for testing.

H1: Work overload stress significantly impacts on the performance of staff nurses in government teaching hospitals of Lahore, Pakistan.

H2: Lack of motivation stress significantly impacts on the performance of staff nurses in government teaching hospitals of Lahore Pakistan.

H3: Physical environment stress significantly impacts on the performance of staff nurses in government teaching hospitals of Lahore Pakistan.

H4: Role ambiguity stress significantly impacts on the performance of staff nurses in government teaching hospitals of Lahore Pakistan.

H5: Burnout significantly impacts on the performance of staff nurses in government teaching hospitals of Lahore Pakistan.

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H6: Burnout mediates the relationship between work overload stress and performance of staff nurses in government teaching hospitals of Lahore Pakistan.

H7: Burnout mediates the relationship between lack of motivation stress and performance of staff nurses in government teaching hospitals of Lahore Pakistan.

H8: Burnout mediates the relationship between physical environment stress and performance of staff nurses in government teaching hospitals of Lahore Pakistan.

H9: Burnout mediates the relationship between role ambiguity stress and performance of staff nurses in government teaching hospitals of Lahore Pakistan.

H10: Professional experience moderates the relationship between work overload stress and performance of staff nurses in government teaching hospitals of Lahore Pakistan.

H11: Professional experience moderates the relationship between lack of motivation stress and performance of staff nurses in government teaching hospitals of Lahore Pakistan.

H12: Professional experience moderates the relationship between physical environment stress and performance of staff nurses in government teaching hospitals of Lahore Pakistan.

H13: Professional experience moderates the relationship between role ambiguity stress and performance of staff nurses in government teaching hospitals of Lahore Pakistan.

There are four independent variables (I.Vs.) in the conceptual framework. These include "role ambiguity stress," "physical environment," "work overload stress," and "lack of motivation stress," with "burnout" acting as the mediator. "Professional experience" is the moderator. The dependent variable is performance (D.V.).

Figure 1

Conceptual Framework

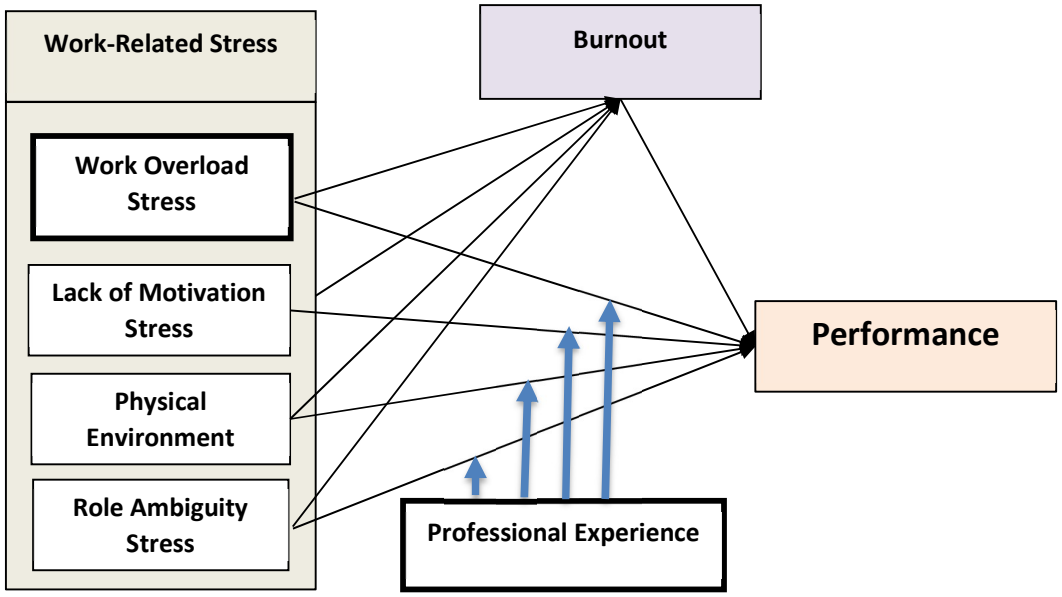

Figure 1 here as in original: Work-Related Stress (Work Overload Stress, Lack of Motivation Stress, Physical Environment Stress, Role Ambiguity Stress) → Burnout → Performance, with Professional Experience as moderator.

3. Research Methodology

The existing research is focused on quantitative data analysis where the data of nurses working in government hospitals of Lahore is observed. The population for this study comprises 8,672 populations from government teaching hospitals in Lahore, Pakistan. These institutions were chosen due to their significant role in providing healthcare services and their relevance as sites of high work-related stress among nurses. Then

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target population is government teaching hospitals in Lahore, Pakistan and population data is collected from Government Department of Nursing School. The present study has used proportionate stratified random sampling. Random sampling has an advantage that it represents the population well and its estimated statistic are close to the population parameter (Cochran, 1977).

Table 3.1

Proportionate Stratified Random Sampling for Data Collection

Sr. No.	Hospital Name	Quantity of Nurses	Proportionate Sample Size
1	Mayo Hospital Lahore	1629	72
2	Services Hospital Lahore	670	30
3	Sir Ganga Ram Hospital Lahore	779	34
4	Lahore General Hospital Lahore	1359	60
5	Punjab Institute of Neurosciences, Lahore	415	18
6	Jinnah Hospital Lahore	714	31
7	Jinnah Burn and Reconstructive Surgery Centre	90	04
8	Institute of Child Health Lahore	1060	47
9	Punjab Institute of Cardiology Lahore	782	34
10	Lady Willingdon Hospital Lahore	1500	71
11	Govt. Mian Munshi Hospital Lahore	650	31
12	Govt. Hospital Kot Khawaja Saeed	1900	81
13	Institute of Mental Health Lahore	230	10
14	Lady Aitchison Hospital Lahore	700	31
15	Punjab Cancer Care Hospital Lahore	220	11
16	Government Hospital Shahdara Lahore	1820	81
17	Govt. Nawaz Sharif Hospital Lahore	1300	61
18	Govt. Said Mitha Hospital Lahore	1000	41
19	Govt. Mozang Hospital Lahore	160	1
20	Punjab Dental Hospital Lahore	190	1

The present study sample consist of 382 nurses from the total population of 8672 nurses in government teaching hospitals in Lahore. The study designed questionnaire according to its objectives and formed hypothesis. The present study has taken the help of Phayoonpun (2015) adding the question six and seven that are about time dimension of work overload as mentioned in Bacharach et al., (1990). The questions included to measure work overload stress in this study are provided in table 3.2.

Table 3.2

Measurement of Work Overload Stress (WO)

Item
I think my job responsibilities should be reduced.
I feel too busy in my role.
My job responsibilities are too much for me alone.
My job responsibilities is too much for me to execute.
Because my job responsibility is too much, I cannot maintain good quality.
The time of my job is too much that affects my personal life
The work is too much that I have to take work back home

The study uses Oyira and Ademuyiwa (2019) where questions from one to four are external motivation and five to seven are intrinsic motivation; the questions included in this study are as follows:

Table 3.3

Measurement of Lack of Motivation Stress (LM)

Item

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I get extra pay for high performance
I think that the salary I get from the hospital is enough
There is an opportunity to be promoted in the hospital
My colleagues are always with me in solving my personal and family problem.
I have responsibilities related to work.
My colleagues appreciate me for what I did for my work.
I believe that the work which I have done is a respectable job.

The present study uses Alayoubi et al. (2022) questions to estimate physical environment stress; these questions are provided in table 3.4.

Table 3.4

Measurement of Physical Environment Stress

Item
I feel that my work needs safety and security
I suffer from noise in my workplace.
I suffer from poor lighting in my workplace.
I am upset because the devices used in my work are not working well.
I feel insufficient ventilation in my workplace.

The present study uses first six questions from Phayoonpun (2015) including the last two questions that indicate satisfaction level from job and life that made person able to cope up with not knowing how to perform or not knowing the consequences of failing to meet expectations.

Table 3.5

Measurement of Role Ambiguity Stress

Item
I am worry about the level of authority I have in my workplace.
The objectives, planned, and goals of my work are unclear to me.
My work has uncleared explanations of what I need to do to complete it.
I don't know what duties and responsibilities I have.
I am certain of what is expected of me.
I don't know how to divide my time appropriately.
I am satisfied from my job.
I am satisfied from my life.

The present study has adopted questions about work related burnout from Moulton et al. (2022); these are provided in table 3.6.

Table 3.6

Measurement of Burnout

Item
Do you feel worn out at the end of the working day?
Are you exhausted in the morning at the thought of another day at work?
Do you feel that every working hour is tiring for you?
Do you have enough energy for family and friends?
Is the nature of your work emotionally exhausting?
Do you feel burnt out because of your work?

The present study modifies the professional experience when it includes questions related to the skill of individuals that would reflect effectiveness of their work better than just a number that is often attached as the years of working in the particular hospital. The present study uses guidelines from Dewi (2021) and Sinambela and Ernawati (2021) to make the questions to measure professional experience of staff nurses that is represented in table 3.7.

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Table 3.7

Measurement of Professional Experience

Item
I have required qualifications for my job.
I have required training to do my job.
I am able to recognize my work
I know all the procedures required for my job.
I am able to solve various work problems.
I am able to overcome / provide solutions to my work

The present study measures performance of nurses using questions from Oyira and Ademuyiwa (2019) that are listed in table 3.8.

Table 3.8

Measurement of Performance

Item
I achieve my goals by satisfying my patients needs
I do not have the patient best interest in my mind.
I get patients to discuss their needs
I find out nursing care that most helpful to the patients
I offer nursing care best suited to the patients' needs
I answer patient's question about nursing care correctly
I use nursing care plan to solve patient's problem
I give patients an accurate expectation of nursing care
I figure out the patient's need
I help patients by fulfilling their needs

The study used five points Likert scale that is bipolar scale with extreme points of strongly disagree and strongly agree and a central point of neutral while the numerical values from one to five are assigned to transform the data into numerical numbers.

Before collecting data from final questionnaire pilot study sample of 80 nurses from eight different government teaching hospitals in Lahore; specifically, the sample include 06 staff nurses from Institute of Child Health Lahore, 07 nurses from Sir Ganga Ram Hospital Lahore, 06 nurses from Lahore General Hospital Lahore, 19 nurses from Lahore General Hospital Lahore, 01 nurse from Government Hospital Shahdara Lahore, 05 nurses from Mayo Hospital Lahore, 02 nurses from Services Hospital Lahore and 34 nurses from Punjab Institute of Cardiology Lahore.

The Kaiser-Meyer-Olkin (KMO) test and Bartlett's test of sphericity assess factorability and are pre-requisites for EFA (Kim et al., 2016). The KMO test was usually employed for assessing sample size sufficiency (Guivendir and Ozkan, 2022). Leech et al., (2005) highlighted that the value of KMO between 0.50-0.60 considered insufficient, between 0.60-0.70 considered poor, between 0.70-0.80 considered moderate, between 0.80-0.90 was good, and over 0.90 considered exceptional. In other words, the high values of KMO points out that sample size is sufficient for EFA. The Bartlett's Test of Sphericity investigates the difference in unit and true correlation matrix, and its significance affirms factor analysis (Can, 2016). The present study ensured face validity by showing the questionnaire to some nurses and medical superintendents and asked their opinion about the questionnaire that was satisfactory. The content validity was established after the detailed discussions then questionnaire became ready to collect data for pilot study for measuring work overload stress, lack of motivation stress, physical environment stress, role ambiguity, burnout, professional experience and performance of nurses. Construct validity usually examines the claim of research instrument to validate the theory or model underlined (Cavana et al., 2001; Cooper and Schindler, 2006). The construct validity in the present study is checked on EFA and CFA. The EFA results evident in favour of validity of questionnaire and all items/questions were located in latent constructs similar to the distribution of questionnaire.

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Table 3.9

Factor Loadings Results from Exploratory Factor Analysis

Item	1	2	3	4	5	6	7
q1	-0.091	0.821	0.045	-0.051	-0.043	0.099	-0.145
q2	-0.227	0.675	0.011	-0.071	-0.062	0.301	-0.238
q3	-0.026	0.829	0.138	0.051	0.068	0.041	0.079
q4	-0.124	0.779	-0.002	-0.174	-0.036	0.117	0.013
q5	0.009	0.773	0.230	-0.093	0.035	0.029	0.063
q6	-0.035	0.817	0.031	-0.062	-0.111	0.079	-0.078
q7	-0.019	0.716	-0.070	-0.117	-0.205	0.266	-0.046
q8	0.140	0.103	-0.019	0.820	-0.037	-0.071	-0.040
q9	0.044	-0.081	-0.058	0.776	0.060	-0.009	-0.056
q10	-0.032	-0.093	-0.015	0.700	-0.019	0.197	-0.014
q11	0.002	-0.074	-0.051	0.795	0.004	0.148	0.087
q12	0.014	-0.082	-0.012	0.742	-0.050	0.149	-0.136
q13	-0.158	0.011	-0.093	0.733	-0.143	-0.128	0.188
q14	0.050	-0.164	-0.085	0.684	0.013	0.098	0.003
q15	0.164	-0.077	-0.056	0.031	0.000	0.278	0.627
q16	0.057	-0.037	0.021	0.002	-0.081	-0.207	0.789
q17	-0.142	-0.063	-0.045	-0.071	-0.081	-0.011	0.788
q18	-0.114	-0.147	-0.139	-0.034	-0.167	0.422	0.558
q19	-0.035	0.027	0.098	0.029	-0.075	0.190	0.704
q20	0.819	-0.040	-0.168	0.121	0.050	0.064	0.127
q21	0.735	0.009	-0.070	0.059	0.120	0.110	-0.115
q22	0.847	-0.031	-0.151	-0.054	0.019	0.123	-0.017
q23	0.770	0.055	-0.079	-0.038	0.279	0.168	-0.020
q24	0.726	-0.148	-0.018	0.004	0.028	0.123	-0.078
q25	0.826	-0.026	0.029	-0.127	0.039	-0.021	-0.025
q26	0.833	-0.070	-0.011	0.046	0.046	0.032	0.107
q27	0.624	-0.117	-0.040	0.059	0.172	0.029	-0.009
q28	0.166	0.235	-0.175	0.109	0.047	0.654	0.152
q29	0.362	0.248	-0.277	0.151	-0.073	0.544	0.152
q30	0.091	0.145	-0.106	0.079	-0.081	0.730	0.029
q31	0.246	0.328	-0.263	0.067	-0.115	0.470	-0.060
q32	0.248	0.297	-0.306	0.111	0.063	0.500	0.173
q33	0.115	0.274	-0.268	0.184	0.010	0.522	0.086
q34	0.117	-0.120	0.087	-0.045	0.819	0.005	-0.110
q35	0.114	-0.084	0.071	0.122	0.771	-0.002	-0.033
q36	0.099	0.002	0.041	-0.101	0.818	-0.173	-0.029
q37	0.124	-0.039	-0.114	0.015	0.832	-0.057	0.003
q38	0.025	0.011	0.083	-0.106	0.798	0.052	-0.045
q39	0.155	-0.051	0.128	-0.032	0.801	0.023	-0.139
q40	-0.088	-0.078	0.572	0.015	0.003	-0.111	0.093
q41	-0.251	-0.203	0.581	-0.127	0.168	0.173	-0.250
q42	-0.195	0.036	0.664	-0.087	-0.021	-0.102	0.016
q43	-0.109	0.020	0.616	0.180	0.175	-0.147	0.005
q44	-0.070	0.021	0.717	-0.073	-0.055	-0.264	-0.037
q45	-0.075	0.028	0.669	-0.186	0.104	0.152	0.094
q46	0.000	0.211	0.648	-0.147	0.015	-0.138	-0.175

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Item	1	2	3	4	5	6	7
q47	0.010	0.029	0.643	-0.023	0.050	-0.158	-0.010
q48	0.025	0.112	0.641	0.018	-0.058	-0.050	-0.070
q49	0.086	0.091	0.658	-0.018	0.062	-0.069	0.065

Note. Bold values are factor loadings greater than 0.4.

The present study uses CFA for assessing construct validity of instruments that is questionnaire in the present study. CFA is a statistical technique for examining if the observed items appropriately represent the latent construct and the model for measurement fit well to the collected data (Hair et al., 2019). The study used standardized factor loadings of CFA for examining the strength of relationship between constructs and observed items. The study followed Suryawan et al. (2022) where any item with less than 0.50 factor loadings was removed due to low contribution in the construct. The detailed results of pilot sample were provided in appendix B. Every item in the pilot sample questionnaire was greater than or equal to 0.50 for which all the items were included for further analysis. Construct validity through CFA was further analysed using discriminant and convergent validity.

Convergent validity examined variance shared while measuring similar trait using scores from two different items measuring similar latent concept must be highly correlated (Cavana et al., 2001; Salkind, 2006). Hair et al. (2006) explained it with indicators of a specific construct converge or interrelated constructs accurately. It has measured through CFA, factor loading value, AVE and reliability (Hair et al., 2010). AVE ranges between 0 and 1 and it is estimated by the following formula taken from Said et al. (2011) and Phayoonpun (2015):

Although the recommended threshold for AVE is 0.50, values below 0.50 (e.g., around 0.40) could be acceptable when composite reliability remained more than 0.60 (Fornell and Larcker, 1981; Malhotra and Dash, 2011; Hair et al., 2017). This study assessed the convergent validity of all the constructs that is reported in table 3.11. AVE of work overload stress, lack of motivation stress, role ambiguity stress and professional experience appeared greater than 0.5 while the value of physical environment stress and burnout remained greater than 0.4 but its value remained 0.369 in case of performance that would be troublesome. However, AVE also need to be viewed with factor loadings for performance more than 0.5 and its reliability exceeded 0.7 and it was pilot sample and hold the possibility of increasing AVE in the full sample extracted.

Table 3.10

Average Variance Extracted (AVE) of Pilot Sample

Variable Name	AVE
Work Overload Stress (WO)	0.590
Lack of Motivation Stress (LM)	0.509
Physical Environment Stress (PE)	0.413
Role Ambiguity Stress (RO)	0.578
Burnout (BO)	0.454
Professional Experience (EXP)	0.611
Performance (WP)	0.369

Discriminant validity is another mechanism for construct validity that represents true distinguishing constructs from each other (Hair et al., 2010). Its higher values indicate uniqueness of construct and capture specific phenomenon. The present study has used two methods to estimate discriminant validity.

AVE refers to variance confined through construct in comparison with error of measurement (Hair et al., 2006). Discriminant validity in this case assessed by square root of AVE remained greater than correlations between latent constructs. Present study tested pilot sample constructs to check for discriminant validity using correlations estimated from Spearman formula and the results are provided in table 3.11, correlation matrix diagonal which represents one was replaced with square root of AVE so that every value can be compared with the row and column entries attached. It can be easily seen that empirics of square root of AVE remained larger than correlation coefficient values within constructs that declared high discriminant validity for the constructs from data of pilot sample.

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Table 3.11

Discriminant Validity of Pilot Sample using AVE and Spearman Correlation Coefficient

Construct	WO	LM	PE	RO	BO	EXP	WP
Work Overload Stress (WO)	0.768						
Lack of Motivation Stress (LM)	-0.114	0.713					
Physical Environment Stress (PE)	-0.113	0.011	0.643				
Role Ambiguity Stress (RO)	-0.068	0.103	-0.021	0.761			
Burnout (BO)	0.315	0.192	0.212	0.387	0.673		
Professional Experience (EXP)	-0.050	-0.069	-0.205	0.235	-0.064	0.782	
Performance (WP)	0.138	-0.150	-0.074	-0.231	-0.373	0.125	0.608

Note. Bold values are square root of AVE. All other values are Spearman rho coefficient of correlation within constructs that are provided in columns and rows. WO, LM, PE, RO, BO, EXP and WP means the same constructs mentioned within brackets in rows.

The present study uses Heterotrait-Monotrait Ratio (HTMT) to test discriminant validity. HTMT compares the correlation between constructs items that are observed during the data collection and make a ratio of Heterotrait correlations that are correlation between item of different constructs and Monotrait correlations that are correlations between items of the same construct. Empirical values in the table were below 0.85 that ensure discriminant validity of the constructs in the pilot sample. Therefore, it can be concluded that every construct was different from the other in the analysis of initial sample drawn and the full sample can be collected using the same questionnaire.

Table 3.12

HTMT Ratio for Discriminant Validity of Pilot Sample

Constructs (Latent Variables)	HTMT Ratio
Work Overload Stress (WO)- Lack of Motivation Stress (LM)	-0.160
Work Overload Stress (WO)- Physical Environment Stress (PE)	-0.154
Work Overload Stress (WO)-Role Ambiguity Stress (RO)	-0.131
Work Overload Stress (WO)-Burnout (BO)	0.394
Work Overload Stress (WO)-Professional Experience (EXP)	-0.105
Work Overload Stress (WO)-Performance (WP)	0.147
Lack of Motivation Stress (LM)- Physical Environment Stress (PE)	0.050
Lack of Motivation Stress (LM)-Role Ambiguity Stress (RO)	0.081
Lack of Motivation Stress (LM)-Burnout (BO)	0.230
Lack of Motivation Stress (LM)-Professional Experience (EXP)	-0.090
Lack of Motivation Stress (LM)-Performance (WP)	-0.182
Physical Environment Stress (PE)-Role Ambiguity Stress (RO)	0.015
Physical Environment Stress (PE)-Burnout (BO)	0.342
Physical Environment Stress (PE)-Professional Experience (EXP)	-0.282
Physical Environment Stress (PE)-Performance (WP)	-0.212
Role Ambiguity Stress (RO)- Burnout (BO)	0.270
Role Ambiguity Stress (RO)- Professional Experience (EXP)	-0.269
Burnout (BO)- Professional Experience (EXP)	-0.089
Burnout (BO)- Performance (WP)	-0.520
Professional Experience (EXP)- Performance (WP)	0.138

Reliability is consistency of measurement or extent by similar results occurred from the instrument in the same situations using the same subjects (Nunnally, 1978). The empirical testing of this reliability is usually done using Cronbach's alpha (α) value where if the estimated value is greater than 0.60 then instruments are considered reliable. In addition, construct reliabilities were also checked whose value more than 0.5 is considered satisfactory (Hair et al., 2006). Werts et al., (1974) provided another test for estimating reliability that is named composite reliability that ranges from zero to 1 and its value greater than 0.6 indicate convergent

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validity within the acceptable range (Hair et al., 2010). Empirically construct reliability highlighted consistency of construct validity indicator; it is estimated using the formula provided in Said et al., (2011) that is as follows:

The estimated value of composite reliability greater than 0.70 suggests construct reliability and internal consistency (Hair et al., 2010). The present study tested reliability of factors that are latent variables in pilot study, and its results are presented in table 3.13. The table values provided that Cronbach alpha and composite reliability both were greater than 0.7 for every construct. Therefore, the reliability of constructs was ensured. Moreover, performance that provided low AVE had provided reliability measures greater than 0.8 that favour the constructs to carry forward in the full sample analysis.

Table 3.13

Reliability of Constructs in Pilot Study

Variable Name	No. of Items	Cronbach Alpha (α)	Composite Reliability
Work Overload Stress (WO)	7	0.908	0.909
Lack of Motivation Stress (LM)	7	0.876	0.878
Physical Environment Stress (PE)	5	0.773	0.775
Role Ambiguity Stress (RO)	8	0.915	0.916
Burnout (BO)	6	0.830	0.832
Professional Experience (EXP)	6	0.901	0.904
Performance (WP)	10	0.850	0.853

4. Analysis and Results

This study's objective was to find out how work-related stress affected staff nurses' performance in government teaching hospitals in Lahore, Pakistan. The demographic information of the respondents are shown in Table 4.1.

Table 4.1

Demographic Data of Nurses

	Variables	Frequency	Percentage
Age	20-25 years	107	28.0
	26-35 years	223	58.3
	36-47 years	47	12.3
	46-55 years	5	1.3
Gender	Male	25	6.5
	Female	357	93.5
Marital Status	Single	184	50.27
	Married	182	49.73
Years of Service	1-5 years	146	38.22
	6-10 years	134	35.08
	11-15 years	54	14.14
	16-20 years	16	4.19
	21-25 years	22	5.76
	26-30 years	10	2.62
Service Years in Current Hospital	1-5 years	203	53.14
	6-10 years	109	28.53
	11-15 years	28	7.33
	16-20 years	16	4.19
	21-25 years	16	4.19
	26-30 years	10	2.62

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The descriptive analysis (Table 4.2) of variables majorly includes their maximum value, minimum value, mean and standard deviation of the responses and sometimes it also included the measure of Skewness and kurtosis that was used to assess normality.

Table 4.2

Descriptive Statistics

Question	N	Min	Max	Mean	S.D.	Question	N	Min	Max	Mean	S.D.
q1	382	1	5	3.050	0.725	q26	382	1	5	2.450	0.900
q2	382	1	5	2.950	0.666	q27	382	1	5	2.490	0.890
q3	382	1	5	2.930	0.739	q28	382	1	5	2.820	0.776
q4	382	1	5	2.520	0.690	q29	382	1	5	3.180	0.700
q5	382	1	5	3.090	0.681	q30	382	1	5	2.930	0.806
q6	382	1	5	2.820	0.697	q31	382	1	5	2.720	0.708
q7	382	1	5	3.130	0.731	q32	382	1	5	3.140	0.722
q8	382	1	5	2.640	0.955	q33	382	1	5	3.080	0.693
q9	382	1	5	2.870	0.905	q34	382	1	5	2.990	0.840
q10	382	1	5	2.540	0.815	q35	382	1	5	2.930	0.664
q11	382	1	5	2.640	0.806	q36	382	1	5	3.070	0.772
q12	382	1	5	2.470	0.730	q37	382	1	5	3.040	0.724
q13	382	1	5	2.680	0.867	q38	382	1	5	2.750	0.850
q14	382	1	5	2.190	0.820	q39	382	1	5	2.980	0.823
q15	382	1	5	2.710	0.959	q40	382	1	5	2.800	0.773
q16	382	1	5	2.470	0.831	q41	382	1	5	3.130	0.786
q17	382	1	5	2.700	0.899	q42	382	1	5	3.000	0.701
q18	382	1	5	2.050	0.834	q43	382	1	5	3.190	0.678
q19	382	1	5	2.790	0.909	q44	382	1	5	3.100	0.755
q20	382	1	5	2.310	0.971	q45	382	1	5	3.150	0.742
q21	382	1	5	2.320	0.814	q46	382	1	5	3.200	0.827
q22	382	1	5	2.690	0.942	q47	382	1	5	3.150	0.708
q23	382	1	5	2.440	0.882	q48	382	1	5	3.090	0.785
q24	382	1	5	2.490	0.974	q49	382	1	5	3.330	0.681
q25	382	1	5	2.580	0.927						

Normality test was important because large variation in the data made statistical results invalid (Hair et al., 2010). The present study tested both univariate and multivariate normality and its results were provided in table 4.3. The present study used skewness and kurtosis for each variable in the data set to check univariate normality. The assessment was made on base of Finney and DiStefano (2006) criterion which suggested that absolute values should be less than three for skewness and less than seven for kurtosis which was fulfilled as represented in table 4.3. Therefore, the present study observed factors were normally distributed with no reported Skewness or abrupt peakedness in the distribution.

Table 4.3

Results of Skewness and Kurtosis

Variables	Skewness	Critical Ratio	Kurtosis	Critical Ratio	Variables	Skewness	Critical Ratio	Kurtosis	Critical Ratio
q1	0.173	1.383	-0.012	-0.049	q8	0.146	1.167	-0.336	-1.340
q2	0.000	-0.003	0.361	1.440	q9	0.058	0.463	-0.282	-1.124
q3	0.077	0.618	0.205	0.817	q10	0.025	0.202	-0.231	-0.922
q4	0.132	1.050	0.030	0.121	q11	0.069	0.547	-0.451	-1.799
q5	0.281	2.243	0.403	1.607	q12	0.069	0.547	-0.056	-0.224
q6	0.159	1.270	0.304	1.214	q13	0.006	0.050	-0.460	-1.833
q7	-0.045	-0.363	-0.116	-0.463	q14	0.469	3.739	0.257	1.025

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Variables	Skewness	Critical Ratio	Kurtosis	Critical Ratio
q15	-0.017	-0.139	-0.715	-2.854
q16	0.146	1.169	-0.407	-1.622
q17	-0.051	-0.407	-0.481	-1.918
q18	0.373	2.979	-0.420	-1.674
q19	0.041	0.324	-0.333	-1.330
q20	0.391	3.116	-0.516	-2.058
q21	0.325	2.592	0.246	0.981
q22	0.184	1.465	-0.366	-1.461
q23	0.149	1.188	-0.370	-1.475
q24	0.201	1.606	-0.629	-2.510
q25	0.203	1.621	-0.251	-1.002
q26	0.138	1.103	-0.456	-1.821
q27	0.072	0.573	-0.532	-2.123
q28	0.178	1.424	-0.176	-0.701
q29	0.013	0.102	0.084	0.333
q30	0.119	0.949	0.052	0.207
q31	0.103	0.822	0.269	1.075
q32	-0.176	-1.407	-0.046	-0.182
q33	0.041	0.328	0.259	1.034
q34	0.158	1.257	-0.493	-1.968
q35	0.028	0.221	-0.271	-1.083
q36	0.015	0.124	-0.293	-1.170
q37	0.070	0.556	-0.073	-0.291
q38	0.113	0.898	-0.131	-0.522
q39	-0.046	-0.369	-0.354	-1.412
q40	-0.047	-0.378	-0.252	-1.007
q41	-0.169	-1.352	0.101	0.404
q42	-0.095	-0.760	0.093	0.371
q43	-0.152	-1.213	0.240	0.958
q44	0.058	0.461	-0.179	-0.715
q45	-0.101	-0.803	-0.447	-1.783
q46	-0.099	-0.787	-0.209	-0.835
q47	-0.048	-0.379	-0.145	-0.576
q48	0.038	0.303	-0.120	-0.477
q49	-0.178	-1.417	0.148	0.589
Multivariate	-5.014	-0.693		

Table 4.3 also discussed results of multivariate normality of the dataset. The estimated statistic was -5.014 which should be lower than ρ (ρ +2), where ρ point out the number of observed variables. The observed variables of present study were 49 so the critical value computed to 2499 which was clearly very large from estimated value of the multivariate normality, therefore the results indicated combined distribution multivariate normal. This result also eliminated the chances of overestimation of chi-square statistic or downward bias of estimated standard errors (Nevitt & Hancock, 2001).

The present study used KMO and Bartlett test of the sphericity to check the factorability of the constructs. The results were provided in table 4.4. The KMO measure of the present study was 0.877 which was considered good estimate indicating that sample size was sufficient for conducting the Exploratory Factor Analysis (EFA). The Bartlett test of sphericity was significant as the p-value was 0.000 which indicated that all items or questions included in the analysis were significantly different, indicating these observed items were different from each other and could be used in the factor analysis. After the Bartlett test the study used CFA before conducting the path analysis. Therefore, these tests results indicated that both Efa and CFA can be performed in the current analysis.

Table 4.4

Results of KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	**0.877**
Bartlett's Test of Sphericity	8613.345
	11760.000

The EFA was used to verify whether all the items attached to a particular construct were in fact representing the same construct statistically without the prior knowledge of how many factors really exist within the data or which observed variables belong with which construct. Scree plot provided the relationship between number of factors included in the analysis with their respective eigenvalues and it was helpful to identify the number of factors to be included in the analysis. The Scree plot of present study was represented in figure 4.1.

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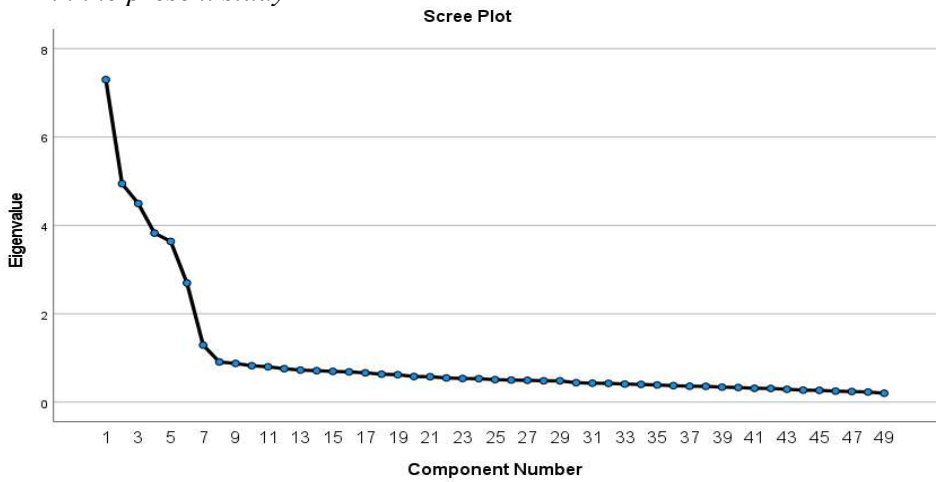
Figure 4.1

Scree Plot for EFA in the present study



The estimates in figure provided sharp decline until seven components in eigenvalues after which the decline lowers that was also elaborated through visible elbow in the figure at factor seven, so following Loewen and Gonulal (2015) seven factors were included in the analysis. Therefore, the questionnaire in the present study highlighted seven latent constructs that were like number of latent variables in our analysis. The present study then used estimated these seven constructs that were identified by Scree plot. The resulting factors were provided in table 4.5. The table provided results for EFA where every item/question must be attached to only one factor for which the present study used factors absolute value greater than 0.4 as relevant for indicated factor in literature (Kim et al., 2016; Sigulda and Maritz, 2023). The values greater than 0.4 were considered relevant for the particular factor and were presented as bold letters in the table 4.5. The present study implemented the principal component analysis with varimax and Kaiser Normalization with rotated factors to obtain the factor loadings. The analysis of table pointed out that factor 01 was performance including items or questions from 40 to 49, factor 02 was role ambiguity stress including items or questions from 20 to 27, factor 03 was work overload stress including items or questions from 01 to 07, factor 04 was lack of motivation stress including items or questions from 8 to 14, factor 05 was professional experience including items or questions from 34 to 39, factor 06 was burnout including items or questions from 28 to 33, factor 07 was physical environment stress including items or questions from 15 to 19. The EFA results provided evidence in favour of validity of the questionnaire as all items/questions here were included in the same latent construct similar to the questionnaire of the present study.

Table 4.5

EFA Results by Rotated Component Matrixa

Item	1	2	3	4	5	6	7
q1	-0.025	-0.018	0.810	-0.071	-0.014	0.086	0.005
q2	-0.024	-0.031	0.775	-0.058	0.039	0.143	-0.069
q3	0.049	-0.037	0.788	0.020	0.085	0.078	0.026
q4	-0.039	0.024	0.759	-0.111	-0.045	0.189	-0.067
q5	0.020	0.008	0.803	-0.065	0.002	0.111	-0.049
q6	-0.079	0.010	0.787	-0.057	-0.082	0.139	-0.034
q7	-0.110	-0.023	0.734	-0.065	-0.049	0.202	-0.074
q8	-0.108	0.052	-0.023	0.782	0.000	0.034	-0.011
q9	-0.006	0.085	-0.041	0.727	0.001	0.160	-0.050
q10	-0.007	0.009	-0.059	0.731	0.019	0.017	0.058
q11	-0.050	0.010	-0.042	0.774	-0.058	0.088	0.004
q12	-0.014	-0.003	-0.127	0.741	0.024	0.098	-0.065
q13	-0.113	-0.041	-0.005	0.751	-0.071	0.051	0.084
q14	0.031	-0.017	-0.060	0.731	0.006	0.129	0.011
q15	-0.119	0.037	-0.063	-0.028	-0.054	0.185	0.706

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Item	1	2	3	4	5	6	7
q16	0.019	-0.036	-0.091	-0.009	-0.025	0.076	0.684
q17	0.004	-0.037	-0.138	-0.063	-0.003	0.052	0.748
q18	-0.089	-0.059	-0.005	0.055	-0.067	0.128	0.674
q19	-0.058	0.026	0.077	0.063	-0.002	-0.020	0.751
q20	0.051	0.763	-0.036	0.056	0.030	0.160	0.011
q21	-0.046	0.749	0.027	0.018	0.033	0.037	-0.095
q22	-0.078	0.767	0.006	0.004	-0.013	0.091	-0.027
q23	-0.069	0.736	-0.029	-0.023	0.031	0.141	-0.088
q24	-0.101	0.771	0.055	0.021	0.008	0.069	0.040
q25	0.036	0.777	-0.036	0.002	-0.025	0.027	0.018
q26	-0.011	0.783	0.005	0.037	0.057	0.023	0.073
q27	-0.076	0.756	-0.040	-0.013	-0.023	0.018	-0.007
q28	-0.211	0.125	0.173	0.182	0.033	0.683	0.081
q29	-0.177	0.108	0.195	0.080	0.024	0.704	0.082
q30	-0.221	0.110	0.196	0.116	-0.086	0.693	0.084
q31	-0.185	0.118	0.193	0.134	-0.121	0.691	0.083
q32	-0.270	0.116	0.249	0.118	0.016	0.562	0.234
q33	-0.214	0.139	0.270	0.174	-0.005	0.591	0.121
q34	0.015	0.063	0.011	0.009	0.809	0.010	-0.052
q35	0.022	0.035	-0.027	0.021	0.772	-0.034	0.027
q36	-0.021	-0.022	-0.004	-0.014	0.830	-0.092	-0.058
q37	-0.059	0.020	-0.055	-0.001	0.765	-0.006	-0.117
q38	0.020	-0.016	0.014	-0.059	0.810	-0.016	0.030
q39	0.080	0.008	0.014	-0.030	0.808	0.025	0.003
q40	0.601	-0.020	-0.122	-0.069	0.000	-0.160	0.030
q41	0.623	-0.065	-0.070	-0.057	0.024	-0.103	-0.046
q42	0.666	-0.046	-0.035	-0.014	-0.017	-0.075	-0.045
q43	0.661	-0.008	-0.008	0.043	0.044	-0.162	0.108
q44	0.698	-0.001	-0.029	0.009	-0.009	-0.111	-0.025
q45	0.659	-0.048	0.040	-0.015	-0.017	-0.082	-0.056
q46	0.737	-0.022	0.066	-0.048	-0.024	-0.062	-0.124
q47	0.647	-0.020	0.066	0.007	0.036	-0.212	0.058
q48	0.675	-0.032	-0.041	-0.110	-0.071	-0.007	-0.065
q49	0.713	-0.030	-0.079	-0.023	0.122	-0.019	-0.109

Extraction Method: Principal Component Analysis. *Rotation Method:* Varimax with Kaiser Normalization.
a. Rotation converged in 6 iterations.

Moreover, table 4.6 highlighted the total variance explained by using these factors. The second column indicated that additional variance which was explained by adding the additional factor in the analysis that reduced rapidly when added the additional factor and was least only 5.671 at adding the last seventh factor in the analysis. The third column provided the cumulative variance explained by all the factors that was estimated 57.540 that indicated the 57 percent variation in the observed variables was fairly explained by the latent factors added in the analysis.

Table 4.6

Total Variance Explained by EFA Factors

Component	Total	Percentage of Variance	Cumulative Percentage
1	4.878	9.955	9.955
2	4.782	9.760	19.715
3	4.651	9.491	29.206
4	4.117	8.401	37.607
5	3.928	8.017	45.624
6	3.060	6.245	51.869
7	2.779	5.671	57.540

Extraction Method: Principal Component Analysis.

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CFA of Work Overload Stress (WO)

The first CFA was conducted for constructing work overload stress. Its results were provided in table 4.7 and figure 4.2. The standardized loadings were provided in the diagram beside the path shown by arrow. The standardized loadings pointed out that the most important relationship of work overload stress was with the job responsibilities as both the questions, one and five, indicated 0.78 factor loadings were attached with the responsibility at the workplace. These items indicated the job responsibilities of an individual, thinking that their job responsibilities were too much and should be reduced. Moreover, all factor loadings were high where the least factor loading provided 0.73 that was found from items three and item seven where the individual thought loneliness in performing responsibilities and had to take home the work assigned. The other factor loadings were also high which indicated that all the dimensions considered for work overload stress contributed significantly to computing this latent factor. The items were majorly based on responsibilities of the individual, feeling about being busy in the role, loneliness in performing responsibilities, overwhelmed by job responsibilities, reduction in quality due to job responsibilities, affecting personal life due to long working hours and take work back home by the individuals were considered the dimensions that were affecting work overload stress. The results indicated that all these dimensions were significantly making work overload stress for the nurse working government teaching hospitals of Lahore. Further, the p-value indicated that all the observed items had highly statistically significant relationship with work overload stress because the p-value was 0.000 for all the indicators which was lower than 0.05 the threshold for significance. Moreover, in order to check if these results were considered valid the present study also included the goodness of fit indicators for the CFA estimates that were provided in the box of the figure 4.2.

Figure 4.2

CFA of Work Overload Stress

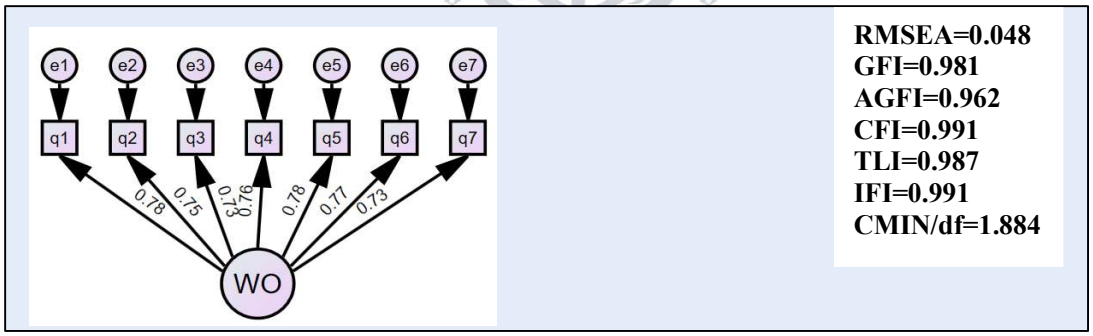

Table 4.7

CFA Results of Work Overload Stress (WO)

Path	Unstandardized Estimate	Standardized Estimate	Standard Error	Critical Ratio	P-Value
WO → q1	1.000	0.783			
WO → q2	0.877	0.747	0.057	15.269	0.000
WO → q3	0.949	0.729	0.064	14.833	0.000
WO → q4	0.925	0.761	0.059	15.607	0.000
WO → q5	0.936	0.780	0.058	16.081	0.000
WO → q6	0.949	0.772	0.060	15.885	0.000
WO → q7	0.939	0.730	0.063	14.841	0.000

The Root Mean Square Error Approximation (RMSEA) was estimated to 0.048 which was lower than 0.05 threshold indicating that model overall provided good estimates to structural model. The value of GFI and AGFI were 0.981 and 0.962 respectively, which were also greater than 0.95 indicating that the CFA model of work overload stress explained population comparisons well. The other indicators such as CFI, TLI, IFI

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and CMIN/df were 0.991, 0.987, 0.991 and 1.884 respectively which all existed in the acceptable range for the good model provided by CFA which indicated that the estimated CFA model for work overload stress fit well to the observed data and could be used for the further analysis. Since all the standardied coefficients were greater than 0.7, the present study did not exclude any of the question used in the questionnaire for estimating work overload stress.

CFA of Lack of Motivation Stress (LM)

The CFA of lack of motivation stress results were provided in the figure 4.3 and table 4.8.

Figure 4.3

CFA of Lack of Motivation Stress

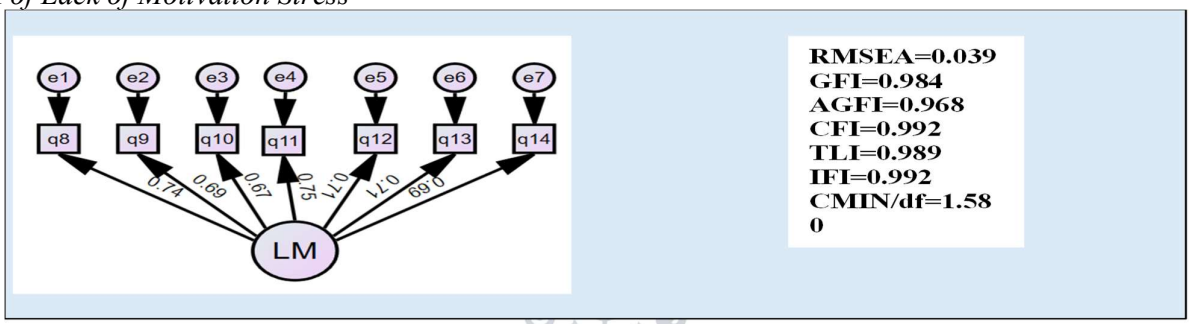

Table 4.8

CFA Results of Lack of Motivation Stress (LM)

Path	Unstandardized Estimate	Standardized Estimate	Standard Error	Critical Ratio	P-Value
LM → q8	1.000	0.743			
LM → q9	0.885	0.694	0.068	12.960	
LM → q10	0.767	0.668	0.062	12.465	
LM → q11	0.851	0.748	0.061	14.001	
LM → q12	0.726	0.705	0.055	13.180	
LM → q13	0.868	0.710	0.065	13.269	
LM → q14	0.797	0.689	0.062	12.862	

CFA of Physical Environment Stress (PE)

The CFA of physical environment stress is provided in figure 4.4 and table 4.9. The estimates provided highest standardized coefficient (0.681) to question 17 which indicated poor lighting on the workplace; it was followed by standardized coefficient (0.664) of question 15 indicating the need for safety and security on the workplace. Further, followed by these values was standardized coefficient (0.646) of question 19 highlighting insufficient ventilation in the workplace. The standardized coefficients estimates were highly statistically significant as the p-value was less than 0.05. The results highlighted that physical environment stress was majorly correlated with safety and security, noise in the workplace, poor lightning conditions, devices presence and workability and insufficient ventilation to determine the performance of nurses working in the government teaching hospitals in Lahore. The standardized coefficients of all the factor loadings were greater from 0.6 but less than 0.7 which indicated that these factor loadings were not very high but were still within the acceptable range threshold of above 0.5 for the present study. Therefore, no items were excluded from the analysis. The goodness of fit indicators of this CFA indicated that RMSEA was 0.069 which was above 0.5 but still was below 0.08 which was considered appropriate fit for the model. The other goodness of fit measures also indicated good fit as GFI, AGFI, CFI, TLI, IFI and CMIN/df were estimated 0.986, 0.957, 0.980, 0.959, 0.980 and 2.803 respectively that all were included in the good fit threshold values. Therefore, the present study used the latent construct of physical environment stress further in its analysis.

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Figure 4.4
CFA of Physical Environment Stress

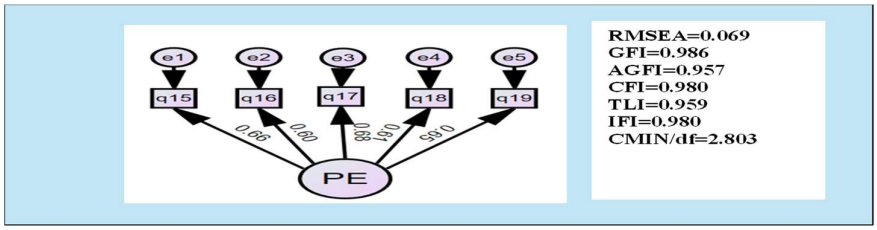

Table 4.9
CFA Results of Physical Environment Stress (PE)

Path	Unstandardized Estimate	Standardized Estimate	Standard Error	Critical Ratio	P-Value
PE → q15	1.000	0.664			
PE → q16	0.782	0.600	0.084	9.276	0.000
PE → q17	0.960	0.681	0.095	10.129	0.000
PE → q18	0.799	0.611	0.085	9.398	0.000
PE → q19	0.921	0.646	0.094	9.792	0.000

CFA of Role Ambiguity Stress (RO)

The CFA results of role ambiguity stress were provided in the figure 4.5 and table 4.10. The standardized estimates (coefficient 0.745) indicated question 24 and question 26 were the most related factors with role ambiguity stress; specifically, these factors were uncertainty about expected work and satisfaction from the job. It was followed by question 20 and question 22, with standardized coefficient 0.738, that were about the level of authority in the workplace and uncleared explanations about assigned work. Moreover, all the standardized estimates were greater than 0.7 providing that role ambiguity stress was majorly determined through all these factors and no observed factor should be excluded from the study, so the present study retained all these observed items to explain role ambiguities stress.

Figure 4.5
CFA of Role Ambiguity Stress

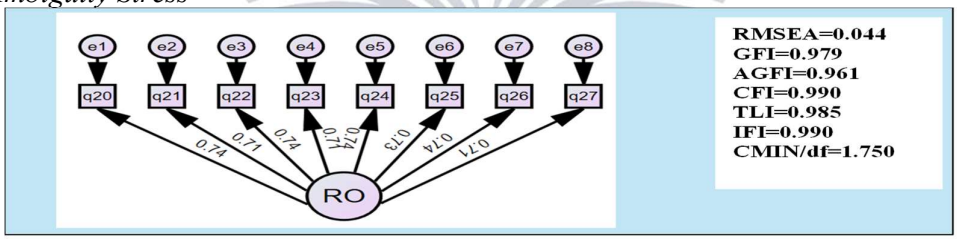

Table 4.10
CFA Results of Role Ambiguity Stress (RO)

Path	Unstandardized Estimate	Standardized Estimate	Standard Error	Critical Ratio	P-Value
RO → q20	1.000	0.738			
RO → q21	0.805	0.707	0.060	13.460	
RO → q22	0.971	0.738	0.069	14.077	
RO → q23	0.873	0.709	0.065	13.492	
RO → q24	1.013	0.745	0.071	14.200	
RO → q25	0.947	0.732	0.068	13.941	
RO → q26	0.936	0.745	0.066	14.206	
RO → q27	0.884	0.711	0.065	13.537	

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The goodness of fit indicator highlighted that the CFA model was a good fit as RMSEA was 0.044 which was less than 0.5. The other indicators including GFI, AGFI CFI, TLI, IFI and CMIN/df were 0.979, 0.961, 0.990, 0.985, 0.990 and 1.750 which all existed in the good fit range for the model. Therefore, the CFA model fitted appropriately to the data and could be used for further analysis.

CFA of Burnout (BO)

The CFA of burnout results were provided in table 4.11 and figure 4.6. The goodness of fit indicators pointed out RMSEA value 0.045 which was less than 0.05 threshold indicating that model was good fit. The value of GFI, AGFI, CFI, TLI, IFI and CMIN/df were estimated 0.986, 0.968, 0.992, 0.986, 0.992 and 1.759 respectively which all highlighted that model CFA was good fit and it could be utilized in the further estimation.

Figure 4.6

CFA of Burnout

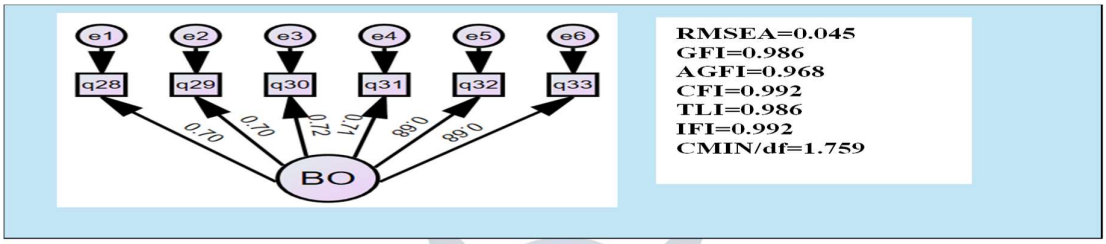

Table 4.11

CFA Results of Burnout (BO)

Path	Unstandardized Estimate	Standardized Estimate	Standard Error	Critical Ratio	P-Value
BO → q28	1.000	0.703			
BO → q29	0.903	0.704	0.074	12.155	0.000
BO → q30	1.058	0.716	0.086	12.337	0.000
BO → q31	0.919	0.708	0.075	12.212	0.000
BO → q32	0.896	0.677	0.076	11.739	0.000
BO → q33	0.863	0.680	0.073	11.780	0.000

CFA of Professional Experience (EXP)

The CFA results of professional experience were provided in table 4.12 and figure 4.7. The estimates of other goodness of fit indicators were greater than 0.95; specifically, the values of GFI, AGFI, CFI, TLI, IFI and CMIN/df were 0.986, 0.966, 0.993, 0.988, 0.993 and 1.873 indicating that the CFA of professional experience was appropriate to use in further empirical analysis.

Figure 4.7

CFA of Professional Experience

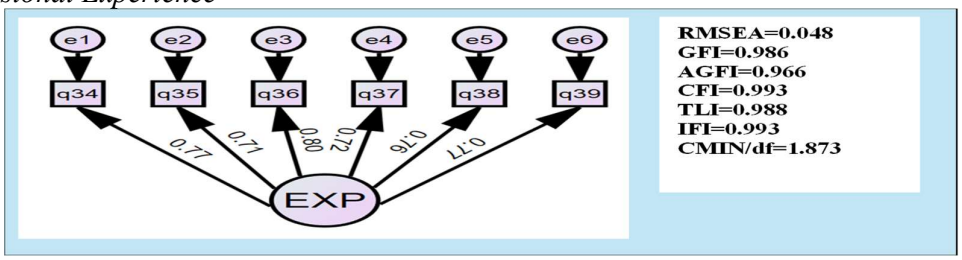

Table 4.12

CFA Results of Professional Experience (EXP)

Path	Unstandardized Estimate	Standardized Estimate	Standard Error	Critical Ratio	P-Value
EXP → q34	1.000	0.773			
EXP → q35	0.729	0.713	0.052	14.045	

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EXP → q36	0.954	0.802	0.059	16.051
EXP → q37	0.800	0.718	0.057	14.157
EXP → q38	0.998	0.762	0.066	15.140
EXP → q39	0.971	0.766	0.064	15.236

CFA of Performance (WP)

The CFA results of performance were provided in figure 4.8 and table 4.13. The goodness of fit indicators of performance provided RMSEA value 0.03 which was lower than 0.05 of the thresholds indicating a good fit. Other values were also greater than 0.95, specifically the value of GFI, AGFI, CFI, TLI, IFI, and CMIN/df were estimated 0.975, 0.961, 0.987, 0.983, 0.987 and 1.449 which indicated that the CFA of performance was good fit and also appropriate for further analysis.

Figure 4.8

CFA of Performance

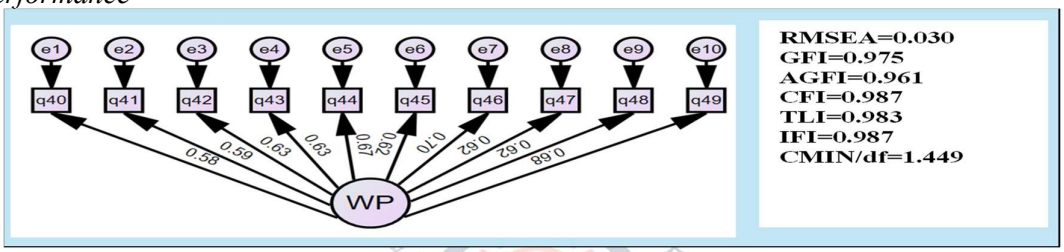

Table 4.13

CFA Results of Performance (WP)

Path	Unstandardized Estimate	Standardized Estimate	Standard Error	Critical Ratio	P-Value
WP → q40	1.000	0.576			
WP → q41	1.043	0.591	0.114	9.161	0.000
WP → q42	0.988	0.628	0.103	9.562	0.000
WP → q43	0.958	0.629	0.100	9.576	0.000
WP → q44	1.130	0.666	0.114	9.952	0.000
WP → q45	1.029	0.617	0.109	9.448	0.000
WP → q46	1.303	0.702	0.127	10.300	0.000
WP → q47	0.993	0.624	0.104	9.525	0.000
WP → q48	1.095	0.621	0.115	9.489	0.000
WP → q49	1.035	0.677	0.103	10.056	0.000

Combined CFA

The study included the combined form of CFA where all the latent constructs along with their observed factors were attached to each other for checking if the observed variables were in fact attached with the construct the researcher had attached with the factor. The results indicated all the factor loadings were appropriate for the specific factors, and these factors were also interrelated. The value of goodness of fit indicators provided that RMSEA was 0.023 which was lower from the threshold of 0.05 indicating that the CFA model fit good to the observed variables. The GFI and AGFI were 0.88 and 0.869 which were close to their appropriate threshold of 0.9 and 0.95. The other goodness of fit indicators including CFI, TLI and IFI remained 0.973, 0.971 and 0.973 which were highly above their goodness of fit threshold of 0.95 indicating that the model CFA was good fit and these constructs could be used for further path analysis using SEM approach. The combined CFA was considered important before conducting the path analysis because it is important to understand if the factors included were distinct from each other and no latent construct was closely related to the other construct that they should be combined and not considered separately in the model. The results indicated that all the factors including work overload stress, lack of motivation stress, physical

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environment stress, role ambiguity stress, burnout, professional experience and performance of nurses were all significantly different constructs from each other based on items that were different from one another. Therefore, Structural Equation Modelling (SEM) could be used for inferential analysis that was used for hypothesis testing of direct effects, moderation and mediation effects.

The present study has investigated face validity after showing questionnaire to the relevant experts that was conducted before data collection process. The construct validity was investigated through both EFA and CFA. EFA approved that the observed values explain the same construct under which they were placed by the questionnaire. CFA factor loadings provided evidence that the questions included constructing the latent variable were important for the specific phenomenon estimated. Further, the study has also tested convergent validity and discriminant validity in the following lines.

Convergent validity according to Hair et al. (2006) indicate extent that indicators of a specific construct converge or share high proportion of variance. In simple words, components of constructs should be interrelated with each other to ensure constructs accurately measure the concept. Convergent validity can be analysed through CFA, factor loading value, Average Variance Extracted (AVE) and reliability (Hair et al., 2010). The AVE values for the present study were provided in table 4.14. The AVE for work overload stress, lack of motivation stress, role ambiguity stress and professional experience were 0.574, 0.502, 0.530 and 0.572 which were greater than the recommended threshold for AVE is 0.50. The AVE of Physical environment stress, burnout and performance remained 0.411, 0.487 and 0.402 which were below threshold recommended of 0.50 but were still greater than 0.40 which was acceptable because of high factor loadings that were greater than 0.50 and composite reliability exceeded 0.70 pointing adequate convergent validity (Fornell & Larcker, 1981; Malhotra & Dash, 2011; Hair et al., 2017).

Table 4.14

Results of Average Variance Extracted (AVE)

Variable Name	AVE
Work Overload Stress (WO)	0.574
Lack of Motivation Stress (LM)	0.502
Physical Environment Stress (PE)	0.411
Role Ambiguity Stress (RO)	0.530
Burnout (BO)	0.487
Professional experience (EXP)	0.572
Performance (WP)	0.402

Discriminant validity exists when the square root of AVE estimated greater than the correlation between the latent constructs. The present study used Spearman formula, and its results were provided in table 4.15. In the table, diagonal of correlation matrix that represents one was replaced with square root of AVE so that every value could be compared with the row and column entries attached. It could be easily seen that every value of square root of AVE remained larger than the correlation coefficient values within constructs, as the correlation matrix values remained less than 0.641 which is the least value for the square root of AVE highlighted as bold values in the table, which declared high discriminant validity for the constructs made from data.

Table 4.15

Discriminant Validity using AVE and Spearman Correlation Coefficient

Construct	WO	LM	PE	RO	BO	EXP	WP
Work Overload Stress (WO)	0.757						
Lack of Motivation Stress (LM)	-0.090	0.708					
Physical Environment Stress (PE)	-0.085	0.013	0.641				
Role Ambiguity Stress (RO)	0.028	0.087	-0.728				
Burnout (BO)	0.366	0.266	0.232	0.229	0.697		
Professional Experience (EXP)	0.004	-0.040	-0.023	-0.055	0.075	0.756	
Performance (WP)	-0.043	-0.122	-0.081	-0.407	0.011	0.115	0.634

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Note. The bold values are square root of AVE in the diagonal.

Another criterion used for discriminant validity was HTMT whose values were reported in table 4.16. Since estimated values for all the relationships between variables provided estimates less than 0.85 which was considered good threshold for discriminant validity (Kline, 2010). Hence, the results provided conclusion that every construct was different from the other construct included in the analysis.

Table 4.16

HTMT Ratio for Discriminant Validity

Constructs (Latent Variables)	HTMT Ratio
Work Overload Stress (WO)- Lack of Motivation Stress (LM)	-0.116
Work Overload Stress (WO)- Physical Environment Stress (PE)	-0.123
Work Overload Stress (WO)-Role Ambiguity Stress (RO)	0.011
Work Overload Stress (WO)-Burnout (BO)	0.453
Work Overload Stress (WO)-Professional Experience (EXP)	-0.012
Work Overload Stress (WO)-Performance (WP)	-0.091
Lack of Motivation Stress (LM)-Physical Environment Stress (PE)	0.056
Lack of Motivation Stress (LM)-Role Ambiguity Stress (RO)	0.081
Lack of Motivation Stress (LM)-Burnout (BO)	0.312
Lack of Motivation Stress (LM)-Professional Experience (EXP)	-0.044
Lack of Motivation Stress (LM)-Performance (WP)	-0.140
Physical Environment Stress (PE)-Role Ambiguity Stress (RO)	-0.023
Physical Environment Stress (PE)-Burnout (BO)	0.355
Physical Environment Stress (PE)-Professional Experience (EXP)	-0.116
Physical Environment Stress (PE)-Performance (WP)	-0.197
Role Ambiguity Stress (RO)-Burnout (BO)	0.293
Role Ambiguity Stress (RO)-Professional Experience (EXP)	0.033
Role Ambiguity Stress (RO)-Performance (WP)	-0.144
Burnout (BO)-Professional Experience (EXP)	-0.070
Burnout (BO)-Performance (WP)	-0.557
Professional Experience (EXP)-Performance (WP)	0.030

Reliability or the consistency of measurement in the present study was empirically tested using Cronbach's alpha and construct reliability. The threshold for Cronbach's alpha estimate was 0.6 where the reliability would be ensured if estimates were greater than 0.60. In addition, threshold for construct reliabilities was 0.5 where the values greater than it were considered satisfactory (Hair et al., 2006). The results of reliability estimates were provided in table 4.17. The estimates of reliability remained greater than 0.8 for Cronbach alpha and greater than 0.7 for composite reliability which provided evidence for reliability of estimates. Moreover, the value of composite reliability greater than 0.70 suggested construct reliability and internal consistency (Hair et al., 2010). Moreover, AVE of physical environment stress, burnout and performance was lower than appropriate threshold, but their reliability measures were 0.777, 0.851 and 0.870 that favoured constructs validity as well.

Table 4.17

Reliability of Constructs

Variable Name	No. of Items	Cronbach Alpha	Composite Reliability
Work Overload Stress (WO)	7	0.904	0.904
Lack of Motivation Stress (LM)	7	0.874	0.876
Physical Environment Stress (PE)	5	0.776	0.777
Role Ambiguity Stress (RO)	8	0.900	0.900
Burnout (BO)	6	0.850	0.851
Professional Experience (EXP)	6	0.887	0.888
Performance (WP)	10	0.869	0.870

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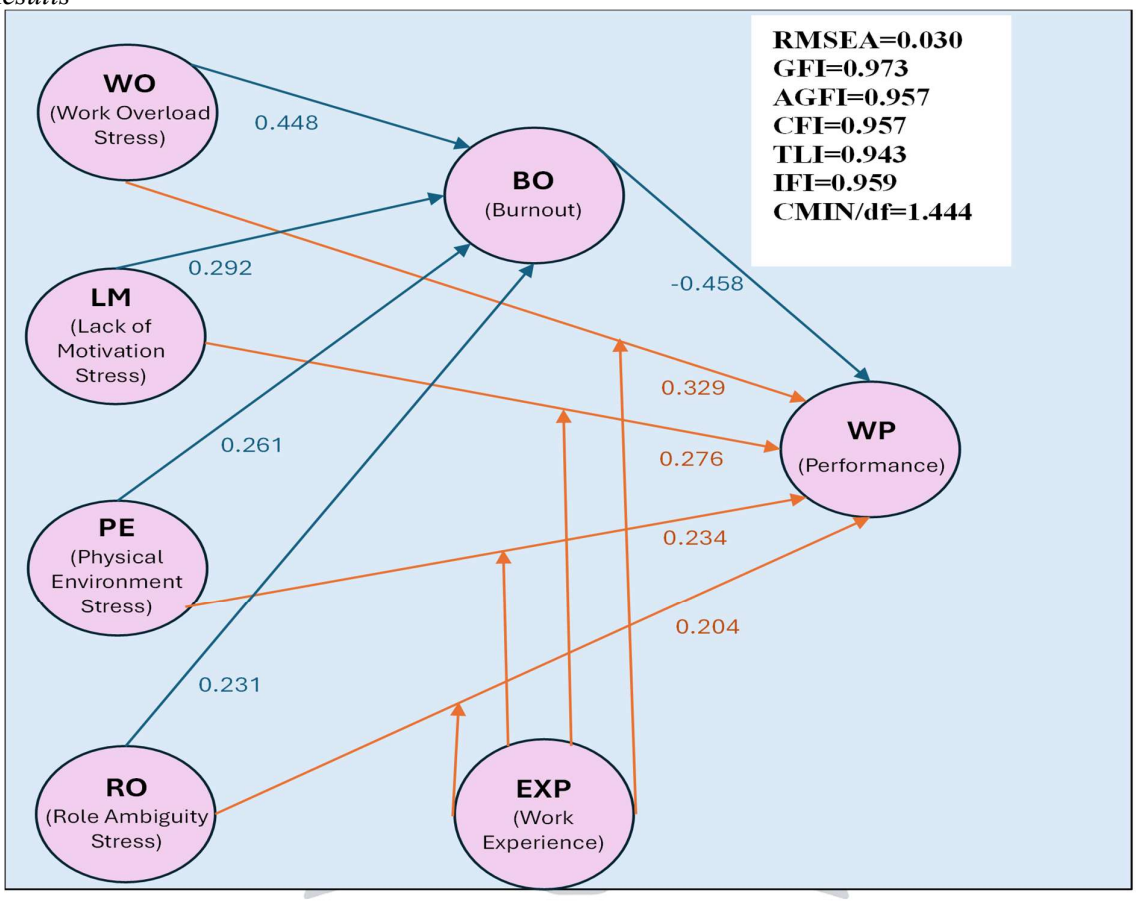
Structural Equation Modelling (SEM)

The study used SEM analysis for hypothesis testing. The empirical results of path analysis model were provided in table 4.18 and figure 4.9. It included the path from work overload stress (WO), lack of motivation stress (LM), physical environment stress (PE), role ambiguity stress (RO) to the mediation variable that was burnout (BO).

Figure 4.9

SEM Results



The empirical estimates indicated that work overload stress significantly increased burnout as the estimate of this path was 0.448 with the highly significant coefficient as the p-value was less than 0.01. Similarly, lack of motivation increased burnout of the nurses as the estimated standardized coefficient value was 0.92 and it was also highly statistically significant. The physical environment stress also increased the burnout as the standardized coefficient was 0.261 which was significant. The role ambiguity stress also increased the burnout because the standardized coefficient value was 0.231 which was highly statistically significant. All these values were highly statistically significant, but the standardized estimate of work overload stress was highest as it was 0.448 indicating that work overload stress was the major contributor of burnout in the nurses working in government teaching hospitals of Lahore. The results indicated that burnout decreases performance of nurses as the standardized coefficient of burnout was revealed 0.458 which was highly statistically significant with p-value less than 0.01. Moreover, burnout was the only factor that revealed directly negative relationship with the performance of nurses working in government teaching hospitals of Lahore. In other words, burnout decreased performance of nurses working in the government teaching hospitals of Lahore and no other factor was decreasing directly the performance of nurses.

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Moreover, the table 4.18 indicated that direct effects of variables on the performance of nurses (this figure only included the path provided in theoretical framework and its detailed version was provided in appendix C). The direct effect of work overload stress provided by standardized coefficient was 0.094 to affect the performance of nurses, and it was revealed significant. The estimate indicated that increase in work overload stress increased the performance of nurses working in the government teaching hospitals of Lahore that was also supported by the existing literature. The direct effect results revealed lack of motivation stress insignificant in affecting performance of nurses as the standardized coefficient of the path was 0.029. Similarly, the direct effect of physical environment stress and role ambiguity were also revealed insignificant indicating that both physical environment stress and role ambiguity stress did not affect the performance of nurses working in government teaching hospitals of Lahore.

Table 4.18

Results of SEM Model

Path	Unstandardized Estimate	Standardized Estimate	Standard Error	Critical Ratio	P-Value
WO → BO	0.358	0.448	0.032	11.35	0.000
LM → BO	0.219	0.292	0.030	7.401	0.000
PE → BO	0.299	0.261	0.045	6.611	0.000
RO → BO	0.134	0.231	0.023	5.850	0.000
BO → WP	-0.607	-0.458	0.066	-9.230	0.000
WO → WP	0.099	0.094	0.047	2.116	0.034
LM → WP	0.029	0.029	0.041	0.716	0.474
PE → WP	0.079	0.052	0.061	1.284	0.199
RO → WP	0.004	0.006	0.031	0.139	0.889
EXP → WP	0.013	0.012	0.042	0.307	0.759
EXP×WO → WP	0.122	0.329	0.014	8.609	0.000
EXP×LM → WP	0.104	0.276	0.014	7.213	0.000
EXP×PE → WP	0.122	0.234	0.020	6.118	0.000
EXP×RO → WP	0.054	0.204	0.010	5.330	0.000

Further, SEM analysis also provided interactive effects as highlighted in table 4.18 and figure 4.9. The interacting effect of professional experience with the workload was revealed positive and significant as its standardized estimate was 0.329 which was highly statistically significant. The results indicated that work overload stress increased the burnout far more than lack of motivation, physical environment stress, and role ambiguity stress did. The work overload stress increased burnout that meant whenever there were long working hours, increased intensity of work, more patients to visit, or take work at home then the nurses felt stress which would be translated into burnout (Purwanti and Ediyono, 2022); increased burnout then ultimately decreased work performance of nurses because burnout decreases performance of nurses that results was similar to Bapanda and Saraswathy (2023).

Moreover, the interactive effect of professional experience and lack of motivation was revealed 0.276 that was positive and significant indicating that the increase in experience and lack of motivation increased the performance of nurses working in government teaching hospital of Lahore. The physical environment stress interaction with the professional experience provided the standardized coefficient of 0.234 which was significant, indicating that increase in physical environment stress of experienced nurses increased the performance of nurses significantly in government teaching hospitals of Lahore. The interaction of professional experience with role ambiguity provided positive and significant results as its standardized coefficient of 0.204 indicated that increase in role ambiguity stress and professional experience increased the performance of nurses working in government teaching hospitals of Lahore. The interactive terms of professional experience and one of work overload stress, lack of motivation stress, physical environment stress and role ambiguity stress in fact provided the moderator effect of experience with these variables which were revealed highly statistically significant indicating that the increase in experience increased the

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performance of nurses working in government teaching hospitals of Lahore irrespective when they were facing these indicators of stress. In other words, whenever the professional experience of nurses increased, they could manage work overload stress, lack of motivation stress, physical environment stress and role ambiguity stress in a better way that their performance increased significantly in all these stressing scenarios. The experience on the other hand directly remained insignificant in affecting the performance of nurses as its direct effect coefficient was 0.012 and it was insignificant as the p-value was 0.759 which was greater than 0.05.

After estimating the model from SEM analysis and discussing their direct effects, the present study did the hypothesis testing using estimates that were presented in table 4.19. The first hypothesis was accepted that work overloads stress significantly increased the performance of nurses directly because the p-value was 0.034 which was less than the 0.05 level indicating significance at five percent level of significance. The direction of relationship between work overload stress and performance was increasing as the estimated coefficient was positive. It meant increasing the work overload would increase the performance of nurses working in government teaching hospitals of Lahore. The study did not find any empirical evidence for the support of second hypothesis which indicated that lack of motivation stress significantly impacted performance of nurses. The third hypothesis was also rejected highlighting that physical environment stress did not impact significantly on performance of nurses working in government teaching hospitals of Lahore. The fourth hypothesis that role ambiguity stress significantly affected the performance of nurses was also rejected due to insignificance. The insignificance of the relationship of a direct relationship between lack of motivation stress, physical environment stress and role ambiguity stress with performance of nurses that was found in earlier literature might occurred due to ignoring the mediation role of burnout and the moderation role of work experience to affect the relationship of these stressors with performance of nurses. The study found empirical evidence that burnout significantly affected performance of nurses; its coefficient was -0.607 indicating that burnout decreased significantly the performance of nurses and the direction of relationship was negative.

The SEM analysis also provided mediating hypothesis tested using the relationship of the dependent variable with the mediating variable and between the mediating reliable and the dependent variable in the analysis. In other words, these were the indirect effects of the independent variables over the dependent variable provided in the analysis. The sixth hypothesis that burnout mediated the relationship between work overload stress and performance of nurses that was accepted. It was because its estimate was -0.217 with the p-value of 0.000 which was less than 0.05 indicating that work overload stress increased burnout which in turn decreased the performance of nurses working in government teaching hospitals of Lahore. Earlier studies also indicated work overload stress increases performance of nurses as it is indicated in our study (Naveed et al., 2023). It was because consistent work overload increases the capacity of the workers to perform their duties efficiently taking small time to handle which increased number of patients treated in a particular day. However, in certain studies the increase of high workload decreased performance of nurses that was reflected in the mediating impact of burnout, where the work overload stress led to increased burnout which decrease the performance of nurses (Eldin et al., 2021; Purwanti & Ediyono, 2022; Nugraha et al., 2023). It was aligned with job demand control theory that indicated high work overload increased work-place stress which ultimately decreased the performance of nurses. Moreover, the mediation hypothesis also indicated that burnout partially mediated the relationship between work overload stress and performance of nurses. It was because the coefficient of direct effect of work overload stress and professional experience was revealed significant and positive indicating that work overload directly affected performance of nurses and when burnout mediated the relationship between work overload stress and performance of nurses it also revealed significant indicating partial mediation.

Seventh hypothesis was also accepted as it indicated that lack of motivation relationship was mediated by burnout with the performance of nurses. It meant that the empirical evidence supported the seventh hypothesis that lack of motivation caused burnout which decreased the overall performance of nurse working in government teaching hospitals of Lahore. The result is in line with Abdulsalam and Mawoli (2012). It

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indicated that lack of motivation escalated burnout among the nurses by lowering their will encourage for patient care resulting in decrease in their performance. This result is also in line with Effort Reward Imbalance (ERI) theory because. There were no stimuli to push forward the motivation, the absence of rewards, appraisals, and bonuses, then it would lead to increase the stress among nurses decreasing their performance through escalated burnout. The lack of motivation stress relationship with the performance of nurses was fully mediated by burnout because its coefficient was significant in case of only the mediation relationship while the direct coefficient of lack of motivation was insignificant on the performance of nurses. The eighth hypothesis indicated that physical environment stress relationship with performance of nurses was mediated using burnout which was revealed significant. It provided that physical environment stress increased burnout which lowered the performance of nurses working in government teaching hospitals of Lahore. The result is in line with transactional theories of stress indicating stressful work environments that produced workplace stress which in turn led to lower performance, but it allowed the explanation of introducing mediating role of burnout in work environment stress and performance of nurses. This result was also supported by the existing literature (Akhter et al., 2020; Almutairi et al., 2022; Kadhim & Qassem, 2023). Similarly, burnout fully mediated the relationship between physical environments stress and performance of nurses because the estimated coefficient of mediation was highly statistically significant but the direct coefficient of physical environment stress with the performance of nurses revealed insignificant. The ninth hypothesis of mediation of burnout in the relationship of role ambiguity and performance of nurses was also accepted as its coefficient -0.081 was highly statistically significant. This result indicated that burnout mediated the relationship of role ambiguity stress and performance of nurses in the way that when role ambiguity increased it increased the burnout which in turn increased the performance of nurses working in government teaching hospitals of Lahore. This result was in line with Demand Control Support (DCS) theory indicating that clearance about responsibilities of individual remained an important factor in defining the performance of nurses highlighting the increase in role ambiguity stress led to lower performance of nurses; the difference here remained the introduction of burnout as the mediating factor which actually manifest the relationship of role ambiguity stress and performance of nurses through full mediation. This result was also in line with empirical literature (Abd Elhamid et al., 2013). Further, burnout also fully mediated the relationship between role ambiguity stress and performance of nurses as the coefficient was highly statistically significant in case of mediation, but it was insignificant in case of direct relationship of role ambiguity stress and performance of nurses working in government teaching hospitals of Lahore.

Table 4.19

Results of Hypotheses Testing Using SEM

Hypotheses	Estimate	Standard Error	Critical Ratio	P-Value	Decision	Result
H1: WO → WP	0.099	0.047	2.116	0.034	Accepted	Direct Effect
H2: LM → WP	0.029	0.041	0.716	0.474	Rejected	No Direct Effect
H3: PE → WP	0.079	0.061	1.284	0.199	Rejected	No Direct Effect
H4: RO → WP	0.004	0.031	0.139	0.889	Rejected	No Direct Effect
H5: BO → WP	-0.607	0.066	-9.230	0.000	Accepted	Direct Effect
Mediation Hypotheses						
H6: WO → BO → WP	-0.217	0.031	-7.000	0.000	Accepted	Partial Mediation
H7: LM → BO → WP	-0.133	0.023	-5.783	0.000	Accepted	Full Mediation
H8: PE → BO → WP	-0.181	0.034	-5.324	0.000	Accepted	Full Mediation
H9: RO → BO → WP	-0.081	0.016	-5.063	0.000	Accepted	Full Mediation
Moderation Hypotheses						
H10: WO × EXP → WP	0.122	0.014	8.609	0.000	Accepted	Partial Moderation
H11: LM × EXP → WP	0.104	0.014	7.213	0.000	Accepted	Full Moderation
H12: PE × EXP → WP	0.122	0.020	6.118	0.000	Accepted	Full Moderation
H13: RO × EXP → WP	0.054	0.010	5.330	0.000	Accepted	Full Moderation

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The results in table 4.19 also provided the moderation relationship of work experience with the stressors using the interaction terms indicating that the combination of experience and the specific stressor impact on performance of nurses could be evaluated from the specific coefficient. It revealed positive and highly significant for all moderation hypotheses. The moderation hypotheses were from 10 to 13 indicating the moderating role of professional experience in the relationship of work overload stress, lack of motivation stress, physical environment stress and role ambiguity stress with the performance of nurses working in government teaching hospitals of Lahore. The result pointed out that experienced nurse's performance increased amid work overload stress, lack of motivation stress, physical environment stress and role ambiguity stress. It was because the experience held the specific resource that these nurses used in patient care which was aligned with COR theory. The tenth hypothesis was accepted as the interaction of work overload stress and professional experience provided positive and significant relationship with the performance of nurses. However, moderation remained partial because the coefficient of direct effect of work overload stress on performance of nurses was positive and significant. This result indicated that whenever there was increase in experience the individual managed work overload stress efficiently and their performance increased significantly.

The impact of work overload stress through the moderating role of work experience also manifests the positive relationship to the performance of nurses, indicating that whenever work overload stress increases along with the increase in experience or training it would lead to improve the performance of nurses. It also meant that with increasing experience the work overload stress improved performance of nurses across public hospitals in Lahore. Experience was a form of resource that allowed people to manage themselves in the situation of workload stress followed by Conservation of Resources (COR) theory. The estimated highlighted professional experience fully moderated the relationship between lack of motivation stress and performance of nurses in eleventh hypothesis as the individual coefficient of lack of motivation impact on performance of nurses was insignificant, but the moderated coefficient was highly statistically significant. In other words, the hypothesis provided evidence that with increase in experience even the increase in lack of motivation stress increased the performance of nurses working in government teaching hospitals of Lahore. The twelfth hypothesis pointed out that experience moderated the relationship between physical environment stress and performance of nurses. The estimates provided full moderation of professional experience in the relationship between physical environment stress and performance of nurses because its coefficient was highly statistically significant with the p-value 0.000 which was less than 0.05 but the direct coefficient between physical environment stress and performance was revealed to be insignificant. It highlighted that whenever the individual had professional experience the increase in physical environment stress increases the performance of nurses working in government teaching hospitals of Lahore. The thirteenth hypothesis indicated that experience moderated the relationship between role ambiguity stress and performance of nurses which was also revealed significant with p-value of the coefficient was 0.000 which was less than 0.05 threshold of significance. The relationship also showed full moderation because the individual coefficient of direct impact of role ambiguity stress with the performance of nurses revealed insignificant; therefore, it can be stated that experience fully moderated the relationship between role ambiguity stress and performance of nurses working in government teaching hospitals of Lahore.

5. Conclusions

The study was conducted to investigate the impact of job-related stress on performance of nurses working in government teaching hospitals of Lahore. The work-related stress included using work overload stress, lack of motivation stress, physical environment stress and role ambiguity stress. The empirical results found work overload stress increased the job performance of nurses significantly. The work overload stress also revealed significantly with mediation effect of burnout and moderation effect of professional experience that indicated partial mediation and moderation. Hence, the work overload stress itself increased the job performance of nurses, but when it was combined with burnout then the performance of nurses decreased. The moderation estimate highlighted that increase in experience when accompanied with the work overload stress then the performance of nurses increased.

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Lack of motivation stress coefficient direct affect remained insignificant while its coefficient was significant and negative with mediation effect of burnout that indicated increase in lack of motivation increased burnout which decreased performance of nurse; this relationship showed full mediation. Moderation effect of professional experience remained positive and significant that indicated full moderation pointing experience along with the lack of motivation increased the job performance of nurses.

The physical environment stress coefficient direct affect insignificant in affecting performance of nurses while its coefficient was significant and negative with mediation effect of burnout indicating full mediation. The result pointed out that increase in physical environment stress caused burnout among nurses that in turn resulted in decreasing the job performance of nurses. The moderation effect of professional experience also indicated full moderation highlighting that with increase in physical environment stress the experienced nurses would increase their job performance. The results indicated role ambiguity stress direct affect insignificant for affecting performance of nurses whereas its coefficient was significant with mediation effect of burnout pointing full mediation.

The result highlighted that increase in role ambiguity stress increased burnout of nurses which in turn decreased job performance of nurses. The result of moderation effect of professional experience indicated full moderation and pointed that with increase in role ambiguity stress the experienced nurses' performance increased. The results highlighted burnout negative effect on job performance of nurses working in government teaching hospitals of Lahore. The results provided work related stress when combined with burnout decreased the performance of nurses but when combined with professional experience increased the job performance of nurses working in government teaching hospitals of Lahore.

The present study has suggested to decrease work related stress in all dimensions including work overload stress, lack of motivation stress, physical environment stress and role ambiguity stress to improve the job performance of nurses. Specifically, work overload stress should be reduced by dividing the work appropriately in all the nursing staff so that no nurse felt overwhelmed by the workload. Moreover, if there exists shortage of nurses then new staff should be employed to divide the burden of existing work. The lack of motivation stress should be reduced by appreciation either verbal or in the form of incentives for nurses so that they feel motivated during work hours. Physical environment stress should be reduced by ensuring ventilation, safety measures, working devices in the unit and proper working space for the nurses. The study suggests to these all stressors so that burnout nurses would not feel burned out and their performance remain enhanced to provide better service to the patients coming for cure.

The study found positive impact of professional experience in handling work overload stress, lack of motivation stress, physical environment stress and role ambiguity stress that increased job performance of nurses. Then, the study suggested to enhance the professional experience through training and short courses where the required knowledge of instruments and behaviours should be reminded so that the nurses could perform better even in the presence of work-related stress.

Author Contributions

All authors participated in ideation, development, and writing the manuscript. All authors read and approved the final manuscript.

Conflict of Interest Statement

The authors declare that there is no conflict of interest regarding the publication of this article.

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Informed Consent

Informed consent was obtained from all participants prior to data collection. Participants were informed about the purpose of the study, the voluntary nature of their participation, and their right to withdraw at any time without any consequences. The confidentiality and anonymity of respondents were guaranteed throughout the research process.

Data Availability

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The datasets generated and analysed during the current study are available from the corresponding author upon reasonable request. The authors are committed to transparency and will provide detailed methodological information and analysis protocols upon request.

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