

Examining Motivation and Nurses Performance in the Punjab Private Health Sector: Mediation of Work Engagement, Employee Engagement, and Moderation of Working Environment

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Abstract

Employees are the pillars of an institution and are valued as its jugular vein, through which the organization's growth reveals. It is a fact that the existence, presence, and survival of an organization within the market revolves around the concept of employees' motivation. This paper aims to examine the motivation and nurses performance in the Punjab private health sector through intervening role of work engagement, employee engagement and working environment as moderating variable. It is a cross-sectional-based quantitative explanatory study supported by Herzberg's Two-Factor theory of motivation having adopted questionnaire comprising five points Likert-scale for a sample size of 599 nurses through a convenience sampling technique. Data was tested and examined by structural equation modeling (SEM) utilizing the latest version of Smart PLS 4.0.8.3. Results demonstrated a significantly positive influence of motivation on nurses performance and connection amongst the concepts having direct, mediation, and moderation impact. The findings corroborate previous studies, and the contribution is justified by filling the research gaps.

Keywords: Employee engagement; motivation; performance; work engagement; working environment

Introduction

A rapid change in the business environment occurs due to globalization, thus compelling the organization to have diversified, talented, and motivated human assets to overcome the competition in a profitable way (Imaduddin & Pamudy, 2017). Employees are the pillars of an institution (Waruwu et al., 2020) and are valued as its jugular vein by Zainon et al. (2020), through which the organization's growth reveals. It is a fact that the existence, presence, and survival of an organization within the market revolves around the concept of motivation (Duttan, 2020). A highly motivated workforce will perform well (Sugara et al., 2020).

Such high employee performance is the primary concern and problem of today's health sector, especially regarding the nursing staff. The health sector is a people-oriented industry, including nursing care (Thambusamy & Palvia, 2020). The word "nurse" is derived from "Nutritious," which describes somebody who nurtures, cherishes, and protects. It is the profession of promotive, preventive, curative, and rehabilitative (Hidayat, 2017). According to American Nurses Association (2021), nursing is a systematic progression of diagnosing and curing human responses within humanity's boundaries. Such nursing occupation demands high intrinsic and extrinsic motivation (Ryan & Deci, 2000) to enhance performance.

There is a dire need to introduce valuable motivation-related packages to address the problem of nurses' performance. Boosting the nurses' interest is mainly played by motivation followed by work engagement (Schaufeli & Bakker, 2010) through vigor, dedication, and absorption; thus off-shooting employee engagement (Shuck et al., 2017) through cognitive, emotional, behavioral, and conducive working environment (Putri et al., 2019) through physical and non-physical features of the work-related settings. The ultimate result of such motivational factors gives high rise to the nurses' performance from its dimensional (task, contextual, adaptive, and counterproductive) performance perspective (Krijgsheld et al., 2022).

In developing countries like Pakistan, quality health services delivery is generally desired but practically lacking. As per Shabbir (2019), the Government of Pakistan has projected a shortfall of 900,000 professional nurses within the next fifteen years. Consequently, Bhatti et al. (2022) found that nurses' motivation is highly preferred to boost their performance within the Pakistan public health sector. Unfortunately, it has been ignored from the Pakistan private health sector perspective, thus adversely affecting their performance. This is the problem that needs to be further explored for a better outcome. The private health sector faces a significant problem with nurses' performance, a matter of great concern for health administrators. This needs to be addressed on priority because nurses are the key pillars of this domain vis-à-vis quality services delivery is also expected and demanded, which could be improved and enhanced through motivation-related factors.

Consequently, this study has addressed the following four research gaps; (a) Pakistan's research on the health sector is limited, especially from motivation and performance along with the nursing perspective (Manzoor et al., 2021). Here arises a question about pursuing the same study in which sector; the public, the private, or both. The direction of novelty for this study depends on the accurate answer to this question which has been addressed through an additional literature review. The latest study by Bhatti et al. (2022) found strong connection among motivation and nurses' performance restricted to the Sindh public health sector. (b) Research within the nursing domain has been found scarce from the angle of work engagement, employee engagement (Bhatti et al., 2018) along with working environment (Huang et al., 2021). (c) Pakistan's private health sector has not been greatly researched, especially in the province of Punjab, thus providing an apparent breakthrough in the area required to be fulfilled. (d) There was inadequate literature on the topic of interest under study, which demanded further investigation to fill this knowledge gap.

The importance of the problem and current research is plentiful but is not limited to the forth-mentioned. First; the mounting gap between the supply and demand of nurses is getting critical across the globe (WHO, 2013) because regions like Africa and Southeast Asia will face a shortage of 12.9 million trained health professionals by 2035, where 40% of them will quit because of limited spurs and perks. It was concluded in the study by Apex-Apeh et al. (2020) as a severe problem of inviting, holding, and pleasing skilled workers in the health sector, especially the nursing staff. Second, 486 schools and colleges of nursing offer diploma, degree, and post-basic diploma programs across the country duly recognized by the Pakistan Nursing Council (PNC).

Contrary to this, there is not even a single independent nursing university in Pakistan to produce and overcome the projections mentioned above by the World Health Organization (WHO) and Ministry of National Health Services Regulations and Coordination (MoNHSRC), Government of Pakistan.

Third, an increasing trend of public perception about giving preference to doctors compared to nurses is alarming despite knowing that doctors only perform their advisory role as per their expertise while the nurses do most of the patient care (Blau et al., 2023). Fourth, availability of minimal research within the private health sector of Pakistan (Zaidi, 2019;2022), especially the province of Punjab, demands knowledge that has been addressed through the concept of work engagement, employee engagement, and working environment. Fifth, author of the study believes that this will be a pioneer research study of its own which has been conducted within the private health sector of Pakistan with an ultimate focus on the Punjab province. Sixth, this study will provide a new approach to increasing the nurses' performance through their engagements within a conducive working environment.

Seventh, the study findings will facilitate the health administrators to take a hedonistic approach to gain a competitive edge while focusing on quality health service delivery through their frontline workers, especially the nursing staff (Lestari et al., 2021). Eighth, this study would provide a new set of directions for the policymakers and governments to focus on meaningful investment in demanding professions like nursing (Adhikari & Smith, 2023). Ninth, this study contributed to the existing literature that would open an avenue for conducting nationwide analysis within the targeted sector in Pakistan.

In consequence, current research work has some forth-mentioned research objectives like (1) to check a relationship between motivation and work engagement, (2) to see a connection between motivation and employee engagement, (3) to find out the link between work engagement and performance, (4) to inspect an association between employee engagement and performance, (5) to identify association among motivation and performance, (6) to study an intervening part work engagement plays between motivation and performance, (7) to inspect an intervening influence employee engagement has in between motivation and performance bonding, and (8) to diagnose the moderating role of working environment between motivation and performance to explore below mentioned queries.

Based on the above research objectives, this study has some forth-mentioned research questions like (1) Is there any linkage between motivation and work engagement?, (2) Is there any connection between motivation and employee engagement?, (3) What kind of link is there between work engagement and the performance?, (4) What kind of association is there between employee engagement and performance?, (5) Is there any association between motivation and performance?, (6) Can work engagement mediates motivation and performance linkage?, (7) Can employee engagement mediates motivation and performance association?, and (8) Does working environment have moderating role on motivation and performance connection?

Literature Review

Employee Performance

Williams and Anderson (1991), as cited by Aslam et al. (2022), there is two-fold classification of employee performance i.e. task and contextual, in general. However, the study of Krijgsheld et al. (2022) revealed various dimensions of the nurses' performance within the health sector. As narrated by them, (a) task performance is the in-role conduct (i.e., the core technicalities of the jobs) having the direct activities like treating patients and indirect activities like supporting management; (b) contextual

performance is the contributing behavior towards social exchange within the institution; (c) adaptive performance is a reflection of ability and capacity of the employee is in adapting the work-related changes; and (d) counterproductive is the work-related behavior that is deleterious to the performance of employee's like abuse, absenteeism, presentism (being present while ill), etc.

Aforementioned dimensional elaboration reflects their importance to consider them collectively as a whole within the targeted settings because performance of employees plays a significant role in organizational success (Yang & Ai, 2020). Similarly, high performance from employees like nurses can be ensured through motivation, being a primary stimulating factor (Hee et al., 2016; Dalal et al., 2020; Ahakwa et al., 2021; Van den Broeck et al., 2021). Hence, the real know-how about motivation and its related aspects is vital to consider.

Employee Motivation

Prasetyani et al. (2021) stated that motivation is the leading stimulating factor in activating employees within an organization. However, motivation has its critical dimensionality in terms of intrinsic and extrinsic (Yang & Ai, 2020). Mazllami (2020) highlighted intrinsic motivation as an internal driving force propelling employees to get more, while extrinsic motivation is related to workplace attributes. An excellent reward system creates a sense of their value within the organization, which positively reflects their performance (Jeni et al., 2020). Sukardi (2021) emphasized the availability of motivation-related tools in employee tasking to engage them. The recent pandemic of COVID-19 has economically reduced the capacity of many organizations resulting declined employee's motivation and performance (Aguinis & Burgi-Tian, 2021), thus compelling the organizations to hunt for other meaningful ways of engaging employees and increasing their performance (Bao et al., 2021). Numerous factors like work-related setups, working environment, and infrastructure are affecting employee's performance (Bao et al., 2021); however, motivation plays a significant role (Abbas & Kumari, 2021).

The ultimate outcome of studies undertaken by Ryan and Deci (2020) revolved around both intrinsic and extrinsic, being the prominent dimensions of motivation. Hence, the current study in hand has considered them simultaneously because of its leading towards the concept of work engagement (Christi et al., 2020).

Work Engagement

Employee performance actually demands engagement, which is a field of interest for researchers and management practitioners and is characterized by work engagement and employee engagement (Kosaka & Sato, 2020). These concepts look alike but differ in a real sense due to their applicability (Kosaka & Sato, 2020) because there are critical differences among these two concepts while referring some previous studies (Schaufeli et al., 2002; Shuck et al., 2017). Schaufeli et al. (2002) stated that both are academically preferred concepts. However, the notion of work engagement is known for having feelings about one's work which is the passionate mentality towards work and well-being at work. Schaufeli and Bakker (2004) categorized three interrelated varieties of emotional state like vigor, dedication, and absorption. Vigor means high energy and mental resilience during job performance, whereas dedication reflects the employee's involvement in terms of importance and challenges. Absorption refers to the employees' capacity and interest level for preoccupation or submergence in their work.

The present study has taken all the three aforementioned dimensions because work engagement is the outcome of motivation (Van den Broeck et al., 2021) along with off-shooting employee engagement (Ojo et al., 2021).

Employee Engagement

It is widely used and preferred in a practical business (Shuck et al., 2017), where it is related to the

feelings towards an organization that reflects commitment and dedication. Shuck et al. (2017) categorized three varieties of employee engagement: cognitive, emotional, and behavioral. Cognitive engagement is an intensity-based mental state of an employee towards organizational excellence. The willingness of employees to have meaningful emotional interactions is beneficial for an organization's success in emotional engagement. Behavioral engagement is a psychosomatic nature based mindset for acting productively to enhance performance.

As per Farman (2021) and Mudany et al. (2021), employee engagement is the outcome of motivation due to which its three dimensions plays vital role in developing organization oriented feelings within employees. Therefore, considering all the above dimensions of employee engagement in present study. This is because every organization has its own working environment which is not only considered itself as a motivational factor (Akinwale & George, 2020) but also adds further value in enhancing and achieving the desired performane from employees in addition to independent concepts like motivation, work engagement, and employee engagement (Caroline et al., 2022).

Working Environment

Despite the aforementioned philosophical concepts, it is essential to consider importance of working environment towards increasing employees' performance levels because it also predicts good performance (Huang et al., 2021). It is the combination of physical and non-physical environments provided to the employees with an expectation to give their best output (Aisyah et al., 2020). As per Sitepu et al. (2020), the physical working environment is all about factors of work-related settings affecting the performance of employees like layout, space etc. Contrary to this, a non-physical working environment refers to all such factors as a sphere, communication, psychological work, work regulations, etc., that give employees a feeling of ease, solace, relaxation, and safety which is vital for stimulating them to perform better.

Both these dimensions have been taken into consideration in this study because not only discipline and professional decorum can be easily ensured during work but also improvement in the performance of employees can be witnessed (Sitepu et al., 2020; Marlina et al., 2021).

Hypotheses

In order to align the literature above with the hypotheses, it is essential to highlight and integrate the concept of model development and theoretical base followed by relevant hypotheses through supported empirical literature.

From model development perspective, previous studies found motivation (intrinsic and extrinsic) as the leading independent factor in increasing employee performance (Girdwichai & Sriviboon, 2020; Vandana & Murthy, 2021). Bhatti et al. (2018), followed by Lee et al. (2021), gave strong recommendations to consider work engagement as the intervening variable to increase the employees' performance with motivation.

Moreover, the study of Siswanto et al. (2021), followed by Almawali et al. (2021), highly recommended employee engagement because of its significant intervening role between motivation and performance. Finally, moderating role within motivation-performance linkage can be better played by working environment (Astuti & Amalia, 2021; Hegazy et al., 2021). In short, study model is given in Figure 1:-

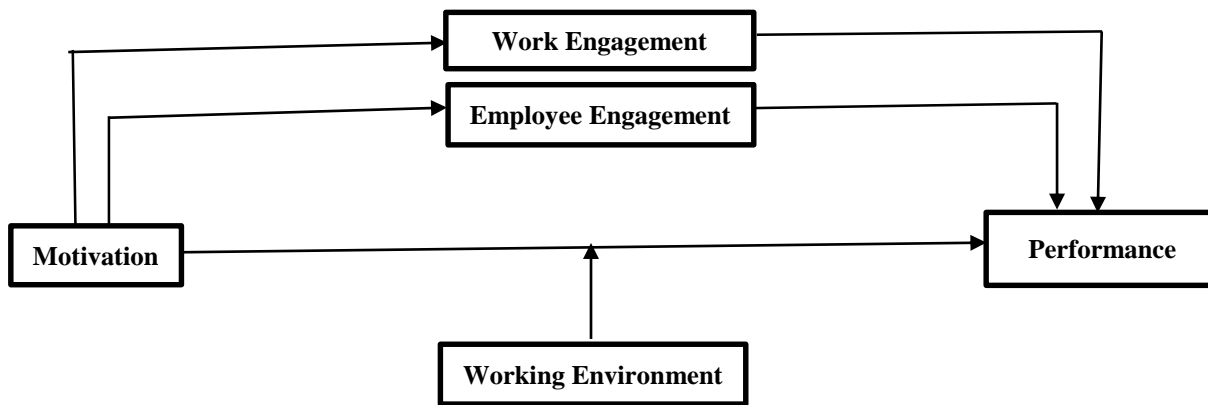


Figure 1. Proposed Model

From theoretical angle, motivational theory of Herzberg guides this study, highlighted by Vandana and Murthy (2021). According to them, generally, this theory provides significant results when it comes from a motivation-performance perspective but specifically, its role becomes more vital within the nursing domain of the health sector. This theory is comprised of motivator and hygiene factors. The employees' satisfaction is a good reflection of motivator factors, while their dissatisfaction prevails around hygiene factors. Factors of motivator are achievement, recognition, kind of work, growth or advancements, etc., while policies, supervision style, status, security, salary etc., are hygiene factors.

Employee Motivation and Work Engagement

Work-related engagement of the staff can be ensured through motivation because it has always been found to be a leading stimulating factor in this context (Kosaka & Sato, 2020). As per Rinanta and Santoso (2021), intrinsic and extrinsic motivation significantly influence work related engagement, especially its three dimensions. Individuals having greater job related motivation will be engaged in their work (Slatten et al., 2022). This leads to the first hypothesis, which is as under;-

H1: A significant relationship exists between employee motivation and work engagement.

Employee Motivation and Employee Engagement

To ensure employee engagement, motivational factors always come across (Siswanto et al., 2021). Engidaw (2021) study concluded with significant association among intrinsic, extrinsic, and employee engagement, individually and collectively. The study of Almawali et al. (2021) came with the same findings, where intrinsic and extrinsic motivation significantly influences employee engagement, especially their cognitive, emotional, and behavioral engagement. Hence, continuing the study's another hypothesis, as under;-

H2: There is a significant connection amongst employee motivation and employee engagement.

Work Engageent and Employee Performance

To have meaningful outcome regarding staff performance, it is vital to consider work engagement. Studies by Wang and Chen (2020) have confirmed a significant work engagement effects over the employee's performance (Cheng et al., 2020). Such findings were also given by Erum et al. (2020), which is a clear reflection of their vigor (energy), dedication (involvement), and absorption (concentration). This leads to the third hypothesis, which is as under;-

H3: Work engagement and employee performance has a significant linkage.

Employee Engagement and Employee Performance

Employees might be engaged at work by motivational factors (George et al., 2021). This reflects their emotional attachment to the organization, thus improving their performance. Studies by Sungmala and Verawat (2021) have experienced a significant link amongst employee engagement and employee performance (Amjed et al., 2020), where nursing staff tries their level best to make full use of their cognitive (thinking), emotional (feelings) and behavioral (to act) productively at the job. Thus, resulting to formulate and propose next hypothesis of the study, as under;-

H4: Employee engagement and employee performance has a significant linkage.

Employee Motivation and Employee Performance

Motivation strongly influence employee performance (Astuti et al., 2020). Generally, highly motivated workforce will be concerned with the efficient and effective production of results. This was also evidenced by Kumari et al. (2021), followed by Novianti and Suparmono (2021), where findings revealed significant association of motivation and performance. Consequently, resulting to propose the next hypothesis of this study, as under;-

H5: There exists a significant bonding between employee motivation and employee performance.

Employee Motivation, Work Engagement, and Employee Performance

Bhatti et al. (2018) highlighted that work engagement not only enhances the employee performance but also acts like motivational factors, which are offered and provided to them (Kosaka & Sato, 2020; Slatten et al., 2022). Lee et al. (2021) also concluded their study with a significant impact of work engagement on the nurses' performance. This, leads to the sixth hypothesis, which is as under;-

H6: Work engagement is mediating the linkage of employee motivation and employee performance.

Employee Motivation, Employee Engagement, and Employee Performance

Employees' engagement yield performance (Wardani & Eliyana, 2020), which is fully backed by motivation. In between motivation and performance, vital significant contributions is played by employee engagement (Memon et al., 2020; Siswanto et al., 2021; Almawali et al., 2021). Lee et al. (2021) also concluded their study with a significant impact of employee engagement on the nurses' performance. Thus, leading towards seventh hypothesis of current research work, as under;-

H7: Employee engagement is mediating the linkage of employee motivation and employee performance.

Employee Motivation, Working Environment, and Employee Performance

The literature revealed about positive influence working environment has over the nurses' performance (Burbar, 2021), especially under the umbrella of healthy nursing working environment (Al-Sabei et al., 2020; Hegazy et al., 2021). Additionally, Novianti and Suparmono (2021) concluded in their study about significant impact of both motivation and the working environment on employee performance. A good working environment can boost employee (nurses) performance. This, leads to the eighth hypothesis, which is as under;-

H8: Working environment is playing a moderating role amongst employee motivation and employee performance.

Methodology

A positivist philosophy has been applied due to its value-free process feature to generate the required

information where the researcher does not influence the data (Melnikovas, 2018). Following deductive approach, a quantitative study with an explanatory research design has been used. A survey research strategy through a mono-method of choice for the cross-sectional study has been applied through non-probability sampling method with convenience sampling technique having an ordinal measuring scale (Dalati, 2018).

Data Collection

The Pakistan Economic Survey (PES) report for the fiscal year 2021-22 was published by the Ministry of Finance, Government of Pakistan, on 9th June 2022; the health sector comprises a total of 121,245 registered nursing staff across the country representing both the public and private health sector (Finance Division, 2022). As per the study requirements, enough possible efforts were made to approach and get the actual breakdown quantitative details of registered nursing personnel working in the public and private health sector both at national and provincial level from government departments like Pakistan Nursing Council (PNC) and Pakistan Bureau of Statistics (PBS).

Consequently, such information was not available at the time of conducting this research work by receiving verbal remarks like lack of policy at government level, inadequate paper/digital record, increased turnover of the staff due to pay inequity, job insecurity, and immigration etc. Therefore, separate clarity of the population from the private health sector, especially in the Punjab province, is unknown. Selecting a sample size can be ensured either through formula, reference table, or both. The current study in hand adopted both the options for perfect clarity where among various formulas, the author used Cochran (1977) formula, as given below.

$$n_o = \frac{Z^2pq}{e^2} \dots\dots\dots \text{Formula 1}$$

Where,

- no = required sample size
- e = margin of error (0.05)
- p = estimated population proportion (0.5) means 95% confidence coefficient
- q = 1 – p i.e. (1 – 0.5 = 0.5)
- Z-value = extracted from a Z-table i.e. 1.96

Sample Size Calculation

$$n_o = \frac{(1.96)^2 (0.5) (0.5)}{(0.05)^2} = 384$$

Similarly, 384 as minimum benchmark being sample size was also reflected through a tabulated introduced by Krejcie and Morgan (1970), recently used by Taherdoost (2017). However, the researchers have circulated about 800 questionnaires not only to get maximum response rate with accuracy but also to avoid any unresponded, missing, incorrect, or incomplete received feedback. Therefore, under the reach and collecting capacity of researchers through in-person and online (forms), 599 accurately filled responses from the registered nursing staff were taken into consideration as a sample size for this study being conducted within the private health sector across Punjab province.

Measurement Development

The respondents’ demographic profile comprises their age, marital status, title/designation, experience, and professional qualification within the relevant field. The questionnaire survey comprising of five-point of Likert-scale extending from 1 for strongly disagree to 5 for strongly agree (Bhatti et al., 2022).

Most studies have confirmed the maximum accuracy of data significance by five points Likert scale (Kumari et al., 2021). The publically available documents regarding the original scale of the studied constructs have been adopted, as reflected in Table I:-

Table I. *Questionnaire Development*

Variables	Name of Scale	Dimensions	Items	Adopted From	Originally Developed By	Total Items
Motivation (MSQ)	Minnesota Satisfaction Questionnaire	Intrinsic	7	Abbasi and Amiri (2022)	Weiss et al. (1967)	13
		Extrinsic	6			
		Individual	5			
Performance (IWPQ)	Work Performance Questionnaire	Task Performance	5	Krijgsheld et al. (2022)	Koopmans et al. (2011)	23
		Contextual Performance	8			
		Adaptive Performance	6			
Work Engagement (UWES)	Utrecht Work Engagement Scale – Short Version	Counterproductive Behavior	4	Kosaka and Sato (2020)	Schaufeli et al. (2002)	17
		Vigor	6			
		Dedication	5			
Employee Engagement (SEE)	Scale of Employee Engagement	Absorption	6	Kosaka and Sato (2020)	Shuck et al. (2017)	12
		Cognitive	4			
		Emotional	4			
Working Environment (PES-NWI)	Practice Environment Scale of Nursing Work Index	Physical	4	Arsat et al. (2022)	Lake (2002)	22
		Nurses Participation in Hospital Affairs	7			
		Nurses Foundation for Quality Care	6			
		Nurse Manager Ability, Leadership and Support for Nurses	4			
		Staffing and Resource Advocacy	3			
		Collegial Nurse-Physician Relations	2			

Data Analysis

Structural equation modeling (SEM) utilizing latest Smart PLS 4.0.8.3 was considered for data analysis (Aslam et al., 2022). It is a meaningful option to use PLS –algorithms to examine the outer model. Additionally, 5000 subsets of bootstrapping (Hair et al., 2011) were applied to check the path coefficients in conjunction with a significance level for direct, specific indirect/mediation along with moderation analysis to properly test the dimensions, measurement, and structural modeling addressing the complicated models.

Demographic Profile of the Respondents

Table II reflects about participants demographic profile. Authors distributed 800 questionnaires among the target population physically and through online google form. In return, 697 questionnaires were received back (87.125%), comprising 519 through in-person (74.5%), and 178 through online google forms (25.53%). All the responses were thoroughly reviewed to ensure complete correctness, and only correctly filled questionnaires were considered for further analysis. Finally, an analysis was done on 599 respondents comprising 421 through in-person (70.283%), and 178 through online google forms (100%) having net response rate as 85.145%.

Table II. *Participants Demographic Profile*

Demographics	Categories	Frequencies	Percentage
Gender	Male	166	27.71
	Female	433	72.29
Age Level (Years)	Below 20	63	10.52
	21-30	211	35.23
	31-40	163	27.21
	41-50	109	18.20
	Above 50	53	8.85
Marital Status	Single	173	28.88
	Married	347	57.93
	Separated	19	3.17
	Divorced	37	6.18
	Widow	23	3.84
Designation	RN-I	156	26.04
	RN-II	149	24.87
	RN-III	160	26.71
	Nurse Manager	114	19.03
	Director Nursing	20	3.34
Experience Level (Years)	0-5	144	24.04
	6-10	139	23.21
	11-15	146	24.37
	16-20	132	22.04
	Above 20	38	6.34
Last Education	Diploma	62	10.35
	Post Diploma	96	16.03
	BS / BSc. N	276	46.08
	MSN / MSc. N	165	27.55
	PhD / Post Doc	0	0.00

The above table shows the demographics breakdown where 433 were female respondents comprising 72.29% representation, thus reflecting that nursing is a female-oriented profession, while 166 were male respondents comprising 27.71%. According to age level, the highest number of respondents was 211 (35.23%) between the age group of 21-30, 163 (27.21%) from 31-40, and 109 (18.20%) from 41-50. The 63 were below 20 years of age, with 10.52%, while 53 respondents were above the age of 50, with 8.85% representation. The class of married respondents was high being 347 in number with 57.93%, followed by 173 single respondents with 28.88% representation. In addition, 37 divorced respondents (6.18%), 23 widows (3.84%), and 19 separated respondents (3.17%) also participated in this research.

Most respondents were registered nurses (RN's) in the capacity of RN-III, RN-II, and RN-I, being 160, 156, and 149 in numbers with a representation of 26.71%, 26.04%, and 24.87%, respectively. 114 nurse managers (19.03%), and 20 director nursing (3.34%) also participated in this research. Similarly, the class of experienced respondents was found as 146 (24.37%) between 11-15 years, 144 (24.04%) between 0-5 years, 139 (23.21%) between 6-10 years, and 132 (22.04%) between 16-20 years. Only 38 respondents had more than 20 years of nursing experience, with 6.34%. Respondents with honors graduates were high in number, with 276 (46.08%) and 165 masters qualified to have 27.55% participating in this research. Diploma and post-diploma-qualified respondents were 62 and 96, with 10.35% and 16.03%, respectively. Though nursing is considered an emerging domain in developing countries like Pakistan, the authors did not find a contribution from any single respondent with a doctorate or post-doctorate qualification in this research.

Data Validity and Reliability

The scale's validity and reliability enable researchers to yield beneficial results (Surucu & Maslakci,

2020). Data confirmation was ensured through various techniques like CFA, composite reliability (CR), average variance extracted (AVE), and rho_A. CFA ranges between 0.792 and 0.892, above the minimum standard value of 0.7 (Hair et al., 2011; Zhao et al., 2021; Jahangir et al., 2022). For ensuring evaluation of the model measurement, convergent validity was assessed through loading of items of relevant construct, CR and AVE.

Table III. *Construct Validity and Reliability*

Constructs	Items	F.L	CA	CR (rho_a)	CR (rho_c)	AVE
<i>Employee Engagement</i>	EE1	0.859	0.892	0.892	0.893	0.818
	EE10	0.955				
	EE11	0.843				
	EE12	0.761				
	EE2	0.845				
	EE3	0.964				
	EE4	0.863				
	EE5	0.796				
	EE6	0.963				
	EE7	0.756				
<i>Motivation</i>	EE8	0.958	0.889	0.889	0.890	0.835
	EE9	0.768				
	MOT1	0.944				
	MOT10	0.845				
	MOT11	0.839				
	MOT12	0.824				
	MOT13	0.759				
	MOT2	0.834				
	MOT3	0.794				
	MOT4	0.738				
	MOT5	0.755				
	MOT6	0.841				
	MOT7	0.827				
<i>Performance</i>	MOT8	0.835	0.796	0.796	0.797	0.714
	MOT9	0.949				
	PER1	0.859				
	PER10	0.762				
	PER11	0.858				
	PER12	0.961				
	PER13	0.858				
	PER14	0.762				
	PER15	0.759				
	PER16	0.847				
	PER17	0.957				
	PER18	0.861				
	PER19	0.764				
	PER2	0.749				
	PER20	0.958				
	PER21	0.895				
	PER22	0.846				
	PER23	0.752				
	PER3	0.747				
	PER4	0.957				
PER5	0.752					
PER6	0.853					
PER7	0.957					
PER8	0.861					
PER9	0.757					

Constructs	Items	F.L	CA	CR (rho_a)	CR (rho_c)	AVE
Work Engagement	WEG1	0.736	0.792	0.792	0.793	0.784
	WEG10	0.848				
	WEG11	0.941				
	WEG12	0.741				
	WEG13	0.843				
	WEG14	0.946				
	WEG15	0.894				
	WEG16	0.834				
	WEG17	0.735				
	WEG2	0.835				
	WEG3	0.738				
	WEG4	0.936				
	WEG5	0.848				
	WEG6	0.949				
	WEG7	0.791				
	WEG8	0.741				
	WEG9	0.893				
Working Environment	WN1	0.718	0.892	0.892	0.893	0.859
	WN10	0.973				
	WN11	0.837				
	WN12	0.929				
	WN13	0.837				
	WN14	0.934				
	WN15	0.722				
	WN16	0.931				
	WN17	0.737				
	WN18	0.844				
	WN19	0.931				
	WN2	0.893				
	WN20	0.801				
	WN21	0.911				
	WN22	0.736				
	WN3	0.805				
	WN4	0.923				
WN5	0.732					
WN6	0.893					
WN7	0.738					
WN8	0.812					
WN9	0.927					

Results in table III above show that items loading varies between 0.722 and 0.973 along with the CR that ranges between 0.792 and 0.893 thus over the required standard value of 0.7 (Fornell & Larcker, 1981). The AVE value varies between 0.714 and 0.859, which is also above the minimum required standard i.e. 0.5 (Chin, 1998; Fornell & Larcker, 1981; Hair et al., 2011; Zhao et al., 2020). Cronbach alpha was considered for overall instrument reliability that ranges between 0.792 and 0.892 thus above the lowest benchmark standard i.e. 0.7 (Cronbach, 1951).

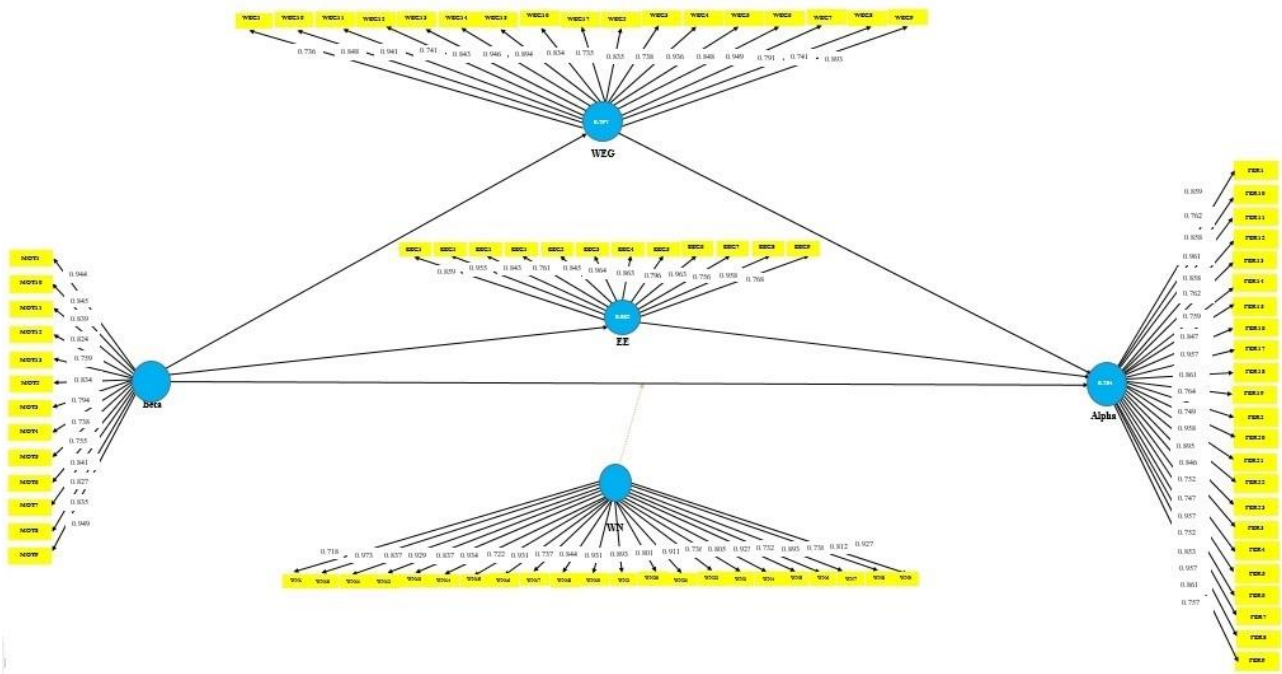


Figure II. Confirmatory Factor Analysis

As per Henseler et al. (2015), Fornell-Larcker criterion approach is usually applied for evaluating the discriminant validity. However, it is measured through taking square root of the AVE regarding individual variables having greater outcome of their correlation with other constructs (Fornell-Larcker, 1981). Moreover, it has been witnessed too by Henseler et al. (2015) through simulation studies that neither it fits accurately nor reliably detects any lack of discriminant validity in general research settings due to which a substitute option of multitrait-multimethod matrix like heterotrait-monotrait (HTMT) ratio of correlation was introduced by them having recommended threshold values less than 0.9, which has been applied in this research work (Campbell & Fiske, 1959; Aslam et al., 2022). Following table 4 shows all the values of HTMT within the minimum required standards.

Table IV. *Heterotrait-Monotrait Ratio (HTMT)*

	PER	MOT	EE	WEG	WN
PER					
MOT	0.790				
EE	0.801	0.662			
WEG	0.775	0.888	0.642		
WN	0.697	0.300	0.531	0.304	

Model Fit

A hypothesized structural model was taken to evaluate the path estimation and the whole model fit. Fitness of data and its acceptance depends on the values that come within the standard range of 0.10 or 0.08 for standard root mean square residual (SRMR), exact model fit (squared Euclidean distance (d_ ULS) and geodesic distance (d_ G) does not have any specific value, however, considered good model upon upper bound of confidence interval having higher than actual values of d_ ULS and d_ G fit criteria, similarly no specific threshold for Chi-square and greater or equals to 0.90 for normed fit index (NFI). This study results reflect the excellent model fit as all the relevant values were above the minimum required standards i.e. SRMR is 0.028, d_ ULS is 2.968, d_ G is 7.668, Chi-square is 19173.920, and NFI is 0.912.

Structural Equation Model (SEM) Assessment

Table V shows the direct path analysis breakdown from the hypotheses perspective. According to the results, employee motivation has a significant positive influence on work engagement, having values ($\beta = 0.393, \rho = 0.000$). Thus, H1 is positively accepted. There is a significant positive influence of employee motivation on employee engagement with values ($\beta = 0.437, \rho = 0.000$). Thus, H2 is also positively accepted. Similarly, work engagement has a significant positive influence on employee performance with values ($\beta = 0.024, \rho = 0.007$). Thus, H3 is positively accepted. There is a significant positive influence of employee engagement on employee performance having values ($\beta = 0.036, \rho = 0.000$). Thus, H4 is also positively accepted. Finally, results show a significant positive influence of employee motivation on employee performance having values ($\beta = 0.423, \rho = 0.000$). Thus, H5 is positively accepted too.

Table V. Direct Path Analysis

Hypotheses	Paths	B-Value	SD	T-Statistics	P-Values	Results
H1	MOT -> WEG	0.393	0.021	12.468	0.000	Positively Accepted
H2	MOT -> EE	0.437	0.027	10.898	0.000	Positively Accepted
H3	WEG -> PER	0.024	0.015	2.703	0.007	Positively Accepted
H4	EE -> PER	0.036	0.008	4.291	0.000	Positively Accepted
H5	MOT -> PER	0.423	0.023	15.254	0.000	Positively Accepted

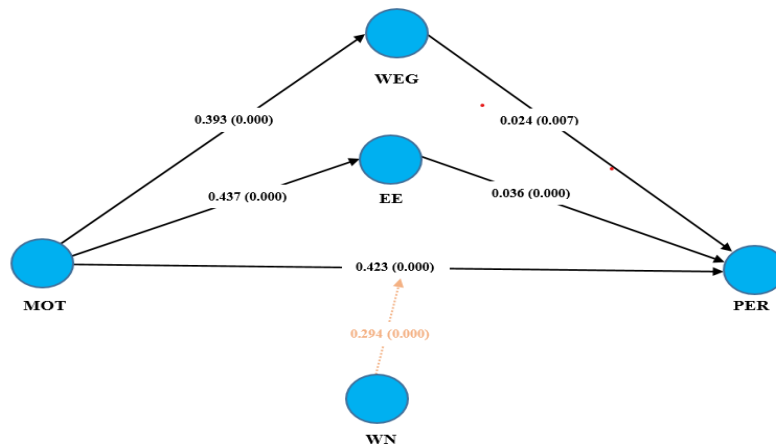


Figure III. Direct and Moderating Path Analysis

Table VI shows mediating path analysis, where work engagement is mediating the linkage of employee motivation and employee performance having values ($\beta = 0.036, \rho = 0.10$). Thus, H6 is positively accepted. Similarly, employee engagement is also mediating the employee motivation and employee performance linkage with values ($\beta = 0.023, \rho = 0.000$). Thus, H7 is also positively accepted.

Table VI. Mediating Path Analysis

Hypotheses	Paths	B-Value	SD	T-Statistics	P-Values	Results
H6	MOT -> WEG -> PER	0.036	0.014	2.580	0.010	Positively Accepted
H7	MOT -> EE -> PER	0.023	0.006	4.103	0.000	Positively Accepted

Table VII shows moderating path analysis, where the working environment is playing a moderating role amongst employee motivation and employee performance, having values ($\beta = 0.294, \rho = 0.000$). Thus, H8 is positively accepted.

Table VII. *Moderating Path Analysis*

Hypotheses	Paths	B-Value	SD	T-Statistics	P-Values	Results
H8	WN x MOT -> PER	0.294	0.013	23.435	0.000	Positively Accepted

The following figure 4 shows the moderating graph of interaction slopes. The figure shows a comparative analysis for direction and strength between employee motivation and performance. Thus, reflecting positive and parallel two-way interaction effects between the variables.

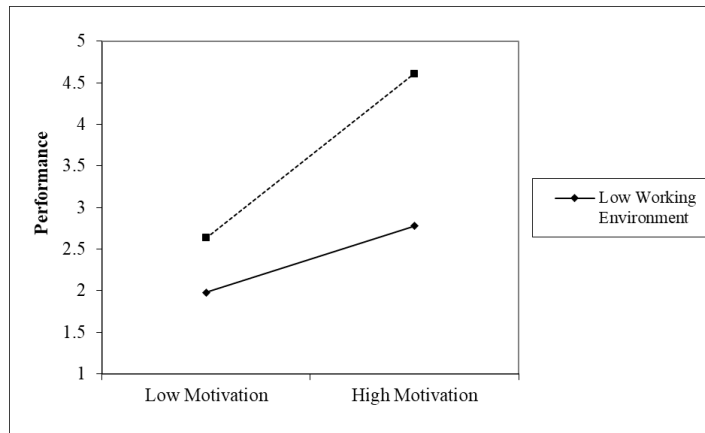


Figure IV. Moderating Graph

Discussions

This study has a four-fold contribution in fulfilling the research gaps discussed earlier. Consequently, current research proposed five constructs, motivation, performance, work engagement, employee engagement, and working environment, to see their relationship within Pakistan's Punjab private health sector. The study comprised a total of eight hypotheses with the breakdown of five direct, two mediation, and one moderation. All the proposed hypotheses were developed through available supporting literature. Ultimately, outcomes of the study are in line with the pre-determined research objectives.

First hypothesis examines a linkage of employee motivation and works engagement, where results indicated a significant positive connection between them. The study findings were in line with Rinanta and Santoso (2021), that both intrinsic and extrinsic dimensions of motivation significantly influence the nursing staff's work-related engagements in terms of vigor, dedication, and absorption. The second hypothesis finds the employee motivation and employee engagement relationship, where results showed a significant positive association between them. The study findings authenticated the conclusion of Almawali et al. (2021), where intrinsic and extrinsic motivation significantly impacts the employees' cognitive, emotional and behavioral engagement.

The third hypothesis identifies an association of work engagement and employee performance. Results expressed about significantly positive bonding between them, where study findings have validated the previous work of Wang and Chen (2020) having significant influence of work engagement along with its dimensions like vigor, dedication, and absorption on performance. Fourth hypothesis examines the relationship of employee engagement and employee performance, where results indicate about significant positive connection between them. The study findings were in line with Amjed et al. (2020) that using cognitive, emotional, and behavioral aspects of engagement by the employees enhances their

performance, Sungmala and Verawat (2021).

The fifth hypothesis investigates the employee motivation and employee performance relationship, where results showed a positive significant influence of employee motivation on employee performance. Findings of this research work supports the outcome of Kumari et al. (2021) and Novianti and Suparmono (2021). The sixth and seventh hypothesis inspects work engagement and employee engagement as mediating variable amongst employee motivation and employee performance separately, intending to fill out the gaps within the existing literature (Lee et al., 2021; Siswanto et al., 2021).

Results showed about positively significant mediating impact of work engagement and employee engagement on the linkage of employee motivation and employee performance, which not only resulted as the consequence of motivational boost (Kosaka & Sato, 2020; Slatten et al., 2022) but also contribute better towards performance improvement (Bhatti et al., 2018; Memon et al., 2020).

The eighth hypothesis identifies working environment playing a role of moderating variable between employee motivation and employee performance to fill out the gap within the existing literature (Astuti & Amalia, 2021; Hegazy et al., 2021). Results showed a positive significant moderating impact of the working environment between employee motivation and employee performance, thus supported the findings of Burbar (2021) that the working environment not only plays a vital role in motivation boost but also contributes towards employee performance.

Implications: for theory

This study has threefold theoretical implications. First, it will enhance the existing literature on motivation and performance. The academicians would be able to consider the essential contributory aspects of work engagement, employee engagement, and working environment from various angles within the diverse theoretical domains. Second, this study elucidates the real difference between work engagement and employee engagement by confirming and referring to Kosaka and Sato (2020) contributions, thus negating the previously adopted approach of considering these two as an interchangeable concepts. Third, it will enhance the knowledge gap, especially within the nursing domain. This new insight will allow researchers to view Herzberg's two factor theory of motivation in the service industry like the health sector from different angles to get various desired outcomes.

Implications: for practice

The practical significance of this study revolves around the two main areas. First, both HR and health administrators need to consider the importance of work engagement, employee engagement, and working environment not only individually but also as an extension of the motivation-related package. This will increase not only employee retention but their performance, too. Second, the health sector is a people-oriented industry with nursing care (Thambusamy & Palvia, 2020) demands the majority of quality health services delivery at the ground level, which rests with the nursing staff. Therefore, important for policymakers and the government to have long-term, constructive investment plans for a demanding profession like nursing.

Limitations

The researcher faced constraints from the population and sample, thus restricted to the nursing staff of the Punjab private health sector of Pakistan through quantitative research under a cross-sectional study with a questionnaire having a convenience sampling technique. Still, this article did not discuss employee retention, customer's (patient's) satisfaction, and health conditions, which are the study's limitations.

Recommendations

In line with the objectives of this study, future researchers may consider the public health sector of Punjab to have comparison of the findings within this province. In addition, either the private health sector of other provinces of Pakistan or the country's health sector as a whole could be considered. Moreover, researchers may have its replica in other developing or developed countries/continents containing provincial or states along with other sector of economy. Apart from the nursing professionals, remaining sub-categories of the healthcare workforce under five classifications of WHO is also recommended. Any other demographic factors along with either expanding the similar model or upgrading it with other options, might be considered. Pursuing the same constructs, either extending the current version of the study to other sectors/industries/business zones/hubs or having public-private or cross-sector/industry examination with addition/deletion of key inter-disciplinary variables of social, medical, information and management sciences etc. are additionally suggested.

Conclusions

The current research work highlighted about an impact of motivation to measure performance in the Pakistan's Punjab private health sector, however, it has been under investigation from different outlooks in past. Having said that, investigating it from the nursing angle within the health sector, along with an intervening role of work engagement, employee engagement, and the moderating role of the working environment, is a pioneering approach of its own, thus giving it a unique importance to this study. Findings of present study have expressed about significantly positive association among the constructs. This means that the proposed model has a direct, specific indirect / mediation, and moderation impact; thus, all the proposed hypotheses are positively accepted, and the desired outcome of the constructs are in line with the established objectives. The study authors believe that the study will help both the academic knowledge contribution and the industry to adopt new ways of enhancing employee performance through diverse motivational factors. The study will also enhance the understanding and importance of recognizing the employee's desired needs, stimulating them to give their best output towards enhanced performance.

Disclosure Statement

The author (s) of this article did not receive any potential conflict of interest.

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