






THE ROLE OF INTRINSIC AND EXTRINSIC JOB MOTIVATIONAL FACTORS IN ENHANCING EMPLOYEE PERFORMANCE: A MEDIATING EFFECT OF EMPLOYEE COMMITMENT

Sanam Nawaz Kalhoro¹  | Sarfraz Ali Malak^{2*}  | Bakhtawar Memon³ 
| Amjad Hussain Lashari⁴ 

Abstract

*The aim of this study was to investigate the role of job motivation factors including intrinsic and extrinsic in augmenting the performance of nurses and paramedical staff and also to assess the mediating effect of employee commitment. The current research is based on expectancy theory. The simple random sampling technique has been used and data were collected through survey questionnaire from paramedical staff (grade 16 and above) of government hospitals of urban Sindh, Pakistan. The sample size required calculated through G*power software was 258; however we received 265 responses out of 300 (response rate 88.3%). The data were analyzed through Partial Least Square Structural Equation Modeling (PLS-SEM) in Smart PLS 3.0 version software. The hypotheses testing results indicated that “employees’ intrinsic motivation (IM)” and “extrinsic motivation (EM)” had a significant positive impact on “employee performance (EP)”. The findings of this study also reported that both types of motivations (intrinsic & extrinsic) impact indirectly on workforce performance through mediator “employee commitment”. This means that nurses and healthcare workers provided with greater motivation aspects (intrinsic and extrinsic) have higher work performance and their commitment also increases which further lead to their enhanced productivity in their jobs. The authors concluded this empirical study with implications, some limitation and directions for the research in future.*

Keywords: *Extrinsic motivation, intrinsic motivation, employee performance, employee commitment.*

Author’s Affiliation:


Institution: Shaheed Benazir Bhutto University, Shaheed Benazirabad¹ | University of Sindh (Campus Dadu)^{2,3,4}

Country: Pakistan

Corresponding Author’s Email: *malak.sarfraz@usindh.edu.pk

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1. INTRODUCTION

Motivation has great influence as a driving force on employees to work consistently in their jobs and perform tasks in a better way (Utete, 2023). Authors of research Marleya et al. (2022) argued that a positive employee motivation improves their effectiveness and efficiency which contribute in achieving the goals of organization as a whole. Employee performance is very important factor for the organizations' success (Mwanje, 2010). The employee performance can be enhanced through many ways such as organizational culture; job satisfaction, organizational commitment, job motivation, good leadership style and inculcating positive working environment at work place (Sparrowe et al., 2018). Employee motivation contributes a lot in determining higher performance of employees (Mahmoud et al., 2020). In health sector employment, major portion is represented by nurses. Nurses play an important role as they are involved in patients' initial diagnosis and treatment process (Soyler et al., 2019). Nurses' motivation has been reported to impact greatly on work performance (Yahya et al., 2019). The work of Ryandini and Nurhadi (2020) stated that the outcome of workers is greatly related to the good working conditions at hospitals. Employee performance as indicated was reported to be influenced by the supervisory behavior, clear goals and objectives, and when employees receive feedback, they are compensated with rewards and remunerations, receive sufficient trainings (Chien et al., 2020). Similarly, for work performance, it has been recommended that employees' motivation is a very important factor in raising rank or position (Ali et al., 2020). Employee motivation is a major factor that drives workforce performance (Mahmoud et al., 2020).

Motivation is central to organizational behavior. It is linked to increase interest towards goals and objectives; it drives personnel to achieve their objectives (Bright, 2021). Motivation is a psychological force to determine how employees will behave in the workplace (Jolly, 2016).

The theories have discovered that motivation can be either intrinsic or extrinsic that exert their effect on the employee's performance (Pradenas et al., 2021). Similarly, Theories of motivation have expressed that human behavior is determined by diverse intrinsic and extrinsic goals (Ryan & Deci, 2020). Intrinsic factors including acknowledgment, opportunity for training, delegation of power, and equity among co-workers influence their level of motivation, which in turn influences their output at work (Sam et al., 2024). The intrinsic motivation variable significantly influenced the workplace performance of staff. The findings indicated that "intrinsic" and "extrinsic" motivation had a favorable impact on workers satisfaction (Yusuf, 2021). "Intrinsic motivation" is quality characterized by the strong evaluation of a person's involvement in work (Ryan & Deci, 2017). These are important factors that cause employee performance to increase. That is, extrinsic motivation influenced in a positive way on organization performance (Ahmed et al., 2021). Authors of the study Maan et al. (2020) argued that commitment is a psychological agreement that employees' have toward organization, which show the physically powerful bond between the organization and employees and physically powerful aspiration of the employees to participate

in helping the organization to achieve goals.

1.1 Objectives of the Study

The core objective of study undertaken is to examine how motivation contributes in improving employee performance. However, main research objective is categorized as:

- To assess the influence of intrinsic motivation on “employee performance”.
- To assess the influence of extrinsic motivation on “employee performance”.
- To investigate the effect of intrinsic motivation on “employee commitment”.
- To investigate the effect of extrinsic motivation on “employee commitment”.
- To evaluate the mediating role of employee commitment in the link between intrinsic motivation and performance.
- To evaluate the mediating role of employee commitment in the link between extrinsic motivation and performance.

1.2 Research Questions

- In line with objectives set for this study, the following research questions are raised:
- To what degree the motivation with intrinsic aspects impact on employee performance?
- To what degree the motivation with extrinsic aspects impact on employee performance?
- Does intrinsic motivation have any effect on employee commitment?
- Does extrinsic motivation have any effect on employee commitment?
- Does employee commitment act as a mediator in the link between intrinsic motivation and “employee performance”?
- Does “employee commitment” act as a mediator in the link between

extrinsic motivation and employee performance?

2. LITERATURE REVIEW

This section critically reviews the relevant literature on the research themes of this article including types of motivation (intrinsic & extrinsic), performance of employees and also role of mediating variable employee commitment. The systematic review of past studies facilitates in identifying research gaps and developing our research theoretical and conceptual framework in context of health service providers, the nurses and paramedical staff in government hospitals of Urban Sindh, Pakistan.

2.1 Underpinning Theory

This research uses “expectancy theory” of Vroom (1964) which is related with workplace motivation of employees and it discusses that “intrinsic and extrinsic motivation collectively and positively influence expected work performance”. Grounded on expectancy theory, the study proposes that both types of motivations predict employee performance via employee commitment.

2.2 Intrinsic Motivation and Employees Performance

Workforce performance has become vital for the success of organizations (Mwanje, 2010). The personnel work performance has been investigated in different ways. There are two domains of employee performance; contextual and task (Rahman et al., 2019). “Task performance” represents a set of activities that affect an organization technical aspect which an employee is expected to maintain. Whereas, contextual performance denotes the behaviors that are beyond official sanctions but are expected to affect the work environment in a positive manner (Pandey et al., 2021). The research evidenced that intrinsic motivation factors were strongly associated with work output of employees (Sam et al., 2024). Empirical evidence of the study by Sunardi et al. (2020) reported that intrinsic motivation affected the gratification of workers, and also had significant influence on personnel performance and values. Environment of the job and the support from management had the strongest impact directly and indirectly on the job performance, whereas intrinsic motivation had a direct impact on the job performance (Diamantidis & Chatzoglou, 2019). It was reported by research findings that intrinsic motivation impacted job performance significantly (Nasir et al., 2019). The study outcomes showed that “intrinsic” motivation partially effects on workers performance, and “extrinsic” motivation has no importance on employee performance, however, both types of motivations reported to have influence on performance of staff (Andika & Darmanto, 2020). Since nurses and paramedical staff are frontline service providers, the job factors can greatly influence on their job performance. Based on this, it is hypothesized that:

H1: “Intrinsic motivation” has a significant positive effect on employees’

performance.

2.3 Extrinsic Motivation and Employee Performance

“Extrinsic motivation” is very important for “employee performance” because the extrinsic reward system helps employees to perform better in organization (Nilasari et al., 2021). The investigation reported that employee identification has a high positive and important correlation with employee performance and employees should be motivated (Okoth & Florah, 2019). Employee motivation increases efficacy and helps in achieving organizational goals (Marleyana et al., 2022). The research work of Delil (2019) indicated that extrinsic motivation influences “organization commitment” and “employee commitment”. These extrinsic elements encompass “working conditions”, “salary” & “job security” which were positively related with employees’ commitment. The rewards such as money and other awards can be great motivating factors for those who are engaged in health services such as nurses and healthcare staff which can have significant influence too. In this context, the hypothesis has been postulated that:

H2: Extrinsic motivation has a significant positive effect on employee performance

2.4 Intrinsic Motivation and Employee Commitment

The author’s work revealed that motivating employees for their commitment such as “salary” and “working conditions” have a high impact on employee to become responsible and productive (Ezenwakwelu, 2017). Similarly, “personal growth” related positively in enhancing the staff commitment and higher performance of employees. This means that intrinsic motivation of employees enhanced employees’ commitment. Another study revealed that intrinsic motivation moderated the connection between public service motivation and organizational commitment (Potipiroon & Ford, 2017). It was seen in the research that motivated personnel had great influence on their commitment for organizations (Al-Madi et al., 2017). In case of staff engaged in health services in hospitals, the inherent job motivation factors can influence on their commitment. This has been hypothesized as:

H3: Intrinsic motivation has significant positive effect on commitment of employees.

2.5 Extrinsic Motivation and Employee Commitment

Study conducted by Delil (2019) showed that the working conditions, salary, job security which are factors of extrinsic motivation had positive significant effect on employees’ commitment. An extrinsic motivation influences staff performance this results increased commitment for the organizations. The variables “career development” and “motivation influenced on “employee performance” simultaneously, and “career development”, “motivation”, and “organizational commitment” together impact employee’s performance partially (Kurniawan &

Rivai, 2018). The provision of external rewards such as monetary benefits and career growth incentives can greatly impact nurses and paramedical staff commitment in the organizations. This leads to construct the following statement for testing:

H4: “Extrinsic motivation” has a positive and significant effect on “employees’ commitment”

2.6 Employee Commitment and Employee Performance

The “employee commitment” can benefit in many ways as it results low turnover, lower absenteeism and high performance of employees (McGuire & McLaren, 2018). The research results showed employee commitment was positively related with employee performance (Simatupang & Saroyeni, 2018). Employee’s creative performance has become a vital for success of any organization; it depends on the rewards which give the commitment to their work. If rewards are more outstanding then employees are more motivated towards their work (Shalley & Gilson, 2017). If health services providers’ commitment can also impact on their performance of jobs. In view of above” literature review”, the following hypotheses have been developed:

H5: “Employee commitment” is relates positively with “employee performance”.

H6: “Employee commitment” has mediation effect on the link between “intrinsic motivation” and “employee performance”

H7: “Employee commitment” mediation effect on the association between “extrinsic motivation” and “employee performance”.

3. RESEARCH METHODOLOGY

3.1 Conceptual Model

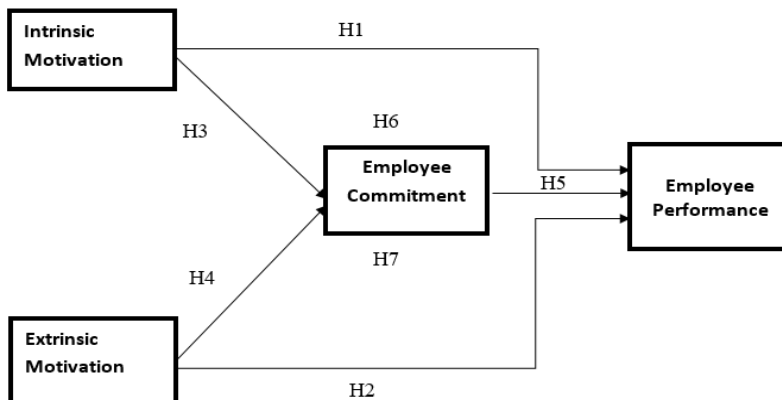


Figure 1. Conceptual Model

The figure 1 illustrates the conceptual framework of our study. It shows Intrinsic and extrinsic motivations are independent variables and employee's performance is dependent variable, whereas employee commitment is a mediating variable of study undertaken.

3.2 Research Methodology

Jonker and Pennink (2010) explained research as a regular, deliberate and mechanical procedure which entails search of new insights and knowledge in the form of an answer to the predetermined questions or problems. This research study employs a quantitative research design to evaluate the link between Job related motivation (extrinsic and intrinsic), "employee performance" and "employee commitment". In research design, the "cross-sectional survey" has been used to gather quantitative data through questionnaire on Five-Point Likert scale from paramedical staff (having BPS 16 & above) of government hospitals at District Head Quarters (DHQs) in urban cities (Karachi, Hyderabad, and Sukkur) of Sindh, Pakistan. This study has used "simple random sampling technique" and minimum sample size determined through G* power calculator was 242. However, 300 "questionnaires" were distributed among the premedical staff of the government hospitals of urban Sindh, Pakistan. For receiving a higher level of response rate, questionnaires were distributed online as well as physically face to face. In total 270 responses were received which represented 88.3% response rate.

The collected data have been analyzed through "Statistical Package for Social Sciences (SSPS) version-25" for descriptive analysis. However, software (SmartPLS), "Partial Least Square (PLS)", "Structural Equation Modeling (SEM)" has been used to evaluate measurement model, structural model and to examine the connections among the variables of this study.

4. DATA ANALYSIS & RESULTS

4.1 Measurement Model Assessment

As suggested, both measurement model and structural model were assessed for quality check (Hair et al., 2012). The steps involved in assessment of measurement model include; checking reliability of individual object, reliability of "internal consistency", "content validity", "convergent validity", and "discriminant validity" (Hair et al., 2016).

Reliability Analysis: The reliability of items is considered good if its loadings value is more than 0.70 (Hair et al., 2016). As recommended rule of thumb the items with loadings varying from 0.40 to 0.70 should be retained. Following this approach only 25 items were retained with loadings 0.638 to 0.943 (see Table 1 & Figure 2).

Table 1. Factor Loadings

Constructs	Items	Loadings
Intrinsic Motivation (IM)	IMO1	0.879
	IMO2	0.888
	IMO3	0.897
	IMO4	0.879
	IMO5	0.893
	IMO6	0.897
Extrinsic Motivation (EM)	EM1	0.793
	EM2	0.753
	EM3	0.638
	EM4	0.907
	EM5	0.912
	EM6	0.893
	EM7	0.908
	EM8	0.901
	EM9	0.927
Employee Commitment	EC1	0.778
	EC2	0.933
	EC3	0.924
	EC4	0.757
	EC5	0.914
Employee Performance	EP1	0.924
	EP2	0.928
	EP3	0.943
	EP4	0.926
	EP5	0.928

Reliability of Internal Consistency: “Composite reliability” value has been used to assure the “internal reliability” of latent variable. Composite reliability values should be 0.7 or above (Hair et al., 2011). In Table 2, the “cronbach’s alpha” and “composite reliability” values represent that constructs in our model meet reliability criteria.

Convergent Validity: “Average variance extracted (AVE)” values were used to analyze the “convergent validity” of the constructs. AVE values should be 0.5 or above (Hair et al., 2010). The constructs’ AVE values are above 0.5 which confirms the validity of our model constructs (see Table 2).

Table 2. Construct Reliability and Validity

Construct	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
EC	0.851	0.878	0.910	0.748
EM	0.862	0.891	0.923	0.728
EP	0.873	0.903	0.936	0.865
IM	0.881	0.911	0.941	0.790

Discriminant Validity_ Fornell & Larcker Criterion: The extent to which a construct is different from others in terms of how it related to other constructs and how certain metrics only represent one construct is referred to as discriminant validity (Hair et al., 2014, p.115). In Table 3, the diagonal bold italic values are squared AVE and are greater than correlated values of other variables which suggest that discriminant validity has been established.

Table 3. Discriminant Validity_ Fornell & Larcker Criterion

Construct	EC	EM	EP	IM
EC	0.865			
EM	0.765	0.853		
EP	0.612	0.756	0.930	
IM	0.554	0.629	0.851	0.889

Discriminant Validity_ Heterotrait-Monotrait Ratio (HTMT): The discriminant validity can also be checked through HTMT values which should be below suggested limit of 0.85 and 0.90 as given by the author (Henseler et al., 2015). In this regard, Table 4 shows that all HTMT values are below recommended threshold which guides that required discriminant validity among variables have been achieved.

Table 4. Discriminant Validity_ Heterotrait-Monotrait Ratio (HTMT)

Constructs	EC	EM	EP	IM
EC				
EM	0.664			
EP	0.722	0.658		
IM	0.791	0.82	0.737	

4.2 Assessment of Structural Model

The “structural model” is to be assessed for “co-efficient of determination (R²)”, “Effect size (F²)” and assessment of direct and indirect paths (Hair et al., 2016). For getting results in our research, 5000 bootstraps were run on samples of 265 instances for testing the significance of path model. The final path model of this study is illustrated in figure 2.

Co-efficient of determination of R² Assessment

One way of assessing the “structural model” is the R square value (Hair et al., 2012). According to the R square value, the predictor variables describe the percentage of variance in the dependent variables (Hair et al., 2010). The minimum appropriate value of the R square is 0.10 (Falk & Miller, 1992). Whereas, the “R square value of 0.67 is a significant value, 0.33 is a moderate value, and 0.19 is a weak value” in the PLS-SEM (Chin, 1998). The R square values of the endogenous variables of this study model are presented in table 5.

Table 5. R Square Values

Construct	R Square	R Square Adjusted
EC	0.925	0.924
EP	0.946	0.945

Effect size f² assessment

Effect size is the relative shift in the “exogenous latent variable” on the “endogenous latent variable(s)” by a change in “R-squared” values (Chin, 1998). The impact size estimation takes place in relation to the unexplained variance of unexplained variables as the rise in R square values of the latent variable linked to the route occurs (Chin, 1998).

“F² values of 0.02 are weak, 0.15 is moderate, and 0.35 is high” (Cohen, 1998). The effect sizes of the structural model variables are shown in the table 6.

Table 6. F Square Values

Construct	EC	EM	EP	IM
EC			0.065	
EM	0.701		0.282	
EP				
IM	0.199		0.222	

Assessment of Direct Paths

The findings in Table 7 show that “intrinsic motivation (IE)” has positive impact on “employee performance (EP)” which is significant too ($\beta = 0.331$, $t = 6.340$, $P < 0.05$), hence results support H1. This means more the intrinsic motivation of the nurses of government hospitals the greater would be their work performance. The results further reveal that “extrinsic motivation (EM)” is positively related with “employee performance (EP)” and it is also significant ($\beta = 0.446$, $t = 7.865$, $P < 0.05$), therefore H2 is supported. Nurses also performed well in their jobs when they had good extrinsic motivation at workplace. The path assessment (see Table 7) indicated that H3 is also supported ($\beta = 0.339$, $t = 4.943$, $P < 0.05$) this means that IM has positive and significant effect on employee commitment (EC). In addition, it is also shown EM has positive and significant relation with EC ($\beta = 0.637$, $t = 9.523$, $P < 0.05$) which support H4 of our study. Thus, the healthcare staff commitment also increased with the higher aspects of motivational factors intrinsic and extrinsic which subsequently increased personnel performance as results reported that EC had positive and significant impact on EP ($\beta = 0.215$, $t = 3.057$, $p < 0.05$) which agrees with H5 of this study (see Table 7).

Table 7. Assessment of Direct Paths (Hypotheses Testing)

Hypothesis	Path	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T-Statistics (O/STDEV)	P Values	Decision
H1	IM -> EP	0.331	0.338	0.052	6.340	0.002	Supported
H2	EM ->EP	0.446	0.446	0.057	7.865	0.000	Supported
H3	IM -> EC	0.339	0.339	0.069	4.943	0.000	Supported
H4	EM->EC	0.637	0.638	0.067	9.523	0.000	Supported
H5	EC -> EP	0.215	0.208	0.070	3.057	0.000	Supported

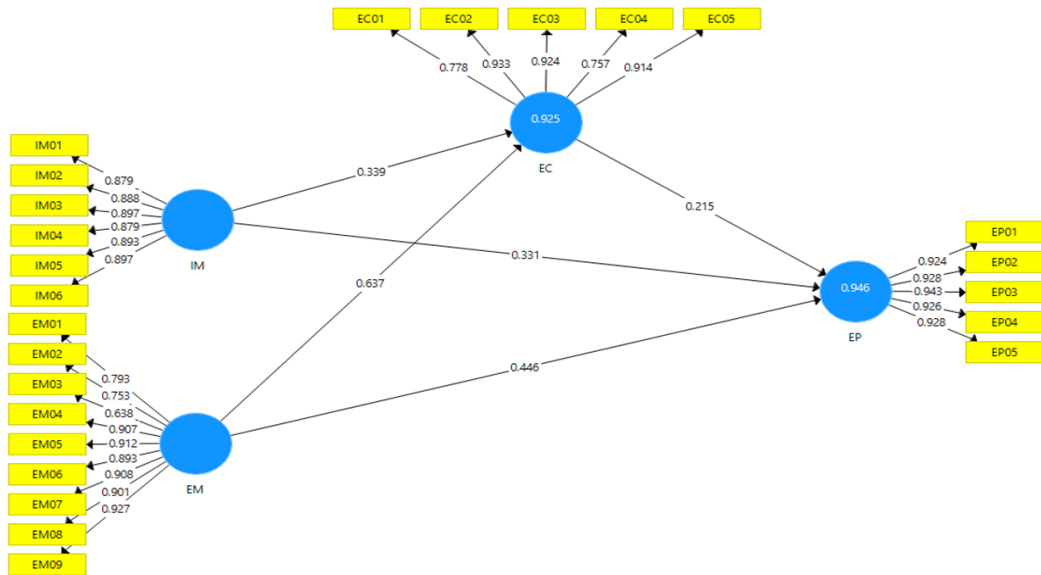


Figure 2. Final Path Model of this study

4.3 Mediating Analysis

The mediation was assessed through bootstrapping procedure to check the indirect effect. The results in Table 8 show that EC mediates the link between the IM and the EP ($\beta= 0.073$, $t= 2.799$, $P<0.05$) in a significant way, H6 is supported. Similarly, findings also revealed that the interaction between EM and the EP was mediated significantly by EC ($\beta= 0.137$, $t= 2.769$, $P <0.05$), therefore H7 of this study is also supported.

Table 8. Assessment of Indirect Path (Mediating Analysis)

Hypothesis	Path	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T-Statistics (O/STDEV)	P Values	Decision
H6	IM -> EC-> EP	0.073	0.070	0.026	2.799	0.005	Supported
H7	EM ->EC-> EP	0.137	0.133	0.049	2.769	0.006	Supported

5. DISCUSSION & CONCLUSION

It is understood that nurses are instrumental component and play a major role in health service sector. All health care practitioners facilitate in management and provision of smooth health services. Nonetheless, nurses are the main collaborators of doctors and play a substantial role in the processes of diagnosis and recovery and are involved in a substantial portion of the delivery of care to doctors. In this context, nurses are engaged in providing services in key areas,

such as reaching the optimal level of success in healthcare facilities, delivering adequate support, and ensuring patient loyalty. According to Boon et al. (2019) that HR is responsible for raising “employee motivation” in order to enhance “organizational performance”. The job efficiency of nurses impacts patient care results by providing meaning to their activities. Any stimulant to drive nurses towards greater motivation is, therefore, just as important. Current study results show that motivation (intrinsic and extrinsic) directly impact the performance of nurses in a positive and significant way which is consistent with research findings of authors (Katebi et al., 2022; Utete, 2023). These results agree with the research evidence which show that Intrinsic factors including acknowledgment, opportunity for training, delegation of power, and equity among co-workers influence their level of motivation, which in turn influences their output at work (Sam et al., 2024). This means motivation given to nurses by hospitals enhances their job performance. In addition it was also seen in results that motivation (intrinsic and extrinsic) increased employee commitment, which agree with past investigations (Al-Madi et al., 2017; Delil, 2019). In empirical findings of present witnessed that more employee commitment of nurses enhanced performance of nurses at workplace which were consistent with previous research findings (Simatupang & Saroyeni, 2018). Interestingly, the outcomes of this study further indicated that “employee commitment” mediates the interaction between motivation and the “performance of employees”. This suggests that employee commitment causes the more impact of “employee motivation (intrinsic and extrinsic)” on the nurses’ performance. The findings of this research study provide support for the key “theoretical concepts”. In particular, this study answered all the research questions and objectives. Although there are many studies on the relationship between motivation and employee performance, this research addressed the theoretical gap by incorporating employee commitment as the mediator. This study gives theoretical and functional guidelines and directions for prospective studies in the area of motivation and employee performance using expectancy theory in addition to the analytical findings.

6. IMPLICATIONS, LIMITATIONS & FUTURE RESEARCH

Theoretically, this research leads to the development of a framework concerning performance of nurses from various DHQ Hospitals in Urban Sindh, Pakistan. The theoretical model presented in this research is derived from literature and past empirical research. It was also explained through the expectancy theory given by Victor Vroom (1964) related to motivation and employee performance and outcome. The current study provides empirical support on the role of motivation in enhancing the employees’ performance, a mediating role of employee commitment. Thus, this current study has managed to add to the body of knowledge in the area of nursing in urban Sindh Hospitals of Pakistan.

Practically, this empirical study guides that motivation can influence on the performance of staff nurses. The healthcare workers who are given job motivation have shown good performance in DHQ Hospitals of urban Sindh Pakistan.

Thus, the managers in the health service industry should concentrate on enhancing the efficiency of frontline workers; workers be given motivation for increasing performance and more commitment to the organization. Not only bosses, administrators should think about their positions but they should still behave as peers and coworkers.

The sample for this study was limited to three cities (Karachi, Hyderabad, Sukkur) in the Sindh province of Pakistan. Future research could expand the scope to include the entire country or even other nations, allowing for comparative analysis between multiple countries. Additionally, future studies might compare the four provinces of Pakistan—Sindh, Punjab, Baluchistan, and KPK—to examine whether and how motivation (both intrinsic and extrinsic) varies across these regions.

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