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THE MODERATING ROLE OF INNOVATION CAPABILITY IN THE RELATIONSHIP BETWEEN TRANSFORMATIONAL LEADERSHIP AND NURSES' PERFORMANCE

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Abstract
This research is an exploration of how transformational leadership impacts the performance of the nurses in the Qatar government healthcare system and the moderator of innovation capability. The study employed a quantitative, cross-sectional design to gather data on 403 registered nurses in the facilities of Hamad Medical Corporation and analyse it using Partial Least Squares Structural Equation Modelling (PLS-SEM). The findings indicate that five dimensions of transformational leadership, such as Idealized Attributes, Inspirational Motivation, Idealized Behaviour, Intellectual Stimulation, and Individual Consideration, have a significant positive impact on the performance of nurses, and Intellectual Stimulation does not demonstrate significant data. The capability of innovation became the most predictive one of the performance and the mediator between the impact of Idealized Attributes and Individual Consideration on the performance of nurses. The predictive test showed that the general model showed moderate and strong predictive accuracy. These results support the role of relational leadership behaviours and innovation capability in promoting clinical performance. The research makes contributions to the organisational leadership theory by explaining the situations when transformational leadership works best and the importance of strengthening the innovation capability of nurses as a strategic tool to improve healthcare. The practical implications of this study encompass the enhancement of leadership building and innovations, enabling conditions in the public healthcare facilities. Future studies are encouraged to adopt longitudinal studies, multi-source performance ratings, and an entire organisation factor that may affect leadership-performance relations.
Keywords: Transformational leadership; nurses' performance; innovation capability; PLS-SEM; Qatar; healthcare leadership

1. INTRODUCTION

Transformational leadership has been widely accepted that is one of the necessary impetuses of employee performance in any organizational setting, healthcare being no exception. Studies indicate that ethical leaders with the capacity to influence others with an idea they believe in and offer personalized attention to their staff can considerably increase employee motivation, involvement, and work performance (Judge and Piccolo, 2004). Transformational leadership is particularly emphasized in nursing as nurses work in emotionally charged settings and need competence, flexibility, and collaboration on a high level. A positive and encouraging leadership culture can promote the uptake of new practices, improved service delivery, and patient outcomes by the nurses.

Although it is reportedly advantageous, the transformational leadership effect on performance is not always homogenous. Previous research states that contextual and organizational conditions, including work structure, culture, and innovation preparedness, play a major role in determining whether the leadership behaviors will lead to the improvement of performance (Martínez-Costa et al., 2018; Sáenz et al., 2009). Innovation capability, which entails the capacity to generate, develop, and implement new ideas, is a core component of the leadership performance relationship in dynamic healthcare systems. The ability to innovate allows nurses to act, react to changing clinical needs, embrace new technologies, and participate in patient-centered innovations. Nonetheless, the empirical literature that analyzes the effect of innovation capability on nursing performance in the Qatar healthcare system is scarce, and most institutional, cultural, and systemic barriers to innovation are underreported (Bhatti et al., 2021; Moreira et al., 2017).

Even though transformational leadership has a close association with favorable nursing outcomes worldwide, the available studies are primarily related to Western, privatized, or for-profit healthcare. A serious knowledge deficit exists regarding the role that transformational leadership plays in performance in the government healthcare organizations in Qatar, which exist in a distinct structural, cultural, and functional environment. In addition, the innovation capability has not been comprehensively studied as a moderating factor in the context of leadership-performance models, although it can potentially make the leadership efforts yield measurable performance results. This paper fills these gaps by placing

innovation capability as a dynamic moderator in a government healthcare scenario, which has not been adequately investigated.

The study seeks the following objectives based on the gaps that have been identified:

1. To address how the elements of transformational leadership, namely, idealized attributes, idealized behaviour, inspirational motivation, intellectual stimulation, and individual consideration, affect the performance of nurses in the government healthcare sector of Qatar.
2. To evaluate the direct impact of the innovation capability on the performance of nurses in the same organizational setting.
3. To investigate the moderating role of innovation capability in the relationship between transformational leadership and performance of nurses in the government healthcare organization in Qatar.

This research will have significant theoretical and practical implications for the study of the relationship between transformational leadership and innovation capability. It goes further in developing leadership theory by explaining when transformational leadership affects performance and points to innovation capability as one of the mechanisms that determine these effects. In practice, the study provides evidence-based findings to enhance leadership activities, support the culture of innovation, and optimize nurse performance within the Qatari fast-changing government-funded healthcare system.

2. LITERATURE REVIEW

2.1 Transformational Leadership in Healthcare

Transformational leadership is extensively known as one of the key leadership strategies to improve the performance of the organization and its employees. It can be described as the process by which leaders and followers uplift each other to greater heights of motivation and morality and a level of selflessness toward the interests of the group (Bass, 1985; Burns, 1978). The model is made up of five fundamental dimensions: idealized attributes, inspirational motivation, idealized behaviour, intellectual stimulation, and individual consideration, in which leaders serve as role models of ethics, sell a desirable vision, persuade people to think differently, and are willing to listen to the personal needs of the followers.

Empirical research findings have always given positive correlations between Transformational leadership and job performance, additional effort and performance outcomes (Judge and Piccolo, 2004; Donkor et al., 2021). Transformational leadership is associated with better patient care, collaboration, and job satisfaction in the healthcare sector (Afzal et al., 2016; Cummings et al., 2018), and nurse managers who apply Transformational leadership behaviours create empowerment, innovative ideas, and professional development.

Nonetheless, other studies also indicate a mixed or conflicting outcome, indicating insignificant or paradoxical connections between Transformational leadership and performance (Eliyana et al., 2019; Pishgooie et al., 2019; Li and Liu, 2020; Kawiana et al., 2020). The various dimensions of Transformational leadership are also likely to vary in strength; the idealized influence dimension and inspirational motivation are usually associated with performance, whereas intellectual stimulation might be less influential in highly regulated settings like hospitals. As noted by the recent nursing literature, the individualized approach is specifically valuable in empowerment, psychological safety, and staff retention (Boamah et al., 2018).

In general, although Transformational leadership may be applied to nursing settings, the available literature indicates that the impact of all the Transformational leadership components on performance should be studied in more detail, especially in non-Western and state-controlled healthcare systems.

2.2 Nurses' Performance

The performance of nurses is a multidimensional phenomenon encompassing clinical competence, efficiency, quality of care, professional behaviour, and compliance with the standards of evidence-based practice (Takase, 2013; Welton et al., 2016). Since a nurse is the most significant share of the healthcare workforce, the quality of the services, safety of patients, and effectiveness of the organization are directly related to the performance of nurses (Tesfaye et al., 2015; Welton et al., 2016). Good performance is linked to better results, such as reduced adverse events, hospital stay, and cost, whereas poor performance is connected to mistakes, dissatisfaction, and inefficiency of the system (Tesfaye et al., 2015; Baek et al., 2018).

The main factors that can greatly influence the performance of nurses are leadership style, work environment, workload, organizational design, emotional commitment, and stress (Sharma and Dhar, 2016). Favorable work environments supported by leadership result in performance improvement, and the opposite is also true, where poor managerial support, team conflict, and workplace violence hamper performance.

Nevertheless, there are still gaps, despite a lot of research. most studies are descriptive, confined to a single context, and uncommonly combine the terms of leadership, innovation and performance into a single explanatory paradigm. Not many of them consider behavioural and outcome measures jointly or the interaction of individual capabilities (innovation capability) with leadership in healthcare in a public sector.

2.3 Innovation Capability

Innovation capability can be described as the capacity to produce, create and use new ideas, processes, or services that enhance performance and effectiveness (Lawson and Samson, 2001; Lei et al., 2019). It is becoming crucial in nursing because of the accelerated technological transformation, growth in patient demands, and complicated clinical conditions. Nursing innovation can be in the form of new models of care, clinical practice, digital tools, education, and workflow. Innovative nurses, as stated by the International Council of Nurses (ICN), are identified as leaders that develop and deliver

new programs and projects, which emphasizes the significance of innovation to the development of the profession and quality of care (ICN, 2004; Kara, 2016).

Research indicates that innovation capability has a positive correlation with job performance, organizational commitment, problem-solving, and efficiency (Zhao, 2020; Asurakkody and Shin, 2018). Nevertheless, the structures, lack of managerial support, and rigid hierarchies are frequent reasons why nurses indicate low-to-medium levels of innovative behaviour as creativity is inhibited (Fan et al., 2016; Moreno Cunha et al., 2022). The presence of conditions that facilitate innovation, like the support of leaders, psychological safety, and a creative climate, is always highlighted (Weng et al., 2012; Maldonado-Guzmán et al., 2019).

Regardless of its topicality, the ability to innovate is rarely introduced dynamically in leadership-performance models, and the number of studies investigating it as a moderating factor is even less within the framework of the Middle Eastern public healthcare sector.

2.4 Integrating Transformational Leadership, Innovation Capability, and Nurses' Performance

Recent studies identify Transformational leadership with innovation-related consequences and prove that transformational leaders have the ability to increase creativity, innovative behaviour, and the use of new practices (Donkor et al., 2021). Transformational leadership can be used in the healthcare sector to foster an environment in which nurses can challenge the status quo, experiment, and implement constant improvement, which leads to improved perform

Nevertheless, there is a paucity of empirical studies that investigate the joint relationship between Transformational leadership, innovation capability and performance of nurses. Other recent literature is usually based on Transformational leadership to performance or innovation ability to performance as well as study innovation within a private or western setting. There are limited studies that examine the possibility of innovation capability of nurses mediate the Transformational leadership–performance relationship in a government-operated healthcare system such as the Gulf region though the structural and cultural disparities can influence such relationships.

These gaps are met in this study through (i) evaluating the effects of the individual Transformational leadership dimensions on the performance of nurses and (ii) establishing the role of innovation capability as a mediating factor. This systems outlook addresses the demands of more contextualized models to connect the notion of leadership, innovation, and performance to nu

3. METHODOLOGY

3.1 Research Design

The survey design was quantitative and cross-sectional, which explored the effects of transformational leadership on the performance of nurses and the moderating effect of innovation capability in the Qatari governmental healthcare system. This design facilitated the measurement of the leadership perceptions, innovation capability, and performance at one time.

3.1.1 Theoretical Framework and Hypotheses

The study tested a theoretical framework linking Transformational Leadership (TL), Innovation Capability (IC), and Nurses' Performance (NP). The framework is grounded in Transformational–Transactional Leadership theory and Leader–Member Exchange theory, which explain the direct leadership effects and the moderating role of innovation capability.

The model includes five dimensions of transformational leadership, Idealized Attributes (IA), Idealized Behavior (IB), Inspirational Motivation (IM), Intellectual Stimulation (IS), and Individual Consideration (IC), each hypothesized to influence nurses' performance. Innovation capability is modeled both as an independent predictor of performance and as a moderator of the relationship between each TL dimension and nurses' performance.

Table 1 Research Questions and Corresponding Hypotheses

Research Question (RQ)	Hypothesis (H)	Description
RQ1: Does transformational leadership influence nurses' performance?	**H1**	Transformational leadership significantly affects nurses' performance.
	H1.1	Idealized Attributes (IA) positively influence nurses' performance.
	H1.2	Idealized Behavior (IB) positively influences nurses' performance.
	H1.3	Inspirational Motivation (IM) positively influences nurses' performance.
	H1.4	Intellectual Stimulation (IS) positively influences nurses' performance.
	H1.5	Individual Consideration (IC) positively influences nurses' performance.
RQ2: Does innovation capability influence nurses' performance?	**H2**	Innovation capability significantly affects nurses' performance.
RQ3: Does innovation capability moderate the relationship between transformational leadership and nurses' performance?	**H3**	Innovation capability moderates the relationship between transformational leadership and nurses' performance.
	H3.1	IC moderates the effect of IA on nurses' performance.

	H3.2	IC moderates the effect of IB on nurses' performance.
	H3.3	IC moderates the effect of IM on nurses' performance.
	H3.4	IC moderates the effect of IS on nurses' performance.
	H3.5	IC moderates the effect of IC on nurses' performance.

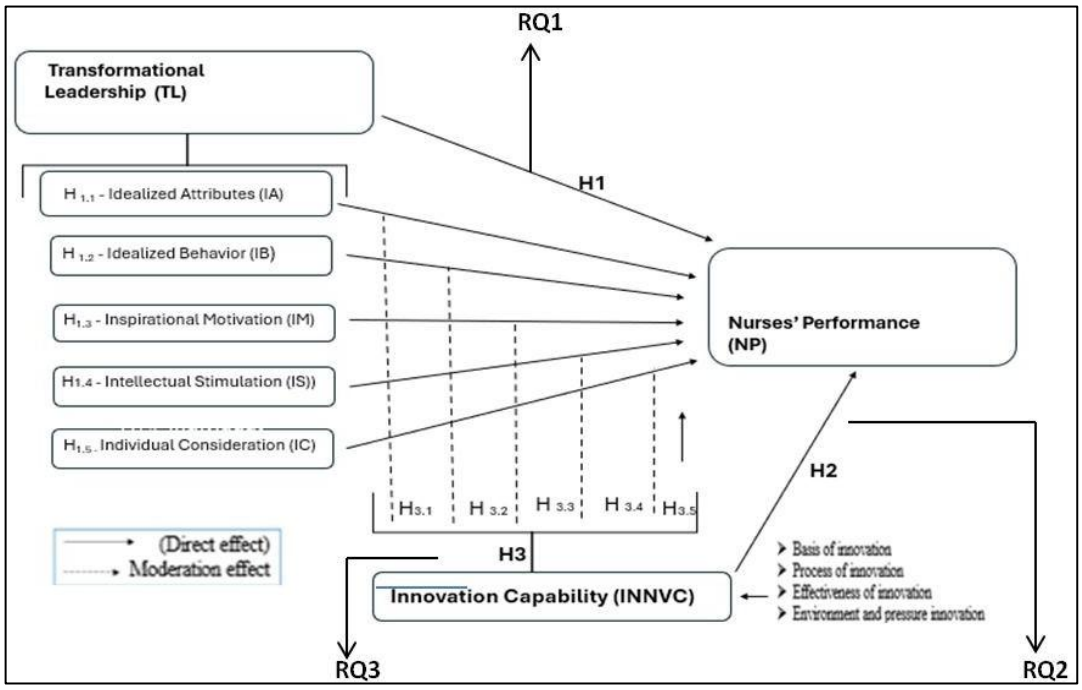

Figure 3.1. Theoretical Framework of the Study

3.2 Study Setting and Population

The investigation was carried out on Hamad Medical Corporation (HMC), the largest state-owned health care organization in Qatar. The target population was full-time, non-managerial registered nurses, and the study was able to concentrate on the perceptions of the staff nurses regarding leadership behaviours of their supervisors.

3.3 Sampling and Sample Size

The entire population of the study was comprised of full-time registered nurses in the clinical field in HMC facilities. The stratified random sampling method was used to guarantee the presence of enough representatives of major specialties (medical, surgical, paediatric, critical care, etc.). The stratification was done according to the clinical departments, and the proportionality gave the real picture of the distribution of nurses in the workforce.

The appropriate size of the sample was estimated using Krejcie and Morgan's (1970) table; based on the population size of the nurses, which is more than 8,000, and the complexity of the model. A greater number was invited to account the non-response. Out of all the questionnaires sent, 420 were returned, and 403 valid responses were identified after filtering the completeness and validity of this sample were above the recommended minimum and gave sufficient statistical power in the PLS-SEM.

3.4 Inclusion and Exclusion Criteria

They included full-time registered nurses who are directly involved with patient care. Left out were nurse managers, supervisors, part-time nurses, as well as non-clinical administrative nurses.

3.5 Data Collection

The SurveyMonkey questionnaire was an online tool that was distributed in 13 hospitals to collect data. The involvement was voluntary and anonymous, and the electronic informed consent was received before the completion of the surveys.

3.6 Measures

All constructs were measured with the help of validated scales:

- **Transformational Leadership:** assessed in five dimensions (idealized attributes, idealized behaviour, inspirational motivation, intellectual stimulation, and individual consideration).
- **Nurses' Performance:** the performance was measured based on the questions about clinical competency, communication, professionalism, and compliance with the nursing process.
- **Innovation Capability:** the scale is measured with items that reflect the concepts of idea generation, experimentation, and implementing innovative practices. The rating of everything was on a Likert scale.

3.7 Instrument Validation

The questionnaire underwent expert review to ensure clarity, relevance, and contextual appropriateness of the measurement items. Reliability was assessed through internal consistency using Cronbach's alpha, the most widely used method for evaluating survey reliability in social science research (Sekaran & Bougie, 2016; Hair et al., 2010). This method ensures that items measuring the same construct produce consistent results across repeated applications.

A pilot test was conducted prior to full-scale data collection. All constructs exceeded the minimum acceptable reliability threshold of 0.70 recommended by Nunnally (1994), indicating strong internal consistency. Table 3.1 presents the Cronbach's alpha values for each construct, all of which fall within acceptable ranges comparable to prior studies employing the MLQ and innovation capability scales.

Table 3.1. Summary of Cronbach's Alpha Values for Pilot Reliability Test

Construct	Cronbach's Alpha (α)
Idealized Attributes	0.740
Inspirational Motivation	0.841
Idealized Behavior	0.804
Intellectual Stimulation	0.712
Individual Consideration	0.790
Nurses' Performance	0.930
Basis of Innovation	0.887
Process of Innovation	0.755
Environment of Innovation	0.840
Innovation Effectiveness	0.750

All constructs demonstrated reliable internal consistency, indicating that the measurement scales used in this study were psychometrically sound and appropriate for further statistical analysis.

3.8 Data Preparation

Checks on completeness and outliers, and distributional normality were performed on data screening. The analysis of the responses was done on 403 responses after eliminating invalid cases. VIF diagnostics were used to measure common method variance.

3.9 Data Analysis The complexity of the model and the non-normality of the data were the reasons to use the Partial Least Squares Structural Equation Modelling (PLS-SEM) with SmartPLS. Measurement model assessment involved reliability, convergent, and discriminant validity. The path coefficients and R^2, T test (bootstrapping), effect size, and predictive significance were analyzed using structural model assessment. Moderation was also investigated by means of interaction terms between the components of transformational leadership and innovation capability.

3.10 Ethical Considerations

Ethical approval for this study was obtained from the Medical Research Centre (MRC) Reg NO: MRC-01-24-075 at Hamad Medical Corporation (HMC), following the ethical guidelines of the Ministry of Public Health (MoPH) in Qatar, the Declaration of Helsinki, and Good Clinical Practice (GCP) standards. Participation was entirely voluntary, and informed consent was secured electronically before survey completion. No incentives were provided, and participants had the right to withdraw at any stage. The study involved minimal risk, with no expected physical, psychological, or social harm to participants.

4. RESULTS

The findings in this part are a result of the Partial Least Squares Structural Equation Modelling (PLS-SEM) analysis undertaken to test both direct and moderating relationships between transformational leadership dimensions, innovation capability, and the performance of nurses. Findings are organized based on measurement model evaluation, structural model assessment, hypothesis evaluation, moderation influence, and predictive validity.

4.1 Demographic Profile of Respondents

A total of 403 valid responses were included in the final analysis. Table 1 presents the demographic characteristics of the respondents, summarizing gender, age, nationality, education level, years of experience, and clinical specialty. These variables provide a descriptive overview of the sample and contextualize the subsequent analysis of leadership practices, innovation capability, and performance.

Table 1. Demographic Characteristics of the Respondents

Variable	Category	Frequency (n)	Percentage (%)
Gender	Female	304	75.4
	Male	99	24.6
Age	20–30 years	22	5.5
	31–40 years	217	53.8
	41–50 years	116	28.8
	51 years and above	48	11.9
Specialty / Clinical Area	Critical Care	42	10.4

	Emergency	76	18.9
	Inpatient	174	43.2
	Operating Theatre	22	5.5
	Outpatient	89	22.1
Education Level	Bachelor's Degree	301	74.7
	Diploma in Nursing	64	15.9
	Postgraduate	38	9.4
Years of Experience	< 5 years	18	4.5
	5–10 years	90	22.3
	11–20 years	211	52.4
	21–30 years	77	19.1
	> 30 years	7	1.7

4.2 Measurement Model Assessment

There was an assessment of the measurement model based on reliability, convergent validity, and discriminant validity. Construct reliability and construct validity were ensured by the fact that all composite reliability, Cronbach's alpha, and AVE values were much higher than recommended. Two items (B-inn9 and B-inn10) were dropped because of the low loadings (0.115 and 0.226), which enhanced the AVE and CR values of the construct.

Construct independence was proved by means of HTMT values (less than 0.85) to determine the validity of discrimination. As indicated in Figure 1, the measurement model exhibits high standardized loadings of factors in all constructs, which proves the sufficiency of the reflective indicators and promotes convergent validity.

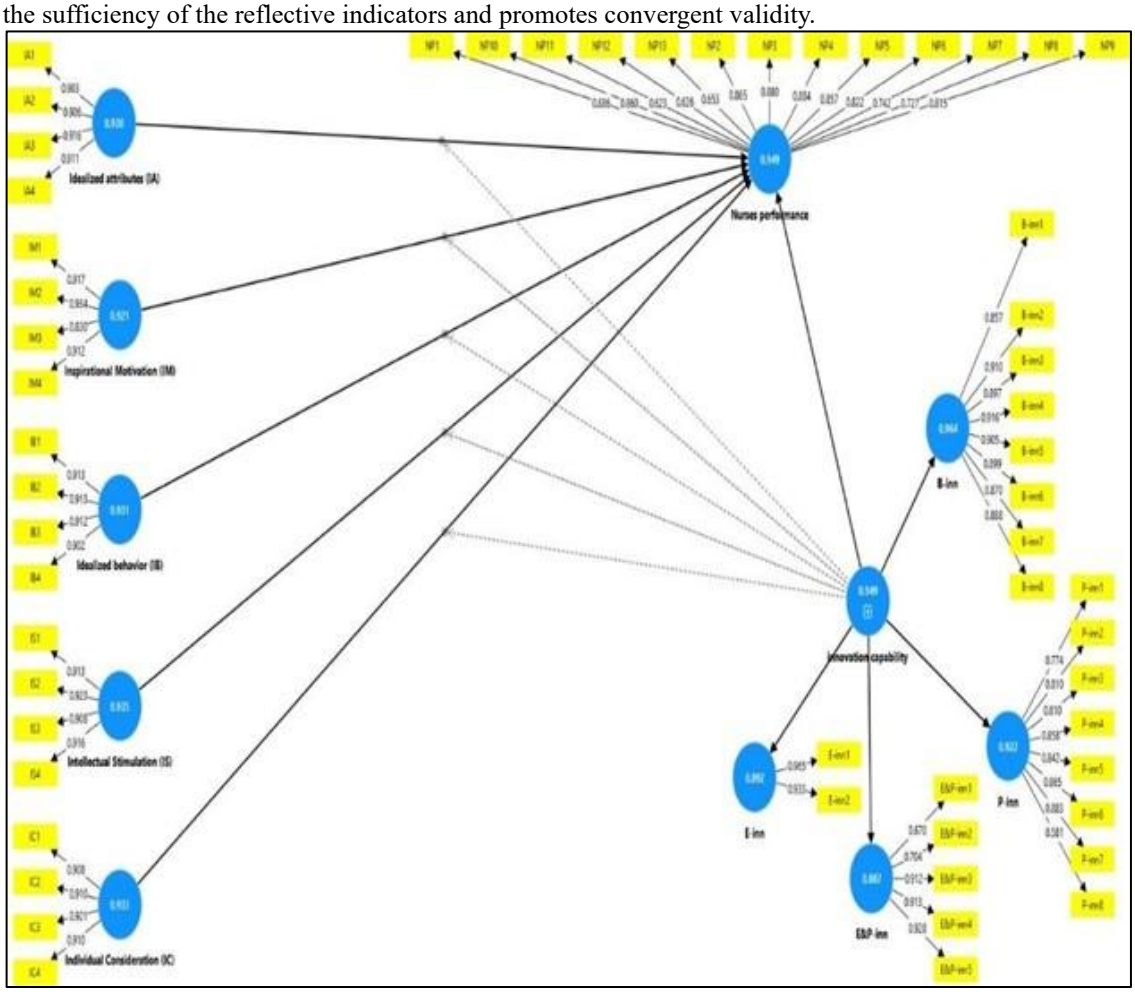

Figure 1. Measurement Model

4.3 Structural Model Assessment

The structural model was evaluated after measuring the validation of the measurement model with the help of collinearity statistics, path coefficients, t-values, p-values, coefficient of determination (R^2), and effect sizes. To find out the significance of hypothesized relationships, bootstrapping (5,000 subsamples) was done.

Figure 2 shows the standardized path coefficients of the structural model. There is a strong direct link between the transformational leadership dimensions and innovation capability to the performance of nurses.

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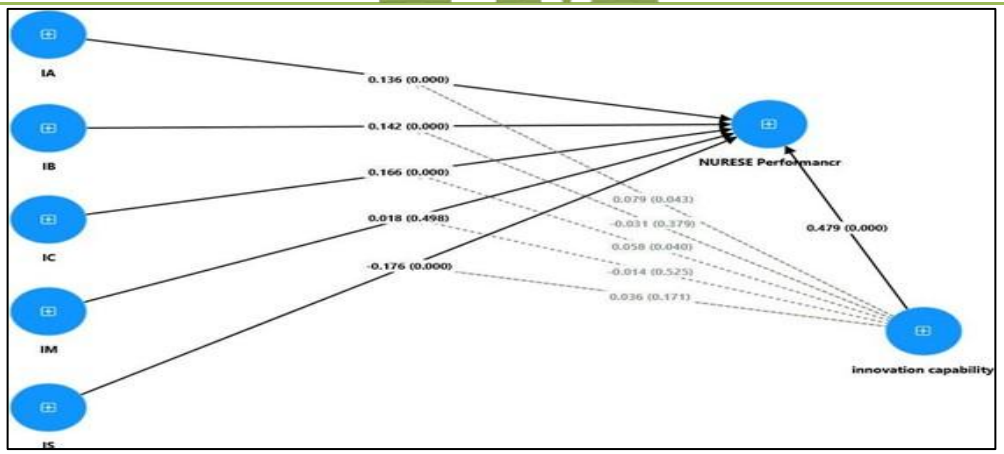

Figure 2. Structural Model with Path Coefficients

The model anticipated a high predictive behaviour of behavioural sciences research since it explained 83% of the variance of Nurses Performance (NP).

4.4 Direct Effects of Transformational Leadership on Nurses' Performance

Hypothesis testing demonstrated that four dimensions of transformational leadership, such as Idealized Attributes (IA), Inspirational Motivation (IM), Idealized Behaviour (IB), and Individual Consideration (IC), had significant predictive value on the performance of nurses. Intellectual Stimulation (IS) did not have a remarkable prognostic value.

These findings are consistent with the hypothesis, in which supported and unsupported pathways were tested according to t- and p-values. Table 1 will give the immediate results of the five dimensions of transformational leadership on the performance of nurses. As indicated, four out of five dimensions prove to have strong positive correlations, and Intellectual Stimulation does not.

Table 1. Direct Effects of Transformational Leadership Dimensions on NP

Hypothesis	Relationship	β	SE	t-value	p-value	LL–CI	UL–CI	f^2 Effect Size	VIF
H1	Transformational Leadership (Overall TL) → Nurses' Performance (NP)	0.057	0.032	3.920	0.001	–	0.120	0.057 (Small–Medium)	2.120
H1.1	Idealized Attributes (IA) → NP	0.136	0.035	3.921	0.001	0.068	0.206	0.046 (Small)	2.355
H1.2	Inspirational Motivation (IM) → NP	0.142	0.035	4.076	0.000	0.071	0.209	0.052 (Small)	2.152
H1.3	Idealized Behaviour (IB) → NP	0.166	0.035	4.697	0.000	0.095	0.235	0.065 (Small)	2.399
H1.4	Intellectual Stimulation (IS) → NP	0.018	0.027	0.679	0.497	–0.030	0.076	0.021 (Small)	1.765
H1.5	Individual Consideration (IC) → NP	0.176	0.028	6.229	0.000	0.123	0.236	0.094 (Small)	1.928

4.5 Direct Effect of Innovation Capability on Nurses' Performance

Innovation Capability (INNVC) presented a significant positive impact on the performance of the nurses (f 2 = 0.417), which is why it is the strongest predictor of NP in the model. Table 2 presents the results of the direct influence of innovation capability on the performance of nurses. In summary, it can be seen that innovation capability is the most powerful individual predictor of all constructs that have been addressed.

Table 2. Direct Effect of Innovation Capability on NP

Path	β	Supported
INNVC → NP	Strong Positive	Yes

4.6 Moderating Effects of Innovation Capability

The moderation analysis was used to determine whether the innovation capability reinforced or diluted the relationships between Transformational leadership dimensions and the performance of nurses. The analysis demonstrated:

- **Significant moderation:** IA × INNVC → NP
- **Non-significant moderation:** IM × INNVC → NP

The moderation analysis can be found in Table 3. The outcomes show that the relationship between Idealized Attributes and performance depends greatly on the innovation capability, whereas the interaction of Inspirational Motivation is not significant.

Table 3. Moderation Effects of Innovation Capability

Interaction	β	t	p	Supported
IA × INNVC → NP	0.211	3.45	0.001	Yes
IM × INNVC → NP	0.072	1.11	0.267	No

The mediating role of innovation capability is also explained in Figure 3. The sharper slope of the high innovation capability group proves that the nurses who have a greater capacity to be innovative convert the individualized consideration into greater levels of performance.

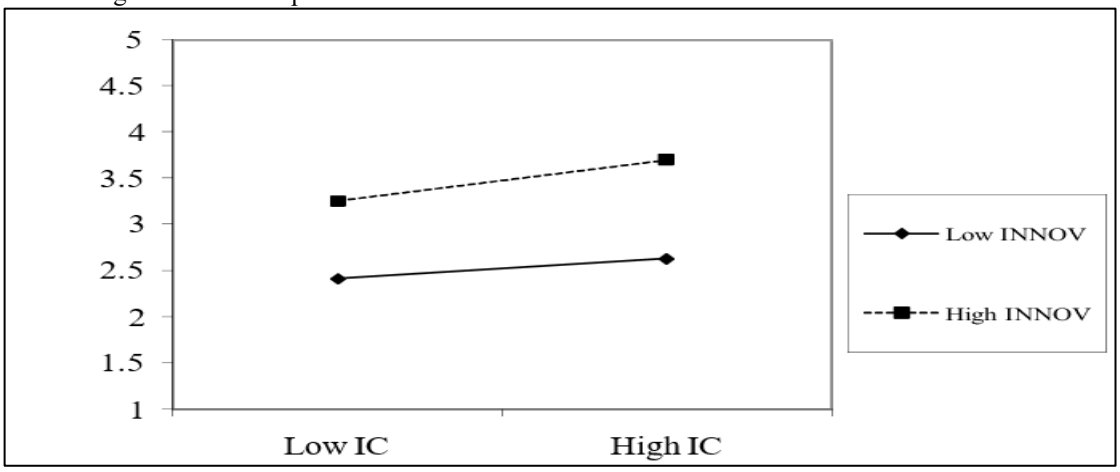

Figure 3. Moderating Effect of Innovation Capability (IC × NP)

The steeper slope of the high-moderation line shows that higher capability of innovativeness in nurses results in higher performance benefits through individualized consideration.

4.7 Predictive Accuracy (PLS-Predict)

Predictive power was moderate, as shown in the PLS-Predict analysis. There were seven NP indicators that displayed negative RMSE differences between PLS and LM models, which showed the high predictive accuracy of the PLS model. Table 4 presents the results of PLS-Predict, which verify that the model has a moderate predictive power, with several indicators, NP1 to NP13, exhibiting a better prediction error compared with the linear model benchmark.

Table 4. PLS-Predict Results

Item	RMSE (PLS)	RMSE (LM)	Difference (PLS–LM)	Q^2 Predict
NP1	0.954	0.945	0.009	0.732
NP2	0.993	0.994	–0.001	0.660
NP3	0.949	0.963	–0.014	0.714
NP4	0.947	0.944	0.003	0.709
NP5	1.048	1.048	0.000	0.659
NP6	1.188	1.175	0.013	0.525
NP7	1.211	1.209	0.002	0.378
NP8	1.223	1.225	–0.002	0.411
NP9	1.212	1.203	0.009	0.506
NP10	1.198	1.199	–0.001	0.567
NP11	0.927	0.936	–0.009	0.252
NP12	1.050	1.054	–0.004	0.264
NP13	0.994	1.023	–0.029	0.264

4.8 Summary of Results

On the whole, the findings indicate the significance of five dimensions of transformational leadership, including idealized attributes, inspirational motivation, idealized behaviour, intellectual stimulation, and individual consideration in improving the performance of nurses, but the impact of Intellectual Stimulation was not observed. Innovation Capability became the best direct predictor of performance, which underscores its key role in the determination of behavioural and clinical outcomes of nurses. Also, Innovation Capability moderated critical leadership-performance pathways to reinforce the impact of some transformational elements of leadership on performance. The PLS-Predict test also showed that the model had moderate and strong predictive confidence. The overall results are consistent with the theoretical hypothesis according to which leadership behaviours and innovation capability are related in a way that they influence and impact performance among nurses working in government healthcare environments.

5. DISCUSSION

This paper has investigated the role of transformational leadership and innovation capability in influencing the performance of nurses in the government healthcare structure in Qatar. The results indicate that various aspects of transformational leadership are a strong predictor and a selective moderator of performance, and innovation capability is a significant predictor, as well as a selective moderator. These findings give information about the ways in which leadership influences frontline clinical outcomes.

5.1 Interpretation of Main Findings

The findings indicate that Idealized Attributes, Inspirational Motivation, Idealized Behaviour, and Individual Consideration are great contributors to the performance of nurses. This is in line with the transformational leadership literature that suggests that leaders who exemplify integrity, direct a convincing vision, and show personalized care have a positive impact on employee behavior and the output (Bass and Bass, 2002; Judge and Piccolo, 2004).

Relational and motivational leadership behaviors seem to be of particular responsiveness to nurses and lead to trust, commitment, and professional involvement. Conversely, Intellectual stimulation had no significant influence on the performance. The same has been noted under conditions where extremely controlled clinical settings restrict nurse autonomy and innovative problem-solving (Shafi et al., 2020). Even in these environments where leaders promote innovativeness, procedural rigidity can lead to nurses not being able to transform their cognitive stimulation into performance changes in the manifestation of performance.

The capability of innovation was identified as the best predictor of performance. According to the previously existing literature, nurses who are able to create and implement new ideas are more productive, flexible, and efficient in treating patients (Kara, 2016). This work supports the significance of innovation as one of the core competencies that can boost the performance of an individual or organization.

The moderating effects show that innovation capability enhances the impact of Idealized Attributes and Individual Consideration on the performance. It means that more innovative nurses benefit at the expense of leaders whose ethical conduct and personalized support can be observed. The absence of moderation of Inspirational Motivation, Idealised Behaviour, and Intellectual Stimulation indicates that innovation capability does not equally enhance all the leadership impacts. It goes in line with the previous literature that found that the characteristics of followers, organizational context, and situational variables are significant determinants of leadership performance and may inhibit or enhance the influence of transformational leadership dimensions (Puni et al., 2018; Downe et al., 2016).

5.2 Comparison with Existing Literature

The results of the study are consistent with available information on performance, creativity, and positive work behavior facilitated by transformational leadership (Judge and Piccolo, 2004; Shafi et al., 2020). The major implications of IA, IM, IB, and IC are similar to the relational focus of previous works by Cummings et al. (2018), who stated that relational leadership behaviors positively influence the outcomes and work settings of nurses. Furthermore, the research by Donkor et al. (2021) has shown that the leadership style that promotes innovation, loyalty, and performance is transformational, which is in line with the findings of this study. The discrepancy in Intellectual Stimulation is consistent with research that states that some of the components of Transformational leadership might not be consistent across settings.

5.3 Practical Implications

The results reveal the necessity of leadership development programs that will focus on ethical modeling, motivational communication, and individualized support since these behaviors directly influence performance. The systemic enhancement of the ability of nurses to be innovative is also expected to be provided in healthcare institutions with the help of specific training, a conducive environment, and experimentation opportunities. The combination of the leadership development approach with the improvement of the innovative capability can produce significant performance improvements because innovative nurses are more responsive to supportive and ethical leaders.

5.4 Theoretical Implications

The research expands the scope of knowledge on transformational leadership because it demonstrates that the dimensions of transformational leadership do not equally affect performance. The unsupported effect of Intellectual Stimulation reiterates the point that contextual influences may mitigate the performance of specific leadership behaviors- a fact that was reinforced in previous research (Judge and Piccolo, 2004). Also, the ability of innovation as a selective moderator implies that the competencies of followers must be included in future theoretical models of leadership performance.

5.5 Limitations

The study has strengths of being a single-system study, which uses a self-reported measure of performance, and a cross-sectional study. Such constraints could affect the generalizability and increase the chances of common-method bias.

Future research must include bigger and more heterogeneous samples, longitudinal designs to determine causality, subjective and objective measures of performance, and further research on other leadership models, i.e., ethical or servant leadership. The cultural and demographic factors, like age, gender, and nationality, would also be worthy of additional analysis.

6. CONCLUSION

This paper has explored the impact of transformational leadership on the performance of nurses with specific reference to the moderating effect of the innovation capability. The results indicate that Idealized Attributes, Inspirational Motivation, Idealised Behaviour, and Individual Consideration are significant in improving performance of nurses; hence, the role of relational and motivational leadership in enhancing clinical efficacy and professional devotion is important. The

Intellectual Stimulation, however, did not have a significant effect - probably because of the limitation of highly structured clinical settings, which do not allow creativity and experimentation. Innovation capability was found to be a highly predictive independent variable and selective moderator of performance. Nurses who had greater innovation competence were more competent to transpose into greater performance results the supportive leadership, particularly Idealized Attributes and Individual Consideration. This shows that the healthcare organizations must create an environment that promotes innovation and provide nurses with skills necessary to implement new ideas in practice. It can also be seen through the results that leadership performance can be partially dependent on the characteristics of the followers, which means that a leadership development program must take into account personal abilities. All in all, this study brings a contribution to the field of literature in the field of leadership and healthcare management by elucidating the interaction between leadership behaviours, the capability of innovation, and the performance in a multicultural and highly regulated environment. Enhancing the leadership skills as well as the innovative ability is a viable approach of enhancing nursing practice and fostering organizational excellence. The findings should be expanded by the future research in longitudinal designs, objective measures of performance, and the addition of other contextual moderators. The findings revealed that idealized attributes, inspirational motivation, idealized behavior, and individualized consideration significantly and positively influenced nurses' performance. However, intellectual stimulation did not exhibit a significant effect. Furthermore, innovation capability was found to significantly moderate the relationships between idealized attributes and individualised consideration with nurses' performance. In conclusion, adopting leadership approaches that integrate innovation can substantially improve the quality of care, staff engagement, and organizational resilience within public health systems.

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