

Relationship between the Leadership Behaviors, Organizational Climate, and Innovative Work Behavior among Nurses

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Abstract Healthcare organizations, because of their distinctive structure and management conduct, vary from other institutions. The organizational climate is the main building blocks for organizations that promote innovation. This research aimed to explore the relationship between leadership behaviors, organizational climate, and innovative work behavior among nurses at Zagazig University Hospitals, Egypt. A descriptive correlation design has been used for this study. From the above-mentioned settings' a stratified random sample of 384 nurses was selected. A questionnaire sheet was used to obtain information for this research, which consisted of three tools: I. Modified multifactor leadership behaviors questionnaire, II. Organizational climate questionnaire, and III. Modified innovative work behavior questionnaire. Results indicated that 83.9 % of nurses had a positive perception of transformational leadership behavior. On the other side, 81% of nurses had a positive organizational climate perception. Likewise, 49.2% of nurses had a high level of innovative work behavior. Furthermore, the organizational climate was highly significantly and positively correlated to laissez-faire leadership behavior, where p-value < 0.001. Besides, there were significant and positive correlations between innovative work behavior as regards all multifactor leadership behaviors and organizational climate. **Conclusion:** Transformational leadership was the most influential and predictor type of innovative work behavior. Besides, there was a significant and positive correlation between organizational climate and innovative work behavior. **Recommendation:** To conduct a workshop on creative thinking and design approaches to enhance the behavior of innovation among nurses and promote it.

Keywords: leadership behaviors, organizational climate, innovative work behavior, nurses

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1. Introduction

The increasing competition, in organizations of health care, needs to adapt rapidly and continually innovate. Leadership is considered one of the most important critical factors for the success of the hospital's future development. At the same time, the leader is an important factor affecting the success or failure of the organization [1]. Competent leaders can motivate, encourage and identify with their staff to promote the completion of their job and the achievement of the required objectives. Moreover, leaders use a wide range of different leadership behaviors to inspire and motivate staff nurses; general leadership behaviors are often split into transformational, transactional, and laissez-faire leadership [2].

Transformational leadership is defined as affecting others to reach exceptional objectives by altering followers; values, and demands. This behavior is divided into four dimensions: Leaders with idealized influence and

charisma show allegiance to significant values and principles while paying attention to the fundamental requirements of supporters. As well, leaders with motivational inspiration, articulate the organization's vision to supporters in a way that appeals to them [3]. Additionally, leaders with intellectual stimulation present fresh thoughts to subordinates to make them think critically, without criticizing when they make errors but encourage them to make use of their intuition and logic when dealing with problems [4]. Lastly, by focusing on the demands of personnel nurses, individualized consideration provides leaders with personal attention to them. This includes guidance, coaching, learning opportunities, and creates a climate to encourage the growth of staff nurses [5].

In contrast, a transactional leadership behavior focusing on staff nurses' performance, benefits or disciplines' adequacy, and compensation is the factor that motivates staff nurses. This behavior includes two dimensions: Firstly, the contingent rewards in which leaders concentrate on clarifying the role and practice demands and offering material or psychosocial benefits for nurses based on their

performance of contractual commitment. Secondly, management-by-exception wherein a leader can monitor regularly follower's performance and create adjustments if there is a gap from the laws and regulations and even if needed, take corrective measures [6,7]. On the other side, laissez-faire leadership behavior lacks a spontaneous connection between the leader and the follower. These leaders prevent decision making, volunteer to give up responsibility and do not use their powers [8].

Leader behaviors play a big part in shaping the organization's climate and create a beneficial environment. At a specified moment, the word 'climate' relates to a contextual position and its connection to the individual's ideas, emotions and behavior [9,10]. The organizational climate is defined as the continuous patterns of behaviors, attitudes, and emotions that characterize atmospheric and value-related organization's life [11,12]. As well, the organizational climate is a series of measurable features that can be directly and indirectly perceived by staff at the workplace [13,14].

Nurses want a better work climate that gives them a sense of value, usefulness, and skilled job. Several factors contribute to a positive environment and impact on the effectiveness of nurses, including job facilitation, individuals' concern, team building, decision-making, involvement, communication, client service, quality, nurse-physician interactions, and compensation [15,16]. Nurses who view their job environments as friendly and supportive are more suitable to show favorable behaviors and excellent performance. Besides, a suitable organizational climate helps to inspire innovation and organization and has a useful function to achieve the organization's objectives [17,18]. Consequently, the healthcare administrators should avoid unhealthy working environments to prevent their negative results like exhaustion and frustration [19].

Nowadays, the fields of corporate management, engineering, technology, and education have been discussed extensively on creative behavior phenomenon [20,21]. Nevertheless, there's been little discussion of innovative conduct in the healthcare sector, particularly nursing, linked to institutional performance [22]. Health-care organizations are faced with an increasingly competitive need for innovation and innovative treatments for patients [20]. However, innovation is essential for nursing to promote health, minimize the risk factors for circumstances of health, avoid illnesses, improve health attitudes, and improve therapy policies and procedures, it is highlighted that the leading registered nurses of the profession all play an active part in shaping and promoting innovative strategies [23,24].

Moreover, innovative work behavior described as "all worker conduct aimed at generating, introducing and/or applying (in a position, group or organization) fresh concepts, processes, products or procedures to the appropriate adoption unit that is supposed to benefit the appropriate adoption unit considerably" [25]. In the health sector, the creative work behavior of healthcare practitioners can occur in a gradual adaptation of current healthcare procedures, services or as completely new practical alternatives [26]. Nurses need leadership, organizational climate, resources, a supportive job environment, and understanding innovation's role and patients to engage in creative behavior. Nursing leadership

is essential to the establishment and structural maintenance and conditions to encourage the intensity level and is therefore essential for the innovation process [27].

1.1. Significance of the Study

Any organization's manager is regarded as a strategic factor that leads the organization toward its predetermined goals one of their responsibilities. Nowadays, the leadership behaviors of nursing leaders and organizational climate have a critical part in improving the organization's member to innovate. Nurses provide up to 80% of main care in the healthcare scheme and are thus well-positioned to contribute to the area of innovations in practice. Nursing innovation not only contributes to enhancing the quality of healthcare but also facilitates medical productivity thus playing critical roles in healthcare innovation [28]. Therefore, encouraging innovative work behavior among nurses has been an important development direction for healthcare organizations [29]. So, the current research aimed to explore the relationship between leadership behaviors, organizational climate, and innovative work behavior among nurses at Zagazig University Hospitals

1.2. Aim

The present study aimed to explore relationship between leadership behaviors, organizational climate, and innovative work behavior among nurses at Zagazig University Hospitals.

1.3. Research Questions

- What are the nurses' perceptions of leadership behaviors?
- What are the nurses' organizational climate perceptions?
- What is the level of innovative work behavior among nurses?
- Are there relationships among leadership behaviors, organizational climate, and innovative work behavior?
- Which type of leadership behaviors predicted nurses' innovative work behavior?
- Does organizational climate predict nurses' innovative work behavior?

2. Methodology

2.1. Design

A descriptive correlation design was used for this study.

2.2. Setting

This study was conducted at all Zagazig University Hospitals (academic hospitals), Egypt, which include two sectors involving eight teaching hospitals. The emergency sector included four hospitals; Internal-Medicine Hospital (322 beds), Emergency Hospital (185 beds), New-Surgical Hospital (600 beds), and the Delivery and Premature

Hospital (57 beds). El-Salam sector includes four hospitals; three of them provide free treatment, these were: El-Salam Hospital (254 beds), Cardiac and Chest Hospital (212 beds), and The Pediatric Hospital (220 beds) and the last one which offers free therapy is El-Sadat Hospital (104 beds). With a complete bed capability of 1954 beds. These hospitals provide inpatient and outpatient services with a total number of 2446 staff nurses.

2.3. Subjects

A stratified random sample was used. The required number of nurses from each hospital was calculated with the following formula (number of nurses in each hospital \times required sample size / total number of nurses in all hospitals). Accordingly 384 nurses were chosen randomly as follows; Internal-Medicine Hospital (75 nurses), Emergency Hospital (38 nurses), New-Surgical Hospital (83 nurses), Delivery and Premature Hospital (23 nurses), El-Salam Hospital (47 nurses), Cardiac and Chest Hospital (63 nurses), El-Sadat Hospital (11 nurses), and Pediatric Hospital (44 nurses).

2.3.1. Sample Size

The ideal sample size was estimated at a confidence interval of 95%, margin of errors 5.0%, a total population size of 2446 nurses, and by using the following formula: $[X^2 NP (1 - P) / d^2 (N - 1) + X^2 P (1 - P)]$ [30]; the required sample size was 384 nurses having the following inclusion criteria: At least one year of experience and accept to participate in the study

2.4. Instruments

A questionnaire sheet was used to collect data for this study which was consisted of three tools:

Tool I: Modified multifactor leadership behaviors questionnaire:

This tool contained two parts as follows: **Part 1:** Personal and job characteristics of staff nurses, developed by the researchers to collect data about age, gender, years of experience, and educational qualification. **Part 2:** Developed by Bass and Avolio [4] to measure nurses' perception of multifactor leadership behaviors. It included 21 items that were grouped into seven dimensions (each dimension included three items), four representing transformational leadership (idealized influence, inspirational motivation, intellectual stimulation, & individual consideration), two were constructed for transactional leadership (contingent reward & management-by-exception), and one for laissez - faire leadership. The nurses' responses were measured on a five-point Likert scale ranged from always (5) to never (1). The nurse's score was considered a positive perception of each type of leadership behavior if it was $\geq 60\%$ and a negative perception if it was $< 60\%$. The reliability of the tool was measured by Cronbach alpha coefficient and it was 0.85.

Tool II: Organizational Climate Questionnaire:

The instrument was developed by Martine [15], and aimed to measure the perception of organizational climate characteristics among nurses. It consists of 30 items grouped into ten domains like the following; work facilitation, concern for nurses, team building, decision

making, participation, communications, customer service, hospital reputation, staff/physician relationships, and compensation. Every domain had three items. The Organizational Climate Questionnaire is a five-point Likert scale ranging from never (1) to always (5). The level of perceived organizational climate is high if the percentage score is 60% or more, and low if less than 60%. The internal consistency of this instrument was evaluated by the Cronbach alpha coefficient and it was 0.82.

Tool III: Modified Innovative Work Behavior Questionnaire:

It was developed by De Jong [31] to assess innovative work behavior. It consisted of 47 leader behaviors subdivided into 10 dimensions as follows: Innovative role modeling (4 items), support for innovation (12 items), stimulating knowledge diffusion (7 items), providing vision (5 items), consulting (5 items), task assignment and delegation (3 items), organizing feedback (2 items), rewarding (3 items), providing resources (3 items), and monitoring (3 items). The nurses' responses were measured on a five-point Likert scale ranged from (5) Strongly agree to (1) Strongly disagree. The scoring levels were arranged as follows; $< 65\%$ for low innovative work behavior, from 65 - $< 75\%$ for moderate innovative work behavior, and $\geq 75\%$ for high innovative work behavior. The internal consistency of this tool was measured by Cronbach's alpha coefficient and it was 0.95.

2.5. Field Work

The field work of this study was executed in two months started from beginning of April, 2018. The researcher met the nurses in each unite in the morning and afternoon shifts after finishing their work to distribute the questionnaire after clarifying the purpose of the study. Felling in filled in the questionnaires took from 20-30 minutes.

2.6. Pilot Study

A pilot study was conducted on 38 nurses to assess the feasibility and applicability of the instruments and to estimate the time needed for each participant to complete the questionnaire sheets. Required changes were made and respondents in the pilot study were excluded from the main study sample.

2.7. Content Validity

The English formats of the tools were translated into Arabic. After translation, face and content validity were established by a group of seven expertise's from faculties of nursing at Cairo University, Ain Shams University and Zagazig University, who revised the tools for clarity, relevancy, applicability, comprehensiveness, understanding, and ease for implementation and according to their opinions minor modifications were performed. The opinions of the experts for each item were recorded on a two point scale: agree, disagree.

2.8. Administrative and Ethical Considerations

An official request was submitted to the Dean of the Faculty of Nursing, Zagazig University explaining the aim

and field work requirements. Then, a letter containing the aim and objectives of the study was directed from the Faculty of Nursing to the administrative offices both medical and nursing of the Zagazig University Hospitals requesting their approval and cooperation for data collection. Consent was established with the completion of the questionnaires.

2.9. Statistical Analysis

Data entry and statistical analysis were done using the statistical package for social science (SPSS) version 24.0. Data were presented using descriptive statistics in the form of frequencies and percentages for qualitative variables, and means and standard deviations for quantitative variables. Cronbach alpha coefficient was calculated to assess the reliability of the developed tools through their internal consistency. Pearson correlation analysis was used for assessment of the inter-relationships among quantitative variables. To identify the independent predictors of the innovative work behavior multiple linear regression analysis was used after testing for normal distribution, normality, and analysis of variance for the full regression models were done. Statistical significance was considered at p -value < 0.05 .

3. Results

Table 1 clarifies that 52.6% of nurses' age was ≤ 30 years, with a mean age of 32.32 ± 7.132 . As well, the highest percentages of nurses were female, worked for less than 10 years of experience, and had a nursing school diploma (94.8%, 52.9 %, & 57.8 %, respectively).

Figure 1 illustrates nurses' perception of the multifactor leadership behaviors domains. As perceived from the figure; 83.9 % of nurses had a positive perception of the transformational leadership behavior. On the other hand, 33.6% and 32.3% of them had negative perceptions of transactional leadership and laissez-faire leadership behaviors, respectively (in response to research question 1). Figure 2 portrays the perceptions of organizational climate among the studied nurses. It is clear from this figure that 81% of nurses had a positive perception of organizational climate, (in response to research question 2).

Figure 3 explains the levels of innovative work behavior among the studied nurses. It is clear from this figure that 49.2% of nurses had a high level of innovative work behavior, (in response to research question 3).

Table 2 presents the correlations between the different study variables; this table displays that organizational climate was highly significantly and positively correlated to laissez-faire leadership behavior, where p -value < 0.001 . Besides, there were highly significant and positive correlations between innovative work behavior as regards all multifactor leadership behaviors and organizational climate, where p -value < 0.001 , (in response to research question 4).

Table 3 proves that all types of multifactor leadership behaviors were positive predictors of nurses' innovative work behavior. As well, the transformational leadership was responsible for 23.9% of the variation in nurses' innovative work behavior compared to 13.0% for the

transactional leadership and 4.1% for the laissez-faire leadership ($R^2 = 0.239$, $R^2 = 0.130$, & $R^2 = 0.041$, respectively). Consequently, transformational leadership was the most influential and predictor type of innovative work behavior. Besides, the organizational climate was responsible for 12.9% of the variation in nurses' innovative work behavior ($R^2 = 0.129$). Consequently, transformational leadership behavior and organizational climate were significant predictors of nurses' innovative work behavior (In response to research questions 5 & 6).

Table 4 shows that there were statistically significant relationships between transformational leadership behavior as regards the studied nurses' age and experience, where p -value < 0.001 . As well, there was a statistically significant relationship between laissez-faire leadership behavior and nurses' educational level, where p -value < 0.05 . As well, there were statistically significant relationships between organizational climate as regards nurses' gender, years of experience, and educational level where p -value < 0.001 . Moreover, there were statistically significant relationships between innovative work behavior regarding nurses' age and years of experience where p -value < 0.05 .

Table 1. Personal and Job Characteristics among Studied Nurses (n = 384)

Personal characteristics	No	%
Age (in years)		
• ≤ 30	202	52.6
• > 30	182	47.4
Mean\pmSD		
32.32 \pm 7.132		
Gender:		
• Male	20	5.2
• Female	364	94.8
Experience years:		
• < 10	203	52.9
• ≥ 10	181	47.1
Nursing qualification:		
• Nursing diploma	222	57.8
• Technical institute	117	30.5
• Faculty graduate	45	11.7

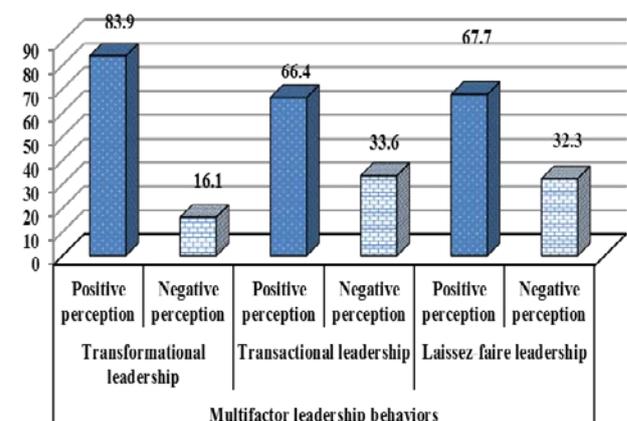


Figure 1. Perception of Multifactor Leadership Behaviors Domains among the Studied Nurses (n=384)

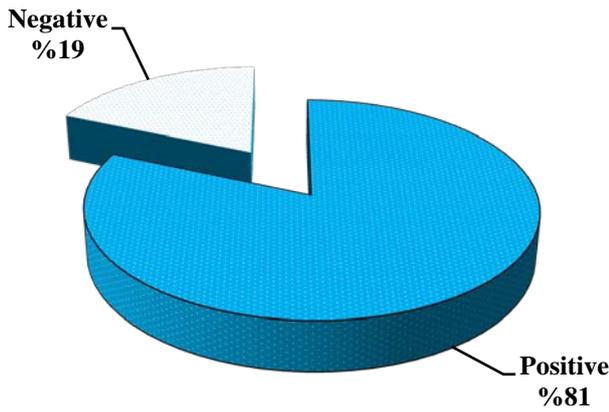


Figure 2. Nurses' Perceptions of Organizational Climate (n=384)

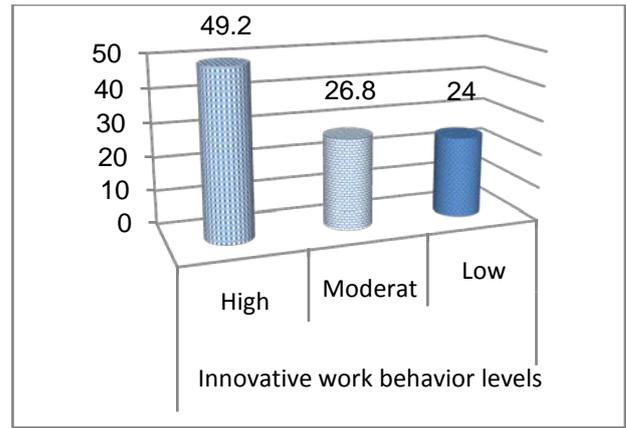


Figure 3. Innovative Work Behavior Levels among the Studied Nurses (n=384)

Table 2. Correlations between the Different Study Variables among Studied Nurses (n=384)

Study variables	Multifactor leadership behaviors						Organizational climate	
	Transformational leadership		Transactional leadership		Laissez faire leadership		r	p
	r	p	r	p	r	p		
Organizational climate	0.044	0.649	0.076	0.431	0.278**	0.003		
Innovative work behavior	0.489**	0.000	0.360**	0.000	0.203*	0.034	0.359**	0.000

*Statistically significant at P < 0.05, **Highly statistically significant at P < 0.001.

Table 3. Linear Regression Analysis to Study the Effect of Leadership Behaviors and Organizational Climate on Nurses' Innovative Work Behavior (n=384)

Items	R	R ²	Unstandardized coefficient		t	Sig.
			β	Std. Error		
Transformational leadership	0.489	0.239	1.700	0.292	5.821**	0.000
Transactional leadership	0.360	0.130	2.790	0.695	4.015**	0.000
Laissez faire leadership	0.203	0.041	2.494	1.160	2.149*	0.034
Organizational climate	0.359	0.129	0.559	0.140	3.994**	0.000

*Statistically significant at P < 0.05, ** Highly statistically significant at P < 0.001.

Table 4. Relation between Personal and Job Characteristics of the Studied Nurses and Different Study Variables (n=384).

Variables	Leadership behaviors									Organizational climate			Innovative work behavior			
	Transformational leadership			Transactional leadership			Laissez-faire leadership			Mean	±	SD	Mean	±	SD	
	Mean	±	SD	Mean	±	SD	Mean	±	SD							
Age (in years)																
≤30	45.59	±	9.38	19.96	±	3.73	9.55	±	2.54	148.89	±	18.97	172.30	±	30.93	
>30	43.08	±	7.52	18.41	±	4.00	9.44	±	2.30	145.84	±	16.23	173.75	±	25.27	
Independent t-test---P-value	10.92**—0.001			2.491—0.11			1.250—0.2			1.917—0.16			3.773*—0.005			
Gender:																
Male	42.10	±	7.13	20.50	±	3.48	9.80	±	1.70	164.30	±	25.78	191.90	±	24.01	
Female	44.53	±	8.69	19.16	±	3.95	9.48	±	2.46	146.52	±	16.79	171.95	±	28.25	
Independent t-test---P-value	3.380—0.06			3.267—0.07			2.767—0.09			19.700**—0.000			0.488—0.485			
Years of experience																
< 10	44.33	±	9.74	19.65	±	3.95	9.79	±	2.41	150.30	±	20.24	171.83	±	30.39	
≥ 10	44.48	±	7.21	18.75	±	3.87	9.18	±	2.42	144.24	±	13.88	174.29	±	25.93	
Independent t-test---P-value	19.167**—0.000			0.007—0.93			1.087—0.29			23.136**—0.000			5.052*—0.02			
Educational qualification:																
Nursing diploma	44.57	±	8.46	19.00	±	3.86	9.29	±	2.26	145.44	±	15.68	172.44	±	29.19	
Technical institute	44.54	±	9.05	19.58	±	4.35	9.49	±	2.80	149.22	±	18.55	171.21	±	28.99	
Faculty graduate	43.22	±	8.46	19.42	±	3.07	10.58	±	1.88	152.71	±	23.41	180.31	±	21.05	
ANOVA F test--P-value	0.474—0.62			0.897—0.40			5.376**—0.005			4.041**—0.01			1.777—0.17			

*Significant at p < 0.05, ** Highly statistically significant at P < 0.001.

4. Discussion

Leadership behaviors have the potential to improve organizational efficiency, nurses' job satisfaction, and the sense of assurance about problem-solving. The critical role of a leader can improve the capacity of organization members to innovate. Also, possession of positive organization climate characteristic provides the organization with the necessary ingredients to fix problems with creativity [2]. Therefore, this study aimed to explore the relationship between leadership behaviors, organizational climate, and innovative work behavior among nurses at Zagazig University Hospitals.

Regarding the perceptions of multifactor leadership behaviors; this research results showed that the majority of those studied nurses had a positive perception of transformational leadership behavior. This finding could be attributed to the studied nurses preferred to work with a leader using this type of leadership behavior which includes pure vision, commitment to excellence, engagement to their staff nurses, ability to motivate, collaborate and lead others to higher achievement. They also encourage innovation and emphasize about the significance of appreciating and valuing staff nurses. These will drive good quality outcomes, healthy working environments for nurses, and safe patient-centered care to new levels of service and sustainability.

The current study finding is in agreement with those of several previous studies as the one performed by El-Demerdash and Aldeeb [32], which examined transformational leadership, collaboration and its relation to staff nurses' work engagement, in Egypt; the other one done by Olu-Abiodun and Abiodun [33], who studied the perception of transformational leadership behavior among nurses, in Nigeria, and another one conducted by Majeed et al. [34], who explored relationship between transformational leadership and organizational citizenship behavior, in Malaysia, and they found that nurses had a positive perception about transformational leadership behavior. However, the previous findings were incongruent with those of the research carried out in the Kingdom of Saudi Arabia, by Aboshaiqah et al. [35], to determine nurses' perception of managers' leadership styles, and found that nurses had a fair perception of their supervisors' transformational leadership behavior.

Concerning the perceptions of the organizational climate; the results from this research showed that more than three-quarters of nurses had a positive organizational climate perception. The possible explanation for this result could be because of that the studied nurses want a more proper work climate that gives them a feeling of worth when they do beneficial and competent work. The current study finding is in agreement with that of other previous studies as the one performed by Mohamed and Gaballah [19] which examined the relationship between organizational climate and nurses' performance, in Egypt, and found that more than half of nurses experienced a high level of organizational climate.

In the same way, in the research conducted by Aiken et al. [36], who were studying the working conditions of nurses in 12 European countries and found that the highest percentage of nurses had positive perceptions toward work climate. Besides, the study result

was parallel to that of Kassem and Gaber [37] in their research and effect on the organizational climate and its impact on nurses' job empowerment, and concluded that nurses perceived their organizational climate positively. However, these previous findings were incongruent with that of a research carried out in Egypt, by Abd El-Megeed and Ahmed [38], who discovered in their research of the organizational climate in hospitals at El-Manial University's critical and intensive care units that nurses viewed the climate as open, pointing to the existence of excellent spirits, good relationships, and human treatment among staff. Opposing to these findings that El-salam et al., and Lephoko [39,40] whose studies concluded that nurses' staff in selected hospitals was dissatisfied with the organizational climate.

As for the level of innovative work behavior; this study findings showed that slightly less than half of them have a high average level of innovative work behavior. The possible explanation for this finding could be ascribed to the fact that the concept of innovation behavior is relatively new. Innovation behavior is quite a new and unfamiliar concept. This study finding goes in the same line with that of a study conducted, in Egypt, by Kamel and Aref [41], who investigated the perception of staff nurses about organizational culture and its relationship to innovative work behavior at critical care units and pointed out that half of staff nurses have highly innovative work behavior. As well, this finding is consistent with that of Stoffers et al. [42], who conducted a study about organizational culture and innovative work behavior: A case study by the packaging company. They reported that the employees valued innovative work behavior higher in the preferred status than in the current status.

On the opposite, Abd ElFattah [43], who conducted a study in Egypt about Innovation behavior levels and its relation with TIGER-based nursing informatics competencies among critical care nurses; results, confirmed that more than half of participants had scored moderate percentage as regards the perceived innovation behavior.

Concerning the correlations between the different study variables and the predicting effect of the leadership behaviors and organizational climate on innovative work behavior; the present study findings revealed that organizational climate was positively and significantly correlated to laissez-faire leadership behavior. Additionally, there were significant and positive correlations between innovative work behavior as regards all multifactor leadership behaviors and organizational climate. Moreover, transformational leadership was the most influential and predictor type of innovative work behavior. The previous study findings could be related to that the leaders with transformational style motivate workers by mean of purposeful tasks that tend to be challenging for their followers. Those leaders communicate vision, encourage hard work and express important goals simply. Team spirit is excited by arousing enthusiasm, optimism tolerates risk-taking and encourages the adoption and implementation of new ideas with decentralization and a participatory spirit provides an environment conducive to the innovation development in an inner environment. Leaders who promote and provide staff more decision-making autonomy in all actions related to tasks they perform and support new activities.

The previous findings go in the same line with those of a very recent study conducted, in Kabul, Afghanistan, by Muzafary et al. [44] who studied the influence of transformational leadership on the employees innovative work behavior, and recognized that transformational leadership completely influences innovation work behavior. Likewise, Jaiswal and Dhar [45] in their study conducted, in India, to investigate the mediating role of innovation climate on the relationship between transformational leadership style and employee creativity and pointed out that transformational leaders can foster a climate for innovation that promotes creativity. In this respect, Noor and Dzulkifli [46] in their study conducted, in Malaysia, analyzed the mediating effect of organizational climate on the relationship between leadership practice and innovative work behavior and revealed a significant relationship between organizational climate and innovative work behavior.

Regarding the relationship between studied nurses' personal and job characteristics as regards the different study variables; this research results stated that there were statistically significant relationships between transformational leadership behavior as regards the studied nurses' age and years of experience. As well, there was a statistically significant relation between nurses' laissez-faire leadership and their educational level. These results could relate to that the younger aged nurses will be encouraged to think and solve problems innovatively by the leadership of nursing managers, who can inspire them to perform beyond their expectations, can act as their role models, can raise their awareness and continue to create a shared vision for them. On the contrary, Metwally et al. [47], who conducted a study, in Egypt, entitled "Organizational justice, organizational citizenship behavior and turnover intention among nurses: The mediating effect of transformational leadership" and detected no statistically important relationships between nurses' personal and job characteristics as regards the transformational leadership.

Additionally, the current research result showed that there were statistically significant positive associations between nurses' perception of organizational climate and gender, years of experience and educational level. Here, male nurses had better organizational climate score than female nurses, and holder of four year college education have a feeling of challenge, self-confidence, ability to plan and prioritize their work effectively and had awareness that they perform high-value work and nurses are equipped with satisfactory help in their initial professions that they work within a positive organizational climate.

On the contrary, Al- Daibat [48], who conducted a study in Jordan about "The impact of the organizational climate in enhancing creative behavior" the results, revealed that no statistically significant effect of demographic factors at organizational climate. Likewise, Mohamed and Gaballa [19], denoted that none of the personal and job characteristics had a statistically significant relation with nurses' work climate.

Regarding, innovative work behavior, in the present study there were statistically significant relationships with nurses' age and years of experience. The possible explanation for this result could relate to that the ability to create innovative solutions is dependent on the knowledge, and even more on age and experience of nurses to apply

the knowledge to solve new problem and generating new ideas. In the same way, Lee and Hong [49], who investigated the factors affecting hospital employees' knowledge sharing intention and behavior, and innovation behavior, in Seoul, Korea they found that as the age of employees and work experience expanded, innovative work behavior tended to be higher. Likewise, Raja and Madhavi [50], who carried out a study, in India, to assess the effect of organizational climate on innovative work behavior, they revealed that employees' age and years of experience were significantly and positively correlated to innovative work behavior.

5. Conclusion

Transformational leadership was the most influential and predictor type of innovative work behavior. Besides, there was a significant and positive correlation between organizational climate and innovative work behavior.

6. Recommendations

Based on the research outcomes the nurse managers should:

- Use leadership styles that facilitate to nurses to express their ideas and share the goals of the organization.
- Nurses need to feel job security through encouraging and motivating them.
- Encourage staff development programs to help nurses to share in making decision and delegation for certain tasks and responsibilities to empower them.
- Be open to suggestions of nurses, by giving them the responsibility to solve problems by themselves, and improve the relationship between the nurses and their supervisors
- React positively to the innovative efforts of nurses by providing them the time and resources to carry out innovative efforts and support innovation as a job requirement

Further research, can be conducted to identify the factors that enhance innovative work behavior among nurses.

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