

Inclusive Leadership and Work Climate as Predictors of Nurses' Proactive Work Behavior

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Abstract

Background: Inclusive leadership and work climate influence nurses' proactive behavior. Leaders who value diverse input and a positive work atmosphere this enhance nurses to take more initiative. The aim of this study was to assess the relationship between inclusive leadership, work climate and proactive work behavior. **Methods: Research design:** A descriptive correlational design was utilized in this study. **Setting:** This study was conducted at Zagazig University Hospitals, Sharkia Governorate, Egypt. **Participants:** A stratified random sample of 352 staff nurses were included from the above-mentioned setting was the participants of the study. **Tools of data collection:** Three tools were used to conduct the study: Inclusive-leadership scale, Work climate scale and Proactive Work Behavior Scale. **Results:** (78.7%) of nurses had a high perception level of inclusive leadership, as well (63.1%) of them had a high perception level of inclusive work climate. While more than half of them (53.7%) had a high level of proactive work behavior. **Conclusion:** There are highly statistically significant positive correlations between inclusive leadership and both work climate and proactive behavior. Additionally inclusive leadership and work climate emerged as strong predictors of nurses' proactive behavior. **Recommendation:** Ensuring that inclusive behaviors across all interactions and decisions, increase collaboration and sharing of opinions and initiative-taking at the hospital, creating a supportive environment where nurses' knowledge, skills, and professional judgment are recognized and utilized in daily practice and creating leadership training on supportive communication.

Keywords: Inclusive Leadership, Work climate, Proactive Work Behavior and Studied nurses

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Introduction

Inclusive leadership is a contemporary leadership approach that emphasizes creating a work environment where all employees feel respected, valued, and empowered to contribute regardless of their gender, age, ethnicity, culture, disability, religion, or other individual characteristics. Unlike traditional leadership styles that primarily focus on authority and performance, inclusive leadership prioritizes equity, belonging, openness, and the active involvement of diverse individuals in organizational decision-making. Inclusive leaders recognize that diversity alone does not guarantee organizational success; rather, they intentionally cultivate an inclusive work climate in which employees feel psychologically safe to express their ideas, challenge assumptions, and participate fully in achieving organizational goals (Hoover and Rupp, 2024).

Work climate refers to employees' collective perceptions and evaluations of the organizational practices, policies, procedures, and social interactions that shape their workplace environment. It represents how employees perceive and experience their daily work conditions, including aspects such as leadership effectiveness, communication quality, teamwork, organizational support, fairness, and the extent to which

their contributions are recognized and valued. Thus leadership can positively affect work outcomes through its effects on the organizational climate (Thabet *et al.*, 2023).

An inclusive work climate (IWC) refers to employees' collective perceptions that their organization promotes equity, respect, inclusion, and a sense of belonging among all members, regardless of their personal backgrounds or individual characteristics. It represents a workplace environment where diversity is recognized and appreciated, employees receive fair treatment, and all individuals are encouraged to actively participate in organizational processes and decision-making. An inclusive work climate allows employees to share their ideas, opinions, and perspectives freely without concerns about bias, discrimination, or exclusion, thereby strengthening psychological safety, cooperation, trust, and mutual respect among employees (Tessema *et al.*, 2023).

Proactive work behavior (PWB) is defined as nurses' self-initiated, anticipatory, and change-oriented behavior directed toward improving individual, team, or hospital functioning. proactive nurses voluntarily take initiative to identify opportunities, prevent potential

problems, and implement improvements that enhance hospital effectiveness. Such behaviors include introducing innovative ideas, optimizing work processes, and taking responsibility for positive hospital change before circumstances require action. This proactive approach enables hospital to adapt more effectively to dynamic and competitive environments (Zia *et al.*, 2024)

Inclusive leadership can increase nurses' willingness to take chances and promote positive behaviors. It also addresses employees' need to belong, helping them curb emotional exhaustion and improving their career sustainability. Hence the inclusive leadership achieves positive work behavior among nurses at workplace as well as enhance proactive work behavior among nurses (Li and Teng, 2022).

Inclusive leadership positively influences proactive work behavior by fostering an environment in which employees feel respected, psychologically safe, and empowered to take initiative. Inclusive leaders demonstrate openness, accessibility, and appreciation for diverse perspectives, encouraging employees to voice ideas, experiment with new approaches, and participate in decision-making. These leader behaviors reduce employees' fear of negative consequences and increase their willingness to engage in proactive actions that improve individual, team, and organizational performance (Rogozńska, 2023).

Significance of the study

Nursing is a highly demanding profession that exposes nurses to physical and psychological challenges. Inclusive leaders play a crucial role in supporting nurses. They display openness, accessibility, and availability in their relationships with nurses. Inclusive leaders show respect and tolerance, focusing on enhancing nurses' motivation. This approach helps nurses feel valued and boosts their sense of worth and achievement.

Previous findings by Elgazar, and Elksas (2025) to examine The Relationship between Head Nurses' Inclusive Leadership and Nurses' Work Engagement. However, there is still a lack of integrated research examining the relationship between Inclusive leadership and work climate as predictors of proactive work Behavior among Nurses. To deal with this gap, this work is contributing to the body of research by investigating the relationship Inclusive leadership and work climate as predictors of proactive work Behavior among Nurses.

Aim of the study

The aim of this study was to assess the relationship between inclusive leadership, work climate and nurses' proactive work behavior at Zagazig university Hospitals.

Research objectives

1. Measure nurses' perception level of inclusive leadership at Zagazig University Hospitals.

2. Assess nurses' perception level of work climate at Zagazig University Hospitals.
3. Assess the level of Nurses' proactive work behavior at Zagazig University Hospitals.
4. Inclusive leadership and work climate predict the nurses' proactive work behavior at Zagazig University Hospitals.

Research question

1. What is the level of nurses' perception of inclusive leadership at Zagazig University Hospitals?
2. What is the level of nurses' perception of inclusive work climate at Zagazig University Hospitals?
3. What is the level of nurses' proactive work behavior at Zagazig University Hospitals?
4. Does inclusive leadership and work climate predict the nurses' proactive work behavior at Zagazig University Hospitals?

Methods

Research design

A descriptive correlational research design was applied in the current study.

Study setting

The study was conducted at Zagazig University Hospitals, Al Sharqia, Egypt, which include two sectors involving nine teaching hospitals, namely; the emergency sector includes five hospitals and El-Salam sector includes three hospitals. The total bed capacity of the hospitals is approximately (1991beds and 16 incubators).

Study participants

Appropriate stratified random sample (n=352) was taken from staff nurses working at Zagazig University Hospitals according to the following Inclusion criteria: all available categories of nurses with different educational credentials was included (Bachelor and Technicians), had at least one year of experience, both sex and agree to participate in the study. Exclusion criteria: Intern nurses, nurses in administrative positions.

Sample size

The total population size is 4225 nurses working in the setting of the study, Sample size will be calculated using a simplified formula $n = (Z^2 * p * q * N) / (E^2 * (N - 1) + Z^2 * p * q)$ which provided by Lohr (2021). A 95% confidence level $Z=1.96$ and $P=0.05$ are assumed for Equation. $q = 0.5$, Where „n” is sample size. „N” is Number of population (total number of nurses in all hospitals). „e” is Coefficient factor = 0.05. Then, the required number of nurses from each hospital was calculated with the following formula (number of nurses in each hospital × required sample size / total number of nurses in all hospitals).

Tools of data collection:

Three tools were used to conduct the study

Tool 1: Inclusive-leadership scale: It consists of two parts as follows:

Part I: nurses personal and job characteristics, as age, sex, years of experience and educational qualifications.

Part II: It was used to assess nurses' perception level of inclusive leadership. This tool was developed from **Al-Atwi and Al-Hassani (2021)**. It includes 25 items categorized under five dimensions namely; "supporting group members" (6 items), "ensuring justice and equity" (5 items), "shared decision-making" (5 items), "encouraging diverse contributions" (6 items) and finally 'helping group members fully contribute domain (3 items). e.g 'My leader Values my personal competence'.

Scoring system

Responses of nurses to the scale were measured on 3-point Likert scale ranged from (3=Agree, 2=Neutral, 1=Disagree). While only reverse question No (13) was response on three-point Likert scale ranged from 1 (agree) to 3 (disagree). The scores of each subscale were summed and the total divided by numbers of items. Total scores ranged from (25-75), with total mean score ranged from (1.5- 2.5) these mean scores were converted into percentage scores. According to **Polit and Back, (2020)** these mean scores were converted into percentage scores as follow: Low if the score <50% , moderate if the score ranges from 50% <75 and high if the score $\geq 75\%$

Tool II: Climate for Inclusion Scale

It was developed from **Nishii, (2013)** to assess nurses perception level of inclusive climate. It includes 31 items categorized under three dimensions namely; "foundation of equitable employment practices" (9 items), "integration of differences" (11 items), and "inclusion in decision making" (11 items). e.g 'This hospital has a climate for healthy debate.'

Scoring system

Responses of nurses to the scale was rate on three points Likert scale ranged from 1 (disagree) to 3 (agree). The scores of each subscale were summed and the total divided by numbers of items. Total scores ranged from (31-93), with total mean score ranged from (1.5- 2.5) these mean scores were converted into percentage scores. According to **Polit and Back (2020)** these mean scores were converted into percentage scores as follow: Low if the score <50% , moderate if the score ranges from 50% <75 and high if the score $\geq 75\%$

Tool III Proactive Work Behavior scale, to assess proactive behavior level among nurses, and developed from **cumali URI , (2017)** .It consists of 12 items grouped under four dimensions namely; "Voice" (3 items), "taking charge" (3 items), "Problem Prevention" (3 items) finally 'Individual Innovation (3 items). e.g 'How frequently do Generate creative ideas?'

Scoring system

Responses of nurses to the scale was rate on three-point Likert scale ranged from 1 (infrequently) to 3

(frequent). The scores of each subscale were summed and the total divided by numbers of items. Total scores ranged from 12-36 , with total mean score ranged from (1.5- 2.5) these mean scores were converted into percentage scores. According to **Polit and Back, (2020)** these mean scores were converted into percentage scores as follow: Low if the score <50% , moderate if the score ranges from 50% <75 and high if the score $\geq 75\%$

Tools validity and reliability

Study tools were originally developed in English and then translated into Arabic. The consistency between the English and Arabic versions was ascertained and presented to a panel of five experts specialized in nursing administration at the Faculty of Nursing, Zagazig University to examine face and content validity. The reliability of the questionnaire was measured through Cronbach's Alpha coefficient for assessing its internal consistency, and it was as the following; inclusive leadership (0.950), inclusive Work climate (0.973) and proactive work behavior (0.892) .

Field work

The data collection phase lasted for 2 months during the period from the 1st of September to the end of October 2025. The first phase units after obtaining the official permission, to clarify the objective of the study and applied methodology. The second phase was done by meeting the study sample, each nurse was met individually, got a full explanation about the aim of the study, and was invited to participate. The data were collected in the morning shift and afternoon shifts, the time used ranged between 20-45 minutes for each nurse.

Pilot study

A pilot study was carried out on 10 % of study subjects (36nurses) to test applicability, feasibility, and practicability of the tools. In addition, to estimate the time required for filling in the questionnaire sheets. The pilot study was conducted one week before collection of data and staff nurses were selected randomly and they were excluded from the main study sample.

Administrative and ethical consideration

Official permissions were obtained from the dean of the Faculty of Nursing, Zagazig University, and approval to conduct the study by ethics committee, (Code: M.D.ZU.NUR/269/12/6/2025). Then, a letter containing the aim of the study was directed from the Faculty of Nursing to the medical and nursing administration of the Zagazig University Hospitals requesting their approval and cooperation for data collection. Participation was voluntary, and confidentiality of the data was assured, through secure data storage, restricted access, and no identified data collection.

Statistical analysis

Data were organized, categorized, tabulated and statistically analyzed by using the Statistical Package for the Social Sciences (SPSS), version 23.0 IBM Corp., Armonk, NY: USA. Data were present using descriptive

statistics in the form of the mean $\pm$ SD and qualitative data were expressed as absolute frequencies (number) & relative frequencies (percentage). Percent of categorical variables were compared using Chi-square test. Pearson correlation coefficient was calculated to assess relationship between various study variables, (+) sign indicate direct correlation & (-) sign indicate inverse correlation, also values near to 1 indicate strong correlation & values near 0 indicate weak correlation. All tests were two sided. P-value < 0.05 was considered statistically significant, p and $p\text{-value} \geq 0.05$ was considered statistically insignificant. β (regression coefficients) & R square test for Multiple linear regression that is a predictive analysis. Multiple linear regressions was used to describe data and to explain the relationship between one dependent continues variable and one or more continues independent variable.

Results

Table 1, shows Personal and job characteristics of the studied nurses. It is clear from this table that, slightly more than half of nurses (56.8%) were in age group from 20 to less than 30 years and slightly more than half of nurses were female had less than five years of experience in nursing and had technical institute of nursing (57.1%, 56.2% & 54.0% respectively). About three quarters of nurses (75.6%) were married.

Figure 1, shows that, (78.7%) of nurses had a high perception level of inclusive leadership, while 2.8% of them had a low perception level.

Table 2, shows that, (more than three quarters of studied nurses (79.8% & 76.4% respectively) had a high perception level toward encouraging diverse contributions and sharing decision-making dimensions) on the other side (4.3%) of them reported that have a low perception level regarding supporting group members dimensions of inclusive leadership.

Figure 2, shows that, more than half of studied nurses (63.1%) reported a high perception level of the inclusive work climate. While only (5.7%) of them perceived a low perception level of inclusive work climate.

Table 3, shows that, (61.9 %) of studied nurses had high perception level regarding integration of differences dimension of inclusive work climate. On the other side (9.7%) of them reported that had a low perception level regarding foundation of equitable employment practices dimension of inclusive work climate.

Figure 3, This figure reflects that, more than half of studied nurses 53.7% of nurses had a high level of proactive work behavior, while 1.4% had low level of proactive work behavior.

Table 4, shows that, (69.3% & 60.8%) of studied nurses had high perception level toward taking charge and problem prevention dimensions. On the other hand (43.5% & 38.6% of them had a moderate level regarding voice and individual innovation dimensions of proactive work behavior.

Table 5, shows that, there is a significant positive correlation between inclusive leadership and both proactive work behavior ($r = 0.743^{**}$, $p < 0.000$) and inclusive work climate ($r = 0.615^{**}$, $p < 0.000$). As well a significant positive correlation between inclusive work climate and proactive work behavior ($r = 0.663^{**}$, $p < 0.000$), indicating that higher levels of inclusive leadership are associated with greater proactive behaviors and a more positive inclusive work climate.

Table 6, shows that Inclusive Leadership had a statistically significant positive effect ($B = 0.560$, $\beta = 0.538$, $p < 0.000$). It emerged as the stronger predictor of proactive work behavior relative to work climate. Additionally inclusive work climate Also demonstrated a statistically significant positive effect and emerged as the stronger predictor of proactive work behavior ($B = 0.332$, $\beta = 0.332$, $p < 0.000$). The overall model is statistically significant ($R^2 = 0.621$, $F = 285.35$, $p < 0.001$).

Discussion

Leaders directly or indirectly influence nurses' active behavior by stimulating their work motivation or influencing the work environment atmosphere. Inclusive leadership plays a significant role to improve nurse's proactive behavior. It is not surprising because the motivational state of such leadership is to set a challenging goal to push nurses to take initiatives. IL is a distinct style of relational leadership, facilitating nurse proactive work behavior by providing a psychologically safe working atmosphere (Chang, Ma and Lin, 2022).

Concerning total level of the studied nurse's perception level of inclusive leadership; The results of the current study showed that the highest percentage of nurses had a high level perception of inclusive leadership. This may be attributed to nurses perceiving that they are respected, equally valued, and empowered by their unit leaders. Leaders share decision with nurse and encouraging diverse contributions. Additionally, leaders may motivate nurses to pursue challenging goals, recognize and assess their efforts and achievements.

This finding is in agreement with the study carried out by Ammar, and El Dahshan (2025), at the Alexandria University Hospital, stated that nurses have had a high perception level of inclusive leadership.

Conversely, this finding is contradicted with study that carried out by Taie and Zoromba (2022), in Egyptian hospitals, found that nurses have had a low perception level of inclusive leadership.

As regards total level of nursing perception regarding inclusive leadership dimensions, the findings of this study presented that highest mean percentage of inclusive leadership perception as reported by the studied staff nurses was related to encourage diverse contributions and share decision-making. This might be due to they perceive their encouraging and valuing the

diversity and enabling their contributions in areas that offer a fit to their unique skill sets.

This finding is in agreement with the study carried out by **Elgazar, and Elksas., (2025)**, at Damanhur University, and reported that studied subjects had highest mean percentage of openness to differences, connection unique perspectives and shared understanding in communication.

As regards total perception level of inclusive work climate among the studied nurses the current study notified that majority of studied nurses reported a high perception level of the inclusive work climate. This may be due to their hospital is committed to having diverse nurses well-distributed, their hospital provides safe ways for nurses to voice their grievances and People in their hospital can count on receiving a fair performance review.

These findings are in agreement with the study carried out by **Majid et al., (2025)**, to in Sukkur's teaching hospitals, found that high perception level of the inclusive work climate.

As regards distribution of inclusive work climate dimension perceived by studied nurses. The current study revealed that high perception level of nurses toward inclusive work climate was related to integration of differences. This may be due to promote diversity awareness is a priority of this hospital, in their hospital, nurses often share and learn about one another as people and intergroup relations.

These findings are in agreement with the study carried out by **Uman et al., (2023)**, in Sweden, reported that healthcare organizations promoting diversity, mutual respect, and acceptance of individual differences.

Concerning level of proactive work behavior among the studied nurses. The present study notified that half of nurses reported a high level of proactive work behavior, while small percentage perceived it as low. This may be due to supportive work environment with strong leadership and sufficient resources encourages initiative, nurses with higher job satisfaction and motivation.

This similar to **Lai, and Frimpong, (2024)** in geographical regions, reported that half of nurses had a high level of proactive work behavior. Conversely, previous study conducted by **Ellaban, and Elsaed, (2025)** in Kafr El Zayat General Hospital, stated that nursing staff had low level of overall proactive work behavior.

As regards distribution of proactive work behavior dimensions among studied nurses the present study revealed that high perception level of nurses toward proactive work behavior was related to taking charge and problem prevention. This may be due to nurses try to bring about improved procedures in your workplace, try to implement solutions to pressing organization problems and Try to find the root cause of things that go wrong.

This study's results go in the line with the study by **Zhang et al., (2026)**, in central China, stated high perception level of nurses in promoting proactive behaviors such as taking charge and problem prevention among nurses.

As regard correlation as regards Correlation between the studied variable. The present study showed a significant positive correlation between inclusive leadership and both proactive work behavior and inclusive work climate. This may be due to the fact that inclusive leadership fosters psychological safety, open communication, and support for individual initiative, which in turn encourages employees to take proactive actions and contributes to a positive and collaborative work environment.

The finding was consistent with the result of the study of **Chang, and Lin, (2022)** in China, stated that inclusive leadership has a significant positive effect on nurses's proactive work behavior.

As well conducted by **Gip, and Guchait (2025)** United States, found that an inclusive leadership climate positively influenced knowledge-sharing behaviors, which subsequently enhanced proactive work behaviors.

As regards multiple linear regression analysis of factors associated with proactive work behavior scores among nurses. The current study revealed that inclusive leadership had a statistically significant positive effect and It emerged as the stronger predictor of proactive work behavior relative to inclusive work climate. Additionally inclusive work climate also demonstrated a statistically significant positive effect. This may be due to inclusive leadership acts as the primary direct catalyst for proactive nursing behavior through daily support and feedback, while an inclusive climate provides the essential, broad environment of institutional trust.

These findings are in agreement with the study carried out by **Ahmed, and Faraz, (2020)** in China, found that inclusive leadership had a statistically significant positive effect on proactive work behavior.

Conclusion

The study findings indicated that more than half of nurses had a high perception level of inclusive leadership, the work climate and proactive work behavior. There are highly statistically significant positive correlations between inclusive leadership and both proactive work behavior and work climate. As well inclusive leadership and work climate emerged as strong predictors of proactive work behavior.

Recommendations

Based on the study findings, it was recommended that

- Giving reasonable feedback to nurses' opinions increases awareness of unconscious bias.
- Developing feedback mechanisms, such as surveys and grievance channels, should also be enhanced to identify and address concerns regarding fairness.

- Increase collaboration and sharing of opinions and initiative-taking at the hospital.

Authors' contributions

Y.A.H.A; created the thesis, provided an explanation, collected information, produced the first manuscript. N.M.A.M; made significant contributions to the goal and research hypothesis, introduction, review of the study's significance, debate. M.A.A.E; review study finding, discussion, conclusion, and recommendations and offered critical feedback on the text. F.G.M; participated in every phase of the research process, and

Table 1: Distribution of the studied nurses regarding their personal and job characteristics (n=352).

Inclusive leadership dimensions	High		Moderate		Low	
	No.	%	No.	%	No.	%
Supporting group members	266	75.6	71	20.1	15	4.3
Ensuring justice and equity	266	75.6	76	21.6	10	2.8
Shared decision-making	269	76.4	70	19.9	13	3.7
Encouraging diverse contributions	281	79.8	59	16.8	12	3.4
Helping group members fully contribute	246	69.9	95	27.0	11	3.1

Personal Characteristics		No.	%
Age			
20-<30		200	56.8
30-<40		120	34.1
40-<50		32	9.1
$\bar{x} \pm S.D$ 1.07±0.29			
Gender			
Male		151	42.9
Female		201	57.1
Marital status			
Single		81	23.0
Married		266	75.6
Divorced		4	1.1
Widowed		1	0.3
Educational qualification			
Diploma		73	20.7
Technical institute of nursing		190	54.0
Bachelor nursing degree		69	19.6
Master's nursing degree or higher		20	5.7
Clinical experience years			
<5 years		198	56.2
5-10 years		102	29.0
>10 years		52	14.8

publication. All authors revised and approved the final manuscript.

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Declaration of conflicting interest

The authors declare that there is no conflict of interest.

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Work climate dimension	High		Moderate		Low	
	No.	%	No.	%	No.	%
Foundation of equitable employment practices	216	61.3	102	29.0	34	9.7
Integration of differences	218	61.9	115	32.7	19	5.4
Inclusion in decision making	206	58.5	127	36.1	19	5.4

Figure (1): Total level of nurses' perception toward inclusive leadership. (n=352).

Table 2: Total level of nurses' perception regarding inclusive leadership dimensions (n=352).

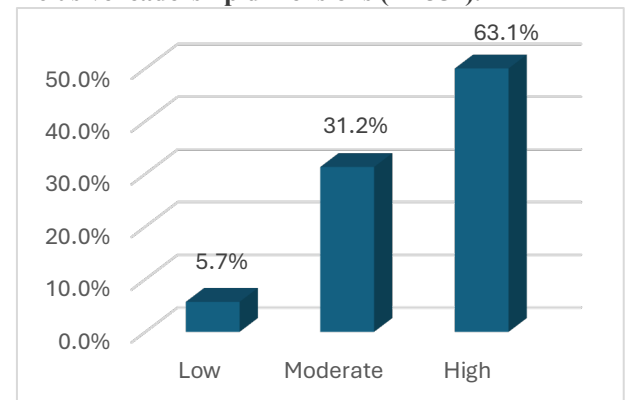


Figure 2: Total level of nurses' perception toward work climate. (n=352).

Table (3): Total level of nurses' perception regarding work climate dimensions (n=352).

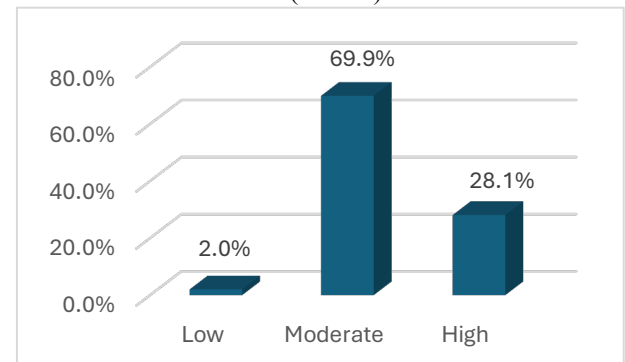


Figure (3): Total level of studied nurses regarding proactive work behavior. (n=352).

Table 4: Total level of nurses' perception regarding proactive work behavior dimensions (n = 352).

Proactive Work Behavior dimension	High		Moderate		Low	
	No.	%	No.	%	No.	%
Voice	183	52.0	153	43.5	16	4.5
Taking Charge	224	69.3	120	28.4	8	2.3
Problem Prevention	214	60.8	127	36.1	11	3.1
Individual Innovation	202	57.4	136	38.6	14	4.0

Table (5): Correlation matrix between inclusive leadership, Proactive work Behavior and inclusive work climate.

Variables		inclusive leadership	Proactive work behavior scale
1. Inclusive leadership	r p		-
2. Proactive work Behavior scale	r p	0.743** 0.000	
3. Inclusive Work climate	r p	0.615** 0.000	-0.663** 0.010

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(**) Statistically significant at $p < 0.01$. r Pearson correlation

Table (6): Multiple linear regression Analysis of inclusive leadership and work climate associated with proactive work behavior scores among nurses (n = 352).

Variables	Unstandardize d Coefficients	standardize d Coefficients	T	P. value
	B	B		
inclusive leadership	0.560	0.538	12.883	0.000*
Work climate	0.332	0.332	7.954	0.000*
ANOVA				
Model	R ²	Df.	F	P. value
Regression	0.621	2	285.35	0.000**

a. Dependent Variable: Proactive Work Behavior

b. Predictors: (constant): inclusive leadership, Work climate.

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