

## Effect of Inclusive Leadership on Nurses' Work Engagement at Zagazig University Hospitals

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### Abstract

**Background:** Motivating nurses' work engagement has emerged as one of the most significant drivers of high performance and achievement in working environments characterized by diversity. As widely known, leadership behaviors have a crucial on work engagement. Inclusive leadership is a relational leadership style that affects nurses' feelings of work engagement since leader's behavior acts as a driver of motivation and satisfaction for nurses, encouraging them to be more engaged in work related initiatives. As well it creates a healthy environment to support engagement. **Aim of the study:** to examine the effect of inclusive leadership on nurses' work engagement. **Subjects and Method: Research design:** A descriptive research design was carried out in this study **Setting:** The present study was conducted at Zagazig University Hospitals **Subjects:** A stratified random sample was taken from 375 staff nurses working in all units at Zagazig university hospitals **Tool of data collection:** Two tools were used for collecting data: The inclusive leadership questionnaire (ILQ) and the Utrecht work engagement scale (UWES). **Results:** The most of studied nursing staff had a high perception level of inclusive leadership behavior. As well they had a high level of work engagement. **Conclusion:** Inclusive leadership was positively and significantly correlated with studied staff nurses' work engagement. **Recommendation:** A mentorship program is recommended where more experienced nursing staff act as models and mentors to the new nursing staff in the profession to empower and motivate them to engage in their work. Nursing leaders should encourage nurses' active participation in the decision-making process and pursuing continuous professional development to improve nurses' work engagement levels.

**Key words:** Inclusive Leadership, Nurses, Work Engagement, Zagazig University

### Hospitals

### Introduction

In nursing, a nursing practice environment supported by competent leaders improves quality of care and patient safety outcomes. Therefore, leadership support is an important source that cannot be ignored in promoting nurses to reach their self-potential and achieve good performance. One of the many reasons that can affect leadership and interfere with its influence is the diversity of the workplace demographics which became a concern in the leadership process that needs to be noticed <sup>(1)</sup>.

Inclusive leadership is the best leadership style that can leverage the differences within the workplace and within the diverse workforce; it is a bidirectional relationship between leaders and their subordinates based on respect and recognition. Inclusive leadership refers to a leadership style that respects the diversity of individuals,

recognizes the individual value of employees, encourages collaboration and communication, tolerates team members' failures and gives corresponding professional guidance and is characterized by openness, accessibility and availability <sup>(2)</sup>.

Motivating nurse work engagement, which has emerged as one of the most significant drivers of high performance and achievement in today's dynamic environment, has become essential in gaining a sustainable competitive advantage. As widely known, leadership is a primary factor affecting work engagement <sup>(3)</sup>. inclusive leadership may play a unique role in fostering work engagement because it is distinguished by its core focus on meeting nurses' uniqueness and belongingness needs, whereas other forms of leadership diverge in this regard <sup>(4)</sup>.

Inclusive leaders' behaviors convey a strong signal that they value and appreciate nurses' contributions and respect the needs of nurses. Through processing information cues from their inclusive leaders, nurses come to feel that their leaders have concern for their interests and that their work can be influential in the organization, which, in turn, provides nurses with increased resources to better, satisfy their work demands<sup>(5)</sup>.

Work engagement is defined as a work-related state of mind characterized by vigor, dedication and absorption. Vigor includes mental resilience and energized employee while working; dedication involves the employee's work involvement and sense of connectedness, significance, interest and trial in their work; absorption is the employee's involvement and fascination with work. This implies that nurses engage in their work and are ready to put their hand, heart and head in their work when they are ready to employ and express their preferred self into the work physically, cognitively and emotionally and when they experience connectedness, supportive and trusting relationships with leaders and co-workers<sup>(6)</sup>.

Work engagement is considered an organizational necessity, and it is fundamental to organizational success. It influences central organizational outcomes such as exhaustion, job satisfaction, organizational commitment, and organizational citizenship behavior. Engaged nurses are proactive in and enthusiastic about their respective roles, which guide them to be happily engaged in their work and be willing to embark on initiatives<sup>(7)</sup>. the managerial style that is oriented to individual and collective participation (in decision-making) is particularly significant to work engagement<sup>(8)</sup>.

#### **Significance of the study:**

Inclusive leadership seeks the generic goals of providing opportunities for staff to develop, mentorship and role modeling with the aim of allowing fair opportunities for all to take organizational

responsibility and achieve their potential - ultimately to engage staff and promote staff perception of being valued, leading to increased productivity, stability and potential succession planning, If they do not feel included in the organization, they are unlikely to reach their full potential.<sup>(9)</sup>.

Inclusive leadership is relatively new leadership style to be investigated in nursing which became a necessity with changing demographics of the nursing workforce. In Egypt, and as regards the nursing field, research on inclusive leadership is limited and needs further investigation. However, despite the importance of inclusive leadership in predicting nurses' work engagement; almost no study has been done to examine the effect inclusive leadership has on nurses' work engagement.

**Aim of the study:** to examine the effect of inclusive leadership on nurses' work engagement.

#### **Research Questions:**

- What is the nurses' perception of inclusive leadership behaviors?
- What is the level of nurses' work engagement?
- Is there a relationship between inclusive leadership and nurses' work engagement?

#### **Subjects and method :**

##### **Research design:**

A descriptive research design was used to carry out this study

##### **Study setting:**

The present study was conducted at Zagazig University Hospitals.

##### **Study subjects:**

A stratified random sample was taken from 375 staff nurses working in all units at Zagazig university hospitals (academic hospitals), Al Sharqia, Egypt, which include two sectors involving nine teaching hospitals.

##### **Tools of data collection:**

Two tools were used to collect necessary data.

**Tool I: Inclusive Leadership**

**Questionnaire (ILQ):** Composed of two parts:

**Part I:** This part was developed by the researcher to collect data about staff nurses' age, years of experience, and educational qualification.

**Part II:** This part was developed by Li<sup>(10)</sup> to measure the perception of inclusive leadership behaviors. The tool consisted of (40 items) categorized into four dimensions of inclusive leadership namely; **The first dimension** was the extent to which the manager provides equal opportunity and fair treatment to all work unit members (**10 items**); includes 3 sub-dimensions. **The second dimension** was the extent to which the manager encourages integration and synergy among all work unit members (**18 items**); which includes 6 sub-dimensions. **The third dimension** was the extent to which the manager directly addresses all work unit members' fundamental needs for belongingness, uniqueness, and authenticity (**9 items**); includes 3 sub-dimensions. **The fourth dimension** was the extent to which the manager implements organizational diversity and inclusion related policies and programs in the work unit (**3 items**).

**Scoring system:**

The staff nurses' responses were measured on a five-point Likert scale ranging from almost never (1) to almost always (5). The staff nurse's score was considered a high inclusive leadership perception level if it is  $\geq 80\%$ , moderate inclusive leadership perception level if it is  $50\% - < 80\%$ , and a low inclusive leadership perception level if it is  $< 50\%$ <sup>(10)</sup>.

**Tool II: The Utrecht Work Engagement Scale (UWES):**

It was developed by Schaufeli et al<sup>(11)</sup> to measure work engagement level among nurses at hospitals, and consisted of 17 items subdivided into three subscales, namely; **vigor (6 items)**, **Absorption (6 items)** and

**dedication (5 items).**

**Scoring system:**

The staff nurses' responses were measured on a five-point Likert scale ranging from strongly disagree (1) to strongly agree (5). The staff nurse's score was considered a high work engagement level if it is  $\geq 80\%$ , moderate work engagement level if it is  $50\% - < 80\%$ , and a low work engagement level if it is  $< 50\%$ <sup>(11)</sup>.

**Validity and Reliability:**

The questionnaire was translated into Arabic and the tools were revised by a panel of five experts from nursing staff which included professor, four assistant professors of nursing administration that revised the tool's content for clarity, relevance, comprehensiveness, understanding, and ease for implementation. Experts were requested to express their opinions and comments on the tool and provide any suggestions for any additions or omissions of items. According to their opinions, all recommended modifications were performed by the researcher. The reliability of the questionnaire was measured through Cronbach's Alpha coefficient for assessing its internal consistency, and it was 0.95 for the inclusive leadership scale and 0.905 for the work engagement scale.

**Fieldwork:**

Once the approval was granted to progress in the study, the researcher started to organize a schedule for collecting the data after assessing the study setting and subjects. The data collection phase of the study took three months from the 1st of February to the 1st of May 2022. The final forms of the questionnaire sheets were handed to staff nurses in their work setting by the researcher to elicit their opinions. The researcher met staff nurses in each unit in the morning and evening shifts after finishing their work to distribute the questionnaires after

clarifying the purpose of the study. Staff nurses completed the questionnaires at the same time of distribution and it took about 10-15 minutes to complete. The researcher checked each questionnaire sheet after they had been completed to ensure the completion of all information.

#### **Administrative and ethical considerations:**

The study was approved by the ethics committee and dean of the Faculty of Nursing, Zagazig University. 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. Consent was established with the completion of the questionnaires. As well, verbal explanation of the nature and aim of the study had been explained to staff nurses included in the study sample. Likewise, an individual oral consent was received from each participant in the study after explaining the purpose of the study. Staff nurses were given an opportunity to refuse or to participate, and they were assured that the information would be used confidentially for the research purpose only. Additionally, they weren't needed to provide their names.

#### **Pilot study:**

A pilot study was carried out on 10 % of study subjects (38 staff nurses) to test applicability, feasibility, 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.

#### **Statistical analysis:**

All data were collected, tabulated and statistically analyzed using IBM Corp. Released 2015. IBM SPSS

Statistics for Windows, Version 23.0. Armonk, NY: IBM Corp. Quantitative data were expressed as the mean  $\pm$  SD & median (range), and qualitative data were expressed as % (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. Multiple linear regression is used to describe data and to explain the relationship between one dependent continues variable and one or more independent variables. All tests were two sided. P-value  $< 0.05$  was considered statistically significant , p-value  $\geq 0.05$  was considered statistically insignificant.

#### **Results:**

The demographic characteristics of the nurses in the study sample

**Table 1:** Reveals that 38.1 % of studied nursing staff aged less than 30 years, and 45.6% of them were technical institute. In addition, 60.5 % of them had more than 10 years of experience.

**Figure 1:** As regards inclusive leadership perception level of studied nursing staff, the figure shows that the majority of studied nursing staff perceived high level inclusive leadership behavior 59.2 %, while, 15.2% of them perceived a moderate level of inclusive leadership behavior.

**Table 2:** As regard to mean and standard deviation of inclusive leadership dimensions among studied nursing staff, the table reveals that, the highest mean percentage of inclusive leadership was related to the extent to which the manager encourages integration and synergy ( $66.5 \pm 19.9$ ), while the lowest was for the extent to which the manager implements organizational diversity and inclusion

related policies and programs in the work unit ( $11 \pm 3.7$ ).

**Figure 2:** As regards work engagement level of studied nursing staff, the figure illustrates that 49.3% of studied nursing staff had a high work engagement level, while, 22.7% of them had a low work engagement level

**Table 3:** Concerning mean and standard deviation of work engagement dimensions among studied nursing staff, the table shows that absorption had the highest mean score ( $22.5 \pm 6.2$ ), followed by vigor ( $22.5 \pm 6.2$ ) and the lowest mean score was given to dedication ( $18.8 \pm 5.3$ ).

**Table 4:** Concerning the relationship between inclusive leadership and work engagement of studied nursing staff, the table presents that there was a positive significant relation between inclusive leadership score and its dimensions and work engagement score and its dimensions.

**Table 5:** Regarding the relation between inclusive leadership level of studied nursing staff and their demographic characteristics the table reports that there was a statistically significant relation between inclusive leadership level of studied nursing staff and their experience,  $p=0.0001$ .

**Table 6:** Regarding the relation between work engagement level of studied nursing staff and their demographic characteristics the table portrays that there was a statistically significant relation between work engagement level of studied nursing staff and their age  $p=0.0001$ , and their experience,  $p=0.0001$ .

### Discussion:

In an increasingly competitive and challenging healthcare environment characterized by increasing work demands and limited resources, providing a working environment that generates positive work attitudes and behaviors is critical. Work engagement is presented as a key factor in

providing exemplary healthcare services. Engaged nurses deliver high-quality, cost-effective care and pursue activities beyond their formal job descriptions and inclusive leadership is the best leadership style that can help nurses reach these outcomes<sup>(12)</sup>.

Regarding the nurses' perception level of inclusive leadership behavior, the finding of the present study indicated that the highest percentage of nurses had a high level perception of inclusive leadership behavior. This could be due to that nurses feel respected, equally valued, empowered by their leaders at their nursing units and they experience less discrimination at work and are being treated fairly regardless of their gender, age or qualification, and they are being involved in the decision making process which in turn makes them feel more included and more connected to the work environment.

This result goes in the same line with a study by Ahmed et al<sup>(13)</sup> who concluded that nurses had a high perception level of inclusive leadership behavior and was contradicted with Elsayed et al<sup>(14)</sup> in Egypt who reported that the nurses' perception level of inclusive leadership was moderate moreover, Jin et al<sup>(15)</sup> in china who had confirmed that the nurses' perception level of inclusive leadership style was low.

As regards the dimensions of inclusive leadership behavior, the findings of this study presented that highest mean percentage of inclusive leadership behavior as reported by the studied staff nurses was related to the extent to which the manager encourages integration and synergy. While, the lowest was for the extent to which the manager implements organizational diversity and inclusion related policies and programs in the work unit. This might be due to they perceive their leaders to be inviting, appreciating others' points of view and contributions regardless of status or power differences. However they may

need their leaders to carry out more diversity and inclusion training activities at organizational level.

In disagreement with this Foley <sup>(16)</sup> in The United States who revealed that the extent to which the manager implements organizational diversity and inclusion related policies and programs in the work unit to have the highest mean score. Moreover, Taie & Zoromba <sup>(17)</sup> study in Egypt who reported that the extent to which the manager provides equal opportunity and fair treatment had the highest mean score.

Regarding the nurses' work engagement level, the finding of the current study stated that the highest percentage of nurses had a high work engagement level. This is might be due to that nurses perceived their leaders as inclusive leaders and Inclusive leaders provide their followers with opportunities to advance their skills, knowledge, and capacities. In their turn, these opportunities shape job-related and personal resources to promote work engagement feelings since the leader's role incentivizes nurses' performance and satisfaction by creating a healthy and convenient environment for work engagement. In addition, Inclusive leaders are identified by openness, readiness, and accessibility, so their words and deeds will affect nurses' sense of inclusion which enhances work engagement.

This result was consistent with those studies carried out by Mousa et al <sup>(18)</sup> to study the relationship between nurse manager leadership style and staff nurses' work engagement in Egypt and reported that most of staff nurses had a high level of work engagement and El Desoky et al <sup>(19)</sup> study which confirmed that more than two third of nursing staff had a high level of work engagement.

In congruent with these results Attia et al <sup>(20)</sup> and El-Guindy et al <sup>(21)</sup> studies in Egypt which declared that

most of staff nurses had low level of work engagement.

As regards the dimensions of work engagement the findings of this study revealed that highest mean percentage of work engagement dimensions as reported by the studied nursing staff was absorption while the lowest was for dedication. This might be due to that nurses were experiencing full concentration at work, feeling happy and engrossed in work so that time seems to pass quickly more than experiencing a sense of significance, enthusiasm, pride and challenge.

This was similar to Diab & El Nagar <sup>(22)</sup> who stated that staff nurses at Menoufia university hospitals experienced absorption as the highest work engagement factor followed by vigor and lastly dedication. As well Mohammed et al <sup>(23)</sup> study to evaluate the preparedness of isolation hospitals to covid-19 risk management and its impact on nurses' work engagement during the outbreak in Egypt and reported that the highest mean scores to be related to absorption.

Inconsistent with this result, Hamdeen et al <sup>(24)</sup> who revealed the highest mean score for work engagement was vigor and the lowest was for dedication. In the same line Hegazy et al <sup>(25)</sup> study which reported that vigor was the highest mean percentage and dedication was the lowest.

Concerning the relationship between inclusive leadership, and work engagement the present study proved that there was a positive significant relation between inclusive leadership and work engagement this might be explained as when supervisors or leaders show inclusive leadership behaviors by being open to discussing their tasks, being available for teamwork, and being accessible for more information in respect of new problems, nurses are psychologically,

intellectually, and emotionally interested in their job duties and responsibilities and exhibit high levels of work engagement.

This result was correspondent with Bannay et al<sup>(26)</sup> study which indicated that inclusive leadership behaviors such as openness, accessibility, and availability motivated the subordinates to be more engaged more recently, Lee<sup>(27)</sup> who indicated that there was a positive association between inclusive leadership and work engagement.

Contradictory with this, a study by Sprouse<sup>(28)</sup> that suggested no statistically positive association between inclusive leadership and nurses' work engagement.

Regarding the relation between inclusive leadership level of studied nursing staff and their demographic characteristics, the present study showed that there was a statistically significant relation between inclusive leadership level of nurse' staff and their experience. This could be attributed to that with the working time prolonging; the nurses contact their leaders more often in different situations, so they perceive more inclusive leadership.

This was supported by the study of Wang et al<sup>(29)</sup> who found that there was a statically significant relation between head nurses' inclusive leadership level and their experience and this result was contradicted by Elsayed et al<sup>(11)</sup> who found that there was no statistically significant relation between staff nurses' inclusive leadership level and their experience.

Regarding the relation between work engagement level of studied nursing staff and their demographic characteristics, the present study showed that there was a statistically significant relation between work engagement level and studied nursing staff's age, and experience. This is could be attributed to increased personal competencies gained as one

ages and having more experience in both work and life which provides more resources to manage demands faced at work such resources can be translated into satisfaction and engagement. In addition, older nurses especially above 44 years are in the stable stage and have less intension to turnover, had a strong sense of identification, belonging and connectedness hence they were more committed to their own work and tend to experience more positive emotions at work and are likely to take active attitudes and show positive behavior in their current organizations and ranged 10-15 years of experience period were associated with high work engagement level where nurses were likely to exert great energy into their work.

This comes in agreement with Kim et al<sup>(30)</sup> who revealed that nurses' job engagement was depending on age and working experience. A higher age nurse led to increased job engagement. As well, García-Iglesias et al<sup>(31)</sup> who concluded that nurses age older than 41 years was significantly related to their work engagement level.

And in disagreement with these results, the study by Mehrad<sup>(32)</sup> in Spain which reported that there was no significant relation between nurses' age, gender, marital status or work experience with their work engagement.

### **Conclusion:**

Based on the results of the present study, it could be concluded that, the most of studied nursing staff had high level of inclusive leadership perception. As well, the most of studied nursing staff had high level of work engagement. Additionally, there was a positive significant relation between inclusive leadership and work engagement. Moreover, there was a statistically significant relation between inclusive leadership level of studied nursing staff and their experience.

Furthermore, there was statistically significant relation between work engagement level of studied nursing staff and their age and experience.

#### Recommendations:

In view of the main results of the study the following recommendations were derived and suggested:

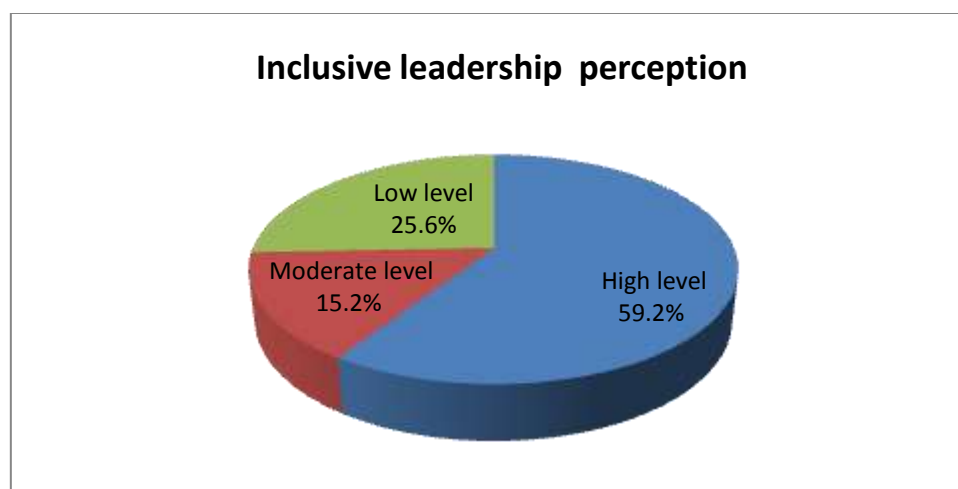
- A mentorship program is suggested where more experienced nursing staff act as

models and mentors to the new nursing staff in the profession to empower and motivate them to engage in their work.

- Encouraging nurses' active participation in the decision-making process and pursuing continuous professional development activities seem to be promising strategies to create a healthy work climate that improves nurses' work engagement levels.

**Table 1: Demographic Characteristics of Studied Nursing Staff (n=375)**

Variable	n.	%	
Age	<30 yrs	143	38.1
	30-40 yrs	138	36.8
	>40 yrs	94	25.1
Qualification	BSc	116	30.9
	Technical institute	171	45.6
	Diploma	88	23.5
Experience	<5 yrs	66	17.6
	5-10 yrs	82	21.9
	>10 yrs	227	60.5

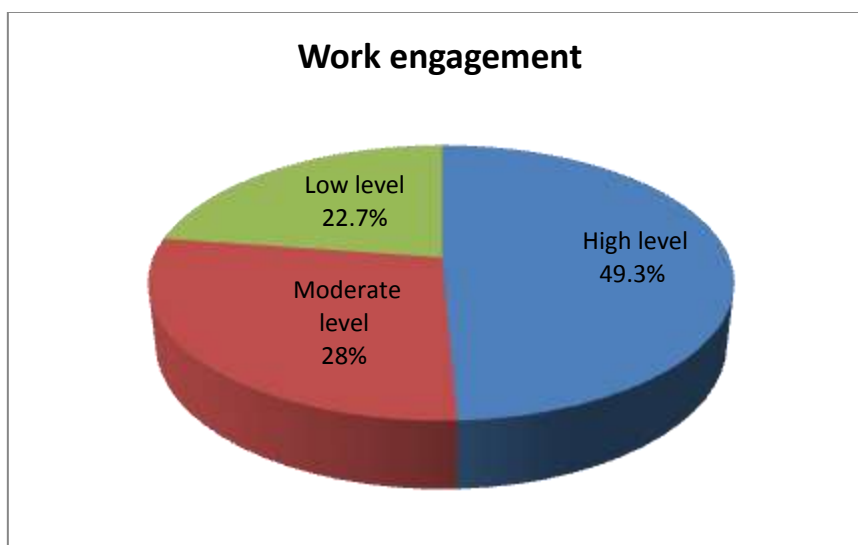


**Figure 1 Inclusive Leadership Perception Level of Studied Nursing Staff (n=375)**



**Table 2: Mean and Standard Deviation of Inclusive Leadership Dimensions among Studied Nursing Staff (n=375)**

Domains	Mean	SD	Range
A. The Extent to Which The Manager Provides Equal Opportunity and Fair Treatment	37.5	10.8	(12-50)
B. The Extent to Which The Manager Encourages Integration and Synergy	66.5	19.9	(21-88)
C. The Extent to Which the Manager Directly Addresses Studied Nursing Staff's Fundamental Needs for Belongingness, Uniqueness, and Authenticity	33.9	9.9	(10-45)
D. The Extent to Which The Manager Implements Organizational Diversity and Inclusion Related Policies and Programs in The Work Unit	11	3.7	(3-15)
Inclusive Leadership Score	149	43.2	(53-193)

**Figure 2: Pie Chart Showing Work Engagement Level of Studied Nursing Staff (n=375)****Table 3: Mean and Standard Deviation of Work Engagement Dimensions among Studied Nursing Staff (n=375)**

Domains	Mean	SD	Range
A. Vigor	22.3	6.2	(9-30)
B. Absorption	22.5	6.2	(8-30)
C. Dedication	18.8	5.3	(6-25)
Work Engagement Score	63.3	17.7	(25-83)

**Table 4: Correlation Matrix between: Inclusive Leadership Score, Work Engagement Score and Their Dimensions among Studied Nursing Staff (n=375)**

Variables	Inclusive leadership score		Work engagement score	
	r	p	r	P
Inclusive leadership score	1			
Knowledge sharing attitudes score	.892**	0.0001		
Work engagement Score	.910**	0.0001	1	
Equal opportunity and fair treatment			.880**	0.0001
Encourages integration and synergy			.895**	0.0001
Directly addresses all work unit members' fundamental needs for belongingness, uniqueness, and authenticity			.890**	0.0001
Implements organizational diversity and inclusion related policies and programs in the work unit			.848**	0.0001
Eagerness	.863**	0.0001	.891**	0.0001
Willingness	.885**	0.0001	.903**	0.0001

(r) Correlation coefficient \*\* Correlation is significant at the 0.01 level (2-tailed). \* Correlation is significant at the 0.05 level (2-tailed).

**Table 5: Relation between Inclusive Leadership Level of Studied Nursing Staff and their Demographic Characteristics (n=375)**

Variables	Inclusive Leadership level			X <sup>2</sup>	P value		
	H ≥80 n.222	M 50:<80 n.57	L <50 n.96				
<b>Age groups</b>	<30 yrs	N	87	24	32	7.1	0.13
		%	60.8%	16.8%	22.4%		
	30-40 yrs	N	75	26	37		
		%	54.3%	18.8%	26.8%		
	>40 yrs	N	60	7	27		
		%	63.8%	7.4%	28.7%		
<b>Qualifications</b>	BSc	N	70	15	31	2.4	0.66
		%	60.3%	12.9%	26.7%		
	Technical	N	105	27	39		
		%	61.4%	15.8%	22.8%		
	Diploma	N	47	15	26		
		%	53.4%	17.0%	29.5%		
<b>Experience</b>	<5 yrs	N	16	20	30	42.4**	0.0001
		%	24.2%	30.3%	45.5%		
	5-10 yrs	N	54	13	15		
		%	63.8%	17.0%	29.5%		

	%	65.9%	15.9%	18.3%
>10 yrs	N	152	24	51
	%	67.0%	10.6%	22.5%

$\chi^2$ :Chisquare test,  $p>0.05$ : non-significant , \*  $p<0.05$ : significant

**Table (6): Relation between Work Engagement Level of Studied Nursing Staff and their Demographic Characteristics (n=375)**

Variables	Work engagement level				$\chi^2$	P value	
	M						
	H $\geq$ 80 n.185	50:<80 n.105	L <50 n.95				
<b>Age groups</b>	<30 yrs	N	59	56	28	21.3*	0.0001
		%	41.3%	39.2%	19.6%		
	30-40 yrs	N	68	38	32		
		%	49.3%	27.5%	23.2%		
	>40 yrs	N	58	11	25		
		%	61.7%	11.7%	26.6%		
<b>Qualifications</b>	BSc	N	66	22	28	0.94	0.051
		%	56.9%	19.0%	24.1%		
	Technical	N	74	60	37		
		%	43.3%	35.1%	21.6%		
	Diploma	N	45	23	20		
		%	51.1%	26.1%	22.7%		
<b>Experience</b>	<5 yrs	N	9	28	29	43.8*	0.0001
		%	13.6%	42.4%	43.9%		
	5-10 yrs	N	51	18	13		
		%	62.2%	22.0%	15.9%		
	>10 yrs	N	125	59	43		
		%	55.1%	26.0%	18.9%		

$\chi^2$ :Chisquare test,  $p>0.05$ : non-significant , \*  $p<0.05$ : significant

#### References:

- Rumsey, M., Leong, M., Brown, D., Larui, M., Capelle, M., & Rodrigues, N. Achieving Universal Health Care in the Pacific: The need for nursing and midwifery leadership. Review Paper. The Lancet Regional Health-Western Pacific, 19, 100340, (2022), DOI:<https://doi.org/10.1016/j.lanwpc.2021.100340>
- Zhang, S., Liu, Y., Li, G., Zhang, Z., & Fa, T. Chinese nurses' innovation capacity: The influence of inclusive leadership, empowering leadership

- and psychological empowerment. *Journal of Nursing Management*, (2022), <https://doi.org/10.1111/jonm.13654>
- 3- Aslan, H., Mert, I. S., & Sen, C. The Effect of Inclusive Leadership on the Work Engagement: An Empirical Study from Turkey. *The Journal of Asian Finance, Economics and Business*, (2021), 8(11), 169-178.
  - 4- Rodriguez, J. L. Inclusive leadership and employee engagement: the moderating effect of psychological diversity climate, (2018), Mater thesis, California State University - San Bernardino
  - 5- Bao, P., Xiao, Z., Bao, G., & Noorderhaven, N. Inclusive leadership and employee work engagement: a moderated mediation model. *Baltic Journal of Management*, (2021), Vol. 17 No. 1, pp. 124-139. <https://doi.org/10.1108/BJM-06-2021-0219>
  - 6- Cruz, J. P., Alquwez, N., & Balayodao, E. Work engagement of nurses and the influence of spiritual climate of hospitals: A cross-sectional study. *Journal of Nursing Management*, (2022), 30(1), 279-287.
  - 7- Bannay, D. F., Hadi, M. J., & Amanah, A. A. The impact of inclusive leadership behaviors on innovative workplace behavior with an emphasis on the mediating role of work engagement. *Problems and Perspectives in Management*, (2020), 18(3), 479.
  - 8- Baran, M., & Sypniewska, B. The Impact of Management Methods on Employee Engagement. *Sustainability*, (2020), 12(1), 426. <https://doi.org/10.3390/su12010426>
  - 9- Dwertmann, D. J., & van Dijk, H. A leader's guide to fostering inclusion by creating a positive diversity climate. In *Inclusive Leadership*, Routledge, (2020), (pp. 149-161).
  - 10- Li, A. Inclusive Leadership Questionnaire: The Design and Validation of a Theory-based Instrument. Columbia University, (2021), PhD thesis, Columbia University.
  - 11- Schaufeli, W.B., Salanova, M., Gonzalez-Roma, V., & Bakker, A.B. The measurement of engagement and burnout: A two sample confirmatory factor analytic approach. *Journal of Happiness Studies*, (2002), 3(1), 71-92.
  - 12- Szilvassy, P., & Širok, K. Importance of work engagement in primary healthcare. *BMC health services research*, (2022), 22(1), 1-11.
  - 13- Ahmed, F., Zhao, F., Faraz, N. A., & Qin, Y. J. How inclusive leadership paves way for psychological well-being of employees during trauma and crisis: A three-wave longitudinal mediation study. *Journal of advanced nursing*, (2021), 77(2), 819-831.
  - 14- Elsayed, W. A., Abdel-ghani, A. M., & Ibrahim, A. A. M. The Role of Work Locus of Control and Inclusive Leadership on Nurses' innovative Work Behavior. *Assiut Scientific Nursing Journal*, (2020), 8(20.0), 124-133.
  - 15- Jin, Y., Bi, Q., Song, G., Wu, J., & Ding, H. Psychological coherence, inclusive leadership and implicit absenteeism in obstetrics and gynecology, (2022),
  - 16- Foley, K. O. Inclusion from Afar: The Impact of Virtual Work on the Effects of Inclusive Leadership (Doctoral dissertation, The George Washington University, (2022), PhD dissertation, the George Washington University.
  - 17- Taie, E. S., & Zoromba, M. A. COVID-19 Pandemic Highlights the Importance of Inclusive Leadership in Egyptian Hospitals to Improve Nurses' Psychological Distress. *Psych*, (2022), 4(3), 537-548.
  - 18- Mousa, W. A., EldinFekry, N. E., & Elewa, A. H. Relationship between nurse manager leadership style and staff nurses' work engagement. *Egyptian Nursing Journal*, (2019), 16(3), 206.
  - 19- El Desoky, E., El Said, N., & El-Shaer, A. Organizational Culture, Individual Innovation and their relation to Nursing Staff's Work Engagement. *Mansoura Nursing Journal*, (2021), 8(3), 39-59.
  - 20- Attia, A. A. M., Abo Gad, R. A. E. F., & Shokir, M. E. Workplace bullying and its effect on staff nurses' work engagement. *Tanta Scientific Nursing Journal*, (2020), 18(1), 83-109.
  - 21- El-Guindy, A. H., Bayoumy, A. S., & Ahmed, M. R. Relationship between Workplace Violence, Work Engagement and Staff Nurses' Intention to Leave Nursing Profession.

- Egyptian Journal of Health Care, (2021), 12(2), 1815-1827.
- 22- Diab, G. M. & Eldeeb, G. A. Effect of Organizational Support and Knowledge Sharing on Nurses' Innovative Behavior, *International Journal of Nursing Science*, (2020), Vol. 10 No. 3, pp. 51-61. doi: 10.5923/j.nursing.20201003.01.
- 23- Mohammed, K. M. A., Mohamed, A. A. H., Elsabahy, H. E., & Saleh, M. S. M. Preparedness of isolation hospitals to Covid-19 risk management and its impact on nurses' work engagement during the outbreak, (2021), DOI: 10.21608/EJHC.2021.192790
- 24- Hamdeen, M. S., Elewa, A. H., & Mohamed, S. A. Staff nurse's perception about performance-appraisal fairness and its relation to their work engagement. *Egyptian Nursing Journal*, (2022), 19(1), 71.
- 25- Hegazy, M. A., Ibrahim, M. M., Shokry, A. W., & El Shrief, A. H. Nurses' Perception of Work Environment Factors and its relation with their Work Engagement. *Egyptian Journal of Health Care*, (2022), 13(1), 280-293.
- 26- Bannay, D. F., Hadi, M. J., & Amanah, A. A. The impact of inclusive leadership behaviors on innovative workplace behavior with an emphasis on the mediating role of work engagement. *Problems and Perspectives in Management*, (2020), 18(3), 479.
- 27- Lee, Y. C. Inclusive Leadership and Work Engagement: The Mediating Roles of Psychological Empowerment and Job Crafting, (2022), Mater thesis, National Sun Yat-sen University.
- 28- Sprouse, M. (2021). Inclusive Leadership and Work Engagement: Mediating Roles of Organizational Commitment and Creativity, (2021), (Doctoral dissertation, Grand Canyon University)
- 29- Wang, Y. X., Yang, Y. J., Wang, Y., Su, D., Li, S. W., Zhang, T., & Li, H. P. The mediating role of inclusive leadership: Work engagement and innovative behaviour among Chinese head nurses. *Journal of nursing management*, (2019), 27(4), 688-696.
- 30- Kim, Y. J., Lee, S. Y., & Cho, J. H. A study on the job retention intention of nurses based on social support in the COVID-19 situation. *Sustainability*, (2020), 12(18), 7276.
- 31- García-Iglesias, J. J., Gómez-Salgado, J., Ortega-Moreno, M., & Navarro-Abal, Y. Relationship Between Work Engagement, Psychosocial Risks, and Mental Health Among Spanish Nurses: A Cross-Sectional Study. *Frontiers in public health*, 8, 627472, (2021), <https://doi.org/10.3389/fpubh.2020.627472>
- 32- Mehrad, A. Leadership Styles, Work Engagement and Perceived Organizational Support among Nurses, (2021), Doctoral thesis, published, Autonomous University of Barcelona.