

Staff Nurses' Perception of Green Inclusive Leadership; its Relation to Green Behavior

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Abstract: Background: Green inclusive leadership and green behavior are widely regarded as an important basis for improving the quality of our environment and support environmental sustainability resulting in the improvement of human health and the wealth of nations. **Purpose:** To assess nurses' perception of green inclusive leadership and its relation to green behavior among nurses at Menoufia University Hospital. **Design:** A descriptive correlational research design was used. **Setting:** The study was conducted at Menoufia University Hospitals. **Sample:** A convenient sample technique of 300 staff nurses was selected. **Instruments:** Two instruments were used (green inclusive leadership scale and green behavior questionnaire). **Results:** More than half (54.30%) of studied nurses had a moderate perception level of green inclusive leadership. While, the minority (15.7%) of them reported a low level of green inclusive leadership. Also, more than half (51%) of studied nurses exhibited a moderate perception level of green behavior, while the minority (5%) of them reported a low perception level of green behavior. **Conclusion:** There was a strong positive correlation between green inclusive leadership and green behavior among the studied nurses. **Recommendations:** Training programs should be conducted for nurses and nurse managers to enhance nurses' knowledge and skills related green inclusive leadership and green behavior. Further studies should be conducted about barriers affecting application of green inclusive leadership and green behavior in health setting.

Keywords: Green inclusive leadership, Nurses, Green Behavior.

Introduction: -

Nowadays, the world faces many different environmental problems and challenges every day. Most of these environmental problems occur as a result of human actions. The healthcare sector is one of the largest and fastest-

growing sectors globally, crucial for addressing the health and well-being of populations (Mukherjee et al., 2024). Despite their vital role, healthcare facilities have a significant ecological footprint, consuming vast

amounts of energy, generating substantial waste and using numerous chemicals (Katz, 2022). This has led to a global push for “greening” healthcare, promoting sustainability, and reducing carbon footprints. so, Academia and entrepreneurs are focusing on what kind of leadership mode organizations should adopt to encourage employees to take the initiative in green behaviour. A new leadership style has been proposed called green inclusive leadership (Bhutto et al., 2021).

Green inclusive leadership (GIL) caters to the concept of inclusiveness however with the approach to accommodating green ideas, being ready to pay heed to discussions about green practices, and being inspired enough towards environmental goals (Aboramadan et al., 2022).

Green inclusive leadership plays a pivotal role in fostering sustainable practices, ensuring that sustainability initiatives protect the planet and promote inclusivity and social responsibility (Aboramadan et al., 2022).. It involves leaders actively promoting and supporting pro-environmental behaviors among nurses while also ensuring that sustainability practices are inclusive and accessible to all members of the organization (Quan et al., 2022).

The global efforts to decarbonize the world and mitigate the non-renewable consumption of resources in all dimensions make it evident that a green approach in leadership is important and a leader who remains inclusive in acceptance of green ideas and novelty in dealing with the anti-green practices can influence more pro-environment decisions (Thabet et al., 2023) and thus

play an indispensable role in generating sustainable performance. Nevertheless, it is important to extensively investigate the trajectory of GIL towards green behavior.

Green behaviors (GB), or in other words, environmentally friendly behaviors, come into play at this point. Preventing the destruction caused by humanity will be achieved by spreading environmentally friendly behaviors. Nurses' GB refers to the behaviors of nurses in the workplace that support environmental sustainability such as turning off lights when the nurse leaves, editing a file electronically rather than printing it out, not using disposable supplies, garbage classification, waste recycling, green living behaviors (green travel, etc.), using teleconferencing instead of traveling to a face-to-face meeting, using waste paper to print a draft, providing environmental protection advice and participating in environmental protection projects (Elkholy, 2024).

Significance of the study

As a result of the implementation of the double carbon strategy, the issue of how to encourage GB has become a prominent one in society. A green inclusive leadership style involves interacting with nurses to achieve environmental protection and cleanliness organizational goals. In the process of work, the leader is the core of moral guidance for the members of the organization. The nurses will be more actively committed to GB of the organization when the leader supports the internal environmental protection work of the organization, takes the

initiative to guide them, and tolerates opinions and suggestions that differ from their own. Thus, the purpose of the study was to assess perception of green inclusive leadership and its relation to green behaviour among nurses.

The Purpose of Study:

To assess the perception of green inclusive leadership and its relation to green behavior among nurses.

Research questions:

- 1) What are the levels of nurses' perceptions of green inclusive leadership?
- 2) What are the levels of nurses' perceptions of green behavior among nurses?
- 3) What is the relation between nurses' perception of green inclusive leadership and their green behaviors at Menoufia University Hospitals?

Methods

Research Design:

A descriptive correlational research design was utilized to conduct this study.

Setting:

The current study was conducted at different units (Critical Units and General departments) of Menoufia University Hospital, at Shebin El kom Menoufia Governorate, Egypt.

Sample:

Sampling technique:

A convenient sample of 300 staff nurses who accepted to participate in this study, male and female and had at least 2 years of experience.

Sample size:

The study will include staff nurses working at above mentioned setting at Menoufia University Hospital during the time of study and who accept to participate in this study.

The sample size was determined by using solvin formula to assess the sample size of staff nurses (Yamane, 1976).

$$n = N / 1 + N(e)^2$$

N → total number of staff nurses are (1200) nurses

n → sample size

e → error tolerance (.05)

1 → a constant value

$$\begin{aligned} \text{Sample size of staff nurse} &= 1200 / \\ &(1+1200) \times (.05)^2 \\ &= 300 \text{ staff nurses} \end{aligned}$$

Data collection instruments:

Two instruments were utilized for data collection.

Instrument one: Green inclusive leadership scale.

It was developed by the investigator after reading the literature (Carmeli et al., 2010). It was adapted and expanded based on jurors' opinions to assess staff nurses' perception level of green inclusive leadership at Menoufia University Hospital. This questionnaire consisted of two main parts:

- **Part one:** Personal characteristics: It included personal data of the staff nurses including working units, age, gender, marital status, educational qualifications, and years of experience in the nursing profession.
- **Part two:** Green inclusive leadership scale: It consisted of 18 items which divided into four-dimensional openness (5 items),

accessibility (4 items) and availability (4 items) and Encouraging integration & Synergy (5 items).

Scoring system:

The studied nurses' responses were assessed by using 5 points likert scale (1- strongly disagree, 2= Disagree, 3= Neutral, 4= Agree and 5= strongly agree). Total score rang was between 18 and 90. The levels of green inclusive leadership were categorized as follows:

- High perception Level: $\geq 75\%$, equivalent to 68–90 points.
- Moderate perception Level: 60% to $<75\%$, equivalent to 54–67 points.
- Low perception Level: $<60\%$, equivalent to 18–53 points (Carmel et al., 2010).

Instrument two: Green Behavior Questionnaire

Green behavior questionnaire was developed by the investigator after reading the literature (zhang, et al., 2021). It was adapted and expanded based on jurys' opinions. This questionnaire consisted of six dimensions covered by 35 items:

- Green learning (3 items)
- Individual practices (11 items)
- Influencing others (8items)
- organizational voices (5 items)
- Avoiding harm (4 items)
- Working sustainably (4 items)

Scoring system:

The studied nurses' responses were assessed by using 5 points likert scale with with 1- strongly disagree, 2= Disagree, 3= Neutral, 4= Agree and 5= strongly agree. The total perception score of each statement was summed up

and converted into percentage scores. The overall score ranged was between 35 and 175.

The levels of green behavior were categorized as follows:

- High perception Level: $\geq 75\%$, equivalent to 132–175 points
- Moderate perception Level: 60% to $<75\%$, equivalent to 105–131 points
- Low perception Level: $<60\%$, equivalent to 35–104 points (zhang, et al., 2021).

Validity of the instruments:

Instruments were tested for its validity through a bilingual group of five experts from Faculties of Nursing at Menoufia University (three professors), and Benha University (one professor and one assistant professor) was selected to ascertain relevance and completeness, suggestions were incorporated into the instruments.

Reliability of the instruments:

These instruments were tested for reliability to estimate the consistency of measurement performed using Chronbach alpha coefficient test. Internal consistency of the first instrument (green inclusive leadership scale) was 0.95 and the second instrument (green behavior questionnaire) was 0.90.

Ethical consideration:

The study was approved by the Ethical and Research Committee of the Faculty of Nursing, Menoufia University (No. 975). A written consent was obtained from all nurses to share in the study. They were assured about confidentiality and anonymity of the collected data. Also, the purpose of the

study was clarified for nurses by the researcher.

Pilot study:

After reviewing of the instruments by the experts, the investigator conducted a pilot study before using the final questionnaire. The purpose of the pilot study was to ascertain clarity, relevance, feasibility and applicability of the study instruments and to determine obstacles that may be encountered during data collection. It was also helpful to estimate the time needed to fill the study instrument. The time needed to fill the study instrument was 20 -25 minutes. The pilot study was carried on 30 nurses (10%) of sample size no required modification done.

Data collection procedure:

An official letter was sent from the Dean of the Faculty of Nursing containing title and explaining the purpose and methods of data collection to the directors of studied settings. Then a short briefing was conducted to orient the respondents to the objectives, possible risks and benefits of the study to gain their cooperation to participate in the study. After explanation of the purpose and nature of the study, staff nurses were invited to participate in the study. Thereafter, data were collected through a self-administered questionnaire to ascertain all questions were answered and to clarify any inquiry and it took about 20-25 minutes to accomplish the two questionnaires. Data were collected in a period of three months(first of September 2024 till first of December 2024) in the morning and afternoon shift with average five

days a week. In addition, data were collected from staff nurses at Menoufia University Hospitals on Saturday, Sunday, Monday, Tuesday and Thursday. The average number of filled tools was 5-6 per day.

Statistical Analysis:

Data was coded and transformed into a specially designed form to be suitable for computer entry process. Data was entered and analyzed by using SPSS (Statistical Package for Social Science) statistical package version 26. Quantitative data were presented by mean (X) and standard deviation (SD) Pearson correlation coefficient test was used to correlate between two quantitative variables. Qualitative data were presented in the form of frequency distribution tables, number and percentage. It was analyzed by chi-square (χ^2) test. However, if an expected value of any cell in the table was less than 5, Fisher Exact test was used (if the table was 4 cells), or Likelihood Ratio (LR) test (if the table was more than 4 cells). Simple linear regression analysis was used to test relative effect of green inclusive leadership (independent variable), in predicting green behavior (dependent variable) among studied staff nurses. Level of significance was set as P value 0.05 for all significant tests.

Results

Table (1): Represents percentage distribution of personal characteristics of staff nurses. The table showed that more than two thirds (62%) of the nurses aged between 23 - 34 years with mean age of (33.57 ± 6.59) years), majority of them were females (85%),

married (88.7%), and more than two thirds had bachelor degree (67.3%). Regarding experience years, nearly third quarter (72.3%) of them had between 3 - 10 years of experience with mean (8.37 ± 5.42 years). More than half (57.0%) of studied staff nurses were working at critical care units.

Table (2): Reflects ranking with mean percentage of green inclusive leadership dimensions as perceived by the studied staff nurses. The table indicated that total mean score of total green inclusive leadership was (61.26 ± 11.36) with a percent (68.07%). Also, the first ranking with the highest mean percent was openness with a mean (17.26 ± 3.49) with a percent (69.04%). On the other hand, the last ranking with the lowest mean percent was accessibility with a mean (13.26 ± 2.84) with a percent (66.3%).

Figure 1: Green inclusive leadership levels as perceived by studied staff nurses. It was indicated that one third (30%) of the studied staff nurses had high perception level of green inclusive leadership. while; more than half (54.30%) of them had moderate perception level followed by the minority (15.7%) of them had low perception level of green inclusive leadership.

Table (3): It reflects ranking with mean percentage of green behavior dimensions as perceived by the studied staff nurses. The table indicated that total mean score of total green behavior was 127.65 ± 14.12 . Also, the highest

mean percent was working sustainably with a mean 15.27 ± 2.17 . On the other hand, the lowest mean percent was green learning with a mean (10.62 ± 1.98) with a percent (70.8%).

Figure 2: Green behavior perception levels of studied staff nurses. It was indicated that nearly half (44%) of studied staff nurses had high perception level of green behavior. Meanwhile, more than half (51%) of them had moderate perception level. Only 5% of them had low perception level of green behavior.

Table 4: Presents the relation between total green inclusive leadership and total green behavior levels among staff nurses. There was a highly statistical significant relation between total green inclusive leadership and total green behavior levels at ($X^2 = 100.4$ & $p = 0.000$). Nurses with moderate green inclusive leadership level showed the highest percentage of moderate green behavior level (68.6%). In addition, among nurses who had high perception level of green inclusive leadership approximately 53% of them showed high level of green behavior. And, no one of them (0.0%) had low green behavior.

Table 5: Correlation between total green inclusive leadership and total green behavior among studied staff nurses. This table showed that there was a very highly significant positive correlation between total green inclusive leadership and total green behavior at $r = 0.602$ and $p = 0.00$.

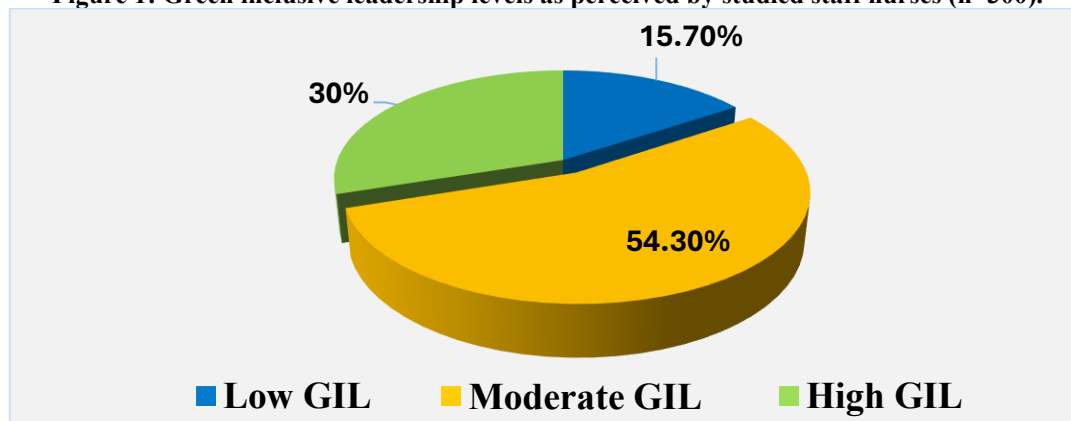
Table (1): Percentage distribution of personal characteristics of staff nurses (n=300).

Personal Characteristics	N	%
Age		
23 ≤ 35 years	186	62.0
36 ≤ 46 years	104	34.7
47 ≤ 55 years	10	3.3
Mean± SD	33.57± 6.59 years	
Gender		
Female	255	85.0
Male	45	15.0
Marital status		
Unmarried	34	11.3
Married	266	88.7
Education		
nursing diploma	74	24.7
Associated degree in nursing	24	8.0
Bachelor's degree in nursing	202	67.3
Experience years		
2 ≤ 11 years	217	72.3
12 ≤ 20 years	76	25.3
21 ≤ 29 years	7	2.4
Mean± SD	8.37±5.42. years	
Unit of working		
General department	129	43.0
Critical care units	171	57.0
Total	300	100

Table (2): Ranking with mean percentage of green inclusive leadership dimensions as perceived by the studied staff nurses (n=300).

Dimensions	No of questions	Max	Mean ±SD	Mean percentage	Ranking
1) Openness	5	25	17.26±3.49	69.04	1
2) Availability	4	20	13.63±2.69	68.15	3
3) Accessibility	4	20	13.26±2.84	66.3	4
4) Encouraging integration & synergy	5	25	17.11±3.47	68.44	2
Total green inclusive leadership	18	90	61.26±11.36	68.07	

Figure 1: Green inclusive leadership levels as perceived by studied staff nurses (n=300).



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Table (3): Ranking with mean percentage of green behavior dimensions as perceived by studied staff nurses (n=300).

Dimensions	No of items	Max	Mean $\pm$ SD	Mean percentage	Ranking
1) Green Learning	3	15	10.62 $\pm$ 1.98	70.8	6
2) Individual Practice	11	55	39.78 $\pm$ 4.94	72.33	3
3) Influencing others	8	40	29.87 $\pm$ 3.81	74.68	2
4) Organizational voices	5	25	17.74 $\pm$ 2.33	70.96	5
5) Avoiding Harm	4	20	14.37 $\pm$ 2.02	71.85	4
6) Working Sustainably	4	20	15.27 $\pm$ 2.17	76.35	1
Total green behavior level	35	175	127.65 $\pm$ 14.12	72.94	

Figure 2: Percentage distribution of green behavior perception levels of studied staff nurses (n=300)

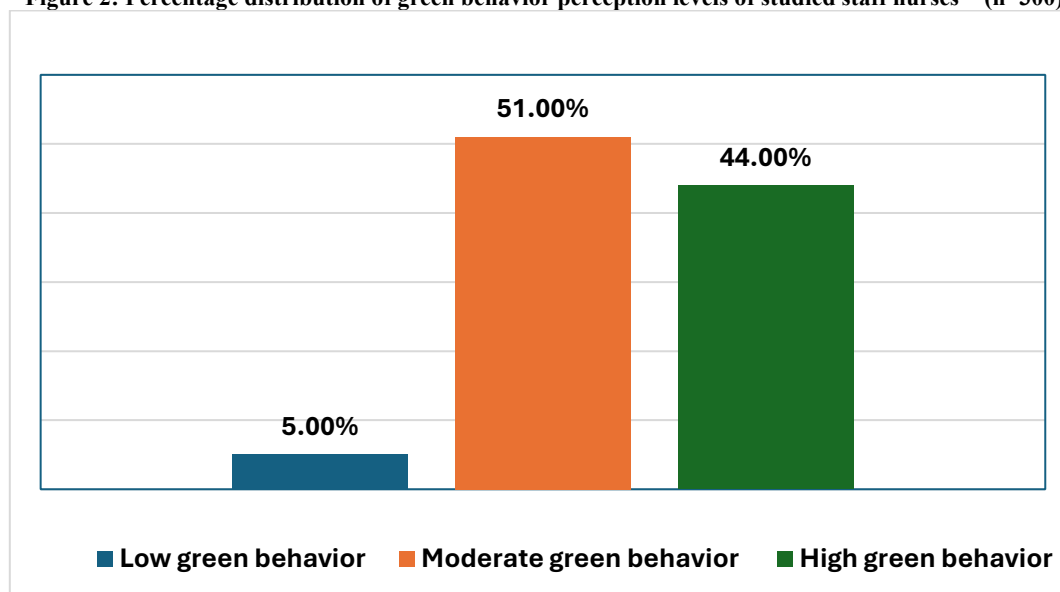


Table (4): Relation between total green inclusive leadership and total nurse's green behavior levels (n=300).

Levels of total green inclusive leadership	Levels of total green behavior						Total		X ²	P
	Low		Moderate		High					
	N.	%	N.	%	N.	%	N.	%		
Low	12	80.0	27	17.3	8	6.2	47	15.7	100.4	0.000*
Moderate	3	20.0	107	68.6	53	41.1	163	54.3		
High	0	0	22	14.1	68	52.7	90	30		
Total	15	100	156	100	129	100	300	100		

Table 5: Correlation between total green inclusive leadership and total green behavior among studied staff nurses (n=300).

Total green inclusive leadership	Total green behavior	
	R	P value
	.602**	.000

Discussion

Nowadays, Healthcare sector plays an important role in protection the environment and adaptation activities. The healthcare sector is large and crucial for addressing the health and well-being of populations could become an important role model for other sectors of society. If the healthcare sector is systemically engaged in sustainability efforts, this will support individual staff members, such as nurses, to achieve sustainability goals in their daily work (Holst, 2020). For studied nurses perception of green inclusive leadership, the study findings indicated that one third of the studied staff nurses had high perception level of green inclusive leadership while; more than half of them had moderate perception level

From the investigator's perspective, this could be to being unsure of nursing role in promoting environmental sustainability and lack of clearly defined workplace policies for how to handle the effects of green inclusive leadership and environmental sustainability practice. so, it's necessary to attend conference and workshop about green inclusive leadership and environmental sustainability practice

The study finding was supported by the study result carried out by Wang et al., (2019) which investigated the relationship between work engagement and inclusive leadership. They found that their inclusive leadership behavior was in middle level. Also, the study finding was supported by the study result carried out by Elsayed et al., (2020) in Egypt who studied the role of work locus of control and inclusive

leadership on nurses' innovative work behavior. They concluded that the nurses' perception level of inclusive leadership was moderate.

The study finding was contraindicated with a study by Jin et al., (2022) entitled "Psychological coherence, inclusive leadership and implicit absenteeism in obstetrics and gynecology nurses". They had confirmed that the nurses' perception level of inclusive leadership style was low. Also, the study finding was contrast with the study conducted by Taie& Zoromba, (2022) who investigated "COVID-19 Pandemic Highlights the Importance of Inclusive Leadership in Egyptian Hospitals to Improve Nurses' Psychological Distress". They found that a prominent percentage of staff nurses perceived their nurse manager as a poor inclusive leader.

Considering ranking with mean percentage of green inclusive leadership behavior dimensions, the findings of current study that the first ranking with the highest mean percent was openness. On the other hand, the last ranking with the lowest mean percent was accessibility.

From the investigator point of view, this might be due to the nurse leader is open to hearing new green ideas, open to discuss environmental goals at work with nurses and promotes open communication with nurses to improve work environment so, nurses realized that nurse leader appreciate nurses' points of view and contributions regardless of status or power differences.

The study finding was contrast with the study conducted by Abdelaziz et al., (2023) who revealed that the 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.

For studied nurses' perception toward green behavior, the present study findings indicated that nearly half of the studied staff nurses had high perception level of green behavior, while, more than half of them had moderate perception level followed by the minority of them had low perception level of green behavior.

From the investigator point of view, this might due to the media now focuses on green behavior and environmental sustainability practices as well as attending scientific conferences that focuses on this field. This could be attributed to the fact that nurses are essential in the implementation of sustainable practices to preserve an environment that does not endanger future generations. However, there is no clear workplace policy to guide nurses in this process, and they are not aware of their obligation to reduce environmental hazards in order to improve the sustainability of the workplace. Furthermore, the hospital management did not provide any training sessions for staff nurses on the most pressing issue facing the world.

The study findings were in agreement with the study of Elkholy, (2024) who reported that overall levels of nurse perception of green behavior were moderate. Also, the study data was in agreement with the study of Elshazly et

al., (2024) who reported that the highest percentages of green behavior levels were moderate.

On other hand, the study findings were discordance with Essawy et al., (2024). They reported that about half of studied nurses exhibited high green behavior at work. Conversely, third of them exhibited low green behavior at work. Also, the study findings were discordance with Dumont et al., (2017) who assessed effects of green HRM practices on employee workplace green behavior, they reported that individual green behavior was high.

Considering ranking with mean percentage of green behavior dimensions, the present study results clarified that the first ranking with the highest mean percent was working sustainably. On the other hand, the last ranking with the lowest mean percent was green learning

From the investigator point of view, this might due to nurses develop new work processes that use fewer natural resources and represents behaviors that help work processes be more sustainable through recycling, energy-saving, and printing reduction. Recycling occurs through placing waste materials (e.g. paper, , plastic and glass) into appropriate bins. Energy-saving is achieved by using less energy, such as turning computers and lights off. Printing reduction through minimizing unnecessary printing.

The study findings were in the same line with Elshazly et al.,(2024) who reported that individual practice dimension had the highest means of green behavior dimensions ,while, green learning had the lowest mean score. Also, the study findings were in

the same line with Moustafa Saleh et al., (2024) who investigated fostering green transformational leadership: the influence of green educational intervention on nurse managers' green behavior and creativity. They reported that green individual practice dimension had the highest mean scores. On other hand, the study findings were discordance with Moustafa Saleh et al., (2024) who confirmed that influencing others of green behavior dimensions had the lowest mean scores.

For the correlation between the study variables.

Considering the correlational findings, the present study illustrated that there was a highly significant positive correlation between total green inclusive leadership and total green behavior.

From the investigator point of view, this result due to green inclusive leadership is one of the leadership styles that contribute positively towards promoting green behavior of nurses, protection environment, achieving work sustainability, significantly affects job satisfaction, green innovative work behavior, work engagement, and retention of nurses in organizations. This kind of leadership encourages their followers to go above what is expected and frequently beyond what they think is feasible to promote sustainable development. Also, from the investigator point of view, adopting a green inclusive approach to leadership does away with various levelled hurdles and encourages individuals to exhibit environmentally conscious behaviour. This implies that when leaders show openness towards environmental issues,

employees are more likely to pay back to the leader with positive work behavior.

Also, from the researcher point of view, this result due to green inclusive leaders encourage the creation of an open, inclusive, and cooperative campus environment, which allows nurses to feel that their green ideas and thoughts are respected and valued. As a result, nurses gain confidence in experimenting with new green projects, thereby fostering the development of green creativity and empower their followers to actively participate in environmental protection, leading to intrinsic satisfaction

The result findings were compatible with Patwary et al., (2023) who evaluated examining proactive pro-environmental behaviour through green inclusive leadership and green human resource management: an empirical investigation among Malaysian hotel employees. They reported that green inclusive leadership positively and significantly impacted pro-environmental behaviour. Also, the findings were aligned with Al-Swidi (2021) who evaluated the joint impact of green human resource management, leadership and organizational culture on employees' green behaviour and organisational environmental performance. They demonstrated that green inclusive leadership positively and significantly impacted pro-environmental behaviour in the organisation.

Moreover, the study findings were accordance with Aboramadan et al., (2022) who investigated green inclusive leadership and employee

green behaviors in the hotel industry: Does perceived green organizational support matter? They reported that green inclusive leadership is positively associated with green behaviors.

Also, the study findings were accordance with Quan et al., (2022) who investigated "The Study on the Influence of Green Inclusive Leadership on Employee Green Behaviour". They illustrated that green Inclusive Leadership positively affects employee green behaviour. Additionally, the study finding was supported by the study result carried out by Mandal & Pal, (2024) who investigated "Going Green from Within: The Mediation of Employee Green Creativity in the Relationship between Green Inclusive Leadership and Green Organizational Citizenship Behaviour". They found that green inclusive leadership exerted a significant and positive influence on green organizational citizenship behaviour.

Similarly, This finding was consistent with Thabet et al., (2023) who investigated "Does green inclusive leadership promote hospitality employees' pro-environmental behaviours?" The mediating role of climate for green initiative. They found leaders who prioritize and actively engage in green practices have a positive influence on employees' environmental attitudes and behaviours. Also, the study finding was supported by the study result carried out by Eladawi et al., (2024) who mentioned that green inclusive leadership positively influences green work engagement and employees' green intrinsic motivation.

Moreover, the study finding was supported by the study result carried out by Liu & Huang, (2024) who investigated "The Influence of College Students' Perception of Green Inclusive Leadership on Green Creativity: The Mediating Role of Green Intrinsic Motivation". They found that students' perceptions of green inclusive leadership were significantly positively correlated with green creativity and their green intrinsic motivation.

Also, the study finding was supported by the study result carried out by Samo et al., (2024) that investigated influence of green inclusive leadership on sustainable performance through innovative behavior: Moderating role of green psychological climate and climate for inclusion. They found there was positive relationship between green inclusive leadership and sustainable performance and behavior.

Conclusion

In the light of the current study findings, it was concluded that one third of the studied staff nurses had high perception level of green inclusive leadership while; more than half of them had moderate perception level followed by the minority of them had low perception level of green inclusive leadership. Also, nearly half of the studied staff nurses had high perception level of green behavior while; more than half of them had moderate perception level followed by the minority of them had low perception level of green behavior. Finally, there was a highly positive statistically significant correlation between nurses' perception of green inclusive leadership and their green behavior.

Recommendations

Based on the findings of this study, the following recommendations are proposed:

- Readiness of organizations for application of green behaviour should be enhanced by forming a green team in hospitals to be responsible for the implementation of green behaviour and environmental sustainability.
- Strategic plans should be set for training and education to maintain and preserve green inclusive leadership and green behaviour.
- Planting of green areas around of should be encouraged around the hospital and planting some types of plants that reduce temperatures on hospital roofs.
- Collaboration protocols between college of nursing and the hospital administration should be encouraged to increase the level toward green inclusive leadership and green behaviour through holding educational workshops and training program.
- Training programs provide staff nurses with the skills needed to implement green behaviour and for all managerial levels to clarify the concept of green inclusive leadership, and the extent to which the hospital and staff benefit from green inclusive.

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