Hospital Green Competencies from nurses' perspective at Suez Canal University Hospitals

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Abstract

Background: Green Competencies have the potential to decrease expenses, safeguard the natural environment, and enhance organizational sustainability. They are highly recommended as a key factor in promoting environmentally friendly practices within the nursing field. **Aim:** This study aims to assess hospital green competencies from nurses' perspective at Suez Canal University Hospitals. **Design:** A descriptive design was used to achieve the aim of the study. **Setting:** The study was conducted at Suez Canal University Hospitals. **Sample:** 380 nurses selected randomly and was included from the Suez Canal University Hospitals. **Tool:** The self-instruction tool used for data collection is the Green Competencies Scale. **Results:** Hospital green competencies scored the mean (96.84± 11.36) with mean percentage (76.8%), the hospital green attitude scored the highest mean (27.54± 4.8) with a mean percentage (78.6%), followed by hospital green knowledge (11.58±1.88) with mean percentage (77%) and then hospital green awareness (14.98 ±2.7) with mean percentage (74.9%). **Conclusion:** The study concluded that the majority of nurses perceived the hospital as a green-competent hospital. **Recommendations**: Develop clear environmental goals and strategies based on the domains of green competencies. Green competencies should be embedded into the nursing curriculum to encourage nurses to practice to the fullest extent of their skills. Collaborating with hospitals for on-site training programs about green competencies and practices for nurses.

Keywords: Friendly Practices, Green Competencies, Hospital, Nurses

1. Introduction

Green development of the health sector is a highly complex, integrated, and interconnected phenomenon. In the last decade, the demand for green healthcare has increased and become more urgent, as healthcare facilities, in particular hospitals, are organizations that require large amounts of resources for medical services (such as water, electricity, gas, and food), and generate both medical and hazardous waste. Therefore, the green transformation of this sector is crucial to achieving climate and sustainable development goals **(Berniak-Woźny & Rataj, 2023).**

Green competencies (GCs) are are essential for advancing sustainability transformations **(Petsimeris & Koulougliotis, 2024).** They are an integral part of sustainable development in hospitals and these competencies are defined as the set of skills, knowledge, and abilities required for environmentally sustainable innovation. **(Dogbe and Marwa, 2024).** As organizations embrace GCs and sustainable development, their objectives extend beyond conventional economic gains, necessitating a transition toward a sustainable and green performance approaches **(Yu et al., 2023).**

Nursing is a socially responsible discipline committed to improving the health of individuals and communities **(Shelby, 2024).** They form the largest group of healthcare providers whose professional capabilities have an essential role in the realization of an effective healthcare system. They are also exposed to a high rate of workplace hazards, as well as encountered a series of formidable challenges, including the rapid expansion of medical waste generation and escalating carbon emissions. Therefore, promoting friendly environment behaviors and competencies, improving workplace safety and supporting sustainable performance are considered the main concern of healthcare organizations to deal with these challenges properly and maintain sustainable development **(Roscoe et al., 2019; Ismail et al., 2024).**

Green competencies are hierarchical dispositional constructs that are comprised of six dimensions which are; green knowledge, green skills, green awareness, green attitudes, green abilities, and green behavior **(Cabral & Dhar, 2021).**

Green knowledge is the general knowledge about the facts, concepts, and relationships regarding the natural environment and the entire ecosystem. Theoretical knowledge of environmental facts or concepts is insufficient to engage in environmental conservation. In this regard, individuals need to be equipped with green skills, which represent a practical application of theoretical knowledge. Green skills are the skillful engagement with the natural environment, including professional and vocational skills, as well as the generic skills. Green abilities are the capacities to integrate theoretical knowledge and practical expertise in the natural environment to solve real environmental challenges and it consider the dimension in green competencies that enable the individual to develop themselves and

enhance their performance to achieve environmental conservation .Green awareness including the ability to perceive, to feel, to be conscious of events, objects, thoughts, emotions or sensory patterns about the natural environment and its problems .Green attitude is as the psychological tendency that is expressed by evaluating perceptions of or beliefs regarding the natural environment. Green behavior is scalable actions and behaviors that organization engage in and contribute to or detract from environmental sustainability **(Carbal & Dhar, 2019; Carbal & Dhar, 2021).**

Green competencies dimensions enable nurses to confront complex environmental problems in the workplace, apply sustainability principles to develop a green nursing practice, and collectively influence the future of national and global health **(Shelby, 2024).** These dimensions stance aligns with stakeholders' concerns and contributes substantively to the attainment of green and sustainable performance **(Abdelkareem et al., 2024).**

Significance of the study:

Green competencies enhance an organization's ability to identify and seize environmentally friendly opportunities. They support a deeper understanding of sustainability concepts and the practical challenges involved, particularly how these ideas can be applied in daily operations **(Tomassi et al., 2024).** These competencies also encompass the essential knowledge, skills, and attitudes needed to develop and implement sustainable and green practices within organizations **(Shao et al., 2024).** In the nursing field, sustainability competencies have not yet been fully recognized as a core aspect of professional practice. Moreover, there is still a noticeable gap in incorporating these competencies into nursing education and professional standards **(Tiitta et al., 2024).** Thus, the green competencies (GCs) framework offers a valuable tool to help close this knowledge gap by promoting environmental education and introducing underrepresented sustainability skills to the healthcare community **(Tomassi et al., 2024).** Hence, studying the hospital's GCs from the nurses' perspective is significant.

The Aim of the study:

This study aimed to assess hospital green competencies from the nurses' perspective at Suez Canal University Hospitals.

Research question:

- What is the hospital green competencies level

from the nurses' perspective at Suez Canal University Hospitals?

2. Subject and Method

Study design:

A descriptive design was utilized to conduct this study.

Study setting:

The study was conducted at Suez Canal University Hospitals, which consists of 32 departments and units distributed in three buildings.

Study subjects:

The study was conducted on 380 nurses out of 1750 nurses working in Suez Canal University Hospitals.

Tool of data collection:

Data was collected by using the following tool: **A self-administered questionnaire which consisting of two parts:**

Part A: Personal characteristics of nurses

Part B: Green competencies scale. It was developed by **Cabral and Dhar (2019)** and was used to assess the hospital's green competencies from the nurse's perspective. It consisted of 29 items categorized under 6 domains: green knowledge (3 items), green skills (3 items), green abilities (4 items), green attitude (7 items), green behavior (8 items), and green awareness (4 items). This part was translated into Arabic by the researcher.

Scoring system:

The response was measured on a five-point Likert-type scale that ranged from "1" – strongly disagree to "5" –strongly agree. The levels of nurses' perception of hospital green competencies were categorized using a cut-off point scale. The cut-off point was developed for the green competencies questionnaire by conducting a Roc Curve analysis for nurses' responses. The value that achieved the highest sensitivity and specificity was 95 (out of 145), which represents (65.5%) of the total score, so the hospital is perceived as a green-competent hospital if the total score of the green competencies' questionnaire is ≥ 95 scores or ≥ 65.5%.

Tool validity and reliability:

The validity of the original English version of the scale was established by **Cabral and Dhar (2019)** through Exploratory Factor Analysis (EFA), which assesses how well the scale items align with

theoretical foundations and empirical evidence from prior research. This analysis was conducted to determine the factor structure of the green competencies construct, which consists of six dimensions and twenty-nine items. To further confirm the construct's accuracy, partial least squares structural equation modeling was applied after finalizing the scale. This method reinforced the reliability and validity of the measurement model, demonstrating its strength and precision.

Regarding the validity of the Arabic version, the scale was evaluated for language accuracy, contextual relevance, and construct validity. The researcher carefully translated the original version into Arabic, with special attention to maintaining both precision and cultural appropriateness. To ensure linguistic equivalence, a back-translation process was carried out, in which the Arabic version was translated back into English to identify and resolve any discrepancies. Following this process, the instruments underwent a face validity assessment. A panel of five academic experts from the Faculty of Nursing—comprising two members from the Nursing Administration Department, two from the Medical and Surgical Nursing Department, and one from the Pediatric Nursing Department—reviewed the translated tools to confirm that they effectively represented the intended constructs within the Arabic cultural and educational context.

The utilized tool was reliable, its realbility Cronbach's alpha was 0.902 **(Cabral & Dhar, 2019).** The reliability of the tool was retested in the current study; the Cronbach's alpha was 0.89.

Fieldwork:

Following the acquisition of the necessary formal approvals from both the Nursing Director and the Administrator of Suez Canal University Hospital, the researcher commenced the data collection phase of the study. This phase extended over a duration of three months, beginning in April 2024 and concluding at the end of June 2024. Data were collected through direct engagement with nursing staff during their designated break times across various shifts—including morning, afternoon, and night—at an average frequency of five days per week and at variable hours to accommodate staff availability. Prior to participation, written informed consent was obtained from each nurse after providing a comprehensive explanation of the study's objectives, significance, and the procedures for utilizing the study tools. Participants were given self-

administered questionnaires, and the researcher remained available to offer clarification and address any inquiries throughout the process. Several challenges were encountered during data collection, primarily due to the demanding workload of the nursing staff within the clinical departments. This limitation was mitigated by the researcher's consistent and repeated visits to the various units, which facilitated improved access and participation.

Pilot study:

pilot study was conducted on a sample of 38 nurses, representing 10% of the total study population. The purpose of the pilot study was to assess the applicability, feasibility, and reliability of the data collection instruments. Additionally, it aimed to identify potential obstacles and challenges that might arise during the main data collection phase, allowing for the implementation of appropriate corrective measures in advance.

The pilot study also assisted the researcher in estimating the time required to complete the study tools. It was determined that completing the self-administered questionnaire required approximately 15 to 20 minutes.

Administrative design:

An official letter was obtained from the dean of the faculty of nursing to present to the nursing director of Suez Canal University Hospitals for collecting data from nurses working in the hospital.

Ethical considerations:

The study was conducted following the approval of the Research Ethics Committee (REC) at the Faculty of Nursing, granted during its 67th session held on October 31, 2023. The research protocol was reviewed and approved under Code No. 236/10 2023. In addition, official permissions were obtained from both the Nursing Director and the Administrator of Suez Canal University Hospitals to proceed with the implementation of the proposed study.

Ethical considerations were strictly observed throughout the research process. Written informed consent was obtained from each participant after providing a clear explanation of the study's purpose, procedures, and any relevant information. Participants were assured of the confidentiality and anonymity of the data collected. Furthermore, they were informed of their right to voluntarily refuse participation or to withdraw from the study at any stage without facing any form of penalty or risk.

Data analysis:

The collected data were coded and entered into coding sheets, then subsequently analyzed using the Statistical Package for the Social Sciences (SPSS), version 23. Prior to analysis, the normality of the data distribution was assessed using the Kolmogorov-Smirnov test at a significance level of 0.05. Descriptive statistical methods—including frequency distributions, mean scores, medians, and standard deviations—were utilized to summarize and describe the characteristics of the study variables

3. Results

Table (1): shows that total hospital green competencies from nurses' perspective scored the mean (96.84± 11.36) with mean percentage (76.8%), hospital green attitudes scored the highest mean (27.54± 4.8) with mean percentage (78.6%), followed by hospital green knowledge (11.58±1.88) with mean percentage (77%) and then hospital green awareness (14.98 ±2.7) with mean percentage (74.9%).

Table (2) shows that 59.2% of nurses agreed that the hospital had developed a green program (waste management, control of effluents, inventory of pollution sources).

Table (3) shows that (45.3%) of nurses agreed that the hospital facilitates appropriate environmental protection skills.

Table (4) shows that (48.2%) of nurses agreed that the hospital ensures that its employees can relate to past and new environmental issues.

Table (5) shows that (42.1%) of nurses agreed that it is important to promote environmentally friendly life in their hospital

Table (6) shows that (46.4%) of nurses agreed that the employees reduce their energy consumption.

Table (7) showed that (49.5%) of nurses agreed that the hospital encourages the use of environmentally friendly products.

4. Discussion

This study was conducted to assess hospital green competencies from the perspective of nurses at Suez Canal University Hospitals. Regarding the demographic characteristics of the studied sample, the majority of participants were working in non-critical care departments. A

considerable portion of the sample were under the age of 25 years. Female nurses represented approximately two-thirds of the participants. Additionally, more than half of the respondents were unmarried, and more than half reported having less than five years of professional experience.

The current study revealed that total hospital green competencies from nurses' perspective scored the a highly mean with more than three-fourths mean percentage. From a researcher's point of view, this result could be attributed to the relatively recent introduction of the concept of green competencies, which has primarily gained traction in response to climate change. This concept is still in its early phases of implementation, both worldwide and particularly in Egypt. However, as awareness of environmental concerns increases and sustainable practices are progressively incorporated into the healthcare sector, it is expected that the number of green hospitals will rise significantly in the near future.

This point of view was supported by **Kraus et al. (2020),** who stated that, the recent proposals suggest that hospitals have increasingly begun to adopt green practices and implement green concepts (GCs) in an effort to minimize air emissions, hazardous materials, environmental pollution, and water waste. Also, **Abou-AL-Ross and Abu Mahadi (2021)** stated that the lack of governmental regulations and procedures that enhance environmental protection and green practices and the lack of environmental knowledge and awareness create weak GCs.

This result was in accordance with **Parker et al. (2020),** who found that environmental competencies were most commonly embedded in healthcare training or offered as new courses or workshops in hospitals.

On the other hand, **Abou-AL-Ross and Abu Mahadi (2021)** reported that green competencies among healthcare professionals in the studied hospitals were notably limited. Similarly, **Konakoğlu and Kurak (2021)** highlighted that only a small number of hospitals meet established green standards, emphasizing the need for hospital designs to align with sustainable criteria to improve overall performance. Furthermore, **Evans et al. (2017)** pointed out that, although competency frameworks for healthcare professionals exist, they often lack a dedicated focus on environmental competencies. He emphasized the necessity for healthcare organizations to develop specific competencies in environmental management to strengthen their sustainability

initiatives.

Regarding to mean scores of hospital green competencies' domains, the results of the current study achieved a high mean score across all domains of hospital green competencies from a nurse's perspective; the hospital green attitudes scored the highest, followed by hospital green knowledge and green awareness. From the researcher's point of view, these results attributed the hospital to a great tendency toward environmental protection and an acceptable level of general knowledge about its related concepts. This drives nurses to be involved in pro-environmental behavior, which they acquire either through education or observation of their hospital culture. Additionally, the findings indicate that the hospital is aware of the environmental impact of its actions, which in turn encourages employees to be willing to exhibit green practices.

This point of view was supported by **Fawehinmi et al. (2020)**, who stated that green knowledge serves as a mediator between green activities and employees' environmental behaviors at work. Also, **Abou-AL-Ross and Abu Mahadi (2021)** indicated that a lack of clear vision, mission, and strategies related to environmental protection and sustainability in healthcare organizations would lead to organizational green awareness's weakness.

There have been several studies that have yielded similar impressive findings; Abbas and Khan (2023) found that green knowledge serves as a significant positive predictor of organizational green innovation and green performance and strengthens their abilities in these areas. **Farooq et al. (2021) and Safari et al. (2018)** found that environmental attitude has a considerable impact on employees' pro-environmental behaviors. Also, **Nurwahdah and Muafi (2022)** found that a green attitude has a significantly positive effect on green organizational citizenship behavior. They interpreted that the greater the green attitude, the greater the environmentally friendly citizenship behavior; conversely, the lower the attitude towards environmental friendliness, the lower the green organizational citizenship behavior.

Furthermore, **Fok et al. (2022)** denoted that environmental awareness seems to play a significant role in the development of employee environmental behaviors; their finding indicates that the more employees are aware of organizations' green practices, the more likely they are going to feel positive about the sustainability performance of the

organization, **Saleem et al. (2020)** found that employees who are well informed and knowledgeable on ecological and environmental concerns by their organization are more willing to engage in green behaviors at work. **Okumus et al. (2019)** found that individuals who are conscious of the environment are more prone to participate in pro-environmental practices at work.

Conversely, **Yusliza et al. (2021)** proposed that environmental awareness is predicted to improve when individual ecological behavior advances. Whereas **Fayyazi et al. (2015)** found that environmental awareness was still fragile despite the tangible governmental movements to increase awareness; moreover, there is obvious weakness concerning the process of sharing green values and the availability of desire among employees to participate in solving environmental problems and discussing green issues.

The current study's results regarding hospital green knowledge domain items from nurses' perspectives showed that about two-thirds of the nurses agreed that the hospital has developed a green program (waste management, control of effluents, inventory of pollution sources). From the researcher's point of view, this result indicates that the hospital is committed to implementing sustainability principles, reducing pollution, and managing waste properly, which are considered essential components of green competencies.

This point of view was supported by **Ali et al. (2017)**, who stated that a sustainable waste management program can go a long way in reducing the pollution and harmful effects of hospital waste. This result agreed with Azar et al. (2015), whose results revealed that hospitals earned about two-thirds of the total attainable score in green hospital program dimensions.

This result disagreed with **Ali et al. (2017),** who found that hospitals in his studied sample suffer from poor waste segregation, collection, storage, transportation, and disposal practices and a poor green program overall, which can lead to occupational and environmental risks. Furthermore, he added that knowledge and awareness regarding proper waste management remain low in the absence of training for hospital staff.

As regards hospital green skills domain items from nurses' perspective, the result of the current study showed that that more than two-fifths of nurses agreed that the hospital

facilitates appropriate environmental protection skills. These results agreed with Kanyimba et al. (2014), who stated that green skills are embedded into organizations to ensure the positive impacts of implementing an environmental management system, which appeared in supporting education for sustainable development and improving pro-environmental protection activities.

As regards hospital green abilities domain items from nurses' perspective, the result of the current study showed that about half of nurses agreed that the hospital ensures that its employees can relate to past and new environmental issues. From the researcher's point of view, this result reflects the hospital's capacity to integrate theoretical knowledge and practical expertise in the natural environment to solve real environmental challenges, which force its green abilities.

This point of view was supported by **Bürgener and Barth (2018)**, who mentioned that organizations that facilitate green abilities among their employees enable them to assist local communities in facing environmental challenges and support eco-initiatives for their subsistence.

As regards hospital green attitudes domain items from nurses' perspective, the result of the current study showed that more than two-fifths of nurses agreed that it is important to promote environmentally friendly life in their hospital. From the researcher's point of view, this result reflects the hospital's great tendency and commitment to environmental protection and green strategies. Our point of view was supported by **Cabral and Dhar (2021)**, who stated that a green attitude is a psychological tendency that is expressed by evaluating perceptions of or beliefs regarding natural environmental protection, including factors affecting its quality.

This result agreed with **Tsai and Tan (2022)**, whose results in the healthcare sector displayed a quite high positive attitude towards environmental protection, but there was still room for improvement.

Regarding hospital green behavior domain items from nurses' perspective, the current study showed that more than two-fifths of nurses agreed that the employees within the organization reduce their energy consumption. From the researcher's point of view, this result reflects the hospital's positive behavior toward the environment, which in turn appears in its employees' green behaviors and practices.

This result agreed with **Hafner et al. (2019),**

who stated that one central aspect of a sustainable energy transition at the societal level involves developing effective means to support and encourage the adoption of innovative technologies to reduce energy demands and foster green behaviors. At the same time, Tsai and Tan's **(2022)** Results showed that the environmental protection behaviors in the Taiwan healthcare sector ranged from moderate to high, depending on the nature and ease of the tasks as well as external regulations and restrictions, which in turn caused differences in behaviors compared to the general public of Taiwan.

Ultimately, the current study's results regarding hospital green awareness domain items from nurses' perspectives showed that about half of nurses agreed that the hospital encourages the use of environmentally friendly products. From a researcher's perspective, this result suggests that the hospital is aware of implementing proactive environmental management, enhancing environmental performance, improving efficiency in the use of resources and materials, reducing associated costs, and ensuring overall environmental sustainability.

This was supported by **Cabral and Dhar (2021),** who stated that green awareness is considered to be a vital factor in implementing environmental management systems in the organization and has a role in supporting these systems to reduce environmental degradation and result in sustainable development.

This result agreed with **Alamsyah et al. (2020),** who stated that green awareness impacts individual intention to adopt environmentally friendly products**.** Also**, Tsai and Tan (2022)** found that the healthcare sector displayed high awareness regarding environmental protection products and a positive attitude towards environmental protection.

On the other hand, this result disagreed with Ali et al. (2017), who found that awareness regarding proper waste management programs and sustainability strategies remains low in the absence of training for hospital staff.

5. Conclusion:

Based on the findings of this study, it can be concluded that the majority of nurses perceived the hospital as a green-competent hospital. Green attitudes constitute the highest score, followed by green knowledge and green awareness.

6. Recommendations:

Based on the findings of the present study, the following recommendations were suggested:

1. Developing clear environmental goals and strategies based on the domains of GCs.
2. Embedding GCs into nursing curricula to encourage nurses to practice the full extent of their skills.
3. Collaborating with hospitals to develop a training program for nurses and healthcare professionals on green competencies and practices to raise their green awareness.
4. Further research is recommended to replicate the current research on a different healthcare facility with a larger sample size to generalize the results. Also, longitudinal studies should be conducted to assess the long-term impact of green competency training on hospital sustainability.

Table (1): Mean score of green competencies' dimensions (N =380)

Dimensions	Minimum	Maximum	Median	Mean	Std. Deviation	Mean percentage
Hospital green knowledge	5.00	15.00	12	11.58	1.89	77%
Hospital green skills	6.00	15.00	12	11.18	2.17	74.5%
Hospital green abilities	5.00	20.00	14	14.25	2.65	71.3%
Hospital green attitudes	14.00	35.00	28	27.54	4.08	78.6%
Hospital green behavior	8.00	20.00	15	14.79	2.64	74%
Hospital green awareness	4.00	20.00	15	14.98	2.71	74.9%
Total hospital green competencies	54.00	126.00	98	96.84	11.36	76.8%

Table (2): Descriptive statistics of hospital green knowledge from nurses' perspective (N=380)

Item	Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
The hospital uses less polluting industrial processes and products.	96	25.3%	183	48.2 %	76	20%	17	4.5%	8	2.1%
The hospital has developed a green program (waste management, control of effluents, inventory of pollution sources)	65	17.1%	225	59.2%	70	18.4%	18	4.7%	2	0.5%
The hospital has developed a drafting of environmental emergency plans and measures	72	18.9%	186	48.9%	97	25.5%	25	6.6%	0	0%

Table (3): Descriptive statistics of hospital green skills from nurses' perspective (N=380)

Items	Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
The hospital creates skills in energy conservation	93	24.5%	142	37.4%	100	26.3%	41	10.8%	4	1.1%
The hospital provides skills in reducing the consumption of materials	72	18.9%	171	45%	102	26.8%	27	7.1%	8	2.1%
The hospital facilitates adequate skills in environmental protection	71	18.7%	172	45.3%	101	26.6%	34	8.9%	2	0.5%

Table (4): Descriptive statistics of hospital green Abilities from nurses' perspective (N=380)

Items	Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
The hospital enables us to solve simple environmental tasks	72	18.9%	150	39.5%	110	28.9%	40	10.5%	8	2.1 %
The hospital helps to find the several solutions for environmental issues complex	59	15.5%	159	41.8%	103	27.1%	48	12.6%	11	2.9 %
The hospital created a platform that makes me to associate different environmental concepts	44	11.6%	179	47.1%	113	29.7%	33	8.7%	11	2.9 %
The hospital ensures that the employee can relate the past environmental problem with the new issues	40	10.5%	183	48.2%	108	28.4%	34	8.9%	15	3.9 %

Table (5): Descriptive statistics of hospital green attitudes from nurses' perspective (N=380)

Items	Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
It is essential to promote green living from part of my hospital.	111	29.2%	160	42.1%	81	21.3%	20	5.3%	8	2.1%
I strongly agree that more environmental protection works are needed from my hospital.	134	35.3%	147	38.7%	76	20%	15	3.9%	8	2.1%
It is very important to raise environmental awareness among employees.	137	36.1%	139	36.6%	82	21.6%	21	5.5%	1	0.3%
Environmental protection works are not simply a waste of money and resources.	115	30.3%	146	38.4%	92	24.2%	22	5.8%	5	1.3%
Environmental protection issues are our business	133	35%	130	34.2%	97	25.5%	18	4.7%	2	0.5%

The hospital thinks environmental protection is meaningful.	116	30.5%	153	40.3%	93	24.5%	15	3.9%	3	0.8%
It is wise for hospitals to spend a vast amount of money on promoting environmental protection.	81	21.3%	159	41.8%	110	28.9%	22	5.8%	8	2.1%

Table (6): Descriptive statistics of hospital green behaviors from nurses' perspective (N=380).

Items	Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
The employees in the hospital try to learn more about the environment	80	21.1%	154	40.5%	110	28.9%	29	7.6%	7	1.8%
The hospital shares the knowledge about the environment with Others	71	18.7%	157	41.3%	117	30.8%	32	8.4%	3	0.8%
The hospital applies new ideas for reducing our impact on the environment.	86	22.6%	169	44.5%	98	25.8%	21	5.5%	6	1.6%
The hospital performs environmental tasks that are not required	5	1.3%	62	16.3%	121	31.8%	129	33.9%	63	16.6%
The hospital questions the practices that are likely to hurt the environment	89	23.5%	159	42%	100	26.4%	29	7.7%	2	0.5%
The hospital reuses materials	71	18.7%	154	40.5%	105	27.6%	44	11.6%	6	1.6%
The employees reduce their energy use	53	14%	176	46.4%	112	29.6%	32	8.4%	6	1.6%
The hospital supports the employees to solve environmental problems in society.	94	24.7%	143	37.6%	105	27.6%	32	8.4%	6	1.6%

Table (7): Descriptive statistics of hospital green awareness from nurses' perspective (N=380).

Items	Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
The hospital facilitates the use of environmentally friendly products	101	26.6%	188	49.5%	74	19.5%	14	3.7%	3	0.8%
The hospital encourages the employees recycle	73	19.2%	162	42.6%	110	28.9%	25	6.6%	10	2.6%
The hospital creates understanding among the employees to learn about environmental issues.	72	18.9%	137	36.1%	132	34.7%	36	34.7%	3	0.8%
The hospital educates employees regarding the negative impact caused to environment.	79	20.8%	152	40%	109	28.7%	31	8.2%	9	2.4%

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