

The Impact of Green Supply Chain Management on Enhancing Mental Image: Empirical Case Study of Ain Shams Specialized Hospital

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أثر سلسلة الامداد الخضراء على تحسين الصورة الذهنية:
دراسة حالة تطبيقية على مستشفى عين شمس التخصصي

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Abstract

Green management has emerged as a modern approach integrating environmental considerations with conventional management practices. In the healthcare sector, adopting environmentally conscious strategies is increasingly essential to promote sustainability and enhance the institutional image. This study aimed at identifying key green supply chain management (GSCM) practices and examining their role in shaping the mental image of public healthcare institutions. The focus is on the Ain Shams University Hospital, one of the largest medical institutions in Egypt and the Middle East. This study employs both descriptive and analytical methodologies and combines theoretical exploration with empirical analyses. A sample of 200 hospital employees was surveyed to assess the practical application and perceived impact of the GSCM practices. The findings indicate that GSCM exerts a statistically significant and positive influence on a hospital's mental image. In particular, green purchasing, marketing, and reverse logistics were found to have the strongest effects. In light of these results, this study recommends the systematic implementation of GSCM practices across the healthcare sector to enhance institutional perception and environmental responsibility. Future research should investigate the broader array of factors necessary to facilitate the transition toward fully green hospitals.

Keywords: Green supply chain management, mental image, green environmental, green management practices, public healthcare sector

Introduction

Recently, most organizations have become more interested in environmental issues, energy savings, and pollution reduction. These organizations are willing to be environmentally friendly to meet government requirements (Panpatil & Kant, 2022). This issue has prompted organizations to develop strategies by implementing green supply chain management, which covers all functions and stages of manufacturing using environmentally friendly materials, manufacturers, packaging, distributors, logistics, warehousing, and customers. Green supply chain management is considered one of the main priorities in organizational strategies that wish to reduce their environmental impacts, as it is considered the key to their success and compatibility with environmental requirements in an era in which success has been measured. On the other hand, organizations concentrate on building a positive mental image in the stakeholders' minds, as it plays an essential role in their success (Alwan & Rajab, 2021). In addition, hospitals provide a high level of healthcare for patients and their families, generating a positive mental image of the hospital.

The importance of this research stems from the increasing interest in protecting and preserving the environment, the increasing interest in the mental image of the public health sector in Egypt, and the need to find new methods and practices to improve mental image.

Following the introduction, this study outlines the research problem and highlights its significance. A comprehensive literature review is then presented to elucidate the concept of GSCM, its core practices, and the notion of mental image within the context of healthcare institutions. Subsequently, the study details the adopted methodology, and a descriptive analysis is conducted to assess the current status of the Ain Shams Specialized Hospital. The paper concludes with key findings and practical recommendations intended to support decision makers in advancing environmentally sustainable practices within the healthcare sector.

Research Significance

In recent years, governments have increasingly prioritized enhancing healthcare services, recognizing the vital role the public healthcare sector plays in national development. The significance of this research stems from its focus on environmental responsibility within organizations and its application to one of the most critical sectors in any country, the public healthcare system.

This study seeks to advance scholarly understanding by offering new insights into the concepts and practices of GSCM. It also contributes to the academic discourse by clarifying the notion of mental image and its underlying components within the context of healthcare institutions.

On a practical level, this research investigates the impact of GSCM on enhancing the mental image of the Ain Shams Specialized Hospital. It identifies potential opportunities to improve an institution's environmental and organizational reputation. Furthermore, this study offers actionable recommendations to hospital administrators to support evidence-based decision-making and promote sustainable management practices.

Problem Statement

Public sector organizations face numerous challenges, such as the need to adopt environmental protection practices to protect the environment from harmful effects, such as pollution, and apply appropriate management practices to transform public hospitals into green public hospitals. This research sheds light on implementing green supply chain management, which is considered one of the essential management practices that protects the environment and enhances the mental image in the Egyptian public healthcare sector in general and in Ain Shams Specialized Hospital in particular.

Therefore, the core question of this study is, to what extent does green supply chain management enhance mental image when applied to the Ain Shams Specialized Hospital?

The sub-questions of this study are as follows:

- What green supply chain management practices should be implemented?
- What specific green supply chain practices are currently being implemented at the Ain Shams Specialized Hospital?
- How can these practices enhance hospitals' mental image?

Research Objectives

The primary objective of this study is to identify key GSCM practices and develop a comprehensive understanding of their associated mental image. In addition, this study explores the impact of GSCM on enhancing the mental image of institutions within Egypt's public healthcare sector, with a particular focus on Ain Shams Specialized Hospital as a representative case study.

Literature Review

The literature review is divided into three main pillars. The first pillar illustrates the concept of green supply chain management and its practices, whereas the second pillar explains the concept of mental image and its components. The third pillar reviews previous research that examined the relationship between green supply chain management and mental image, and then the study introduces the research gap.

Green Supply Chain Management (GSCM)

GSCM is a contemporary technique concerned with environmental innovation that integrates environmental thinking with supply chain management. Green supply chain management can be defined in several ways. According to Srivastava (2007), green supply chain management merges environmental issues with supply chain management practices. Sundarakani et al. (2010) emphasize that green supply chain management is an integration process that includes both environmental and supply chain management practices. Younis (2016) clarified that greening must include all stages of supply chain management, while considering minimal pollution and waste. Hervani et al. (2005) defined it as the integration between the environment and green procurement, green manufacturing, marketing, and reverse logistics. In a related context, AlMufti (2023) outlines the importance of green supply chain management as:

- Achieving sustainable competitive advantage by preserving the environment, reducing pollution rates, and preserving natural resources.
- Providing green products that are safe for human health.
- Reducing costs by minimizing waste, harmful gases, and toxic fumes.
- Reducing handling and maintenance costs owing to the use of clean technologies.
- Improving the quality and efficiency of production processes using clean production techniques.
- Improving the organization's reputation.

Green Supply Chain Management Practices

Many researchers agree that there are multiple green supply chain management practices with little difference between their opinions. Yassine (2022) categorized these practices as follows: green design, green purchasing, green manufacturing, green distribution, green reverse logistics, and environmental collaboration. Ying and Li-jun (2012) concluded that green supply chain management is associated with green strategy, design, procurement, production, logistics, marketing, and recycling. Younis (2016) found that most organizations adopted four practices: green purchasing, eco-design, environmental cooperation, and reverse logistics. Zuhd (2018) and Amemba et al. (2013) presented a framework of GSCM based on eco-design, green purchasing, green manufacturing, waste management, reverse logistics, and organizational culture.

In line with the literature review, this study selected the most critical GSCM practices. These practices were quoted in several studies and can also decrease harmful effects on the organizational environment. These practices include green organizational culture, eco-design, green purchasing, green production, green marketing, and reverse logistics.

Green Organizational Culture: Green organizational culture refers to directing employees and shaping their behavior, activities, and actions to stay committed to protecting and preserving the environment. Studies conducted by Subramanian and Suresh (2023) and Murwaningsari (2023) support this concept.

Eco- Design: It focuses on environmental impacts by reducing energy consumption, raw material consumption, and environmental pollution (Younis, 2022). It encompasses all product development actions that contribute to reducing the harmful environmental impacts of a product throughout its life cycle.

Green Purchasing: It is important for organizations to choose green materials that have a less dangerous impact on the environment. The characteristics of green materials include good performance, low energy use, easy handling, easy recycling, and waste reduction (Ying & Li-jun, 2012; Panpatil & Kant, 2021).

Green Production: It is a process that uses inputs with low environmental impacts and is highly efficient in generating less pollution, leading to an improved corporate image (Saul et al., 2013).

Green Marketing. Green marketing is an organization's commitment to preserving the environment by using all marketing activities to deal with eco-friendly products to satisfy consumer and societal needs (Almufti, 2023).

Reverse Logistics. It is an important process that begins with product return for reuse, remanufacturing, and recycling. It plays a significant role in improving an organization's operational efficiency and reducing costs (Onyango et al., 2014).

Mental Image

Mental image plays a vital role in the organization's success. A positive mental image reflects stakeholders' minds, especially staff behavior and customer loyalty, which leads to improved competitive advantages for the organization (Alwan & Rajab, 2021).

The components of mental image:

1. The cognitive component consists of the knowledge and information received from the surrounding environment.
2. The affective component involves feelings and attitudes that appear through joy and anger (Ali, 2020).
3. The behavioral component is related to an individual's behavior that appears when their needs and desires are satisfied.

The importance of mental image (AL-Rhaimi, 2015):

1. The components of mental imagery and their types interact to form a positive image of an organization.
2. A positive mental image is considered the most important element that creates customer acceptance and attracts customers to deal with the organization.
3. A positive mental image can draw attention to an organization and its products or services.
4. It creates efficient dealing with the environment through a sense of emotion and ethical and social responsibility.
5. The positive mental image can improve a competitive advantage and develop sales.

The Impact of Green Supply Chain Management on Enhancing Mental Image

Many studies have examined the effects of green supply chain management in different fields. El-Sayed and Kadry (2023) aim at identifying the dimensions of GSCM and how green purchase management positively affects the quality of healthcare services. Haroun (2024) finds that green supply chain management has a significant effect on improving the quality of Egyptian pharmaceutical services. The research of Mohammad et al. (2021) had another point of view. It assesses the impact of green purchasing, eco-design, and investment recovery on the environmental performance of the manufacturing sector.

Al-Rhaimi (2015) and Awad (2017) clarify the effect of market applications on mental images in the tourism sector. Routal (2023) and Salim et al. (2021) examine the influence of banking services on the banking sector's mental image. Hashemand and Al-Rifai (2011) explain the influence of the green marketing mix on consumers' mental image by applying it to industrial

companies. Alwan and Rajab (2021) examine how the quality of hospital services can improve the mental image.

Commentary on Literature Review

By analyzing the differences and agreements found in previous research, this study focuses on clarifying the concepts of green supply chain management and mental image. Furthermore, it offers helpful information regarding the implementation of green supply chain management in various fields. Previous research has emphasized the importance of mental images, which aligns with the current research. However, previous research differs in the identification of green supply chain practices.

The Research Gap

Despite the global expansion of GSCM practices, a notable research gap remains in examining their impact on enhancing the mental image of public healthcare institutions, particularly in developing countries such as Egypt. Existing studies on GSCM predominantly focus on the industrial and manufacturing sectors (Srivastava, 2007; Zhu et al., 2008), whereas the healthcare sector, especially in the public domain, remains underexplored (Moktadir et al., 2019). Moreover, limited research has addressed how environmentally sustainable practices, such as green procurement, waste reduction, and eco-friendly logistics, affect stakeholders' perceptions and the mental image of hospitals (Tseng et al., 2019). In the Egyptian context, where public hospitals often struggle with public trust and service quality perception, integrating GSCM could play a vital role in reshaping their image; however, empirical studies in this area are scarce. This gap necessitates further investigation to determine how GSCM implementation can contribute to improving public perception and the overall reputation of Egypt's public healthcare sector.

Therefore, this study sheds light on the most appropriate GSCM practices that can be implemented and the practices that have the greatest impact on enhancing mental image in the public healthcare sector in Egypt and Ain Shams Specialized Hospital in particular.

Research Methodology

The methodology outlines the structured framework adopted to explore the relationship between green supply chain management practices and enhancing the mental image within Egypt's public health sector.

Research Design

The research design consisted of two parts: a descriptive part in the theoretical section and a quantitative part in the applied study. Theoretically, this study used an analytical approach to define the concepts of green supply chain management and mental image. Furthermore, this research conducted an applied study on the Egyptian public health sector to investigate the correlations between green supply chain management and improving mental image.

The research set out the following hypotheses to achieve the research objectives. The main hypothesis of this research is:

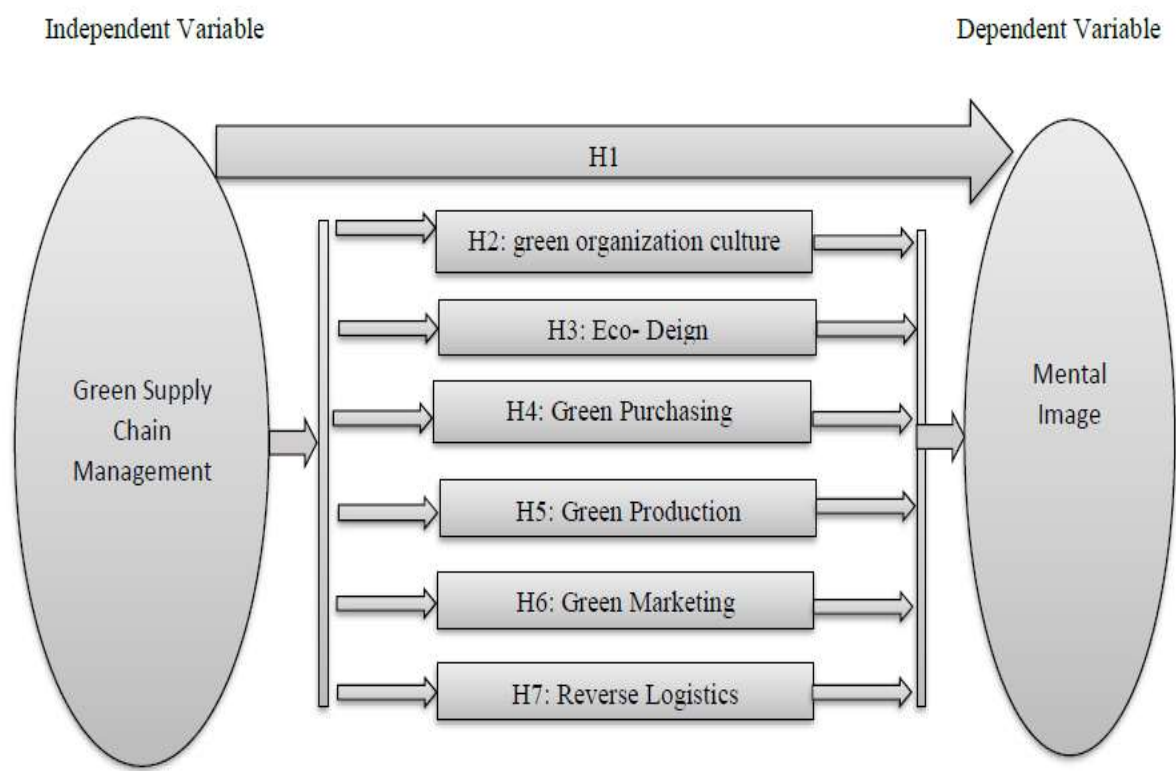
- H1: There is a significantly positive relationship between green supply chain management and mental image improvement.
- The sub-hypotheses are:
- H2: There is a significant positive relationship between green organizational culture and mental image.
- H3: There is a significant positive relationship between eco-design and mental image.
- H4: A significant positive relationship exists between green purchasing and mental image.
- H5: Mental image and green production are substantially positively correlated.
- H6: Green marketing and mental image have a positive association.
- H7: A significantly positive relationship exists between reverse logistics and mental image.

Research Variables

Figure (1) illustrates the research variables, where the independent variable is Green Supply Chain Management, encompassing environmentally friendly supply chain practices and strategies, and the dependent variable is Mental Image, which reflects individuals’ perceptions and mental visualization of the organization influenced by these green practices.

Figure 1

Dependent and independent variables



Source: Prepared by the author.

Population and Sample

The research population consisted of employees of the Ain Shams Specialized Hospital. This hospital provides the highest quality of healthcare in Egypt and the Middle East. The hospital started its success in 1984, and has still exerted significant efforts to achieve continuous improvement. In addition, the Ministry of Environment and the Ministry of Health and Population seek to encourage healthcare organizations to transform into green and sustainable ones, which is highly relevant and aligns well with Egypt's Vision 2030. Ain Shams Specialized Hospital was selected for this study. Therefore, the hospital is now conducting a gap analysis to determine the necessary technical requirements and needs to be transformed into a green hospital.

The survey was distributed to 200 Ain Shams Specialized Hospital employees between June and July 2024. The sample was accessed via an online survey using Google Forms.

The Sample Size

As it was difficult to reach all employees, the paper determined the size of the sample according to the following formula:

$$n_0 = \frac{z_{\alpha/2}^2 * p * (1-p)}{e^2}.$$

Where Z_{α} is the critical value of the normal distribution at α (e.g., for a confidence level of 95%, α is 0.05, and the critical value is 1.96), p is the percentage of specific phenomena and is set to 0.5, as it gives the highest value for the sample size, and e is the margin error set to 0.065 (this is an acceptable margin of error for the paper). The sample size was 200 μm .

Data Analysis Techniques

The measurement tool used in this study was a 5-point Likert scale designed to capture respondents' attitudes and opinions. The scale ranges from 1 to 5, where 1 represents "Strongly Disagree", 2 represents "Disagree", 3 represents "Neutral", 4 represents "Agree", and 5 represents "Strongly Agree".

The data analysis techniques used in this study included several statistical methods to ensure the results' reliability, validity, and accuracy. Indicators were built by combining related statements into a single measure using the equal-weight method. Cronbach's alpha was used to evaluate the reliability of the scales, with values closer to one indicating better internal consistency. A score above 0.5 was considered acceptable for the questionnaire stability. Composite reliability, which is a measure of internal consistency similar to Cronbach's alpha, was used. It assesses the shared variance among observed variables, with a reasonable threshold generally being 0.6 or higher, depending on the number of scale items (Tavakol & Dennick, 2011).

Confirmatory factor analysis (CFA) was used to investigate the relationships among the variables and assess the questionnaire's internal validity. The Kaiser-Meyer-Olkin (KMO) test determines the sampling adequacy for factor analysis, with values between 0.8 and 1

indicating suitability (Kaiser, 1970). Discriminant validity was confirmed using the Fornell-Larcker criterion, which checks whether the square root of the average variance extracted by a construct is greater than its correlation with other constructs.

Correlation analysis was conducted to determine the strength and direction of the relationships between variables using Spearman's rank correlation coefficient. Spearman's rank correlation was preferred when the data did not follow a normal distribution or when variables were ordinal in nature. Relationships were categorized as weak, moderate, or strong based on the coefficient value, and significance was determined by comparing the p-value to a 5% significance level (Spearman, 1904). Normality tests, including the Shapiro-Wilk and Kolmogorov-Smirnov tests, were performed to assess whether the data followed a normal distribution. For large sample sizes, nonparametric tests, such as Spearman's correlation, are robust and provide reliable results, even when normality assumptions are not met (Fornell & Larcker, 1981).

Multiple regression analysis examines the effect of independent variables on a dependent variable by using a mathematical model based on the nature of the dependent variable. The analysis was performed using ordinary least squares (OLS), and it examined important conditions such as normality, no multicollinearity (checked with variance inflation factor), and linearity (evaluated with scatterplots of residuals and predicted values). These techniques ensured the robustness and accuracy of the findings.

All the statistical techniques mentioned above, including reliability analysis, confirmatory factor analysis (CFA), correlation analysis, and multiple regression analysis, were applied using SPSS 26 and Stata 16. These software tools were selected because they were compatible with the methods used in this study.

Descriptive Analysis

This section describes the demographic characteristics of the survey respondents, including age, gender, educational background, work experience, and designation status. This is followed by a discussion of the validity and reliability tests of the model's variables, and an analysis of each statement headed by a variable in the model is provided in terms of the mean, minimum, maximum, and standard deviation. The primary data for this study were collected via a self-completed survey, with a total of 200 participants who completed the survey.

Demographic Analysis

This section addresses the sociodemographic characteristics of the selected sample. Table (1) provides an overview of participants' characteristics in terms of frequency and percentage. The table indicates that the majority of the sample (60.5 %) were male, 37.5% were aged 30 to 40 years, and 69% of the respondents had a university degree. In addition, the work experience shows that 33% of the respondents had 5 to less than 10 years of experience, and 70% of the respondents were at middle or low managerial levels.

Table 1*Description of demographic characteristics among survey participants (n=200)*

Variable	Frequency	Percentage
Gender		
Female	79	39.5%
Male	121	60.5%
Age		
Less than 30 years	23	11.5%
From 30 to 40 years	75	37.5%
From 41 to 50 years	53	26.5%
More than 50 years	49	24.5%
Educational Level		
High school graduate	16	8.0%
University graduate	138	69.0%
Postgraduate qualification	46	23.0%
Work Experience		
Less than 5 years	17	8.5%
From 5 to less than 10 years	66	33.0%
From 10 years to less than 15 years	59	29.5%
15 years or more	58	29.0%
Designation Status		
Middle or low managerial level	140	70.0%
Top managerial level	60	30.0%

Source: Prepared by the author based on results of study sample analysis.

Building Indicators of the Research Variables: Reliability and Validity Analysis

Table (2) presents the indicators created using equal-weight methods in row form. These indicators were used to answer the hypotheses.

Cronbach's alpha reflected the reliability of the research statements, with values ranging from 0.770 to 0.950 for variables that exceeded the threshold of 0.70. In addition, the composite reliability varies from 0.528 to 0.809, which is above the preferred value of 0.50, thereby proving that the model is internally consistent. Furthermore, CFA investigates the interrelationships between variables to determine whether they can be gathered into a smaller set of baseline factors. A CFA was used to test the internal validity of the questionnaire.

The KMO test measures the data's suitability for factor analysis. It also measures the sampling adequacy of each variable in the complete model. The statistic measures the proportion of variance among variables that might be common variance. The lower the proportion, the more suited the data are to factor analysis.

Table 2

Reliability and validity of the questionnaire in each category by using the Cronbach's Alpha coefficient

Constructs	Number of Statements	Cronbach's Alpha	Composite Reliability	KMO	Bartlett's Test	AVE	Item	Loading
Green Supply Chain Management	20	0.944	0.556	0.913	3863.633 (0.000)	0.831	GSCM1	0.518
							GSCM2	0.584
							GSCM3	0.611
							GSCM4	0.556
							GSCM5	0.714
							GSCM6	0.707
							GSCM7	0.822
							GSCM8	0.813
							GSCM9	0.788
							GSCM10	0.630
							GSCM11	0.867
							GSCM12	0.799
							GSCM13	0.888
							GSCM14	0.866
							GSCM15	0.829
							GSCM16	0.853
							GSCM17	0.735
							GSCM18	0.777
							GSCM19	0.764
							GSCM20	0.701
Green Organizational Culture	4	0.831	0.551	0.683	436.140 (0.000)	0.673	GOC1	0.654
							GOC2	0.893
							GOC3	0.896
							GOC4	0.814
Eco-Design	3	0.804	0.578	0.631	253.844 (0.000)	0.790	ED1	0.911
							ED2	0.905
							ED3	0.715
Green Purchasing	3	0.770	0.528	0.662	207.322 (0.000)	0.717	GPUR1	0.845
							GPUR2	0.901
							GPUR3	0.791
Green Production	3	0.921	0.795	0.759	479.741 (0.000)	0.876	GPRO1	0.940
							GPRO2	0.922
							GPRO3	0.946
Green Marketing	4	0.885	0.657	0.818	522.285 (0.000)	0.871	GM1	0.900
							GM2	0.927
							GM3	0.868
							GM4	0.813
Reverse Logistics	3	0.854	0.661	0.716	278.769 (0.000)	0.778	RL1	0.901
							RL2	0.901
							RL3	0.842
Mental Image	12	0.946	0.591	0.899	2812.522 (0.000)	0.783	MI1	0.822
							MI2	0.806
							MI3	0.851
							MI4	0.879

							MI5	0.921
							MI6	0.613
							MI7	0.701
							MI8	0.819
							MI9	0.847
							MI10	0.868
							MI11	0.902
							MI12	0.839
Cognitive Component	5	0.950	0.793	0.866	1085.084 (0.000)	0.837	CC1	0.908
							CC2	0.917
							CC3	0.952
							CC4	0.887
							CC5	0.909
Affective Component	3	0.826	0.612	0.634	273.835 (0.000)	0.745	AC1	0.881
							AC2	0.929
							AC3	0.773
Behavioral Component	4	0.944	0.809	0.851	771.584 (0.000)	0.859	BC1	0.912
							BC2	0.951
							BC3	0.929
							BC4	0.913

Source: Prepared by the author based on results of study sample analysis.

From the previous table, the results of the CFA showed that all items were loaded into their constructs, as suggested in the proposed model, as the loadings of all items were greater than 0.50. On the other hand, the Average Variance Extracted (AVE) values are above the recommended threshold of 0.50, which indicates that the constructs could explain more than 50% of the statements, and these values reflect high internal validity. Moreover, the KMO values for all variables were greater than 0.5, and Bartlett's test of sphericity was significant, indicating sample adequacy.

Table (3) shows the Fornell-Larcker criterion, which is considered one of the most popular techniques used to check the discriminant validity of the measurement models. From table (3), the results of the Fornell-Larcker criterion show that the correlations of a construct with other constructs are less than the square root of its AVE. Thus, the discriminant validity was successfully established.

Table 3
Fronell-Larcker criterion

	Green Supply Chain Management	Green Organizational Culture	Eco-Design	Green Purchasing	Green Production	Green Marketing	Reverse Logistics	Mental Image	Cognitive Component	Affective Component	Behavioral Component
Green Supply Chain Management	0.912										
Green Organizational Culture	0.697**	0.820									
Eco-Design	0.881**	0.566**	0.889								
Green Purchasing	0.845**	0.400**	0.757**	0.847							
Green Production	0.850**	0.331**	0.716**	0.811**	0.936						
Green Marketing	0.902**	0.482**	0.736**	0.737**	0.818**	0.933					
Reverse Logistics	0.815**	0.402**	0.638**	0.620**	0.731**	0.792**	0.882				
Mental Image	0.746**	0.401**	0.614**	0.608**	0.690**	0.757**	0.717**	0.885			
Cognitive Component	0.689**	0.303**	0.554**	0.585**	0.688**	0.745**	0.661**	0.914**	0.915		
Affective Component	0.606**	0.373**	0.501**	0.462**	0.539**	0.593**	0.589**	0.863**	0.647**	0.863	
Behavioral Component	0.710**	0.417**	0.600**	0.585**	0.618**	0.689**	0.678**	0.911**	0.779**	0.691**	0.927

** Significant at 1% level, * Significant at 5% level.
Source: Prepared by the author based on results of study sample analysis.

Descriptive Statistics of Variables and Statement Items

In this section, we provide detailed descriptive statistics and analyses of each item in the model variables. Table (4) presents the minimum, maximum, mean, and standard deviation values.

Table 4

Descriptive statistics for research constructs (n=200)

	Sample Size	Minimum	Maximum	Mean	Standard Deviation
Green Supply Chain Management	200	1.55	5	3.622	0.522
Green Organizational Culture	200	1.25	5	2.908	0.747
The hospital's vision includes the green practice.	200	1	5	2.330	0.802
The hospital management clarifies all green practice information to all the departments.	200	1	5	3.340	0.887
There is a penalty system for violating green practices.	200	1	5	3.360	0.880
There is a budget allocated for supporting green practices.	200	1	5	2.610	1.079
Eco-Design	200	1	5	3.623	0.664
All the materials used in the hospital are environmentally friendly.	200	1	5	3.390	0.873
All products can be recycled into environmentally friendly materials.	200	1	5	3.500	0.845
The hospital is concerned with improving the products to lessen environmental harm.	200	1	5	3.980	0.605
Green Purchasing	200	1	5	3.777	0.650
The hospital is concerned with purchasing material that has less environmental harm.	200	1	5	4.040	0.644
The hospital is applying environmental criteria to suppliers.	200	1	5	3.910	0.674
The hospital deals with suppliers who have quality certificates.	200	1	5	3.380	0.990
Green Production	200	1.67	5	3.895	0.578
The hospital uses environmentally friendly raw materials.	200	2	5	3.910	0.547
The hospital is concerned with producing products that can be recycled.	200	1	5	3.830	0.714
The hospital replaces dangerous materials with environmentally friendly materials.	200	2	5	3.940	0.594
Green Marketing	200	1.75	5	3.861	0.561
The hospital promotes the concept of resource and energy conservation.	200	2	5	3.920	0.605
The hospital prices the services fairly.	200	2	5	3.880	0.586
The hospital seeks to increase its marketing share without harming the environment.	200	1	5	3.960	0.553
The hospital uses energy-saving transportation techniques.	200	2	5	3.680	0.826
Reverse Logistics	200	1.67	5	3.827	0.595
The hospital is keen on reusing the products as much as possible.	200	2	5	3.870	0.623
The hospital uses clean energy.	200	1	5	3.770	0.707
The hospital safely gets rid of non-manufacturable waste.	200	1	5	3.850	0.695
Mental Image	200	1.92	5	3.904	0.530

Cognitive Component	200	1.8	5	4.003	0.534
The hospital is characterized by credibility in dealing with patients and their families.	200	1	5	4.020	0.605
All employees are committed to giving a positive image of the hospital.	200	2	5	4.010	0.630
The hospital provides awareness of patients' medical rights.	200	2	5	4.010	0.567
Patients can easily learn about the services provided by the hospital.	200	2	5	3.980	0.580
The hospital contributes to increasing the therapeutic culture among patients.	200	2	5	3.990	0.540
Affective Component	200	1.67	5	3.672	0.762
Patients are interested in visiting the hospital periodically.	200	1	5	3.540	0.976
Patients constantly follow the hospital's website to learn about everything new.	200	1	5	3.570	0.959
Patients can easily communicate with the hospital administration to submit complaints or suggestions.	200	1	5	3.900	0.692
Behavioral Component	200	2	5	3.955	0.533
The hospital is interested in building good relationships with patients.	200	2	5	3.920	0.596
The hospital is a source of appreciation from patients and their families.	200	2	5	3.940	0.573
The hospital administration has a conscious and advanced management.	200	2	5	4.000	0.540
The hospital seeks to gain the trust of patients and their families.	200	1	5	3.960	0.592

Source: Prepared by the author based on results of study sample analysis.

From the above table, the paper can conclude that:

Green Supply Chain Management. Respondents agreed with statements on green supply chain management, with mean values ranging from 3.5 to 4.5 and a standard deviation of 0.522. Green production received the highest agreement, whereas green organizational culture had the lowest agreement. Green marketing was the most homogeneous variable, showing the least variance, whereas green organizational culture was the most non-homogeneous, exhibiting the highest variance.

Green Organizational Culture. Respondents demonstrated a neutral stance toward green organizational culture, as indicated by mean values ranging between 2.5 and 3.5 and a standard deviation of 0.747. Among the items assessed, the highest level of agreement was observed for the presence of a penalty system addressing violations of green practices. In contrast, the lowest level of agreement pertained to integrating green practices within the hospital's vision. In terms of response consistency, perceptions were most uniform regarding the hospital's vision, whereas the greatest variability was noted in responses concerning the allocation of budgets to support green practices.

Eco-Design. Respondents agreed with eco-design statements, with mean values between 3.5 and 4.5 and a standard deviation of 0.664. The highest agreement was for improving products to reduce environmental harm, whereas the lowest agreement was for using environmentally

friendly materials. The most homogeneous statement concerned product improvement, whereas the least homogeneous concerned environmentally friendly materials.

Green Purchasing. Respondents agreed with green purchasing statements, with mean values between 3.5 and 4.5 and a standard deviation of 0.650. The highest agreement was for purchasing materials with less environmental harm, whereas the lowest agreement was for dealing with suppliers with quality certificates. The most homogeneous statement concerned environmentally conscious purchasing, whereas the least homogeneous statement concerned supplier quality certificates.

Green Production. Respondents agreed with green production statements, with mean values between 3.5 and 4.5 and a standard deviation of 0.578. The highest agreement was for replacing dangerous materials with environmentally friendly ones, whereas the lowest was for producing recyclable products. The most homogeneous statement was about using environment-friendly raw materials, whereas the least homogeneous was about producing recyclable products.

Green Marketing. Respondents agreed with green marketing statements, with mean values between 3.5 and 4.5 and a standard deviation of 0.561. The highest agreement was for increasing the market share without harming the environment, whereas the lowest was for using energy-saving transportation. The most homogeneous statement was about increasing market share, whereas the least homogeneous statement was about transportation techniques.

Reverse Logistics. Respondents agreed with reverse logistics statements, with mean values between 3.5 and 4.5 and a standard deviation of 0.595. The highest agreement was for reusing the products as much as possible, whereas the lowest was for using clean energy. The most homogeneous statement concerned reusing products, whereas the least homogeneous was about clean energy.

Mental Image. Respondents agreed with mental image statements, with mean values between 3.5 and 4.5 and a standard deviation of 0.530. While the affective component had the lowest level of agreement, the cognitive component had the highest. The behavioral component was the most homogeneous, whereas the affective component was the least homogeneous.

Cognitive Component. Respondents agreed with cognitive component statements, with mean values between 3.5 and 4.5 and a standard deviation of 0.530. The highest agreement was for the hospital's credibility in dealing with patients, whereas the lowest agreement was for patients who easily learned about hospital services. The most homogeneous statement was about increasing therapeutic culture, whereas the least homogeneous was about employees maintaining a positive image.

Affective Component. Respondents agreed with affective component statements, with mean values between 3.5 and 4.5 and a standard deviation of 0.762. The highest agreement was for straightforward

communication with the hospital administration for complaints or suggestions, whereas the lowest was for patients' interest in periodic visits. The most homogeneous statement was about straightforward communication, whereas the least homogeneous statement was about periodic visits.

Behavioral Component. Respondents agreed with the behavioral component statements, with mean values between 3.5 and 4.5 and a standard deviation of 0.533. The highest agreement was for hospital administration's advanced management, whereas the lowest was for building good patient relationships. The most homogeneous statement was about advanced management, whereas the least homogeneous statement was about patient relationships.

Inferential Statistics

This section presents the statistical tests performed to check the research ideas. It starts with a normality test to see how the data are spread out and then a correlation test to see how strongly and in what direction the study variables are related.

Normality Test

Table (5) shows the normality test used to examine the variable's distribution scale. The test results, shown in table (5), revealed that not all study variables were normally distributed because their significance values were below 0.05. However, since the valid collected sample had 200 responses, according to Sekaran (2016), a study with a sample size of more than 30 to 50 participants is capable of running parametric tests, especially in multivariate research. Moreover, running a parametric test when the data variables are normally distributed can be violated if the study's sample size is large or moderate, and the results can still reflect precision and accuracy (Green & Salkind, 2005).

Table 5

Normality tests

	Kolmogorov Smirnov			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	df	Sig.
Independent Variable						
Green Supply Chain Management	0.160	200	0.000	0.858	200	0.000
Green Organizational Culture	0.118	200	0.000	0.958	200	0.000
Eco-Design	0.240	200	0.000	0.848	200	0.000
Green Purchasing	0.251	200	0.000	0.847	200	0.000
Green Production	0.397	200	0.000	0.631	200	0.000
Green Marketing	0.378	200	0.000	0.708	200	0.000
Reverse Logistics	0.450	200	0.000	0.571	200	0.000
Dependent Variable						
Mental Image	0.248	200	0.000	0.758	200	0.000
Cognitive Component	0.343	200	0.000	0.659	200	0.000
Affective Component	0.327	200	0.000	0.816	200	0.000
Behavioral Component	0.379	200	0.000	0.652	200	0.000

Source: Prepared by the author based on results of study sample analysis.

Correlation Test

Table (6) presents the values of the Spearman's correlation coefficients for the study variables. The results indicate a strong positive relationship between green supply chain management and mental image, as Spearman's coefficient exceeded 0.7. Furthermore, this relationship was statistically significant, with a p-value less than the significance level of 0.05.

Table 6

Spearman's correlation coefficients

	Green Supply Chain Management	Green Organizational Culture	Eco-Design	Green Purchasing	Green Production	Green Marketing	Reverse Logistics	Mental Image	Cognitive Component	Affective Component	Behavioral Component
Green Organizational Culture	0.697**										
Eco-Design	0.881**	0.566**									
Green Purchasing	0.845**	0.400**	0.757**								
Green Production	0.850**	0.331**	0.716**	0.811**							
Green Marketing	0.902**	0.482**	0.736**	0.737**	0.818**						
Reverse Logistics	0.815**	0.402**	0.638**	0.620**	0.731**	0.792**					
Mental Image	0.746**	0.401**	0.614**	0.608**	0.690**	0.757**	0.717**				
Cognitive Component	0.689**	0.303**	0.554**	0.585**	0.688**	0.745**	0.661**	0.914**			
Affective Component	0.606**	0.373**	0.501**	0.462**	0.539**	0.593**	0.589**	0.863**	0.647**		
Behavioral Component	0.710**	0.417**	0.600**	0.585**	0.618**	0.689**	0.678**	0.911**	0.779**	0.691**	

** and * Correlation is significant at the 1% and 5% level (2-tailed).

Source: Prepared by the author based on results of study sample analysis.

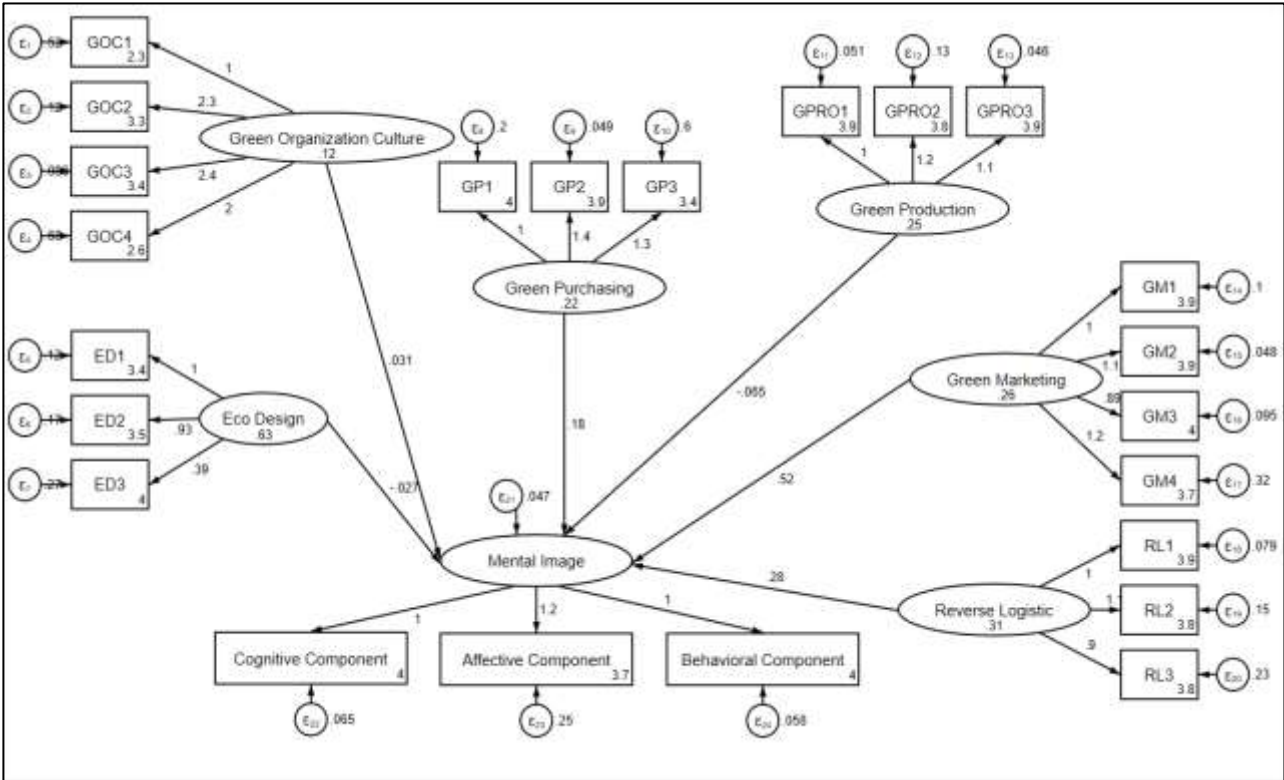
Testing the Research Hypothesis

Path analysis estimates the coefficients and significance of each path to test the theoretical model in the presence of a mediator.

First Structural Equation (SE) Model

The first structural equation (SE) model, as shown in figure (2) and table (7), included green organizational culture, eco-design, green purchasing, green production, green marketing, and reverse logistics as independent variables, whereas mental image was the dependent variable.

Figure 2
First path diagram



Source: Prepared by the author.

Table (7) shows the estimates of the proposed model, highlighting different levels of importance among the parts of green supply chain management and how they directly affect the mental image. The results indicate that green organizational culture and eco-design do not have a statistically significant direct effect on mental image at the 95% confidence level. Similarly, green production had no significant direct influence within the same confidence interval. By contrast, green purchasing demonstrates a statistically significant and positive direct impact on mental image, with an estimated effect of 0.177. Green marketing exhibited the strongest positive influence, with a significant direct impact of 0.523. Additionally, reverse logistics shows a significant positive direct effect, with an estimated coefficient of 0.275. These findings highlight the differential impact of green supply chain components on mental image, emphasizing the importance of green purchasing, marketing, and reverse logistics in shaping public perceptions. The overall model fit was assessed using multiple goodness-of-fit measures to ensure the robustness and validity of structural relationships.

Table 7*Path coefficients and significances*

Structural Path	Path Coefficient	Composite reliability (C.R) (t-value)	Std. Error	Sig.
Mental Image \leftarrow Green Organizational Culture	0.031	0.35	0.0878	0.725
Mental Image \leftarrow Eco-Design	-0.027	-0.60	0.0450	0.550
Mental Image \leftarrow Green Purchasing	0.177	2.00	0.0884	0.045
Mental Image \leftarrow Green Production	-0.065	-0.63	0.1024	0.527
Mental Image \leftarrow Green Marketing	0.523	5.58	0.0928	0.000
Mental Image \leftarrow Reverse Logistics	0.275	4.13	0.0666	0.000

Source: Prepared by the author.

Table (8) shows that the chi-square value of 1023.193 with 224 degrees of freedom is statistically significant at 0.05, indicating that the model is not a good fit. However, the chi-square test was very sensitive to the sample size. The results showed that all the fit indices obtained were satisfactory and within the suggested boundaries. Accordingly, the results confirm the acceptable fit of the proposed model.

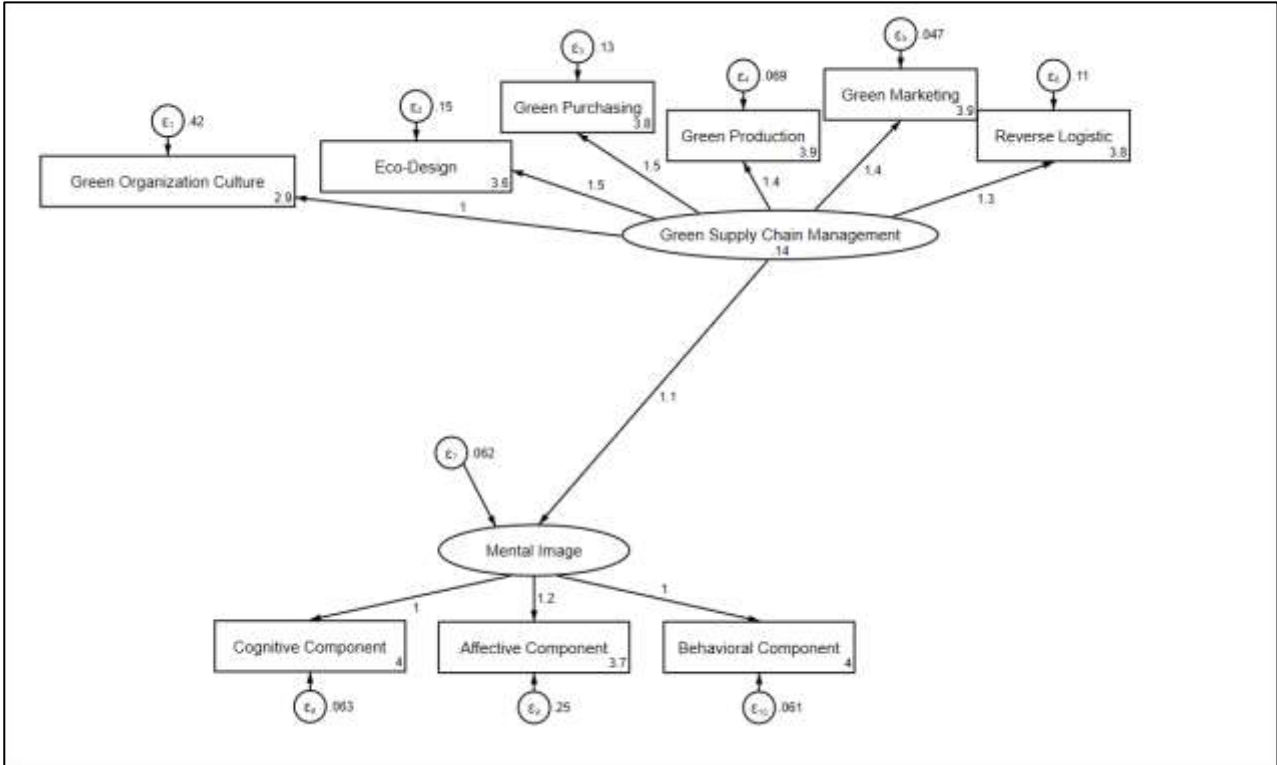
Table 8*Goodness of fit indices*

Indices	Abbreviation	Recommended Criteria	Results	conclusion
Chi-Square	χ^2	P-value > 0.05	1023.193	Not a Good Fit
Degree of Freedom			224	
Level of Significance			0.000	
Normed Chi-Square	$\frac{\chi^2}{DF}$	$1 < \frac{\chi^2}{DF} < 5$	4.568	Good Fit
RMSEA	Root Mean Square Error of Approximation	< 0.05 Good Fit < 0.08 Acceptable Fit	0.036	Good Fit
NFI	Normed Fit Index	> 0.90	0.990	Good Fit
RFI		> 0.90	0.940	Good Fit
IFI		> 0.90	0.946	Good Fit
TLI	Tucker-Lewis Index	> 0.90	0.960	Good Fit
CFI	Comparative Fit Index	> 0.90	0.983	Good Fit

Source: Prepared by the author.***Second Structural Equation (SE) Model***

Figure (3) shows another SE model used to study the overall impact of green supply chain management on mental image.

Figure 3
Second path diagram



Source: Prepared by the author.

Table (9) presents the estimates of the proposed model, indicating that green supply chain management has a statistically significant and positive direct effect on mental image. As shown in the table, the estimated effect size is 1.076, and this relationship is significant at the 95% confidence level. These findings underscore the positive influence of green supply chain practices on how organizations are perceived. The overall model fit was evaluated using several goodness-of-fit measures to ensure the validity and reliability of the structural model.

Table 9
Path coefficients and significances

Structural Path	Path Coefficient	C.R (t-value)	Std. Error	Sig.
Mental Image ← Green Supply Chain Management	1.076	6.97	0.1542	0.000

Source: Prepared by the author based on results of study sample analysis.

Table (10) shows that the chi-square value of 121.004 with 128 degrees of freedom is statistically significant at the level of 0.05, which traditionally suggests that the model may not be a satisfactory fit. However, it is well established that the chi-square test is highly sensitive to sample size and may indicate a poor fit, even when the model is acceptable. As shown in the same table, all other fit indices, such as CFI, Tucker-Lewis Index (TLI), and Root Mean Square Error of Approximation (RMSEA), were within the suggested limits, which confirms that the model is good enough. Therefore, despite the significance of the chi-square statistic, the results supported an acceptable overall fit of the proposed model.

Table 10*Goodness of fit indices*

Indices	Abbreviation	Recommended Criteria	Results	conclusion
Chi-Square	χ^2	P-value > 0.05	121.004	Not a Good Fit
Degree of Freedom			26	
Level of Significance			0.000	
Normed Chi-Square	$\frac{\chi^2}{DF}$	$1 < \frac{\chi^2}{DF} < 5$	4.654	Good Fit
RMSEA	Root Mean Square Error of Approximation	< 0.05 Good Fit < 0.08 Acceptable Fit	0.041	Good Fit
NFI	Normed Fit Index	> 0.90	0.984	Good Fit
RFI		> 0.90	0.956	Good Fit
IFI		> 0.90	0.940	Good Fit
TLI	Tucker-Lewis Index	> 0.90	0.970	Good Fit
CFI	Comparative Fit Index	> 0.90	0.992	Good Fit

Source: Prepared by the author based on results of study sample analysis.

Conclusion

In conclusion, the main objective of this research is to investigate the influence of green supply chain management on enhancing the mental image in the public healthcare sector in Egypt and evaluate the Ain Shams Specialized Hospital in particular.

This empirical study discovers the green supply chain practices currently implemented at Ain Shams Specialized Hospital, which are represented in green purchasing, green marketing, green production, eco-design, and reverse logistics. In addition, this study clarifies the most important practices that positively influence improving mental image.

The empirical study's results indicate that the main hypothesis of the research, that green supply chain management has a significant direct positive impact on mental image, is being accepted.

In addition, the results of the research analyzed the sub-hypotheses and found the following:

1. The practices of green supply chain management that have a significant positive impact on the mental image are:
 - Green purchasing: This is because the hospital is concerned with purchasing materials that cause less environmental harm.
 - Green marketing: Because the price of services is fair, hospitals seek to increase their marketing share without harming the environment and using energy-saving transportation techniques.
 - Reverse logistics: This is because clean energy is used to safely remove waste.

2. The practices of green supply chain management that have a moderate impact on the mental image are:
 - Eco-design: This is because hospitals are concerned with enhancing products to reduce environmental harm; however, not all the materials used in the hospital are environmentally friendly.
 - Green production: The hospital is trying to replace dangerous materials with environmentally friendly ones, but not all products can be recycled because they do not have this facility.
3. Green organizational culture has an insignificant influence on the mental image of green supply chain management practices. Additionally, no budget is allocated to support green practices, and all hospital departments lack information regarding these practices.

Recommendations and Further Research

The research provides recommendations to leaders and officials in the public healthcare sector in Egypt in general and in Ain Shams Specialized Hospital in particular to enhance the hospital's mental image and help it become a green hospital in Egypt. There is a crucial need to implement green supply chain management in the healthcare sector, which increases its positive impact on mental images.

The hospital must adopt and implement the following tools to protect and preserve the environment:

- Changing the hospital's vision and mission to concentrate on green practices.
- Training employees to implement green practices.
- Allocating a budget to support green practices.
- Developing a hospital culture as a green hospital using integrated plans.

It is also necessary to:

- Pay more attention to enhancing the mental image of hospitals.
- Use green practices to keep patients and their families healthy.
- Focus on increasing patients' awareness of the green services provided by the hospital.
- Improve the quality of services and information provided to patients.
- Develop simple and clear promotional methods capable of establishing good impressions among patients.
- Pay more attention to patients' complaints, verify them, and immediately handle them appropriately and professionally.

Future studies should investigate a set of factors—organizational, technological, financial, and regulatory—that are critical for enabling a successful transition to green hospitals.

References

- Ali, E. (2020). The role of relationship marketing in improving an organization's mental image, *Tishreen University Journal for Research and Scientific Studies -Economic and Legal Sciences Series*, 42(3), 11-25.
- Almufti, D. (2023). *Effect of green supply chain management practices on the competitive advantage (Case study of food company in Damascus and its countryside)* (Doctoral dissertation). Selinus University of Sciences and Literature.
- AL-Rhaimi, S. (2015). *The impact of internal marketing on the mental image of the tourism program*. *International Journal of Marketing Studies*, 7(3), 76–83.
<https://pdfs.semanticscholar.org/cddd/7d82025d7e085df82e6f9cf90b5834477b95.pdf>
- Alwan, Q., & Rajab, R. (2021). Effect of functional on patient satisfaction through the mental image of hospital. *International Journal of Business Management and Economic Review*, 4(3), 220–237.
- Amemba, C., Nyaboke, P., Osoro, A., & Nganga, M. (2013). *Elements of green supply chain management*. *European Journal of Business and Management*, 5(12), 51–61.
- Awad, M. (2017). *Digital marketing and its role in enhancing the mental image of the organization* [Master's thesis, University of Karbala, Faculty of Management and Economics, Department of Business Administration].
- El-Sayed, E., & Kadry, K. (2023). Studying the relation between green supply chain management dimensions and improving health quality service. *Arab Journal of Administration*, 43(3), 43–53.
- Field, A. (2013). *Discovering statistics using IBM SPSS Statistics* (4th ed.), Sage Publications, California.
- Fornell, C., & Larcker, D. F. (1981). *Evaluating structural equation models with unobservable variables and measurement error*. *Journal of Marketing Research*, 18(1), 39–50. <https://doi.org/10.2307/3151312>
- Green, S. B., & Salkind, N. J. (2005). *Using SPSS for Windows and Macintosh: Analyzing and understanding data* (4th ed.). Pearson.
- Haroun, S. (2024). *Green supply chain management (GSCM) and its impact on improving quality services for Egyptian pharmaceutical companies*. *Arab Journal of Administration*, 44(4), 3–36.
https://aja.journals.ekb.eg/article_203611_d2cf017cc0e9c0f0dab23875fad089ca.pdf
- Hashem, T., & Al-Rifai, N. (2011). *The influence of applying green marketing mix by chemical industries companies in three Arab states in West Asia on consumer's mental image*. *International Journal of Business and Social Science*, 2(3), 92–101.
- Hervani, A., Helms, M., & Sarkis, J. (2005). *Performance measurement for green supply chain management*. *Benchmarking: An International Journal*, 12(4), 330–353.
- Kaiser, H. F. (1970). A second-generation little jiffy. *Psychometrika*, 35(4), 401–415.
- Lahcen, F. (2022). The impact of green supply chain management practices on business performance of extractive industries in Jordan. *Academy of Entrepreneurship Journal*, 28(4), 1–12.
- Mohammad, A., Chowdhury, K., Ahmad, M., & Mohammad, S. (2021). *Assessing the impact of green supply chain management on environmental performance of Bangladeshi manufacturing firms*. *Saudi Journal of Business and Management Studies*, 6(6), 87–198.
- Moktadir, M. A., Rahman, T., Rahman, M. H., Ali, S. M., & Paul, S. K. (2019). Drivers to sustainable manufacturing practices and circular economy: A perspective of leather industries in Bangladesh. *Journal of Cleaner Production*, 174, 1366–1380. <https://doi.org/10.1016/j.jclepro.2017.11.063>
- Murwaningsari, I., & Etty. (2023). *Effect of green organizational culture and green supply chain on company performance with profitability as moderation*. *Quantitative Economics and Management Studies (QEMS)*, 4(1), 21–31.
- Onyango, M., Nyaoga, R., Matwere, R., & Owuor, O. (2014). *Green supply chain management and economic performance: A review of tea processing firms in Kericho and Bomet Counties, Kenya*. *International Journal of Science and Research (IJSR)*, 3(11), 2462–2466.
- Panpatil, S., & Kant, R. (2021). *Green supply chain management implementation: Modeling the green supply chain practices (GSCPs)*. *Journal of Advances in Management Research*, 19(3), 389–413.

- Routal, A. (2023). *The effect of elements of the banking marketing mix on the mental image of the commercial banks: Case study of Assalem Bank. Journal of Contemporary Business and Economic Studies*, 6(1), 206–219.
- Salim, M., Abu Husain, A., & Awwad, S. (2021). *The impact of quality banking services in improving the perceived mental image of Jordanian Islamic Bank. Multicultural Education*, 7(4), 305–312.
- Saul, C., Getuno, P., Osoro, A., & Mburu, N. (2013). *Elements of green supply chain management. European Journal of Business and Management*, 5(12), 51–61.
- Sekaran, U. (2016). *Research methods for business: A skill building approach* (4th ed.). United State of America: John Willey and Sons, Inc.
- Spearman, C. (1961). 'General intelligence,' objectively determined and measured. *The American Journal of Psychology*, 15(2), 201–293.
- Srivastava, S. K. (2007). Green supply-chain management: A state-of-the-art literature review. *International Journal of Management Reviews*, 9(1), 53–80. <https://doi.org/10.1111/j.1468-2370.2007.00202.x>
- Subramanian, N., & Suresh, M. (2023). Green organizational culture in manufacturing SMEs: An analysis of causal relationships. *International Journal of Manpower*, 44(5), 789–809.
- Sundarakani, B., Souza, R., Goh, M., Wagner, S., & Manikandan, S. (2010). Modeling carbon footprints across the supply chain. *International Journal of Production Economics*, 128(1), 43–50.
- Tavakol, M., & Dennick, R. (2011). Making Sense of Cronbach's Alpha. *International journal of Medical Education*, 2, 53-55.
- Tseng, M. L., Tan, K., Chiu, A. S., Chien, C. F., & Kuo, T. C. (2019). Circular economy meets industry 4.0: Can big data drive industrial symbiosis? *Resources, Conservation and Recycling*, 131, 146–147. <https://doi.org/10.1016/j.resconrec.2017.12.028>
- Yassine, F.L.Y.A. (2022). The impact of green supply chain management practices on business performance of extractive industries in Jordan. *Academy of Entrepreneurship Journal*, 28 (4), 1-12.
- Ying, Y., & Zhou, L.-j. (2012). Study on green supply chain management based on circular economy. In *International Conference on Solid State Devices and Materials Science* (pp. 1682–1688). Elsevier.
- Younis, D. (2022). Green supply chain and impact on electronically devices at Samsung Company. *Academy of Strategic Management Journal*, 21(6), 1-12.
- Younis, H. (2016), The impact of the dimensions of green supply chain management practices on corporate performance, *Doctor of Business Administration thesis*, Faculty of Business, University of Wollongong in Dubai, University of Wollongong, 2016. <https://ro.uow.edu.au/theses/4845>
- Zhu, Q., Sarkis, J., & Lai, K. H. (2008). Green supply chain management implications for “closing the loop”. *Transportation Research Part E: Logistics and Transportation Review*, 44(1), 1–18. <https://doi.org/10.1016/j.tre.2006.06.003>
- Zuhd, M. (2018). *Assessing green practices in the closed-loop supply chain in the West Bank* (Master's thesis, Faculty of Graduate Studies, An-Najah National University, Nablus, Palestine).

أثر سلسلة الإمداد الخضراء على تحسين الصورة الذهنية دراسة حالة تطبيقية على مستشفى عين شمس التخصصي

المستخلص

أصبحت الإدارة الخضراء في الآونة الأخيرة تقنية معاصرة تهتم بالابتكار البيئي الذي يدمج التفكير البيئي مع الإدارة. ومن ناحية أخرى، تسعى إدارة المستشفيات إلى البحث عن نهج جديد للإدارة يهتم بالبيئة من أجل أن تصبح المستشفيات صديقة للبيئة. لهذا، فإن الهدف الرئيسي من هذا البحث هو التعرف على إدارة سلسلة الإمداد الخضراء وكذلك تقديم فهم شامل للصورة الذهنية. بالإضافة إلى ذلك، تبحث هذه الدراسة مدى تأثير إدارة سلسلة الإمداد الخضراء على تحسين الصورة الذهنية في قطاع الرعاية الصحية في مصر بشكل عام، وتقيم الوضع الحالي لمستشفى عين شمس التخصصي بشكل خاص، حيث يعتبر المستشفى واحدًا من كبرى المؤسسات الطبية في مصر والشرق الأوسط. وتعتمد منهجية البحث على كل من الأساليب الوصفية والتحليلية، والتي توجد في الإطار النظري وفي تحليل الاستبيانات، حيث تتكون عينة هذه الدراسة من 200 موظف من العاملين في مستشفى عين شمس التخصصي. ومن أهم نتائج هذا البحث أن إدارة سلسلة الإمداد الخضراء لها تأثير إيجابي مباشر وقوي على تحسين الصورة الذهنية. كما أوضحت النتائج أيضا أن الشراء الأخضر، والتسويق الأخضر، واللوجستيات العكسية الخضراء هي بعض من ممارسات إدارة سلسلة الإمداد الخضراء، والتي لها تأثير إيجابي قوي على تحسين الصورة الذهنية. وأخيرًا، في ضوء هذه النتائج، يوصي البحث بضرورة التطبيق المنهجي لممارسات إدارة سلسلة التوريد الخضراء في قطاع الرعاية الصحية لتعزيز الوعي المؤسسي والمسؤولية البيئية. وينبغي أن تدرس الأبحاث المستقبلية مجموعة أوسع من العوامل اللازمة لتسهيل التحول نحو مستشفيات خضراء بالكامل.

الكلمات الدالة: إدارة سلسلة التوريد الخضراء، الصورة الذهنية، البيئة الخضراء، ممارسات الإدارة الخضراء،

قطاع الرعاية الصحية العامة