

Developing Positive Health Behavior among Employees: Exploring Role of Green Work Environment in Healthcare Sector

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Recent research on green workplaces has shown that it is advantageous for organizations to enhance green-related competencies to improve environmental performance and empower employees to engage in healthy behaviors. This study examines the impact of green knowledge and awareness (GKA) and environmental concerns (EC) on the positive health behavior of employees (PHBE) in the Saudi healthcare sector, with the moderating effect of employee well-being (EW). 333 employees of healthcare companies were surveyed to achieve the desired outcomes and meet the project's goals. The empirical findings demonstrated that EC positively influences employees' health behaviors. GKA was discovered to have a significant and negative effect on PHBE. EW effectively moderated the relationships between the independent and dependent variables. The results cast light on developing a green work environment effectively to motivate employees to engage in healthy behaviors and formulate an eco-friendly workplace. This study contributes to the existing literature by analyzing EC and GKA as the significant determinants of a green work environment for health behavior, focusing on EW. In addition, it provides policymakers and the top management of the healthcare industry with valuable practical implications for achieving optimal positive employee health behavior.

Key words: green work environment, green knowledge, and awareness, environmental concerns, employees' positive health behavior, employee well-being, the healthcare sector.

1. INTRODUCTION

Approximately 80% of chronic diseases are attributable to lifestyle behaviors, making them a primary focus of employee wellness initiatives (Bezner et al., 2020). Creating healthy, supportive environments for health and safety is crucial to total worker health (Schwatka et al., 2018). This refers to how workers perceive their company's value and commitment to safety and health. According to this definition, "green behaviors" are "activities and behaviors that employees engage in related to environmental sustainability and either support or undermine it. Because most adults spend more than half of their waking hours at work, worksite health promotion has become crucial for promoting healthful behaviors and conditions.

Consequently, employee well-being influences their behavior, as employee's experience of job satisfaction is influenced by their affective and psychological experience at work (Ahmed et al., 2020), which can be enhanced by green work environments (AlSuwaidi et al., 2021; Su et al., 2019). (AlSuwaidi et al., 2021) Individual well-being is bolstered by increased job satisfaction among employees who engage in green behavior. One definition of "healthy culture" is "a set of essential qualities formed by the interaction of social and organizational systems that reflect the beliefs, presumptions, expectations, and interpretations of employees" and influence how they think, feel, and act regarding their own and the group's health (Kent et al., 2016). Successful workplace wellness programs are

characterized by effective communication techniques, opportunities for employee engagement, leadership involvement at all levels, utilization of resources, relationships, and ongoing evaluation (Melnyk et al., 2016). Governments and organizations worldwide are instituting effective measures to halt the escalating ecological devastation. Many governments have established policies encouraging organizations to engage in environmentally favorable work activities (Ahmad et al., 2021). The effectiveness of the practices is contingent on the employees' ecological behavior (Fawehinmi et al., 2020). Financial pressures, familial dynamics, mental health issues, and issues with an aging population are common social concerns in Saudi primary healthcare (Almujaidei et al., 2022). As a cornerstone of the United Nations, the Kingdom of Saudi Arabia endeavors to achieve the Sustainable Development Objectives of the 2030 Agenda and greener economic growth. (Chaaben et al., 2022) The green economy catalyzes sustainable development in all three dimensions: social, economic, and environmental. It aims to improve social harmony, reduce environmental risks, and increase well-being. In addition to the rapid global spread of COVID-19, environmental destruction and pollution have disrupted livelihoods and endangered human health. Now, the greatest challenge for communities is to recover from these crises. (Chen et al., 2020) Governments require innovative approaches to enhance the adaptability of businesses and communities and maintain environmental standards. At a recent United

Nations meeting, a delegation from various nations stated that extreme weather disproportionately affects developing economies (UN, 2019).

Human health is in jeopardy due to an increase in temperature, poor and hazardous air quality, dust and pollution, polluted water, and numerous other issues (Peng et al., 2021). Several advancements have occurred in the healthcare industry due to technological advancements. These innovative technologies require effective management practices within Saudi healthcare institutions (Alaqeel et al., 2019). Specifically, a company can facilitate the development of novel concepts for green work environment production or process innovation when it strongly emphasizes green work activities and participation, which aid employees in acquiring ecological skills and knowledge in the health sector. Employees who work in green environments are significantly better equipped to identify environmental issues and are more likely to engage in activities that promote green innovation. Focusing on a green environment can lead to green behavior associated with happiness (Ahmed et al., 2020). Moreover, well-being is a shared objective of both individuals and organizations (Fan et al., 2019). Therefore, organizations must prioritize employee well-being by promoting green knowledge and awareness (Muafi, 2022). The Kingdom of Saudi Arabia has committed substantial resources to improve healthcare to provide unrestricted and open access to healthcare services (Almajwal, 2016). Participation in a green workplace can increase the positive green behaviors of employees. Green reward and performance management strategies can align employee behavior with an organization's environmental objectives (Song et al., 2020).

This study examines the relationship between green knowledge, awareness, environmental concerns, and positive health behavior among Saudi Arabian healthcare workers. Using the S-O-R (Stimulus-Organism-Response) paradigm as a framework, we propose that a positive green work environment that promotes green knowledge and environmental concerns will positively influence employees' health behavior. Moreover, given the significant role that employee well-being plays in their behavior and perception, we intend to explore outcomes further by evaluating employee well-being as the mediator in the relationships.

2. LITERATURE REVIEW

2.1 Theoretical Background

The stimulus organism response model explains and analyzes the relationship between environmental concern, green knowledge and awareness, employee well-being, and positive health behavior. According to the paradigm, the stimulus is external, such as the physical environment. Their environment typically exerts a physical and emotional influence on individuals. As an individual interacts with environmental stimuli, the individual's internal state is sustained, leading to reactions and responses (Bagozzi, 1986; Mehrabian et al., 1974).

Consequently, as the external stimulus positively affects a person's mental and emotional pressure or tension, it develops behaviors to initiate or prevent (Lee et al., 2011). So, according to the framework of the study, the positive work environment that raises awareness and concern about green practices is the stimulus, which activates the individuals, and the organism in the study, resulting in improved well-being and health behaviors, which can be considered a response. The work environment influences the perception of employee satisfaction, which is directly related to employee well-being and determines the behavioral response (Ahmed et al., 2020). This model has been employed in both environmental psychology and business studies. Therefore, it is applicable to demonstrate the effect of a green workplace through green knowledge, awareness, and concern resulting in positive health behaviors moderated by employee well-being (Ahmed et al., 2020).

3. Relational Review

3.1 Impact of Green Knowledge and Awareness on Positive Health Behavior

It has been discovered that green practices within an organization influence employee behavior. For instance, when a company implements green human resource management, employee knowledge and comprehension of the environment and related values increase. The employees engage in environmentally friendly behaviors. Not only do they engage in actions that can be considered voluntary, but they are also unrelated to their job duties. Even if these practices are not taught or practiced within the organization, individuals may begin to adopt them as part of their daily routine (Chaudhary, 2020; Dumont et al., 2017; Renwick et al., 2013). These green practices raise employee awareness of the organization's environmental goals and encourage workers to adopt a greener mindset and consider the welfare of society, nature, and themselves.

Consequently, in addition to environmental knowledge and practices, employees develop pro-environmental psychological capital resulting in sustainable behaviors (HHDNP & Arulrajah, 2014; Mishra, 2017; Saeed et al., 2019). Studies indicate that as employees' environmental awareness and concern increase, they demonstrate more sustainable behavior, such as eating and purchasing environmentally favorable and organic products (Ahmed et al., 2020). When organizations create a healthy work environment by engaging in environmental activities and socially responsible behavior, employees begin to engage in the same behaviors, and the health and well-being of workers improve as a result. Employees learn how to act socially responsibly, and organizations value their participation in initiatives that improve their well-being. Consequently, a positive environment that engages in eco-friendly activities influences and contributes positively to the well-being of workers and fosters green and environmentally conscious behavior. The employees' awareness and comprehension enable them to incorporate

it into their daily activities and form habits based on it. (Afsar et al., 2016; Ahmed et al., 2020; Chan et al., 2014; Suárez-Varela et al., 2016) indicate that it is possible that awareness about green practices may have no impact on well-being but that an adverse effect is not possible. Due to the benefits, businesses emphasize the development of green practices in employee behavior and advance toward incorporating green practices into their systems. (Chaudhary et al., 2020). It could take educating and informing them about the methods for developing such behaviors. Despite this, when employees practice environmental protection, not only are their work requirements met, but they also receive additional benefits, such as recognition and rewards, an increase in their job satisfaction, and, most notably, an improvement in their physical, mental, and professional well-being.

Consequently, it aids them in attaining greater work productivity and motivation (Fan et al., 2019; Kamerde & Richardson, 2018; B. Zhang et al., 2021). The workers will perceive that their values, such as their capability, self-worth, and strength, increase, leading to their satisfaction and, ultimately, their well-being due to their high self-esteem. Additionally, it increases their degrees of happiness (de Ruiter et al., 2018; Dogan et al., 2013; Xiang et al., 2019; B. Zhang et al., 2021). In addition, they receive assistance from the workplace environment for implementing these behaviors, which improves their well-being because they are better able to engage in green behavior (Sun, 2019; B. Zhang et al., 2021). Developments such as happiness, high morality, improved psychological capital, supportive and assisting behavior, and leadership behavior can enhance worker or individual well-being when green and socially responsible behaviors are exhibited.

Additionally, this green behavior can facilitate collaboration between individuals and enhance their perception of their life's purpose (Athota et al., 2020; Choi et al., 2017; Tian & Robertson, 2019; B. Zhang et al., 2021). It has been found that social acts associated with green behaviors have positive effects on contentment, mental well-being, life satisfaction, and the reduction of mental stress and depressive symptoms (Binder & Freytag, 2013; Kahana et al., 2013; Li et al., 2013; B. Zhang et al., 2021). With awareness of environmentally friendly behaviors and their benefits, workers develop green behaviors that assist them in receiving social benefits, a better image of themselves, and improvement of well-being in the form of better physiological and psychological health as well as improvement in career, thereby enhancing their sense of purpose and job satisfaction.

H1: Green Knowledge and Awareness has a positive and significant impact on positive health behavior

3.2 Impact of Environmental Concerns on Positive Health Behavior

Individuals must possess the necessary environmental knowledge to develop an environmental consciousness. Without cognizance, it is impossible to take action

regarding the environment. As a result of a thorough understanding of its associated problems, employees conduct in an eco-friendly manner and are considerate of it. Employees who understand the issues are more likely to develop environmentally conscious behaviors. In addition, they will be unable to comprehend what they can do to address environmental issues and problems (Lee, 2010; Liu et al., 2020; Su & Swanson, 2019; Wang & Noe, 2010; W. Zhang et al., 2021). Environmental concerns include issues like environmental protection and sustainable practices. They investigate the long-term consequences. In addition, they exhibit consumption behaviors based on these concerns, such as purchasing organic food (Brough et al., 2016; Chaudhary, 2020; Galván-Mendoza et al., 2022; Marroquín Cienda et al., 2019). The psychological concern and emotions regarding such behavior for environmental protection demonstrate their environmental knowledge, which prompted them to become more active and motivated to take action. They maintain their green mental health in this manner (W. Zhang et al., 2021). Concerns about knowledge, awareness, behavior, and concern have been extensively discussed (Marroquín Cienda et al., 2019).

Nonetheless, organizations demonstrating concern for nature and living beings have recognized the deteriorating state of the environment and are attempting to implement practices necessary to improve the environment. They promote and encourage such practices within their culture and employees' conduct. As employees adopt such practices, they engage in recycling, green consumption, organic and eco-friendly food consumption, cycling to work, resulting in healthful physical activity, and maintaining a cleaner environment. They also prioritize harmonizing their personal and professional lives. Individual care is a component of sustainable and socially responsible practices (Ahmed et al., 2020), and self-care can be regarded as a component of this practice. Concern for the environment has been shown to result in such positive outcomes as reduced mental stress and health problems, improved self-image, greater job satisfaction, increased psychological capital, and an enhanced sense of purpose and meaning in life and work (Ingrid Kaizer Mitchell, 2022).

Nonetheless, numerous studies have demonstrated the positive impact of such practices on the physical, mental, emotional, and psychological health of employees (Yang et al., 2017; B. Zhang et al., 2021; Zhang et al., 2018). However, previous research has not highlighted the direct relationship between a green workplace, green knowledge and awareness, and healthy behavior. The highlighted void requires additional attention and research, which the current study seeks to address. The researcher has observed and assumed, based on prior knowledge and literature review, that as employees gain environmental knowledge and awareness through the green work environment and practices implemented by the employer, they realize and comprehend the need for environmentally

friendly behavior and the poor situation and continuous deterioration of the environment causes them to be concerned not only for the environment but also for themselves, their close relatives, and the future of the planet. Based on this relationship and prior investigation, the researcher has developed the following hypothesis:

H2: Environmental Concerns has a positive and significant impact on positive health behavior

3.3 Moderating Role of Employee Well-being

According to [Tov \(2018\)](#), well-being is associated with psychological emotions, satisfaction, and the individual's perception of life quality. EW emphasizes the positive mental health of employees in the workplace. This includes job satisfaction, which indicates employees' mental health ([Taris & Schaufeli, 2018](#)). The experiences and emotions of employees are influenced by leadership at work, supportive behavior, and personal values, which are positively associated with well-being ([Athota et al., 2020](#); [Soni, 2022](#)). ([Pressman et al., 2015](#)) have highlighted the growing importance of well-being to enhance behavior and have a positive experience. Green behavior supports and promotes sustainability within the organization and the environment ([Francoeur et al., 2021](#)). ([Ahmed et al., 2020](#)) have evaluated the relationship between well-being and green behavior and found that pro-green behavior can lead to increased well-being among individuals.

Volunteering and other green activities can reduce psychological tension and increase satisfaction by having a positive effect on an individual's emotions ([Pinzone et al., 2019](#)). ([Ahmed et al., 2020](#)) Employees who care about the environment are more likely to engage in green behavior for environmental protection. This positively affects self-image and self-esteem, resulting in increased well-being ([Cheng et al., 2022](#)). Additionally, it contributes positively to employees' professions. ([Yang et al., 2017](#)) Environmental concerns promote sustainable development of the environment, which in turn increases well-being. The absence of ecological concerns and organizational development among employees can harm their relationships with coworkers, resulting in diminished emotional experience and diminished well-being.

([Pinzone et al., 2019](#)) A pro-environmental attitude positively affects the attitude of employees, producing a strong sense of well-being. Poor employee well-being, according to researchers, negatively impacts employee health by increasing anxiety and fatigue ([Sharma et al., 2016](#)). Therefore, employee well-being is essential for organizations to promote and enhance their employees' physical and mental health ([Pradhan & Hati, 2021](#)). ([Kim et al., 2017](#)) Companies that promote sustainable behavior and care for the environment can enhance the quality of life for their employees. Therefore, a green workplace contributes to enhanced employee health. Moreover, this relationship is strengthened when the green workplace correlates with the employees' concerns. The discussion has established that employee well-being is related to green knowledge, awareness, and environmental concerns,

which leads to green behavior. The current literature has not evaluated the moderating effect of employee well-being in Saudi healthcare. Consequently, the current study proposes that well-being moderates the relationship between the independent variables, green work environment: knowledge and awareness, and environmental concern, and the dependent variable, positive employee health behavior. The following hypotheses are put forward:

H3: Employee well-being significantly and positively moderates the relationship between environmental concerns and positive health behavior of employees.

H4: Employee well-being significantly and positively moderates the relationship between green knowledge and awareness and positive health behavior of employees.

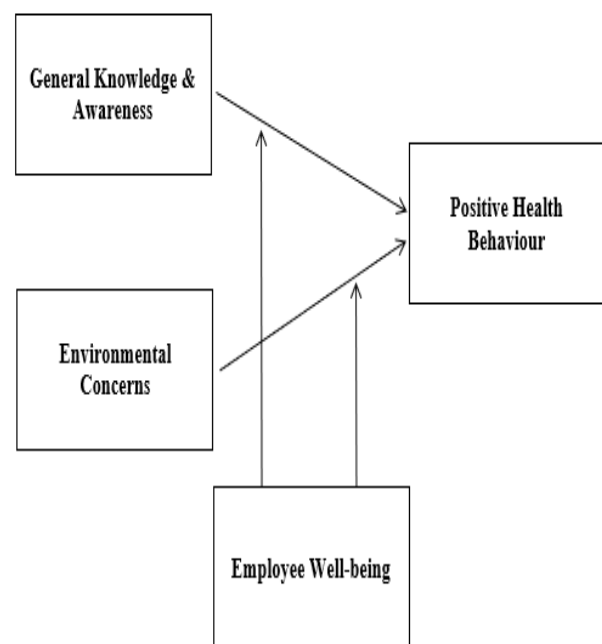


Figure 1. Conceptual Framework

4. METHODOLOGY

Green workplaces play an essential role in every sector of a country. Exploring the green work environment in the context of positive health behavior among employees in the health sector is therefore pertinent and important ([Francoeur et al., 2020](#)). The health sector's processes and activities significantly impact the environment. The impact is negative; that is, the activities associated with the health sector are harmful to the environment. ([Kato et al., 2009](#)) There is a need to raise awareness in the health sectors about the green work environment, which significantly impacts positive health behavior. ([Muster & Schrader, 2011](#)) The employees become not only aware of but also learn various types of behaviors, including the "green-work-life balance concept." Therefore, conducting such research on the green work environment is essential to promote healthy behavior in the health industry.

This study aims to investigate the positive work behavior

of health sector employees. The significance of a green work environment, green knowledge and awareness, and environmental concerns in the Saudi health sector have been investigated. The proposed model incorporates the moderating effect of employee satisfaction. The quantitative method was used to collect data and interpret the results. (Merino-Saum et al., 2020) A quantitative study is a type of research that seeks to evaluate the research numerically. Using questionnaires, the study sought to collect the opinions and experiences of employees. The research also aimed to reach the target population by employing a purposive sampling technique, which made it simpler to collect data for analysis.

4.1 Participants and Procedures

There are many employees in the health sector, but the sample for this research was drawn from the enormous population of health sector employees. The questionnaire survey method was utilized to acquire data from the target population. The questionnaire consisted of two sections. In the first section, the respondents' demographic characteristics are described. It displays the respondent's gender, age, employment status, and level of education. In addition, the second section of the questionnaire comprises items for each study variable. These items are measured utilizing the Likert Scale. 380 individuals participated in the questionnaire survey. The researcher acquired 333 questionnaires out of a total of 380. The return rate of 87.6% is sufficient for analyzing the data and interpreting the research results.

4.2 Measures

The conceptualized model incorporates a green work environment, employee well-being, and positive health behavior among Saudi Arabian health sector employees. The green workplace comprises two dimensions: environmental concerns and green knowledge and awareness. Each variable was measured using a unique set of measurement scales. The five-item Scale for positive health behavior was adopted from Chang et al. (2020) for research purposes. Second, the five-item green knowledge and awareness measurement scale was derived from Taufique et al. (2014). Similarly, environmental concerns were founded on Xiao's (2013) list of five items. Three items were selected from the Scale adapted by Su et al. (2019) to measure the well-being of employees. Each item was evaluated using a Likert scale ranging from 1 (strongly disagree) to 5 (strongly concur).

Table 1: Measurement scales

Variables	No. of items	Measurement Scales
Positive health behavior of employees	5	(Chang et al., 2020)
Green knowledge and awareness	5	(Taufique et al., 2014)
Environmental concerns	5	(Xiao, 2013)
Employee well-being	3	(Su & Swanson, 2019)

5. RESULTS

5.1 Demographic Characteristics of Respondents

The socio-demographic context of the sample is displayed

in Table 2. The data was collected from Saudi Arabia's health sector. The researcher initially distributed 420 questionnaires and received 380 responses, resulting in a response rate of 90.4% from a total of 333 respondents. Following an initial evaluation of the data, 33 responses were eliminated due to missing values, leaving 333 respondents in the final sample. 182 males out of the total population responded to the questionnaire, representing a participation rate of 54.7%, while 151 females responded, representing a response rate of 45.3%. According to Table 2, most employees were between 26 and 30. These employees numbered 131, or 39.3% of the total.

Similarly, 145 employees, or 43.5% of the total workforce, had between 6 and 10 years of experience. Other demographic groups included 32.4% of employees under 25, 23.7% of employees between the ages of 31 and 35, and 4.5% of employees older than 35. The educational background of the employees revealed that 49.2% had bachelor's degrees, 25.2% had master's degrees, and 21.9% had intermediate degrees. These results indicate that the sample consisted primarily of men in their early to mid-twenties with extensive work experience and a high level of education. The presence of education and vast experience suggested that the sample could respond adequately to the research instrument.

Table 2: Demographic background

	Number	Percentage
Gender		
Male	182	54.7
Female	151	45.3
Age		
Less than 25 years	108	32.4
26-30 years	131	39.3
31 to 35 years	79	23.7
More than 35 years	15	4.5
Employee status		
0 to 5 years	46	13.8
6 to 10 years	145	43.5
11 to 15 years	111	33.3
More than 15 years	31	9.3
Education		
Intermediate	73	21.9
Bachelors	164	49.2
Masters	84	25.2
Others	12	3.6

5.2 Descriptive Summary

The descriptive and summary statistics for the research variables are presented in Table 3. Each of the study's variables' means, standard deviations, and skewness are provided in the descriptive summary. It indicates that there was a total of 333 respondents in the study. Since the number of respondents listed for each variable is identical, it can be concluded that there are no missing data values. The data's maximum and minimum values are depicted in the table, and it is evident that the endpoints correspond to the Scale's endpoints. It can therefore be concluded that there were no outliers in the data. The mean values for green knowledge awareness, environmental concerns and positive health behaviors, and employee well-being were 3.19, 3.25, 3.28, and 3.31, respectively, indicating a positive response pattern. Lastly, the skewness statistics

demonstrated the existence of normality, as all variables have values between -1 and 1. As a result, there were no

preliminary issues with the data, and further testing was conducted to evaluate the causal associations.

Table 3: Descriptive Summary

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error
GKA	333	1.00	5.00	3.1940	1.07073	-.237	.134
EC	333	1.00	5.00	3.2462	1.09287	-.282	.134
PHBE	333	1.00	5.00	3.2781	1.22284	-.228	.134
EW	333	1.00	5.00	3.3146	1.18924	-.241	.134
Valid N (listwise)	333						

GKA= green knowledge and awareness, EC= Environmental concerns, and PHBE= positive health behavior of employees, EW= Employee well-being

5.3 KMO and Bartlett's Test

Data is considered suitable and valid when the value of the sampling adequacy test is above 0.6; therefore, the value here is 0.958, which represents good adequacy. Below is provided table 4, which presents the results of KMO and Bartlett's Test.

Table 4: KMO and Bartlett's Test

KMO and Bartlett's Test	
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.910
Bartlett's Test of Sphericity	Approx. Chi-Square 12634.790
	df 153
	Sig. .000

5.4 Rotated Component Matrix

The exploratory factor analysis was conducted to evaluate the factor loadings, as they indicate the presence of individual scale item variability. Table 5 demonstrates loadings are more significant than 0.5; consequently, each construct is unidimensional. Each component is loaded onto the structure to which it applies.

Table 5: Rotated Component Matrix

	Component			
	1	2	3	4
GKA1		.710		
GKA2		.767		
GKA3		.830		
GKA4		.757		
GKA5		.647		
EC1			.814	
EC2			.819	
EC3			.891	
EC4			.899	
EC5			.904	
PHBE1	.901			
PHBE2	.905			
PHBE3	.899			
PHBE4	.903			
PHBE5	.906			
EW1				.601
EW2				.818
EW3				.842

GKA= green knowledge and awareness, EC= Environmental concerns, and PHBE= positive health behavior of employees, EW= Employee well-being

5.5 Convergent & Divergent Validity Analysis

The factor analysis aimed to examine the convergent and divergent validity of the study's measures. (Hair et al., 2021; Holton III et al., 2007) Table 6 demonstrates that convergent validity has been obtained, indicating that the measurement of the construct conforms (AVE > 0.6, CR >

0.8). Each of the four constructs is distinct based on the values of each subsequent row and column of variables.

Table 6: Validity Analysis

	CR	AVE	MSV	MaxR(H)	PHB	GK	ECC	EW
PHB	0.989	0.945	0.960	0.998	0.972			
GKA	0.902	0.650	0.719	0.925	0.775***	0.806		
ECC	0.922	0.709	0.960	0.973	0.980***	0.788***	0.842	
EW	0.910	0.772	0.719	0.923	0.554***	0.848***	0.566***	0.879

GKA= green knowledge and awareness, EC= Environmental concerns, and PHBE= positive health behavior of employees, EW= Employee well-being

5.6 Confirmatory Factor Analysis

The confirmatory factor analysis aimed to assess the reliability of the measurement model. Various measurements are collected during the confirmatory factor analysis. The MIN/DF and RMSEA have been calculated to have values greater than 3 and 0.08, respectively. In contrast, the value for GFI is less than 0.80, the value for IFI is less than 0.90, and the value for CFI is less than 0.90. All of these measurements indicate that the data is appropriate for conducting research. The statistics from the measurement model depicted in Figure 2 are listed in the table 7 below.

Table 7: Results of CFA

CFA Indicators	CMIN/DF	GFI	IFI	CFI	RMSEA
Threshold Value	≤ 3	≥ 0.80	≥ 0.90	≥ 0.90	≤ 0.08
Observed Value	2.239	0.822	0.924	0.987	0.078

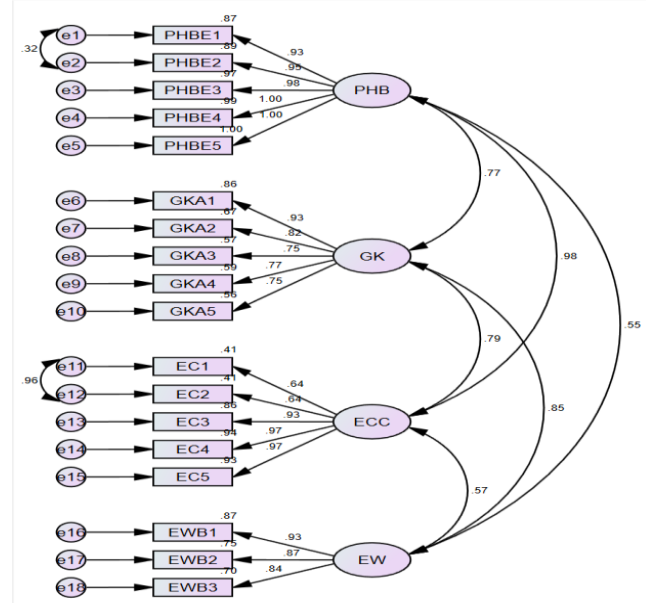


Figure 2: Confirmatory factor analysis

5.7 Structural Equation Model

The research hypotheses are validated using a structural model, the results of which are presented in the table below. SEM is a widely-used method for assessing the structural relationships between latent and observed variables (Hair et al., 2020). In addition, it permits testing multiple relationships simultaneously and is used to determine the optimal model (Mai et al., 2018; Westland & Westland, 2015). Path coefficients allow for the validation of the research's proposed hypotheses. The table demonstrates that employees' green knowledge, awareness, and positive health behavior have a significant but negative correlation at a significance level of 0.05, confirming the first hypothesis. In the table below, p 0.05 indicates that there is also a positive relationship between environmental concerns and the positive health behaviors of employees. Therefore, the first two hypotheses are accepted and confirmed with positive signals where p 0.05 for both relationships. Second, we investigated the moderating role of employee well-being. According to Table 8, employee well-being moderates the relationship between PHBE and EC with a p-value of less than 0.05.

Similarly, employee well-being moderates the relationship between PHBE and GKA with a p-value less than 0.05. Figures 4 and 5 demonstrate that EW has a significant moderating effect. Figure 4 demonstrates that EW weakens the positive association between EC and PHBE, as confirmed by = -0.437 in Table 8. Figure 5 depicts the substantial moderating effect of EW, which results in a 53.8% shift in the correlation between GKA and PHBE, as shown in Table 8.

Table 8: Structural Equation Modeling

Parameter		Estimate	Lower	Upper	P
PHBE	<--- GKA	-.117	-.200	-.003	.059
PHBE	<--- EC	1.044	.953	1.117	.015
ZPHB	<--- ZEWXEC	-.437	-.987	-.074	.042
ZPHB	<--- ZEWXGKA	.538	.068	1.170	.049

GKA= green knowledge and awareness, EC= Environmental concerns, and PHBE= positive health behavior of employees, EW= Employee wellbeing

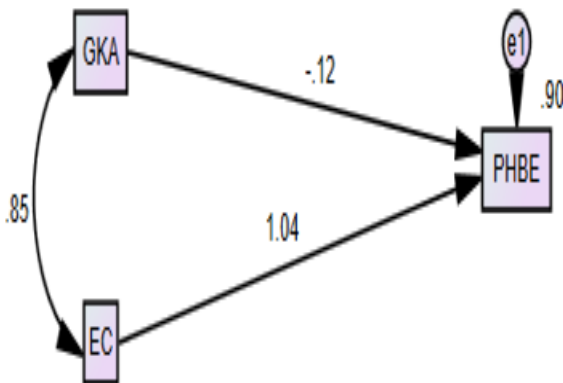


Figure 3: SEM

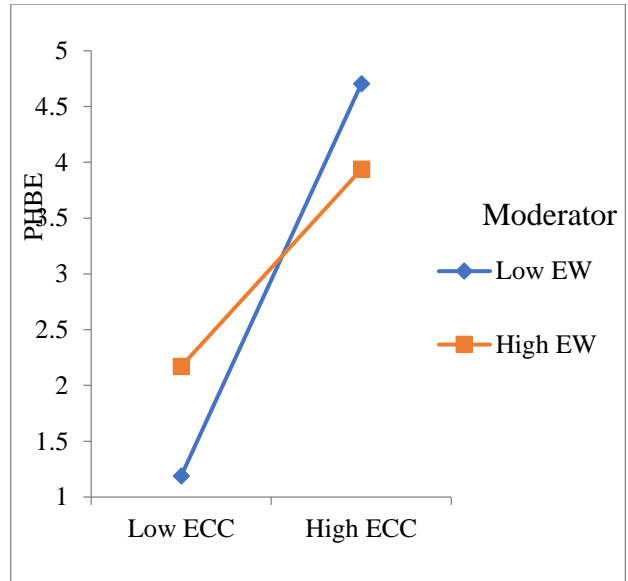


Figure 4: Moderation Effect of EW between EC and PHBE

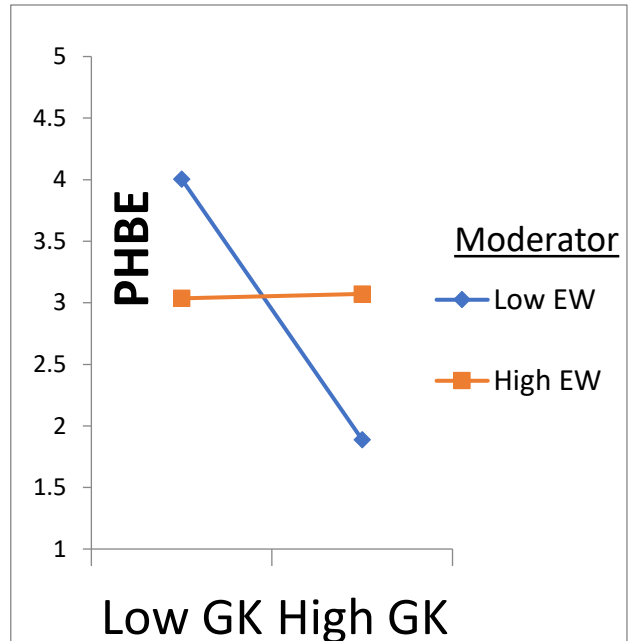


Figure 5: Moderation Effect of EW between GK and PHBE

6. DISCUSSION

Researchers and global policymakers of organizations have acknowledged that the causes of environmental deterioration, such as biodiversity loss and rising pollution, are profoundly rooted in human behavior, which has a profound effect on employees' health behavior. Numerous organizations today implement environmental management systems (EMS) and green initiatives to reduce their operations' negative impact on the environment. In this regard, this study investigated the effect of a green workplace on the health behavior of Saudi healthcare workers. Based on the research objectives and a comprehensive review of empirical studies, this study developed four hypotheses stating that green knowledge and awareness (GKA) and environmental concerns (EC)

positively influence the positive health behavior of employees. The other two hypotheses assessed the moderating effect of employee well-being on the association between GKA and PHBE and EC and PHBE. The study's outcome supported both hypotheses and revealed a significant effect of GKA and EC on employee behavior. EW moderated both relationships significantly.

Numerous additional studies validate this study's ecological knowledge and awareness findings. [Saeed et al. \(2019\)](#) notes that green environmental knowledge and cognizance influence employee decisions and intentions. Employee knowledge of green environmental management influences their health behavior and their pro-environmental conduct in the workplace. Thus, employee interaction and knowledge increase their participation in environmentally responsible behavior. According to [Fawehinmi et al. \(2020\)](#), green human resource management significantly impacts employees' green behavior, whereas green knowledge significantly strengthens this relationship. [Elshaer et al. \(2023\)](#) investigated ecological knowledge and management practices in tourism-related small and medium enterprises. The study's findings indicate that green knowledge and management policies improve employees' social, economic, and environmental performance, and employees' pro-environmental behavior strengthens this relationship. Therefore, active employee participation in green knowledge and practices is recommended for optimal health and environmental behavior. [Amrutha et al. \(2020\)](#) note that green workplace practices substantially impact the social equity, health, and well-being requirements of organizations and their employees to attain environmental and economic sustainability. Prioritizing green awareness and knowledge safeguards the well-being and health of employees to maximize the potential of green practices at their foundation. Subsequently, the findings of existing studies validated the findings of this study and identified a significant impact of GKA on the positive health behavior of employees.

This study demonstrates that environmental concerns (EC) positively influence the positive health behavior of employees. [Al-Swidi et al. \(2021\)](#) emphasize the significance of environmental concerns and green human resource management on organizational culture, supported by numerous other studies. This ecological organizational culture has additional positive effects on employees' positive behavior and performance. [Zhang et al. \(2019\)](#) demonstrate that environmental concerns influence the autonomous motivation of employees and their pro-environmental behaviors, which substantially affects their health and environmental behavior. [Ul Mateen et al. \(2022\)](#) demonstrate that environmental concerns influence GHRM and enhance healthcare employees' positive and pro-environmental behavior. According to [Pieper et al. \(2019\)](#), employees' positive health behavior and well-being are significantly related to work environment factors. According to [Kim et al. \(2016\)](#), environmental

concern is substantially associated with employees' pro-environmental behavior, and external motivation plays a positive role in strengthening this association.

Additionally, EC influences employee behaviors that increase their desire to protect the environment and implement green workplace policies and practices. [Umrani et al. \(2020\)](#) asserts that the positive behavior of employees in a company is essential for that company to achieve environmental outcomes. The study revealed that environmental concerns and a sense of responsibility are statistically significant for employees' positive health behavior. The correlation between green human resource management and employee performance is strengthened when employees are more environmentally conscious. Accordingly, the findings of this study confirm that EC positively influences employees' positive healthcare behavior. In addition, our results supported the moderating role of EW in the relationship between GKA and PHBE. Previous research has demonstrated that environmental knowledge increases well-being ([Ahmed et al., 2020](#)), whereas environmental awareness has no significant effect on well-being ([Ahmed et al., 2020](#)). However, increased employee happiness has a positive effect on PHBE. It has been stated that a change in well-being can influence health behavior and vice versa, where a positive change in health behavior results in improved well-being, and an adverse change in health behavior harms well-being ([Wieneke et al., 2019](#)).

Consequently, our findings are consistent with prior research ([Ahmed et al., 2020](#); [Wieneke et al., 2019](#)). We found that EW moderates the relationship between EC and PHBE significantly. Previous research has found that environmental concerns and employee well-being significantly impact employee health behavior ([Ahmed et al., 2020](#)). Our findings are consistent with these findings. Similarly, another study found that the connection between employee well-being and corporate responsibility is tied to employees' environmental concerns ([Bocean et al., 2022](#)). The relationship between environmentally-transformational leadership and employee well-being is mediated by pro-environmental behavior, as demonstrated by [Soni \(2022\)](#).

7. CONCLUSION

This study investigated the effect of a verdant work environment on the positive health behaviors of Saudi healthcare workers. Consequently, two dimensions of the green work environment, namely green knowledge and awareness (GKA) and environmental concerns (EC), along with the moderating function of employee well-being (EW), were investigated. To obtain an effective conclusion, this study surveyed Saudi employees. The information was gathered from 333 respondents. After fruitful data analysis, the study's findings revealed that GKA and EC positively influence employees' health behavior, with EW having a significant moderating effect. The successful results shed light on establishing a green work environment to encourage employees' positive health

behaviors and create an environmentally friendly workplace. The findings reveal the urgent need for programs and policies that encourage adopting a green work environment in the healthcare sector to attain optimal employee health behavior.

8. THEORETICAL AND PRACTICAL IMPLICATIONS

This research makes a substantial contribution to researchers and practitioners. This study investigates the factors that motivate the positive health behavior of healthcare employees as its theoretical contribution. This study contributes to the extant literature on green work environments and the environmental behavior of organizations by identifying the positive effects of GKA and EC. In addition, this research contributes to our understanding of the positive health behavior of healthcare employees, a topic that receives scant attention in the existing literature. It offers theoretical guidance regarding the function of EW in the healthcare workplace. In terms of its practical implications, this study is noteworthy for administrators of healthcare organizations, as the pertinent findings encourage them to promote a green work environment within their organizations.

The relevant industry practitioners must increase the implementation of environmentally favorable HRM procedures. The recruitment process's job description and employment design must include GKA and EC integration. Environmental concerns will result in healthier employee behavior, thereby enhancing their well-being. In addition, employees must increase their ecological knowledge and environmental awareness to promote healthy behavior. Lastly, the findings of this study provide policymakers with valuable information for enhancing the opportunities and resources to promote green workplace schemes to address environmental issues and promote pro-environmental and healthy employee behavior.

9. LIMITATIONS AND FUTURE RESEARCH INDICATIONS

Even though the present study has accomplished its objectives, it has numerous limitations. Initially, the data was collected from the Saudi healthcare industry, which imposes geographical restrictions. This deficiency can be remedied by collecting data from multiple locations that provide valuable insight into green work environments and validate the generalizability of acquired results in future research. Second, the data was collected through employee self-reported surveys, so the obtained results were limited to a single source. Other studies utilize data from multiple sources, such as firm managers and practitioners, to address this deficiency. Lastly, while the study included employee well-being as the moderator, other variables, such as green commitment and green lifestyle, help to explain the effect of a green work environment on employees' health behavior.

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APPENDIX

Item Measurement

Green Knowledge & Awareness (Taufique et al., 2014)

1. I know very well what the term most studies on today's 'climate change' means.
2. know very well what the term items' global warming' means.
3. The amount of energy I use does not affect the environment to any significant degree.
4. The country needs more restrictions on residential development (construction of a new mall on farmland, new subdivisions, etc.).
5. I know very well what the term' organic product' means.

Environmental Concern (Xiao, 2013)

1. The balance of nature is very delicate and easily upset by human activities.
2. Plants and animals do not exist primarily to be used by humans.
3. No limits to growth for advanced industrialized nations.
4. The earth is like a spaceship with only limited room and resources.
5. The so-called "ecological crisis" facing mankind has been greatly exaggerated.

Employee well-being (Su & Swanson, 2019)

Rate as strongly dissatisfied to strongly satisfied:

1. How would you rate your quality of life?
2. How satisfied are you with yourself?
3. How satisfied are you with your capacity for work?

Positive health behaviour of employees (Chang et al., 2020)

In your company,

1. Supporting environment, including sports and healthy die, psychological health is prioritized.
2. Employee attitude matter on company's policy on health promotion is crucial.
3. Health climate at work and work-life balance is important.
4. Supervisors' attitude toward health promotion is encouraged.
5. Own health involvement in worksite health promotion is encouraged.