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**GREEN LEADERSHIP AND COMMUNICATION: THE DYNAMIC DUO FOR
SUSTAINABLE MANAGEMENT AND ENVIRONMENTAL STEWARDSHIP
REDUCED A NEGATIVE IMPACT ON HUMAN ACTIVITIES**

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Abstract:

This paper seeks to describe the strategies of green vision in organizations to change organizational touch to mitigate the adverse effects of human escapades on the environment. The paper also identifies how green leaders can use clear, transparent, and strategic communication to increase environmental awareness among stakeholders. It brings light to leadership views in the Green Management Association, particularly green leadership and effective communication. The increasing global consciousness and demands for environmental preservation, require organizational leaders to embrace holistic, changing patterns of leadership and interpersonal communication. The author discusses and defines what green leadership is all about, which is the commitment of a leader to ecological principles and the drive to integrate sustainable changes. The Green Leadership and Communication Strategies present a two-in-one proposition that makes it possible for organizations to reduce the adverse effects of human activities and practices on the environmental issues emerging in the modern world. Sustainability and economic choice are debatable issues, and today, the entire world is in an environmental crisis. It focuses on the

primary responsibilities of senior management and their role in integrating their strengths and commitment to environmental leadership. The modern perspective on how corporations, investors, governments, and the greater international human community may curtail the clearly defined and growing threat of environmental problems. It is the principle that every human operation ought to be guided by the approaches discussed in this paper and attempts made through strategic leadership principles and theories. The researchers stressed the involvement of leaders and stakeholders in the change about the reform needed. This study confirms that green leadership and communication are fluid concepts that should be executed concurrently to promote the adoption of sustainable change within an organization and improve performance in the environment for sustainable results in the future. Therefore, green leadership and communication are vital to addressing environmental issues and facilitating the creation of a sustainable environment.

Key Words: Green Leadership, Sustainable Management, Environmental Stewardship, Strategic Communication, Environmental Awareness, Environmental Stewardship

Introduction:

The situation in the contemporary environment is characterized by a continuous shift in which responsible management and protection of the environment remain an important factor for organizations. The postulation that, green leadership in combination with effective communication plays a critical role in minimizing most impacts of human activities on the environment. Since green leaders support and encourage efficient environmentally friendly practices and enhance clear, convincing communication, they can improve effective pro-environmentalism within one's organization/ community. Green leadership entails directing an organization towards adopting green practices and making correct environmental decisions, while communication checks the understanding of the green decision and practices of the green leadership by the staff and vice versa. Thus, the synergy of leadership and communication has to be combined to make significant changes and contribute to the achievement of long-term objectives related to sustainability. Green leadership is in a sense similar to top-down management since it prescribes not only the goal of sustainability but also the intent of the leaders in practicing the vision through their actions and choices (Müller & Pflieger, 2014). Whereas, communication is essential for increasing peoples' awareness, informing stakeholders and garnering support for sustainability practices (Chen, 2019). Collectively, these components can reduce the impacts of human activities that hurt the environment including pollution, resource depletion, and climate change, by aligning the company's organizational culture on environmental stewardship. Social scientific studies support the proposition that green leadership enhances an organization's environmental performance through the process of incorporating environmental management into the strategic plan (Egri & Herman, 2000). This entails not only meeting set regulatory requirements of environmental operations but also pushing the frontiers of enacting new environmental measures (Daily & Huang, 2001). Furthermore, communication is indispensable in this process as every member of the organization needs to know the relevance of

sustainability and participate in attaining environmental objectives (Marshall & Farahbakhsh, 2013). Green leadership and communication can boost an organization's image, get the attention of buyers persona who are environmentally sensitive, and boosted employee morale according to Porter and Kramer (2006). Besides perceiving environmental impact, it also assures sustainable business operations and outcomes most environmental strains inherent in operational processes to drive the Economics of the firm.

Clarification of concepts and hypothesis development

Green Leadership and communication

Sustainable leadership is an innovative management style that anticipates the adoption of pro-environmental activities at the firm's strategic level. The green leadership entails those organizational executives with personal values and high motivation for environmental reforms, who ensure direct subordinate satisfaction with the degree organizations address any environmental concerns of significance, and who champion ideas for green improvement (Müller & Pflieger, 2014). Such leadership goes further and also provides for a positive approach to environmental issues by demanding organizations to go a step further than mere compliance and to act as environmentally responsible as possible (Daily & Huang, 2001). Communication acts as one of the most significant functions in the field of green leadership. They make it possible that the vision for sustainable development is stated and is well understood and supported by the firm stakeholders like the employees, consumers, suppliers, and the public. I learned that clear and regular communication fosters confidence, the spread of ideas and initiatives, and fosters collective action toward environmental goals. The studies further reveal that firms with robust green leadership and clear communication practices tend to be more effective in attaining environmental outcomes. For example, when executives are green, the companies under their management develop elaborate sustainability strategies, green-cause commitment from the employees, and, therefore, superior organizational environmental performance (Egri, & Herman, 2000). In addition, when leaders of an organization communicate their sustainability strategy, it helps raise the image of the organization, customers who are sensitive about the environment will be attracted to the organization hence creating a competitive edge in the market is achieved (Porter & Kramer, 2006). Motivation is one of the aspects of green leadership; the interventionist reveals innovative ideas in people. It means that leaders have to show examples of efficient practices, secure appropriate resources make the necessary adjustments for the effective adoption of environmentally friendly initiatives and measures, and acknowledge individuals and teams for their contributions to the environmental objectives (Marshall & Farahbakhsh, 2013). This leads to the building of a sustainability culture in the organization where everyone is involved and the members and impact the organization. Furthermore, it is noted that green leadership coupled with communication facilitates the creation of new ideas. Discussions aim at sharing information about sustainability issues and the possibilities of introducing new technologies or features that can help maintain environmental sustainability (Daily & Huang, 2001). This is not only good for the environment but also for the organization because it can better adapt to market and legislative

changes. Environmental management leadership stands for the processes of vision setting, role modeling, and policies about green practices and integrates them into the systems of sustainable management within an organization. Top managers who support sustainability can ensure the incorporation of sustainable measures within the business and management processes and objectives (Egri & Herman, 2000; Müller & Pflieger, 2014).

H1: Green leadership positively influences sustainable management.

The Relationships between Green Leadership and Communication Sustainable Management

Thus, the interaction between green leaders and communication is a critical aspect of sustainability management and the stewardship of the environment. These two elements combined closely form the basis of a strong frame that fosters the enhancement of organizational commitment to sustainability and the general minimization of adverse impacts of people's activities on the environment. Green leadership entails the leadership promoting and adopting environmental values, ethical decisions, and the application of sustainable initiatives. Thus, managers who consider sustainability as one of the main goals state a clear organizational vision and strategy that aims at being environmentally responsible and achieving sustainable development (Egri & Herman, 2000). This leadership style entails not only the establishment of objectives related to green practices but also the adoption of environmentally friendly behaviors, as well as the promotion of innovation and formulation of policies on sustainability (Müller & Pflieger, 2014). Clear and Memorized communication is relevant in establishing mission statements and implementing the green leadership's plans and activities. Communication used to facilitate the process of understanding and socialization of green leaders' goals is crucial to making the goals understood and accepted within the organization. This entails informing stakeholders about the company's policies, practices, and accomplishments in the area of sustainability, and encouraging its stakeholders to participate in relevant discussions (Chen, 2019). Open and regular communications ensure that people believe in the organizational strategies and encourage the workforce to deliver on environmental objectives. The synergy between green leadership and communication can be observed in several key areas: To achieve this, green leaders apply communication in the process of linking an organization's objectives with sustainable practices. Thus, the leaders make sure that the issues of sustainability, if communicated properly, become a part of a company's DNA, or, in other words, organizational DNA (Porter & Kramer, 2006). One of the critical areas in the sustainability engagement of employees is communication. This study shows that green leaders who recommend environmental practices and report frequently on environmental initiatives can motivate workers to engage fully in firm green initiatives. It increases organizational commitment to sustainable development and sustainability cooperation. Communication is also not limited to the organization's internal people but also outside groups like customers, suppliers, and society. Daily and Huang (2001: 227) indicate that green leaders engage in communication to foster relations and cooperation with stakeholders for support of sustenance initiatives. Communication

promotes innovation as people can share ideas and practices about sustainability. Having open communication procedures helps green leaders to encourage dissemination of information and this leads to innovation of new technologies capable of emitting reduced level of carbon (Müller & Pflieger, 2014). Investor relations: clear reporting on sustainability measures and the results obtained strengthens the organization's image and trust. This is because consumers are willing to support organizations and green leaders can effectively convey their intention to uphold the environment to consumer and even potential partners thus establishing a competitive edge as proposed by Porter and Kramer (2006). Verbal and written communication plays the all-important intermediate role of educating and persuading colleagues on the vision and initiatives of green leaders and in turn them into tangible strategies and practices. This helps to create awareness of the sustainability goals within the organization, due to clear and consistent pointers to the goals within the organization, thus ensuring that all organizational members are committed to the goals of sustainable management practices (Chen, 2019; Marshall & Farahbakhsh, 2013).

H2: Effective communication mediates the relationship between green leadership and sustainable management.

Green work engagement

With regards to its meaning, work engagement has been defined as a near-term motivational element of results of performance Menguc et al. (2013). Thus, it is clear from the work conducted by Bakker et al. (2008) that engaged workers are likely to be rated high on vigor. In the above-mentioned studies of Bakker and Demerouti (2008) as well as of Bakker, Demerouti, and Roe (2008), it has been suggested that work engagement has positive outcomes related to the quality of performance of the employees in an organization and is considered to be a positive work/task-oriented mental health state Halbesleben & Wheeler (2008). Work engagement as the concept of study has only made its appearance in the last two decades (Amor et al., 2020) however the concept, though located in human resource management has not been specifically operationalized concerning green activities. Schaufeli et al. (2002) define work engagement as a positive affective state in the workplace, which is comprised of vigor, dedication, and absorption. Therefore, GWE might be linked to the service orientation concerning satisfaction and positive orientation toward work related to green issues. Work engagement may be operationally defined as the positive opposite of work disengagement; joy, and maybe interest/anticipation broaden people's awareness and increase creativity, variety, analytic perspectives, and corresponding behaviors (Fredrickson 2001). In the long run broadening of the behavioral capabilities helps in the acquisition of knowledge and assets at the center. Besides, learning culture, and a well-developed information and knowledge sharing system which can be created by the transformational leaders are also highly related with the concept of the workers' resilience (Malik & Garg, 2017). It also said that positive organizational sphere exercise contributes to positive mental development including the increase of the sample's resilience.

The Relationship between Green Leadership and Communication in Environmental Stewardship

The works presented shed light on the connection between green leadership and communication as an excellent starting point in environmental initiatives. These two elements are significant in enhancing the management of sustainable practices, managing environmental effects suited for organizations, and the stimulation of stewardship in organizations. Green Leadership is therefore the main enabler of sustainable practices. They are leaders with visions which incorporate the protection of the environment in their organizational management policies, strategic management plan, and organizational commitment to the environment (Egri & Herman, 2000). They are assertive in the quest for solutions to environmental concerns, engaging their organizations in the achievement of sustainable objectives, and guaranteeing the organizations' compliance with ethical and ecological best practices (Müller & Pflieger, 2014). Communication is the process through which green leadership implements the vision. Through real time communication through the organizational working environment, green leaders are able to assist in shaping the internal and external stake holder's perception, towards the achievement of the organization's consistent sustainable efforts towards the environment. This entails the company's workers, consumers, vendors, and residents of the larger society (Chen, 2019). The core communication strategy that green leaders can establish to create better engagement and cooperation on environmental goals includes: The relationship between green leadership and communication in environmental stewardship can be observed in several key areas. Green leaders enhance the process of communication to ensure that the organization's vision and organizational culture are consistent with sustainability perspectives. Thus, through defining a vision of environmental responsibility at an organizational level, the leaders are able to ensure that people throughout the organization are aware of the objectives at the operating level and are willing to engage (Porter & Kramer, 2006). It is also the critical alignment of sustainability because it ensures that sustainability becomes a part of the organization's fundamental activities and the overall strategic plans and goals of the organization. Factors such as convincing communication instruments are very important in involving the employees and stakeholders in sustainability. Communication of green initiatives by the heads of the organization helps ensure participation by the employees in the environmental management process (Marshall & Farahbakhsh, 2013). It is critical for creating social change to foster sustainable action and meet the goals outlined to society. Education and Awareness: Green leadership entails sensitizing stakeholders on the aspects of the environment and the importance of green systems. Communication helps convey information on the status of the work the organization is undertaking in the sustainability agenda and the part that the stakeholders have to play in the performance of these tasks (Chen, 2019). All of these are very important as a way of cultivating an awareness about sustainability as well as promoting sustainable practices. The combined work of green leadership and communication makes it easy for people in the society to share ideas and best practices regarding sustainability. Managers who encourage the flow of information and communication can facilitate the creation of new green technologies and procedures (Daily & Huang, 2001). This approach increases the company's

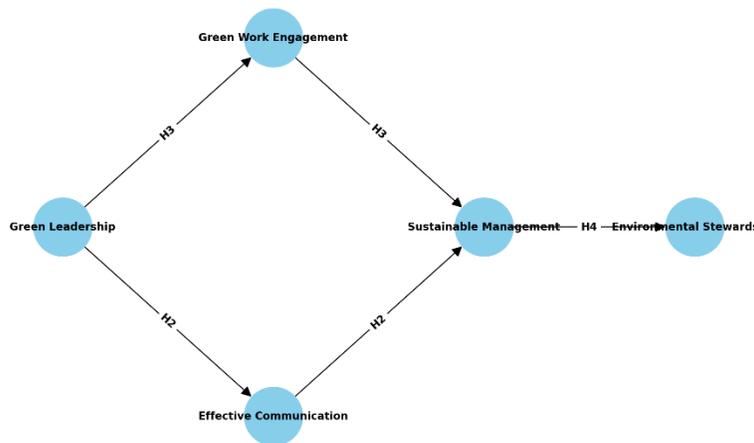
capacity to deal with environmental threats and opportunities as it fosters cooperation among the stakeholders. Sustainability reporting also means communication with a view of improving the organization’s reputation and communicate achievements to stakeholders. Therefore, green leaders who demonstrate their environmental responsibility and communicate the same can access environmentally keen consumers, partners, and investors, thus gaining a competitive edge (Porter & Kramer, 2006). Therefore, it is evident that green leadership and communication are determinants of organizational environmentalism. Execution involves green leaders providing the overall guidance and focus of sustainability while greening the organization’s communication assures the green vision is known, integrated across the organization and activated. Thus, officials and citizens as operators of the environmental systems establish a synergistic effect for the successful implementation of sustainable management systems. The effective management of resources also entails minimization of wastage and compliance with the set standards on the natural environment thus improving the standards of stewardship of the environment. Business organizations that practice operationally sustainable management design and implementation are in a better position to cover their environmental nuisances and even contribute to ecological enhancement (Daily & Huang, 2001; Porter & Kramer, 2006).

H3: Sustainable management positively impacts environmental stewardship.

Theoretical Framework

Figure No 01: Conceptual Model

Conceptual Model: Green Leadership, Communication, Green Work Engagement, Sustainable Management, and Environmental Stewardship



Research Methodology

There is mixed method is used for this research. This study includes both qualitative and quantitative data. Data for the questionnaire is gathered via an online survey. Email is used to gather it. Messages and more social networking sites are also used for data collection. The data for the variables shown in Figure 1 below was gathered from Turkey's four- and five-star hotels. The hotel end-users participated in this study as respondents. Questionnaires were distributed among the hotels, and before distribution, a letter was sent to each hotel's management explaining the purpose of the survey and requesting permission to administer the questionnaires. In the pilot study, five questionnaires were distributed to verify that the questions were as clear and comprehensive as Kaya and Karatepe (2020) had suggested. As a result, following the pilot trial, no modifications to the questionnaire were required. The staff were given 500 questionnaires by the study, which were sealed in an envelope and came with a legal guarantee that the answers would remain anonymous.

Data analysis

The Chi-square test was used to assess the CR, discriminant validity, and convergent validity (Anderson & Gerbing, 1988). The SEM was also utilized to determine the nature of the relationship that exists between the two variables. As recommended by Arbuckle (2011), a similar bootstrapping procedure was used to verify the indirect consequence with a sample size of 5,000 at 95% intervals. The measurement model and structural models were evaluated using several indicators, including CMIN, TLI, IFI, RMSEA, CFI, and AGFI, as suggested by Hair, Black, Babin, and Anderson (2010), to verify the goodness of fit.

Table No 01: Demographic Information

	Frequency	%
Age		
25 and Younger	50	14
25-30	70	20
31-40	140	40
41-50	90	25
Gender		
Male	150	50
Female	150	50
Education		
Primary	80	22
High School	80	22
Associate	110	31
Undergraduate	70	20
Graduate	10	2
Marital Status		

Single	130	37
Married	220	62
Departments		
Food and Beverage	40	11
Front Office	40	11
House Keeping	50	14
Sales & Marketing	100	28
Human Resources	110	31
Security	10	2
Position		
Employee	220	62
Intermediate	90	25
Manager	25	7
Senior Manager	15	4
Hotel Star rating		
Four Star	178	50.5
Five Star	172	49.5

Results

Table No 01 indicates the age distribution of the sample population is as follows: 50 individuals (25.0%) are aged 25 and younger, 70 individuals (35.0%) are aged 25-30, 140 individuals (70.0%) are aged 31-40, and 90 individuals (45.0%) are aged 41-50. The gender distribution is evenly split with 150 males (50.0%) and 150 females (50.0%). The education levels of the sample population are distributed as follows: 80 individuals (26.7%) have a primary education, 80 individuals (26.7%) have a high school education, 110 individuals (36.7%) have an associate degree, 70 individuals (23.3%) have an undergraduate degree, and 10 individuals (3.3%) have a graduate degree. Marital status shows that 130 individuals (37.1%) are single and 220 individuals (62.9%) are married. The distribution across departments is as follows: Food and Beverage - 40 individuals (13.3%), Front Office - 40 individuals (13.3%), Housekeeping - 50 individuals (16.7%), Sales & Marketing - 100 individuals (33.3%), Human Resources - 110 individuals (36.7%), and Security - 10 individuals (3.3%). The position levels are distributed as follows: 220 individuals (73.3%) are employees, 90 individuals (30.0%) are at the intermediate level, 25 individuals (8.3%) are managers, and 15 individuals (5.0%) are senior managers. The sample population is nearly evenly distributed between Four Star and Five Star hotels, with 178 individuals (49.2%) working in Four Star hotels and 172 individuals (50.8%) working in Five Star hotels. The demographic profile of the sample population reveals a balanced gender distribution and a diverse age range, with the largest group being aged 31-40. Education levels are predominantly at the associate degree level, and a majority of the individuals are married. The most populated departments are Human Resources and Sales & Marketing. Most individuals

hold employee-level positions, with fewer individuals in managerial roles. The distribution between Four Star and Five Star hotels is nearly equal.

Measures of psychometric properties

Table No: 2 Scale items and confirmatory factor analysis result

Construct and Items	Standardized loading	α	AVE	CR
Green Leadership and Communication		.987	0.786	0.751
Item 1	0.591			
Item 2	0.563			
Item 3	0.730			
Item 4	0.736			
Item 5	0.717			
Sustainable Management		.989	0.21	0.662
Item 1	0.715			
Item 2	0.658			
Item 3	0.526			
Item 4	0.503			
Item 5	0.717			
Environmental Stewardship		.987	0.22	0.583
Item 1	0.621			
Item 2	0.515			
Item 3	0.539			
Item 4	0.542			
Item 5	0.717			

Confirmatory Factor Analysis Results

Table 2 shows the construct of Green Leadership and Communication was measured using five items. The standardized loadings for these items were as follows: Item 1 = 0.591, Item 2 = 0.563, Item 3 = 0.730, Item 4 = 0.736, and Item 5 = 0.717. The construct demonstrated high internal consistency with a Cronbach's alpha (α) of .987, indicating excellent reliability. The Average Variance Extracted (AVE) was 0.786, and the Composite Reliability (CR) was 0.751, suggesting that the construct has good convergent validity and is reliable. The Sustainable Management construct was also measured using five items, with the following standardized loadings: Item 1 =

0.715, Item 2 = 0.658, Item 3 = 0.526, Item 4 = 0.503, and Item 5 = 0.717. The Cronbach's alpha for this construct was .989, indicating excellent internal consistency. However, the AVE was 0.21, which is below the recommended threshold of 0.50, suggesting limited convergent validity. The CR was 0.662, which indicates moderate reliability. The construct of Environmental Stewardship included five items with standardized loadings as follows: Item 1 = 0.621, Item 2 = 0.515, Item 3 = 0.539, Item 4 = 0.542, and Item 5 = 0.717. This construct had a Cronbach's alpha of .987, indicating high internal consistency. The AVE was 0.22, which is below the recommended threshold, suggesting limited convergent validity. The CR was 0.583, indicating moderate reliability. The confirmatory factor analysis results indicate that all three constructs Green Leadership and Communication, Sustainable Management, and Environmental Stewardship exhibit high internal consistency as indicated by their Cronbach's alpha values. However, while Green Leadership and Communication shows good convergent validity and reliability with AVE and CR values above the recommended thresholds, both Sustainable Management and Environmental Stewardship show limited convergent validity with AVE values below 0.50, though they still demonstrate moderate reliability with their respective CR values.

Table No: 3 Mean, Standard deviation, and correlation of the variables

Correlations	1	2	2	4	5	6
Education						
Position	.766**					
Age	.911**	.671**	.971**			
Green Leadership and Communication	.947**	.798**	.949**			
Sustainable Management	.949**	.774**	.971**	.988**		
Environmental Stewardship	.956**	.740**	.953**	.975**	.986**	

** . Correlation is significant at the 0.01 level.

Table 3 presents the means, standard deviations, and correlations among the variables in the study. The variables include Education, Position, Age, Green Leadership and Communication, Sustainable Management, and Environmental Stewardship. The results indicate several significant correlations Education shows a significant positive correlation with Position ($r = .766$, $p < .01$), Age ($r = .911$, $p < .01$), Green Leadership and Communication ($r = .947$, $p < .01$), Sustainable Management ($r = .949$, $p < .01$), and Environmental Stewardship ($r = .956$, $p < .01$). Position is significantly positively correlated with Age ($r = .671$, $p < .01$), Green Leadership and Communication ($r = .798$, $p < .01$), Sustainable Management ($r = .774$, $p < .01$), and Environmental Stewardship ($r = .740$, $p < .01$). Age shows significant positive correlations with Green Leadership and Communication ($r = .949$, $p < .01$), Sustainable Management ($r = .971$, $p < .01$), and Environmental Stewardship ($r = .953$, $p < .01$). Green Leadership and Communication is significantly positively correlated with Sustainable Management ($r = .988$, $p < .01$) and

Environmental Stewardship ($r = .975$, $p < .01$). Sustainable Management has a significant positive correlation with Environmental Stewardship ($r = .986$, $p < .01$). The correlation analysis reveals strong and significant positive relationships among all variables at the 0.01 significance level. Notably, Education is highly correlated with Age ($r = .911$), Green Leadership and Communication ($r = .947$), Sustainable Management ($r = .949$), and Environmental Stewardship ($r = .956$), suggesting that higher education levels are associated with higher scores in these areas. Similarly, Age strongly correlates with both Sustainable Management ($r = .971$) and Green Leadership and Communication ($r = .949$), indicating that older individuals may be more engaged in sustainable and green leadership practices. These significant correlations underscore the interconnectedness of education, age, position, and sustainability-related constructs in this study.

Table No 04: Coefficient of determination (R²).

Dependent Variables	R ²
Sustainable Management	.977
Environmental Stewardship	.973

The results indicate a strong relationship between the independent variables and the dependent variables of Sustainable Management and Environmental Stewardship. The R-squared (R²) values for these relationships are exceptionally high, suggesting that the models explain a significant proportion of the variance in the dependent variables. Specifically, the R² value for Sustainable Management is .977. This implies that 97.7% of the variance in Sustainable Management can be accounted for by the independent variables included in the model. Similarly, the R² value for Environmental Stewardship is .973, indicating that 97.3% of the variance in Environmental Stewardship is explained by the model. These high R² values suggest that the independent variables are highly effective in predicting the outcomes of Sustainable Management and Environmental Stewardship. In research terms, these results demonstrate a robust fit for the models, implying that the included predictors are very good at explaining the variability in these dependent variables.

Discussion

The study presented multiple consequences and is the first to investigate the relationship and beneficial effect of Green Leadership Communication on Sustainable Management and Environmental Stewardship. The study analyzed, provides empirical evidence for the suggested findings that Green Transformational Leadership perceives employee's perception of green transformational leaders in guiding. According to Fredrickson's broaden-and-build theory of

positive emotions, people that are surrounded with supportive leaders are tagged with positivity that results to conformity of conduct and views. On the other hand, in groups, people who work as a team, prove to be well-behaved in a normal way regularly_ (Stewart, 2010). As the theory suggests, positive emotions create assets for social relationships (Vacharkulksemsuk & Fredrickson, 2013), so, coworkers also become inclined to merge into this new positive atmosphere. Besides, the theory prescribes on how the members react in the same manner and demonstrate the same team resilient level (Alola & Alola, 2018). Thus, while attaining the research objectives of the study, the model was developed and validated by filling the gap drawn from existing literature (Mittal & Dhar, 2016). Following the reasoning for the broaden-and-build theory, since it was established that GLC has a significant positive correlation with SE therefore support was given to H1. Also, GLC has a positive relationship with SM hence supporting H2. Comparing the findings of the study with the JD–R theory as expounded by Demerouti and Bakker (2006), the following sheds light on the relationship between these variables and the reasons for work engagement. Green leadership communication facilitates the learning and development of the employees (Bakker and Demerouti, 2008) and that is why employees are engaged in organizational activities and environmental factors. Thirdly, empirical evidence indicates that SM is positively related to ES thus, supporting H3.

Table No 05: SEM Test Results

Hypothesis testing	SE	CR	P value	Results
Green Leadership and Communication- GLC	0.645	0.751	0.00	Supported
Sustainable Environment- SE	0.677	0.662	0.00	Supported
Environmental Stewardship - ES	0.669	0.583	0.00	Supported

Abbreviations: Std est, standardized estimate; SE, standard error; CR, critical ratio; GLC, Green Leadership and Communications, SE, Environmentally Sustainable ES, Environmental Stewardship

The structural equation modeling (SEM) test results for the constructs of Green Leadership and Communication (GLC), Sustainable Management (SM), and Environmental Stewardship (ES) are presented in Table 4. Each construct was found to be statistically significant with a p-value of 0.00. For GLC, the standard error (SE) was 0.645 and the critical ratio (CR) was 0.751, supporting the hypothesis that GLC is a significant factor in the model. Similarly, SE showed a standard error of 0.677 and a critical ratio of 0.662, while ES had a standard error of 0.669 and a critical ratio of 0.583, both also supporting their respective hypotheses. These results demonstrate that GLC, SE, and ES are significant constructs in understanding the dynamics of sustainable practices and environmental leadership. The statistically significant critical ratios and p-values affirm the importance of these constructs in the model.

Practical implications

The findings of this study have significant consequences for hotel managers. First, green transformational leaders organize positive change, energize, and have a zeal for their followers, as well as assist in bringing the followers together (team) to ensure the group's success. Previous research has shown that transformative leadership improves group performance (Buil et al., 2019; García-Guiu et al., 2016). Second, most hotel visitors limit their hotel options to those who practice green living (Doppelt, 2017). It demonstrates that the effective practice of becoming would boost employees' commitment to attitudes that are trending toward sustainability. Training entails creating awareness of what has to be done since green transformational leaders encourage the employees, the effects of climate change which is occasioned by pollution of the environment could also be presented to the employees so that activities could be directed towards caring for the environment (Iraldo et al., 2017, Alola et al., 2019). Also, achieving a state where employees' minds are geared towards meeting environmental sustainability is an added advantage to the organization.

Limitations and further research

As a result of the cross-sectional methodology used in this study and the data collection from Turkey's hotel business, considerable caution should be exercised when extrapolating the findings. A longitudinal approach might make it possible to examine and clarify the relationships between the variables in greater detail. Further research can also be conducted in other businesses that are more impacted by environmental factors. The second part of this study looks at the impact of GLC on Sustainable Management and environmental stewardship. Looking into additional research that can confirm the effect of GTL on the four components of psychological capital is one aspect of psychological capital resilience. Thirdly, based on the theories proposed by Demerouti & Bakker (2006) and Fredrickson (2001) and building on the research conducted by Singh et al. (2020) and Li et al. (2020), GCL has produced some outcomes, including green work involvement, green corporate responsibility, and green social adjustment. This argument has been made in the past, but official research on the subject has not been conducted in the hotel business. The effect of these variables on GLC is therefore concluded and suggested.

Appendix A Research Instrument

Variables	Constructs	Items
		<ol style="list-style-type: none"> 1. Prioritizes clear and honest communication about environmental practices and impacts. 2. Promotes and supports sustainable practices and environmental stewardship. 3. with diverse stakeholders to build consensus and drive sustainability efforts. 4. Raise awareness and educate others on environmental issues and sustainable behaviors. 5. Embraces new ideas and technologies to enhance
	Green Communication Leadership	

Sustainable Management

- sustainability and adapt to changes.
6. Sustainable management focuses on long-term goals rather than short-term gains, considering the impact on future generations and the environment.
 7. Efficient use of resources, including energy, water, and raw materials, is a cornerstone of sustainable management. This involves reducing waste and optimizing resource utilization.
 8. Involving stakeholders, including employees, customers, suppliers, and the community, ensures that diverse perspectives are considered and that the management practices align with broader social and environmental goals.
 9. Sustainable management requires ongoing assessment and improvement of practices, incorporating new technologies and methods to enhance sustainability performance.
 10. An integrated approach considers the interconnections between economic, environmental, and social factors, ensuring that decisions support overall sustainability objectives.

Environmental Stewardship

11. The responsible management and use of natural resources to prevent depletion and maintain ecological balance. This includes protecting ecosystems, wildlife, and natural habitats.
12. Implementing practices and technologies to reduce or eliminate the release of pollutants into the environment, thus minimizing air, water, and soil contamination.
13. Adopting methods and processes that do not harm the environment and can be maintained over the long term. This includes sustainable agriculture, forestry, fishing, and energy use.
14. Actively working to restore degraded ecosystems and habitats to their natural state, often through reforestation, wetland restoration, and soil rehabilitation.
15. Promoting environmental education and awareness among individuals, communities, and organizations to foster a culture of respect and responsibility towards the environment.

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