



Research Article

The mediating role of green thinking in the effect of green transformational leadership on organizational citizenship behaviour directed towards the environment

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Abstract

Purpose: The present study investigates the mediating role of green thinking in the relationship between green transformational leadership (GTL) and organizational citizenship behaviour directed towards the environment (OCBE) in the hospitality sector.

Design/methodology/approach: Data were collected from 355 employees working in 3-, 4-, and 5-star hotels located in Mardin, Diyarbakır, and Batman. A quantitative research design was employed using validated scales for GTL, GT, and OCBE. The study utilized a structured questionnaire based on a five-point Likert scale distributed to employees selected through judgmental sampling from hotel businesses operating in the selected provinces. The collected data were analysed through confirmatory factor analysis (CFA) to evaluate the validity and reliability of the measurement model, followed by structural model analysis to test the proposed hypotheses and the mediating role of green thinking.

Results: The findings indicate that GTL significantly enhances both GT and OCBE among employees. Furthermore, GT holds a mediating role in the effect of GTL on OCBE.

Discussion: These results suggest that environmentally oriented leadership fosters not only pro-environmental attitudes but also voluntary sustainability-oriented actions in the workplace. The study contributes to the organizational behaviour and green management literature by empirically demonstrating how cognitive variables, such as green thinking, bridge leadership and environmental citizenship. It may also offer practical implications for hotel managers by highlighting the strategic importance of cultivating green leadership practices and promoting environmental awareness. The research is contextually significant as it focuses on a region and sector where such studies are limited. Future studies are recommended to explore other mediating variables and to replicate the model in different cultural and organizational contexts.

Keywords: Green Transformational Leadership, Green Thinking, Environmental Citizenship, Sustainability

Introduction

Amid growing global awareness of environmental degradation, increasing attention has been directed toward the ecological implications of decisions and initiatives undertaken by individuals, communities, and organizations. Particularly over the past decade, this issue has evolved into a shared concern among policymakers, academic researchers, and institutional actors. In the context of escalating environmental crises, including global climate change, the natural resource depletion, and the rapid loss of biodiversity, the active involvement of organizations in fostering environmental sustainability has become not only necessary but also strategically vital (Le et al., 2024). Managers can enhance the environmental performance of their organizations by promoting employees' environmental responsibilities through their own attitudes, behaviours, and strategic decisions. In this context, leaders adopting such practices are referred to as "Green Transformational Leaders" (GTL), and they are increasingly regarded as critical assets for achieving

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environmental sustainability. Considering the severity of current environmental challenges, it is essential that this leadership style is thoroughly investigated, systematically developed, and institutionally supported.

Recent international studies have further highlighted that environmentally oriented leadership styles significantly contribute to strengthening employees' environmental engagement, green creativity, and voluntary sustainability-oriented workplace behaviours, particularly in environmentally sensitive sectors such as hospitality and tourism (Öğretmenoğlu et al., 2022; Liu & Yu, 2023). Additionally, contemporary sustainability research pinpoints that leadership-driven environmental responsibility and pro-environmental employee behaviours hold central themes in organizational behaviour literature due to their crucial role in supporting long-term environmental performance and sustainable organizational transformation (Wu et al., 2025). In spite of this growing international interest, studies investigating the cognitive mechanisms underlying the relationship between green transformational leadership and environmentally responsible employee behaviour remain relatively limited, especially in the context of developing countries and the Turkish hospitality sector. Thus, the mediating role of green thinking has not been sufficiently explored in explaining how environmentally responsible leadership practices encourage employees to engage in voluntary organizational citizenship behaviours directed toward the environment.

Scientists in the fields of sustainable development and organizational behaviour have increasingly focused on the roles that the leaders play in fostering employees' organizational citizenship behaviour directed towards the environment (OCBEs). Prior studies indicate that green intrinsic motivation and green transformational leadership (GTL) are significant variables influencing workers' environmentally responsible behaviours (Kerse et al., 2021; Temminck et al., 2015). In spite of being a subject of international academic interest for the past two decades, GTL has received limited scholarly attention in Türkiye. Therefore, examining existing scientific studies on this leadership style holds substantial potential for informing national-level policy development and decision-making processes. In this context, organizational citizenship behaviours directed towards the environment (OCBEs) refer to discretionary actions undertaken by employees that exceed their formal job duties and are aimed at enhancing the organization's environmental performance (Akyürek et al., 2023). Among the various individual and organizational factors influencing these behaviours, leadership styles and environmental cognition are particularly prominent. GTL is characterized by the capacity to inspire employees toward achieving environmental goals and to foster an organization-wide culture of environmental awareness through a shared vision. Empirical studies in the literature have demonstrated that GTL holds a critical role in shaping employees' environmental attitudes and behaviours (Le et al., 2024). Additionally, the concept of green thinking—which reflects individuals' levels of environmental awareness and concern—is also considered a key variable in understanding pro-environmental workplace behaviours.

In the current research, the effect of Green Transformational Leadership (GTL) on organizational citizenship behaviour directed towards the environment (OCBE) and the role of mediation of green thinking in this link are investigated. The current research investigation was conducted using data gathered from hotel workers that work in hotel businesses located in the provinces of Mardin, Diyarbakır, and Batman. The study's main goal is to examine the level to which hotel employees associate their voluntarily adopted environmentally friendly practices with green thinking and green leadership, thereby offering contributions to the literature that are both theoretical and practical. Given that the hospitality sector is inherently in close engagement with the natural environment due to the nature of its operations, analysing green leadership practices and the environmental sensitivity of employees within this sector holds particular significance.

Figure 1. Research Model

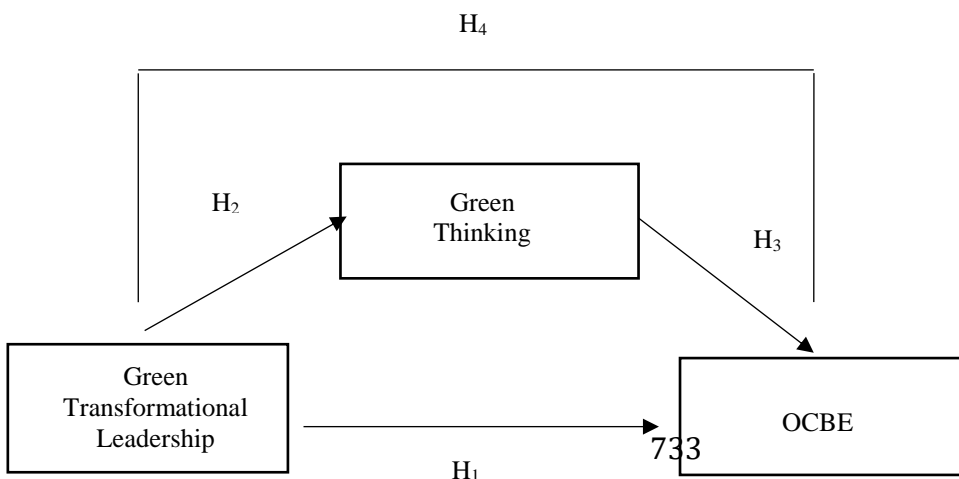


Figure 1 illustrates the theoretical structure developed to investigate the relationships among green thinking, green transformational leadership, and environmental organisational citizenship conduct. This model attempts to explore how leadership practices prioritising environmental values influence employees' pro-environmental attitudes and behaviours within organisational contexts. By integrating the concept of green thinking as an intermediary construct, the model offers a holistic perspective on environmentally responsible actions in the workplace. It reflects a systems-oriented approach to understanding how leadership and individual cognition interact to support environmental sustainability in organisations, particularly in sectors closely connected to the natural environment, such as hospitality.

Literature Review

Green Transformational Leadership (GTL)

Green transformational leadership (GTL) alludes to a style of leadership that inspires and motivates workers to pursue the objectives of environment, fosters environmentally responsible behaviours, and contributes to the development of a sustainable environmental vision at the organisational level (Chen & Chang, 2012). This leadership approach is derived from the recontextualization of the four essential components of transformative leadership are intellectual stimulation, individualized consideration, inspiring motivation, and idealized influence within an environmental framework (Bass & Avolio, 1994; Kerse et al., 2021). In this regard, GTL underscores that leaders should not only articulate environmental values in discourse but also embody and model these values through their actions, thereby setting behavioural standards that encourage similar engagement among employees.

Also, the current international literature has increasingly expanded the theoretical and empirical scope of green transformational leadership by emphasizing its multi-level influence on sustainability outcomes. Thus, recent studies underline that GTL not only shapes individual employee behaviour but also contributes to organizational sustainability capacity through knowledge sharing and environmental learning mechanisms (Fu et al., 2020). Similarly, Jafri et al. (2019) demonstrate that GTL holds a key role in fostering employees' green creativity, particularly when supported by organizational environmental commitment and supportive HRM (Human Resource Management) practices. In addition, Hameed et al. (2025) argue that the integration of green leadership with sustainable human resource management practices significantly enhances firms' overall environmental performance. These findings indicate that GTL is increasingly conceptualized not only as a leadership style but also as a strategic organizational capability embedded in sustainability-oriented systems.

The hospitality sector directly interacts with the natural environment in terms of its activities, which makes green leadership practices even more vital in the sector. The role of green transformational leaders is of strategic significance, especially with respect to managing environmental impacts and establishing a sustainable tourism approach. These leaders increase employees' environmental awareness, make environmentally sensitive behaviours as an organisational norm and encourage voluntary participation in sustainable practices (Mittal & Dhar, 2016). Studies on GTL reveal strong findings that this leadership style boosts organisational environmental performance, strengthens employees' environmental attitudes and encourages green innovation (Li et al., 2021; Robertson & Barling, 2017; Singh, El-Kassar, Herzig, & Ritz). However, evaluating this leadership style only with its positive effects may be limiting. As a matter of fact, it should not be ignored that if environmental expectations are overloaded in the organisation, negative effects such as role conflicts or environmental fatigue may arise. Because of this, it is essential to assess the GTL by considering the context in which it is applied and its compatibility with the individual values of the employees.

Green Thinking (GT)

Green thinking (GT) is a motivational and cognitive approach that increases people's consciousness of environmental values, enables them to develop more sensitive attitudes towards nature and leads them to internalise sustainable behaviours (Largo-Wight et al., 2015). This orientation provides a comprehensive conceptual framework examining the individual's relationship with the environment not only at the behavioural level but also in terms of underlying values and beliefs.

Within this framework, showing sensitivity to environmental problems, producing nature-friendly alternatives and advocating sustainable lifestyles stand out as basic components (Stern, 2000). It is observed that individuals with high level of green thinking are integrated into environmentally friendly practices more quickly, especially in business life, and voluntarily contribute to such practices. This feature enables a positive harmony between organisations' environmental strategies and individual motivations. Increased green thinking orientation of employees directly contributes to the improvement of not only individual environmental

behaviours but also corporate environmental performance. In the organisational context, the ability of green transformational leaders to change the environmental attitudes of their workforce and mediate their internalisation of environmental values is considered as a decisive factor in the development of this way of thinking (Le et al., 2024; Nurfitriyana & Muaf, 2023). By transferring environmental values to the behavioural level, these leaders undertake not only a managerial but also a pedagogical function. Assisting in the growth of employees' environmental consciousness, GT supports the establishment of a green thinking culture at the corporate level and ensures the continuity of environmentalist attitudes. Also, recent studies conducted in 2025 emphasize that green thinking is increasingly understood as a dynamic cognitive structure shaped by continuous interaction between environmental awareness, organizational learning, and sustainability-oriented leadership practices (Zhang et al., 2025). In addition, Li et al., (2025) highlight that green cognitive orientation significantly predicts employees' proactive environmental behaviours, particularly when supported by organizational sustainability culture. Similarly, Gao et al. (2026) indicate that green thinking operates as a mediating psychological mechanism through which environmental leadership translates into long-term sustainable workplace behaviour.

Thus, green thinking is not only an individual preference or tendency, but also the basis of the mental transformation necessary for the reconstruction of organisational culture on the axis of sustainability. Therefore, the promotion of green thinking should be addressed holistically, both at the individual level and with leadership and organisational structures.

Organizational Citizenship Behaviour Directed Towards the Environment (OCBE)

Organizational citizenship behaviour directed towards the environment (OCBE) pertains to employees' voluntary actions that are not part of their formal job descriptions but contribute to the organisation's environmental objectives (Yuriev et al., 2020). These behaviours are typically performed without expecting financial compensation and play an indirect yet significant role in enhancing environmental awareness within the organisation. Examples include conserving energy, supporting recycling initiatives, encouraging the use of ecologically beneficial methods, and raising colleagues' awareness of environmental issues, all of which fall within the scope of OCBE.

OCBE enables organisations to implement their environmental sustainability strategies not only at the management level but also with a sense of responsibility extending to all employees. In this context, the contribution of voluntary behaviours exhibited with environmental sensitivity to corporate performance is not only limited to the achievement of environmental goals; it also strengthens other important factors such as employee engagement, intrinsic motivation and sense of organisational belonging. The existing literature indicates that various individual and organisational factors hold a role in the emergence of OCBE. Leadership style, the importance given to the environment by the organisational climate, individual environmental values and employees' attitudes are determinant in shaping these behaviours (Daily et al., 2009; Largo-Wight et al., 2015). At this point, especially green transformational leadership stands out as an effective force which directs employees to take environmental responsibility. The fact that leaders represent environmentalist values and put these values into action consistently contributes to the dissemination of OCBE by encouraging voluntary participation among employees. Hence, employees' developing a strong understanding of environmental concerns and supporting this awareness with voluntary actions triggers the transformation of organisational culture towards environmental sustainability, not just on a personal level but also on an organisational one. Systematic encouragement of OCBE is considered as a strategic necessity for the success of organisations' long-term environmental policies.

Furthermore, OCBE is strongly influenced by leadership-induced environmental commitment and psychological empowerment mechanisms, which together enhance employees' willingness to engage in extra-role green behaviours (Jing et al., 2026). In addition, Alwheshi et al. (2024) conceptualize Organizational Citizenship Behavior for the Environment (OCBE) as discretionary and voluntary employee actions going beyond formal job requirements to support environmental sustainability within organizations, and OCBE is significantly strengthened when it is fostered by responsible and transformational leadership styles, as well as employees' harmonious environmental passion, thereby contributing to enhanced organizational environmental performance and the institutionalization of sustainable workplace practices. Similarly, building on the findings of Satriawan et al. (2023), organizational citizenship behaviour toward the environment (OCBE) is identified as a key determinant of enhanced environmental performance, as employees' voluntary green behaviours significantly contribute to strengthening organizational sustainability outcomes and fostering a culture of environmental responsibility within the workplace. Besides, Camacho et al. (2025) extend the

Theory of Planned Behaviour in the context of workplace energy-saving intentions by demonstrating that environmental knowledge and organizational culture hold a significant mediating role in shaping employees' pro-environmental behavioural intentions, highlighting that both cognitive awareness and institutional context are critical in translating attitudes into sustainable workplace actions.

As a result, it emphasises the significance of environmental organisational citizenship behaviour, green transformational leadership, and green thinking. Particularly, it is highlighted that green transformative leadership contributes to organisational sustainability by positively affecting employees' environmental behaviours. However, it is stated that research in this field focuses more on large enterprises and the environmental impacts of SMEs are not sufficiently examined (Le et al., 2024). This implies that greater attention should be paid in the future to green practices in SMEs. Moreover, there are different opinions on the effectiveness of the methods (rewards, punishments, etc.) used to encourage employees' green behaviours (Zibarras & Ballinger, 2011), which suggests the need to develop more effective motivational approaches.

Hypothesis Development

Green Transformational Leadership and OCBE

Green transformative leadership is regarded as a reflection of transformative leadership in which the leadership ability fully supports pro-environmental movements (Robertson and Barling, 2013, 177). Green transformative leadership is expressed as a leadership approach that provides support for the internalisation of the organisation's environmental objectives by employees, raises employees' understanding of environmental issues, adopts the leader as a role model for employees, and motivates employees to show environmental performances above expectations (Kerse et al, 2021: 1576). In other words, green transformative leadership prioritizes the organisation's or society's long-term sustainable development (Li et al., 2020: 3), and corporate environmental responsibilities (Omarova & Jo, 2022: 3). However, green transformative leadership draws attention to the ability to mobilise both the organisation and individuals within the scope of the vision of environmental sustainability (Abbas & Al Hasnawi, 2021: 2). In environmental terms, transformational green leaders provide their staff members a sense that environmental sustainability is important, valuable and a priority (Robertson & Barling, 2017a). Leaders with this quality are known as the leading force of environmental sustainability (Robertson & Barling, 2015b). In this context, green transformational leadership can draw an environmental perspective to their employees and encourage them to take part in environmental conservation initiatives (Robertson & Barling, 2017a; Chen et al., 2014). Green transformative leadership can help workers to exhibit environmentalist behaviours by contributing to their environmental sensitivity. In this direction, the following theory is put forth:

H1: Green Transformative Leadership owns a significant and favourable effect on environmental organisational citizenship behaviours.

Green Transformative Leadership and Green Thinking

In an organisational context, green transformative leadership is defined as an approach that increases the level of environmental performance of employees, motivates and inspires them for the environmental goals to be achieved (Robertson & Barling, 2013). In addition, green transformative leadership encourages the promotion of green behaviours such as green creativity, which involves the advancement of new ideas about green services and products, green processes or green practices considered as useful, new and unique (Chen & Chang, 2012). The Green Transformational Leader demonstrates attitude, inspirational motivation, individualized attention, and idealized inspirational appeal throughout these processes. Through intellectual stimulation, green transformative leaders improve workers' green sensitivity and environmental understanding, thereby motivating green and sustainable behaviours (Eide, Saether, & Aspelund, 2020). Green transformational leaders become role models by exhibiting charismatic influence and green behaviours to their employees and help their employees to increase their tendency to show green behaviours with their sustainable environmental sensitivity (Kim, Kim, Han, Jackson, & Ployhart, 2017). Green thinking (Knill, 1991a), which refers to the change in human interaction and perceptions with the environment, pinpoints that human beings are an integral part of the ecosystem and emphasises their responsibility to contribute to ecological sustainability (Knill, 1991b). Green thinking also involves being aware of the interconnectedness of the surroundings and how human activity affects the natural world (The Environmental Action Alliance, 2004). In addition, it supports creative solutions that minimise resource use, increase efficiency and minimise environmental footprints (Caldera et al., 2019; Verrier et al., 2014; Thanki et al., 2016). Individuals with strong green thinking capabilities demonstrate expertise in recognizing environmental challenges, developing

solutions, and validating them through innovative approaches. Their cognitive abilities enable them to transcend conventional patterns, positioning green thinking as a crucial element in innovation and sustainability initiatives (Ali et al., 2020; Akehurst et al., 2012; Begum et al., 2021; Jones, 2019; Wu et al., 2016). In this context, the following theory is put forth:

H2: Green transformative leadership positively affects workers' levels of green thinking.

Green Thinking and OCBE

Green thinking, involving individuals in environmentally friendly activities, is regarded as a cognitive process (Ali et al., 2020). It represents a distinct attribute of environmental greening, where people, who are environmentally conscious, show love and enthusiasm for and taking steps to protect the environment such as gardening, playing golf, and planting seeds (Caldera et al., 2019). Green thinkers with sufficient information about environmental problems are willing to address these problems from many different angles. Indeed, Biswas and Roy (2015) stated that thinkers of green take an active role in putting forward new ideas and techniques to save energy per unit by purchasing, recycling and reusing green products. In addition, according to Jones (2019), individuals with green thinking use green products more than those who are not green.

Organizational citizenship behaviour directed towards the environment (OCBE) was first introduced to the academic literature by Organ (1988) as a concept describing discretionary employee behaviours going beyond formal job requirements. It is also indicated that these behaviours are voluntary and not explicitly outlined in job descriptions, yet they hold a significant aspect in enhancing organisational effectiveness, continuity, and overall productivity. OCBE encompasses actions that employees undertake without expectation of formal rewards or recognition and for which they are not subject to disciplinary consequences if omitted. Such behaviours may include helping colleagues, demonstrating initiative, and adhering to organisational norms which facilitate a positive work environment. As highlighted by Tokgoz and Seymen (2013, p. 64), the significance of OCBE lies in its contribution to organisational functioning by fostering cooperation and social cohesion among employees, ultimately supporting organisational goals beyond formal task performance.

Besides, Employees' organisational behaviours towards the environment are of great significance at the corporate level due to their importance in terms of sustainability of the environment and its benefits on employees and the organisation. The achievement of environmental practices at the corporate level is closely related to the voluntary employees' pro-environmental actions (Unsworth et al., 2013). Therefore, it is considered that environmental organisational behaviour holds a significant contribution to corporate environmental sustainability. Environmental organisational citizenship behaviour, which is important and developing in the discipline of organisational behaviour, is defined as all the scalable behaviours and actions of employees related to environmental sustainability and contribute to it or harmed by it (Tian & Robertson, 2019). In this context, individuals with green thinking skills show environmental organisational citizenship behaviours at a higher level than other individuals. Therefore, the following theory is put forth:

H3: Green thinking positively and positively affects organisational behaviours towards the environment.

Mediating role of Green Thinking

Green transformative leadership's function in implementing, creating and following green environmental policies of organisations is significant (Lusiani, et al., 2020). Organisational greening is at the top of the priorities of green transformational leadership when it comes time to conduct business affairs (Mittal and Dhar, 2016). Green transformational leadership, by its very nature, fosters the development of environmentally focused teams by providing guidance, methods and inspiration, and the individuals in these teams make great efforts in order to fulfil the environmental objectives of their organisations (Wang, et al., 2018). Leaders with an eye toward the environment and strong environmental concerns have the capacity to influence employees' beliefs, attitudes, and perceptions, fostering in them a shared sense of commitment to this vision. Green transformational leadership helps with the advancement of a future that is sustainable by attributing meaning to green projects and their outcomes through expressive influence, intellectual stimulation, and the ability to inspire (Begum et al., 2022; Li et al., 2020).

For the effective implementation of green innovation and inventiveness, intermediary mechanisms have proved to be important. Intermediary mechanisms are instrumental for the shift to be successful in procedures and processes to bring about green innovation. Green transformational leadership enhances employees' sensitivity to environmental issues and facilitates the dissemination of green management philosophy within the organisation, and it also fosters motivation for efforts and innovative approaches aimed at transforming

current goods and manufacturing techniques (Singh et al., 2020). Thanks to green thinking, enterprises have found the opportunity to review the products they produce and the processes they go through while producing these products (Begum, et al., 2022). Workers’ environmental sensitivity and green thinking skills support them to design and develop more ecologically friendly goods (Ali, et al., 2020). Research also pinpoints that green transformational leadership influences workers’ belief systems, norms, values and visions of a world of green; therefore, employees tend to develop products in line with green productivity and green utilitarianism (Ahmeda, et al., 2020). Consequently, it is predicted that green transformative leadership may trigger green thinking in employees by creating an awareness of green aspirations and goals and that workers will be willing to participate in green productivity. In this context, the following theory is put forth:

H4: Green thinking mediates the association between green transformative leadership and environmental organisational citizenship behaviours.

Methodology

Data Collection and Instrumentation

In the current research study, facilities with Tourism Operation Certificates within the Ministry of Culture and Tourism were determined as the study area and 86 3-, 4- and 5-star hotels situated in three different provinces in the South-eastern Anatolia Region were primarily selected. A short list was created from the full list of relevant hotels, and a total of 20 hotels constituted the final sample of the study. The hotels were selected using a stratified sampling approach based on three cities (Diyarbakır, Batman, and Mardin). Within each stratum, hotels were randomly selected to ensure representativeness, while approximately equal numbers of hotels were included from each city to maintain a balanced distribution across the sample. In the selection of cities, the researchers considered the ease of access to the locations, the popularity of the destinations in terms of tourism movements and the fact that they represented the central regions where most of the hotels were located. The purpose of selecting hotels from various cities within the sample frame was to illustrate variability in population size, socioeconomic level and geographical location (Kim and Kim, 2008). In the current study, nearly data of equal amounts were included from each destination using the judgmental sampling method. Destinations were shared among the research team and detailed information was provided to the hotel businesses within the scope of the study and a material package was delivered to the hotels that volunteered to participate in the study by the researchers. Each package included 30 employee surveys. Businesses were revisited and surveys were collected over a two-week period. A total of 355 healthy data were analysed. Numerous researchers have recommended that a minimum sample size of 100 is generally adequate to ensure convergence in statistical analyses (Ahmed et.al., 2020). Anderson and Gerbing (1984) propose that 150 as a sample size is sufficient for achieving convergence. Based on these recommendations, the sample size used in this investigation is deemed appropriate for producing reliable parameter estimates. The study’s data were gathered using a structured questionnaire for a survey. The instrument employed a five-point Likert scale, ranging from (1) "strongly disagree" to (5) "strongly agree." The survey questionnaire is composed of questions relating to three scales. Green transformational leadership questionnaire consisted of 6 statements was measured from the study of Kerse et al., (2021). The questionnaire for measuring green thinking was assessed using four items from Begum et al., (2022). Organizational citizenship behaviour directed towards the environment (OCBE) was evaluated by using seven items from the study of Temminck et al., (2015).

Data Analysis and Results

Demographic Characteristics of the Sample

A total of 355 usable questionnaires were collected from 3-, 4- and 5-star hotel enterprises within the scope of green thinking, green transformative leadership and organizational citizenship behaviour directed towards the environment. Table 1 highlights the sample’s demographic characteristics.

Table 1. Study Sample Profile (N=355)

Sample Profile	Frequency	Percentage
Gender	Male	211
	Female	144
Age	18-29	44.2
	30-39	38.9
	40-49	13.5
	50 and above	3.4

Marital status	Married	180	50.7
	Single	175	49.3
Education	Elementary School	13	3.7
	High school	58	16.3
	Associate Degree	206	58
	Graduate school	72	20.3
	Postgraduate	6	1.7
Department	Frontdesk	60	16.9
	Service	82	23.1
	Kitchen	70	19.7
	Administrative Offices	143	40.3

Measurement Model

Confirmatory Factor Analysis (CFA) was carried out to assess the computation model, and the focus was on convergent validity, construct reliability, and discriminant validity. Construct reliability was investigated employing Cronbach's alpha (CA) and composite reliability (CR), which both ought to be above 0.70 cut off point recommended by Fornell and Larcker (1981). As presented in Table 2, the CA and CR values of all constructs are above the criterion of 0.70, showing satisfactory construct reliability.

To determine convergent validity, average variance and external loadings extracted (AVE) were considered according to the criteria recommended by Hair et al. (2017). These criteria suggest that external loadings ought to be bigger than 0.70 and AVE values should exceed 0.50. Table 2 illustrates that all items possess loadings above 0.70 and AVE values exceed 0.50, thus confirming the validity of convergence.

For discriminant validity, as stated by Hair et al. (2010), the maximum shared variance (MSV) for each construct should be less than its AVE. Also, according to the Fornell-Larcker criterion, the square root of the AVE of each construct should be greater than its correlations with other constructs (Fornell and Larcker, 1981). Table 3 shows that MSV values are smaller than the AVE values for all constructs and each construct's discriminant validity is confirmed when its square root of the AVE is greater than its correlations with other constructs.

Lastly, the measurement model's the goodness of fit was also evaluated. CFA results demonstrated that the model provided a good fit ($\chi^2/df = 329.197/115 = 2.863 < 5$; RMSEA = 0.073 < 0.08; CFI = 0.935 > 0.90; TLI = 0.923 > 0.90; and GFI = 0.901 > 0.90) (Hair et al., 2010).

Table 2. Measurement Model Results

Construct	Factor loading	Cronbach's alpha	CR	AVE
Green Transformational Leadership (GTL)				
GTL1	0,816	0.912	0.912	0.635
GTL2	0,774			
GTL3	0,821			
GTL4	0,834			
GTL5	0,761			
GTL6	0,773			
Green Thinking (GT)				
GT1	0,599	0.844	0.827	0.549
GT2	0,702			
GT3	0,833			
GT4	0,807			
Organizational Citizenship Behaviour Directed Towards the Environment (OCBE)				
OCBE1	0,504	0.836	0.847	0.447
OCBE2	0,698			
OCBE3	0,671			
OCBE4	0,767			
OCBE5	0,777			
OCBE6	0,571			
OCBE7	0,650			

Table 3. Means, Standard Deviations, and Correlations of Variables

Construct	Mean	SD	1	2	3
1. GTL	3.47	0.93	.796		
2. GT	3.85	0.91	.441**	.740	
3. OCBE	3.66	0.75	.640**	.643**	.669

** : Correlation is significant at the 0.01 level (2-tailed).

Structural Model

The test result for hypothesis H1 shows that GTL is significantly and positively related to OCBE ($\beta = 0.450$, $p < 0.000$); therefore, H1 is supported. The findings for hypothesis H2 show that GTL increases employees' GT behavior ($\beta = 0.498$ $p < 0.001$); accordingly, H2 is confirmed. The test result for hypothesis H3 shows that a positive association between GT and OCBE exists ($\beta = 0.505$, $p < 0.000$); thus, H3 is supported. Finally, the findings regarding the test of the mediating effect of GT in the link between GTL and OCBE reveal that the indirect effect of GT is crucial ($\beta = 0.251$, 95% confidence interval [0.151; 0.362]); thus, hypothesis H4 was supported. Table 4 shows the overall structural model with path coefficient values.

Table 4. Structural Model Results

Hypothesis	Paths	Standardized path coefficients (β)	LB(BC)	UB(BC)	p	Results
H ₁	GTL → OCBE	0.450	0.309	0.592	***	Accepted
H ₂	GTL → GT	0.498	0.365	0.611	***	Accepted
H ₃	GT → OCBE	0.505	0.350	0.644	***	Accepted
H ₄	GTL → GT → OCBE	0.251	0.151	0.362	***	Accepted

GTL: Green Transformational Leadership GT: Green Thinking OCBE: Organizational Citizenship Behaviour Directed Towards the Environment *** $p < .000$

Discussion

This research study examined how green transformational leadership (GTL) have effects on employees' organizational citizenship behaviour directed towards the environment (OCBE), concentrating especially on the mediating function of green thinking (GT) in this relationship. Conducted within hotel businesses located in Mardin, Diyarbakır, and Batman, the research found that GTL has a positive and direct influence on OCBE. This outcome highlights the crucial importance of environmentally oriented leadership practices in creating employees' voluntary pro-environmental actions (Yuriev et al., 2020). Furthermore, the findings revealed that GTL enhances employees' levels of green thinking, which in turn significantly and positively affects OCBE. As widely acknowledged in the literature, cognitive processes and environmental awareness among employees are essential drivers of pro-environmental action (Unsworth et al., 2013). In conclusion, the current investigation confirms that green thinking serves as a significant mediating mechanism in the association between GTL and OCBE.

These results significantly overlap with previous studies. Robertson and Barling (2013) emphasised the power of green transformational leadership to shape employees' environmental behaviours, while Begum et al. (2022) stated that green thinking serves as both a cognitive and motivational bridge in this process. In this context, in order to achieve environmental sustainability in organisations, not only managerial strategies but also employees' intellectual transformations are of great importance (Chen & Chang, 2012; Li et al., 2020). This situation reveals that ensuring cultural and cognitive transformation through leadership is a strategic necessity for organisations to achieve sustainability goals (Tian & Robertson, 2019).

Theoretical Implications

From a theoretical perspective, the study contributes to the literature by integrating green transformational leadership, green thinking, and OCBE within a single explanatory model, thereby extending previous research that has mostly examined these constructs in isolation. By highlighting the mediating role of green thinking, the study responds to the need for a more comprehensive understanding of the cognitive mechanisms through which leadership influences environmental behaviours.

Practical Implications

The research findings show that some strategic implications can be made especially for organisations operating in the hospitality sector. First, when managers internalise environmental values and reflect these values through their behaviours, they foster employees' voluntary engagement in environmentally responsible practices. Moreover, the widespread implementation of training programs, incentive mechanisms, and awareness-raising initiatives that promote green thinking within employee psychology plays a crucial role in sustaining organisational-level environmental citizenship behaviours. Such initiatives not only ensure compliance with environmental standards but also encourage employees to take initiative and become actively involved in environmental improvement processes (Tokgöz & Seymen, 2013). In conclusion, green transformational leadership and green thinking emerge as essential managerial instruments for organisations pursuing environmental sustainability. Addressing these two components in an integrated manner offers a strategic framework for environmental transformation at both individual and organisational levels. This integrated perspective equips managers with actionable strategies to foster sustainable business environments and provides scholars with a valuable foundation for further research in the domains of green management and organisational behaviour. From a practical perspective, the findings suggest that organizations should not rely solely on leadership practices but should also invest in structured interventions aimed at strengthening employees' environmental cognition, such as sustainability training programs and value-based organizational policies. Such an integrated approach can enhance the effectiveness of environmental strategies, particularly in hospitality organizations where sustainability performance is closely linked to daily operational practices.

Limitations and Future Research Directions

The current study has some certain limitations. The sample was restricted to hotel businesses located in the provinces of Mardin, Diyarbakır, and Batman, which limits the findings' generalizability. Future research is possible to focus on various sectors and regions to test the validity of the model in diverse organizational and cultural contexts. Furthermore, as this study employed a cross-sectional design, longitudinal research is suggested to better examine how the association between variables evolve over time. Along with green thinking, studies that would be conducted in the future could investigate other potential mediating or moderating variables; for instance, perceived organizational support, environmental justice, psychological capital, or personal environmental norms, to develop the explanatory power of the results. Finally, this research relied on self-reported measures based on employee perceptions. Future research could adopt objective organizational environmental performance indicators such as energy and water consumption, waste volume, or carbon footprint to provide a more comprehensive and practice-oriented evaluation.

Ethical Statement: Ethical approval for the scale used in this study was obtained from the Ethics Committee of Batman University, with decision number 2025/04-10, taken at the meeting held on 17.04.2025 (meeting number: 2025/04, decision order: 36). Should any such circumstance be identified, the Journal of Gastronomy, Hospitality and Travel (JOGHAT) shall bear no responsibility. Full responsibility shall lie solely with the author(s) of the manuscript.

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