GREEN ORGANIZATIONAL LEARNING AND SUSTAINABLE WORK BEHAVIOR IN TOURISM AND HOTEL ENTERPRISES: LEVERAGING GREEN INTRINSIC MOTIVATION AND GREEN TRAINING

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Abstract: The global movement towards sustainability is gaining momentum. Therefore, the study investigates the impact of green organizational learning (GOL) on sustainable work behavior (SWB), examining the mediation roles of green intrinsic motivation (GIM) and green training (GT). The study used PLS-SEM technique and WarpPLS statistical software 7.0 to evaluate 475 replies from full-time employees at Saudi's five-star hotels and travel agencies. Findings revealed that GOL positively affects employees' SWB, GIM, and GT. In addition, GIM and GT positively affect employees' SWB and mediate the GOL→SWB relationship. The study provides new insights into how emerging concepts like GOL, GT, and GIM simultaneously predict the SWB within tourism and hospitality enterprises. The study also has the potential to contribute to Social Cognitive Theory. Furthermore, the study emphasizes the importance of green organizational learning in the tourism and hospitality sector for practical applications.

Keywords: Green organizational learning, Sustainable work behavior, Green intrinsic motivation, Green training, Tourism and Hotel Enterprises

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INTRODUCTION

In recent years, there has been a growing acknowledgement of the significance of sustainability in organizational practices across various industries. As a result, organizations have actively embraced strategies for green organizational learning to enhance their environmental performance and foster sustainable work behavior among employees (Kiesnere and Baumgartner, 2019; Ali et al., 2023). Green organizational learning entails the acquisition, dissemination, and application of knowledge and skills pertaining to environmental sustainability within an organization. This encompasses various activities such as training programs, knowledge sharing, and the cultivation of environmental awareness and comprehension (Özgül and Zehir, 2023; Cui et al., 2023). Green organizational learning plays a crucial role in enhancing green intrinsic motivation, green training, and sustainable work behavior by establishing a supportive and adaptable environment that fosters continuous improvement and innovation toward sustainability objectives. Organizational learning entails the collective acquisition, sharing, and application of knowledge and insights within an organization. When organizations prioritize green organizational learning, they actively cultivate a culture of sustainability and provide platforms for employees to exchange ideas, experiences, and best practices concerning environmental responsibility. This collaborative learning experience not only reinforces green intrinsic motivation by reinforcing a sense of purpose and shared values but also facilitates the development and implementation of effective green training programs (Cui and Wang, 2022).

By participating in ongoing learning initiatives, employees can continuously enhance their skills and knowledge, staying updated on emerging sustainability trends and technologies (Saha et al., 2016). Consequently, green organizational learning empowers employees to make well-informed decisions, take ownership of their role in promoting sustainability, and actively engage in sustainable work behaviors. Additionally, it fosters collaboration, creativity, and innovation in finding environmentally friendly solutions, propelling the organization towards its sustainability objectives (Shuhua and Kanokporn, 2023; Khairy et al., 2024; Velwin et al., 2024). Ultimately, the significance of green organizational learning lies in its capacity to establish a comprehensive and synergistic approach to sustainability, where green intrinsic motivation,

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green training, and sustainable work behavior are interconnected and mutually reinforcing, thereby cultivating a more sustainable and environmentally responsible organization (Al-Romeedy and Mohamed, 2022).

Green intrinsic motivation plays a vital role in fostering sustainable work behavior by cultivating a genuine and enduring commitment to environmental sustainability among individuals. When employees are intrinsically motivated to act in an environmentally responsible manner, their actions are driven by personal values, beliefs, and a sense of purpose rather than external rewards or pressures. This intrinsic motivation instills a higher level of engagement and dedication to sustainable practices, as individuals genuinely care about the impact of their actions on the environment (Li et al., 2020; van Dijk, 2021). Green intrinsic motivation empowers employees to take ownership of their role in advancing sustainability, resulting in increased proactivity, creativity, and innovation in seeking environmentally friendly solutions (Hu et al., 2022). Furthermore, green intrinsic motivation fosters collaboration and the exchange of knowledge among employees, establishing a positive work environment that promotes sustainable work behavior as a collective endeavor. Ultimately, the significance of green intrinsic motivation lies in its capacity to embed sustainability as a fundamental value within organizations, fostering enduring commitment and driving positive change towards a greener and more sustainable future (Norton et al., 2015; Wang et al., 2024).

Moreover, green training plays a crucial role in enhancing sustainable work behavior by equipping employees with the necessary knowledge, skills, and awareness to actively participate in environmentally responsible practices (Pinzone et al., 2019). Through targeted training programs, employees acquire a deeper understanding of sustainability principles, environmental challenges, and the potential impact of their actions on the planet. Green training not only imparts technical knowledge regarding energy efficiency, waste reduction, and eco-friendly practices but also fosters a sense of environmental consciousness and accountability. By providing employees with the essential tools and information, green training empowers them to make well-informed decisions and take proactive steps towards sustainability in their everyday work (Tu et al., 2023). It nurtures a culture of environmental stewardship, cultivating a collective dedication to sustainable practices across the organization. Additionally, green training promotes ongoing learning and adaptation, enabling employees to remain updated on emerging sustainability trends and optimal approaches. Ultimately, the significance of green training lies in its capacity to bridge the divide between awareness and action, facilitating meaningful and enduring behavior change towards a more sustainable workplace, and contributing to a greener future (Ahmad et al., 2023; Amrutha and Geetha, 2021).

Comprehensive studies specifically examining the correlation between green organizational learning and sustainable work behavior within the context of tourism and hospitality businesses are currently lacking. Existing research may have primarily concentrated on other industries or failed to delve into the specific mechanisms through which green organizational learning impacts sustainable work behavior. Although it is likely that green organizational learning influences sustainable work behavior, further investigation is required to understand the underlying mechanisms behind this relationship. A potential research gap lies in the limited understanding of the mediating role played by green intrinsic motivation. Conducting research that explores how green intrinsic motivation mediates the connection between green organizational learning and sustainable work behavior would yield valuable insights. Another area of research that requires further exploration is the limited investigation into the mediating role of green training. Understanding how green training mediates the relationship between green organizational learning and sustainable work behavior in the context of tourism and hospitality businesses is significant. Examining the extent to which green training acts as a mediator would enhance our understanding of the underlying mechanisms involved in this relationship, leading to a more comprehensive understanding of the topic.

In light of the identified research gaps, the objective of this study is to investigate the impact of green organizational learning on green intrinsic motivation, green training, and sustainable work behavior. Additionally, the study seeks to evaluate the influence of green intrinsic motivation and green training on sustainable work behavior. Furthermore, the study aims to explore the mediating roles played by green intrinsic motivation and green training in the relationship between green organizational learning and sustainable work behavior. By addressing these objectives, this study will not only contribute to the academic understanding of the connections between green organizational learning, green intrinsic motivation, green training, and sustainable work behavior but also have practical implications for tourism and hospitality organizations. The study's findings can assist organizations in formulating effective strategies to foster sustainable work behavior among their employees and contribute to the overall sustainability of the tourism and hospitality sector.

Literature Review and Hypotheses Development
Social Cognitive Theory (SCT)

Social Cognitive Theory (SCT) offers valuable insights into the cognitive processes, learning mechanisms, and motivational factors that can impact individuals' involvement in sustainable work behavior (Font et al., 2016; Guo et al., 2022). SCT highlights the significance of observational learning, which involves individuals learning by observing and imitating others. Within an organization, employees have the opportunity to observe and learn from sustainability role models (Krcmar, 2019; Saleem et al., 2021). Green training programs can facilitate such opportunities by enabling employees to observe and learn from experts or colleagues who exemplify sustainable work behavior. Through these observations, employees can acquire knowledge, skills, and attitudes pertaining to sustainability, thereby influencing their own behavior (Chaudhary, 2020; Saleem et al., 2021).

Self-efficacy holds a central position within SCT (Johnston et al., 2019) and refers to an individual's belief in their capability to effectively perform specific actions to achieve desired outcomes (Zulkosky, 2009). In the context of sustainable work behavior, the provision of green training programs can bolster employees' self-efficacy by equipping them with the necessary knowledge, skills, and resources. Through these training experiences, employees can develop a sense of

competence and confidence in their ability to engage in sustainable work behavior. Higher levels of self-efficacy have been linked to increased motivation, persistence, and performance in sustainable work behavior (Abdelhamied et al., 2023).

Within SCT, the significance of reinforcement and feedback in shaping behavior is emphasized. Positive reinforcement involves offering rewards or recognition for desired behavior, while feedback entails providing individuals with information regarding their performance (Stajkovic and Luthans, 2003; Schunk and Usher, 2012). In the context of sustainable work behavior, green training programs can integrate reinforcement and feedback mechanisms. For example, employees who consistently exhibit sustainable practices can be acknowledged or rewarded. Feedback mechanisms can furnish employees with information about their performance, progress towards sustainability objectives, and areas where improvements can be made. By incorporating reinforcement and feedback, organizations can bolster and sustain employees' motivation and engagement in sustainable work behavior (Abdelhamied et al., 2023).

The effect of green organizational learning on sustainable work behavior

Green organizational learning pertains to the organizational process of acquiring, interpreting, and disseminating knowledge concerning environmental sustainability. It involves developing an understanding of environmental concerns, identifying sustainable practices, and implementing them within the organizational context. Green organizational learning encompasses a range of activities, including environmental training, knowledge sharing, and continuous improvement processes aimed at reducing the organization's environmental impact (Argote, 2012; Singh et al., 2020). On the other hand, sustainable work behavior refers to the actions and behaviors exhibited by individuals within an organization that contribute to environmental sustainability. This can encompass practices such as energy conservation, waste reduction, recycling, and the adoption of environmentally friendly work practices (Ciocirlan, 2017).

Green organizational learning encompasses the process of obtaining knowledge and developing awareness regarding sustainability issues, practices, and their consequences. By means of training programs, workshops, or information sharing, employees acquire a deeper comprehension of environmental challenges, the significance of sustainable practices, and their own role in attaining sustainability objectives. This heightened knowledge and awareness empower employees to actively participate in sustainable work behavior (Kordab et al., 2020; Chams and García-Blandón, 2019). The primary objective of green organizational learning initiatives is frequently to enhance employees' skills and competencies in the realm of sustainability. This can involve providing training on various topics such as energy conservation, waste reduction, sustainable procurement practices, or eco-design. By equipping employees with the requisite skills, organizations enable them to integrate sustainable practices into their everyday work routines and decision-making processes (Mishra, 2017; Al-Romeedy, 2019).

Green organizational learning plays a crucial role in cultivating favorable attitudes and values regarding sustainability. Employees who undergo training and education on sustainability subjects are more inclined to cultivate pro-environmental attitudes and a sense of responsibility towards sustainable work behavior. This alignment between individual values and the sustainability goals of the organization establishes a basis for employees to willingly engage in sustainable practices (Cebrián et al., 2013; Kordab et al., 2020). As well, green organizational learning fosters a culture of ongoing enhancement in sustainable work behavior (Achdiat et al., 2023; Zivanovic et al., 2023). As employees acquire fresh knowledge, skills, and best practices, they become more receptive to feedback, open to experimentation, and willing to adjust their behaviors in order to accomplish sustainability objectives. This mindset of continuous learning and improvement empowers employees to identify opportunities for innovation and fine-tuning in their sustainable work practices (Cameron and Green, 2019). Consequently, the following hypothesis is proposed:

H1: Green organizational learning positively affects sustainable work behavior.

The effect of green organizational learning on green intrinsic motivation

Green intrinsic motivation encompasses the internal drive and inclination of individuals to participate in environmentally responsible behaviors. It represents a personal interest and enjoyment in engaging in activities that advance environmental sustainability, rather than being solely motivated by external rewards or pressures (Lin, 2022; Steg et al., 2016). Green organizational learning plays a role in fostering employees' sense of meaning and purpose in their work. As employees comprehend the environmental consequences of their actions and recognize how their efforts contribute to broader sustainability objectives, it enhances their intrinsic motivation. The knowledge acquired through green organizational learning allows employees to perceive the purpose and significance of their work in the context of building a more sustainable future (Gaafar, 2020). Green organizational learning initiatives frequently enable employees to gain knowledge and skills that empower them to make independent, sustainable choices and decisions. This autonomy fosters a sense of empowerment, as employees feel capable of making a positive impact through their actions. When individuals have a sense of control and ownership over their work, it enhances their intrinsic motivation to engage in environmentally friendly behaviors (Alqarni et al., 2023; JASIM et al., 2024). It also frequently encompasses collaborative learning experiences that facilitate social connection and support. Through participation in shared learning activities like workshops or group discussions, employees have the opportunity to engage with colleagues who share similar interests in sustainability. This sense of belonging and social support enhances intrinsic motivation by creating a positive and supportive environment for green behaviors (Achdiat et al., 2023; Abdelhamied et al., 2023).

Green organizational learning initiatives have the potential to offer employees feedback and recognition for their sustainable work behaviors. Feedback mechanisms, such as performance evaluations or sustainability awards, acknowledge and appreciate employees' contributions towards sustainability goals. This feedback and recognition serve to reinforce employees' intrinsic motivation by validating their green behaviors and establishing a positive feedback loop (Malik et al.,

2021; Lu et al., 2023). In addition, green organizational learning provides employees with avenues for personal growth and development. Through the acquisition of knowledge and skills pertaining to sustainability, employees can enhance their professional capabilities and expand their expertise. This process of continuous learning and development contributes to their sense of self-improvement and personal growth, ultimately fueling their intrinsic motivation to engage in green behaviors (Iqbal and Ahmad, 2021; Passow and Passow, 2017). As a result, the following hypothesis is posited:

H2: Green organizational learning positively affects green intrinsic motivation.

The effect of green intrinsic motivation on sustainable work behavior

Positive attitudes and beliefs towards sustainability are closely linked to green intrinsic motivation. Individuals who possess high levels of green intrinsic motivation typically hold a firm belief in the significance of environmental preservation and sustainability. They may view sustainable work behavior as an ethical obligation and as a means to contribute to a more promising future. These favorable attitudes and beliefs serve as the foundation for their motivation to actively participate in sustainable practices (Steg et al., 2016; Budzanowska-Drzewiecka Tutko, 2021). Besides, green intrinsic motivation has the capacity to inspire employees to voluntarily and willingly partake in sustainable work behavior beyond what is strictly required. Unlike behaviors that are externally imposed or enforced, individuals driven by intrinsic motivation proactively engage in sustainability initiatives. They take ownership of sustainability goals and actively seek opportunities to make meaningful contributions, going above and beyond the minimum requirements and regulations. This voluntary behavior and discretionary effort can have a substantial positive impact on the organization's sustainability performance (Al-Romeedy, 2023).

Green intrinsic motivation has been associated with heightened creativity and innovation within the realm of sustainability (Liu and Liu, 2023). When employees possess intrinsic motivation, they are more inclined to generate fresh ideas and propose innovative solutions to environmental obstacles. They actively seek avenues to enhance current practices, devise sustainable alternatives, and contribute to the organization's sustainability strategy. This creativity and innovation contribute to ongoing improvement and the adoption of more sustainable practices within the organization (Delmas and Pekovic, 2018; Ren and Jackson, 2020). It also correlates with a heightened commitment to sustainability among employees (Li et al., 2020; Al-Romeedy, 2019). When individuals are intrinsically motivated, they perceive sustainability as personally significant and in harmony with their values. This sense of commitment translates into a greater dedication to integrating sustainable practices into their work routines and advocating for sustainability within the organization (Afsar et al., 2016; Masri and Jaaron, 2017). Consequently, the following hypothesis is put forth:

H3: Green intrinsic motivation positively affects sustainable work behavior.

The mediating role of Green intrinsic motivation in the link between green organizational learning and sustainable work behavior

Green organizational learning imparts employees with knowledge regarding environmental issues and sustainability (Zhang et al., 2018). This knowledge, when coupled with effective communication and training, aids individuals in internalizing environmental values and beliefs. Green intrinsic motivation arises from a profound concern for the environment and a genuine aspiration to effect positive change. As employees internalize these values, they are more inclined to be intrinsically motivated to partake in sustainable work behavior (Organ et al., 2013; Faraz et al., 2021). Green intrinsic motivation emerges from the perception of sustainability as personally meaningful and relevant (Li et al., 2020). Through green organizational learning, employees gain an understanding of how their individual actions contribute to broader environmental objectives. They develop a sense of personal efficacy and responsibility, recognizing that their sustainable work behavior can have a significant impact. This personal relevance amplifies their intrinsic motivation to actively participate in sustainable practices (Bianchi et al., 2022; Bauer, 2022).

Green organizational learning facilitates employees' comprehension of the organization's sustainability goals and initiatives. When employees perceive a robust alignment between their values and the organization's sustainability objectives, it nurtures a sense of purpose and significance. This alignment reinforces green intrinsic motivation, as employees are motivated to contribute to the organization's sustainability endeavors through their work behavior (Al-Romeedy and Khairy, 2024). Consequently, the following hypothesis is formulated:

H4: Green intrinsic motivation mediates the relationship between green organizational learning and sustainable work behavior.

The effect of green organizational learning on green training

Green training encompasses targeted initiatives designed to enhance employees' knowledge, skills, and competencies in the realm of sustainability. These initiatives can take the form of workshops, seminars, e-learning modules, or on-the-job training, providing employees with practical guidance and tools to implement sustainable work behaviors (Al-Romeedy, 2019). Green organizational learning aids organizations in identifying their unique training requirements pertaining to environmental sustainability (Tu and Wu, 2021). Through the process of organizational learning, companies develop a more profound comprehension of the environmental challenges and opportunities they face. This understanding enables them to evaluate the knowledge and skill gaps among their workforce, leading to the identification of specific areas where green training is necessary (Dixon, 2017). Green organizational learning establishes the groundwork for the creation of impactful green training programs. It offers valuable insights into essential sustainability concepts, best practices, and emerging trends that should be incorporated into the training initiatives. By leveraging the knowledge gained through organizational learning, organizations can develop customized green training programs that align with their sustainability objectives and cater to the specific requirements of their employees (Subramanian and Suresh, 2022; Gaafar, 2020).

Green organizational learning empowers organizations to incorporate sustainability principles into their comprehensive training and development strategies. It enables organizations to realize that environmental sustainability is not merely an isolated endeavor but should permeate the organization's culture and practices. Consequently, green training becomes an intrinsic component of the larger learning and development framework, ensuring that sustainability concepts are infused into diverse training programs and initiatives across various functional domains (Kordab et al., 2020; Espinosa and Porter, 2011). Additionally, it nurtures collaboration and knowledge sharing among employees, leading to a positive impact on green training (Al-Romeedy, 2023). Through organizational learning, employees are provided with avenues to share their experiences, insights, and best practices in relation to sustainability. This collaborative learning environment establishes a platform for peer-to-peer knowledge exchange and stimulates the development of innovative training approaches. Employees become active participants in the green training process, leveraging their expertise and experiences to enhance the effectiveness and applicability of training programs (Brandi and Thomassen, 2021; Renwick et al., 2013). Consequently, the following hypothesis is formulated:

H5: Green organizational learning positively affects green training.

The effect of green training on sustainable work behavior

Green training enriches employees' knowledge and consciousness regarding environmental sustainability principles, practices, and concerns. Through well-designed training programs, employees acquire a comprehensive comprehension of the environmental ramifications of their work and the significance of adopting sustainable practices. This augmented knowledge and awareness lay the groundwork for sustainable work behavior by equipping employees with the essential information and context to make informed choices and undertake responsible actions (Alshehri et al., 2024). Similarly, green training empowers employees with the necessary skills and competencies to effectively integrate sustainable practices into their work. Through training programs, employees receive practical guidance on reducing energy consumption, minimizing waste, optimizing resource utilization, and adopting environmentally friendly processes and technologies. By honing these skills through training, employees are better equipped to seamlessly incorporate sustainable practices into their daily work routines, leading to sustained sustainable work behavior (Pinzone et al., 2019; Usman et al., 2023).

The objective of green training is to drive behavior change by advocating for sustainable work practices (Pinzone et al., 2019). Training programs frequently incorporate interactive exercises, case studies, and real-life examples to prompt employees to reflect on their current practices and explore alternative approaches. This process of reflection, coupled with the knowledge and skills acquired through training, has the potential to result in behavior change. Employees may embrace sustainable work behaviors such as recycling, conserving energy, practicing responsible procurement, and utilizing eco-friendly materials, among other actions (Buckley and Caple, 2009; Gaafar, 2020). Likewise, it elevates employee motivation and engagement in relation to sustainability. Through investment in training programs that underscore the significance of environmental sustainability, organizations communicate their unwavering dedication to this cause. Green training initiatives instill a sense of purpose and significance among employees by illuminating how their work directly contributes to overarching environmental objectives. This heightened motivation and engagement cultivate a positive attitude towards sustainable work behavior, inspiring employees to actively partake in sustainability initiatives (Yafi et al., 2021; Usman et al., 2023). As well, green training has the potential to shape sustainable work behavior through peer influence and the establishment of social norms within the organization. As employees engage in training programs and embrace sustainable practices, their behavior can serve as a role model for others. Positive peer influence can foster a social norm where sustainable work behavior is not only anticipated but also encouraged. This normalization of sustainable practices through training contributes to the development of a sustainability-focused culture within the organization, reinforcing and perpetuating sustainable work behavior (Alshehri et al., 2024). Therefore, the following hypothesis is proposed:

H6: Green training positively affects sustainable work behavior.

The mediating role of green training in the link between green organizational learning and sustainable work behavior

Green organizational learning establishes a knowledge and awareness base among employees concerning sustainability issues and practices. This knowledge is then fortified through green training, which delves into specific sustainability topics, industry best practices, and emerging trends. By amalgamating the broader organizational learning with focused training, employees acquire a more holistic comprehension of sustainability and its pertinence to their work (Al-Romeedy and Khairy, 2024). Green training transcends theoretical knowledge by prioritizing practical application and skill development. Training programs equip employees with the essential tools, techniques, and resources to effectively implement sustainable work behaviors (Bilderback, 2023). These programs may incorporate hands-on exercises, simulations, or real-life case studies that offer employees opportunities to practice and enhance their skills within a supportive learning environment. By actively applying knowledge in practical scenarios, the link between organizational learning and the actual adoption of sustainable work behaviors is reinforced (Abdollahi et al., 2023; Gaafar, 2020).

Green training assumes a vital role in tackling barriers and challenges that could impede the adoption of sustainable work behaviors (Aleixo et al., 2018). By recognizing prevalent obstacles and offering strategies to overcome them, training programs enable employees to navigate potential hurdles with confidence and efficacy. For instance, training may address concerns like resistance to change, resource limitations, or conflicting priorities, providing guidance on how to surmount these challenges and sustain sustainable practices amidst adversity (Al-Romeedy, 2023). Green training fosters a culture of continual learning and adaptability. In a dynamic landscape where sustainability practices evolve and fresh challenges arise, training

programs ensure that employees remain current with the latest advancements. These programs offer opportunities for ongoing skill enhancement, knowledge exchange, and staying informed about evolving regulations and industry standards. By cultivating a mindset of perpetual learning, green training empowers employees to adjust their work behaviors in accordance with evolving sustainability demands (Alshehri et al., 2024). Consequently, the following hypothesis is postulated:

H7: Green training mediates the relationship between green organizational learning and sustainable work behavior.

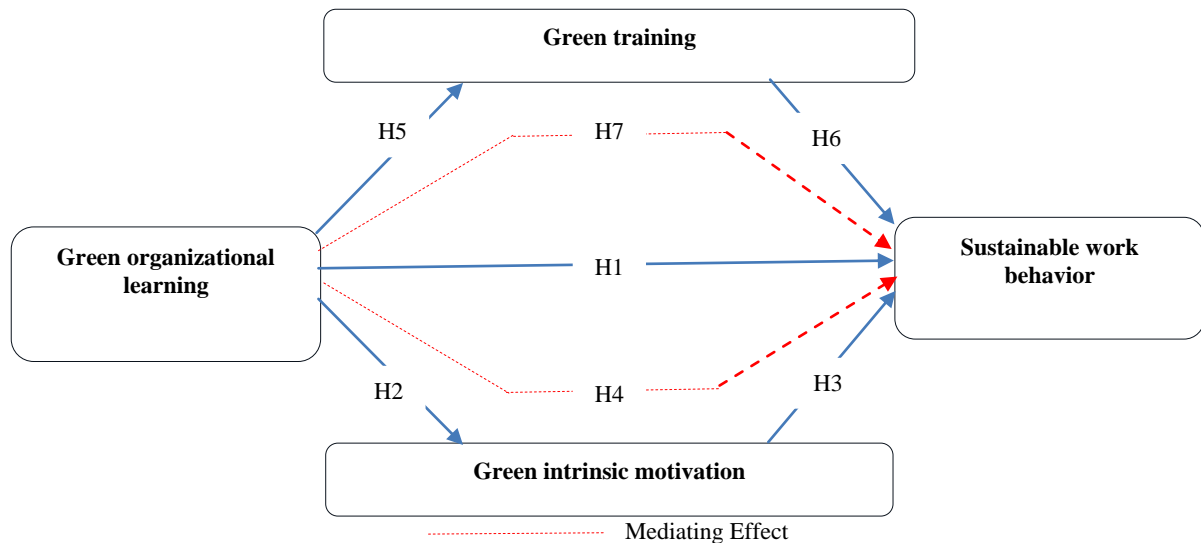The hypothesized research framework presented in Figure (1) below.

Figure 1. The hypothesized research framework

RESEARCH METHODOLOGY

Questionnaire design and study measures

This is a quantitative research study; it used a structured survey to evaluate green organizational learning in tourism and hospitality businesses, focusing on its impact on sustainable work behavior, and the mediating roles of green intrinsic motivation and green training. The survey consists of two sections, covering employee profiles and examining four concepts using a five-point Likert scale.

The study utilized a scale developed by Özgül and Zehir (2023, p. 2059) to measure green organizational learning through eight items. Sample items include:" Our firm can quickly absorb, master, and use green equipment and production processes obtained from outside" and "Our firm is good at acquiring and using external green technology and knowledge". In addition, the study assessed sustainable work behavior using seven items from a scale developed by Temminck et al. (2015). For instance, "I make environmental suggestions to improve work procedures" and "I try to draw management's attention to potentially environmentally unfriendly activities". Moreover, the study utilized a scale developed by Li et al. (2020, p. 120229) to measure green intrinsic motivation through six items. For example, "I enjoy tackling with environmental tasks that are completely new" and "I feel excited when I have new green ideas". Furthermore, the study utilized six items from a scale developed by Cop et al. (2020, p. 3502) to measure green training. For instance, "Employees can have the chance to be trained on environmental issues" and "Employees use environmental training effectively".

Sample and data collection procedures

The study focuses on Saudi's tourism and hospitality businesses, including travel agencies and five-star hotels, which are known for their high-quality services and commitment to environmental preservation, embracing green practices to improve their operations. The study utilized a judgmental sample approach to select five-star hotels and travel agencies. In contrast, a convenience sample approach was employed to collect data from volunteered participants.

The visit and distribution of questionnaires were conducted after obtaining verbal consent from the premises' HR managers. A questionnaire was distributed to 40 travel agencies and 22 five-star hotels, with 68.2% (n=324) of respondents working in five-star hotels and 31.8% (n=324) in travel agencies. Out of 475 participants involved in this study, 351 men (73.9%) and 124 women (26.1%). 48.4% of respondents were aged 30-40 while 38.7% were under 30. The majority (80.8%) had a bachelor's degree. Employees had varying experience levels, with 18.9% having less than two years, 19.8% between two and five years, 16.4% between six and ten years, and 44.8% over ten years.

Data analysis

The study utilized the PLS-SEM technique with WarpPLS software 7.0 to analyze the measurement and structural model, testing research hypotheses. PLS-SEM is a widely used analytical method in tourism research, assessing advanced structural models with direct and indirect paths connecting multi-item variables (e.g., Amaro and Duarte, 2015; Manley et al., 2020; Hassan et al., 2024; Alghamdi et al., 2024). In addition, the study performed a multi-group analysis to discover significant variations in path coefficients between hotels and travel agencies, with the results being insignificant (P>0.05).

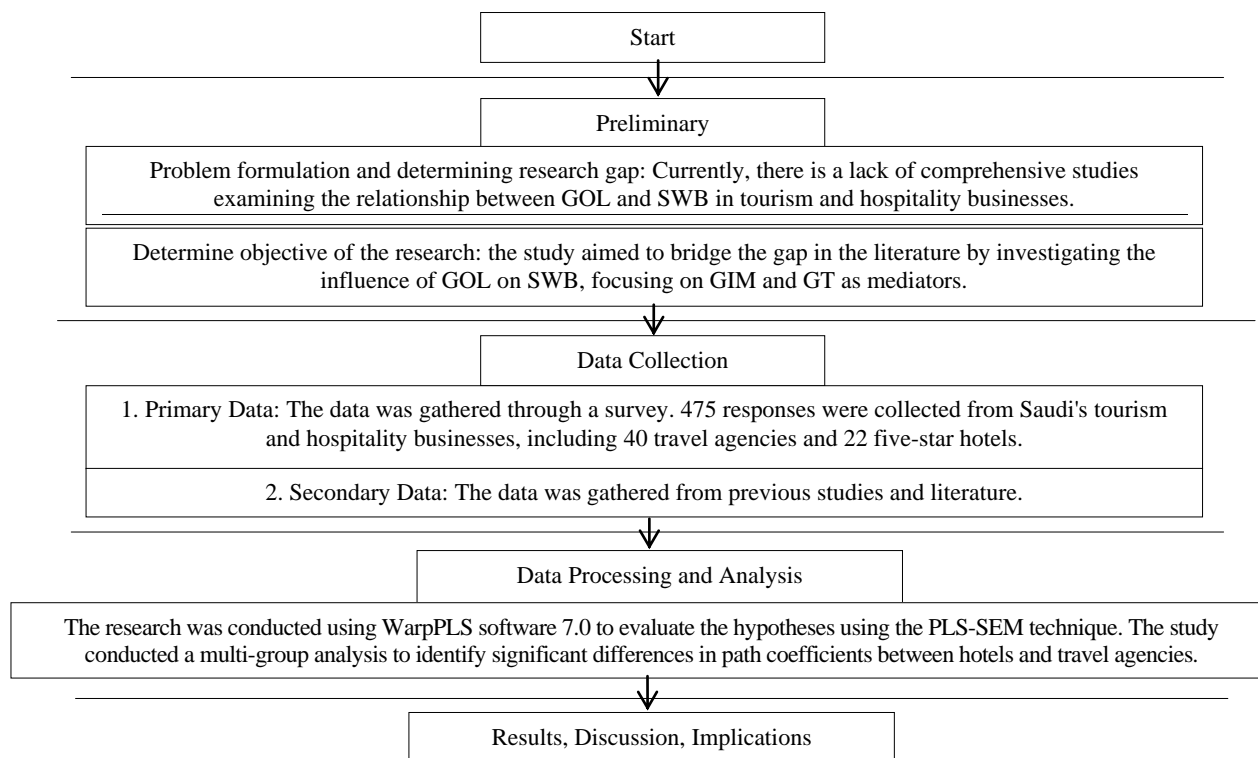A flow chart of research methodology steps is presented in Figure 2 below.

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 │ Problem formulation and determining research gap: Currently, there is a    │
 │ lack of comprehensive studies examining the relationship between GOL and   │
 │ SWB in tourism and hospitality businesses.                                 │
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 │ Determine objective of the research: the study aimed to bridge the gap in  │
 │ the literature by investigating the influence of GOL on SWB, focusing on   │
 │ GIM and GT as mediators.                                                   │
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 │ 1. Primary Data: The data was gathered through a survey. 475 responses     │
 │ were collected from Saudi's tourism and hospitality businesses, including  │
 │ 40 travel agencies and 22 five-star hotels.                                │
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 │ 2. Secondary Data: The data was gathered from previous studies and         │
 │ literature.                                                                 │
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 │ The research was conducted using WarpPLS software 7.0 to evaluate the      │
 │ hypotheses using the PLS-SEM technique. The study conducted a multi-group  │
 │ analysis to identify significant differences in path coefficients between  │
 │ hotels and travel agencies.                                                │
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Figure 2. A flow chart of research methodology

ANALYSIS AND RESULTS

Measurement model: The four-factor model, which includes green organizational learning, sustainable work behavior, green intrinsic motivation, and green training, was evaluated through confirmatory factor analysis. The model's fit was evaluated using Kock's (2021) ten fit indices: APC "P<0.05", ARS "P<0.05", AARS "P<0.05", AVIF "acceptable if ≤5, ideally ≤3.3", AFVIF "acceptable if ≤5, ideally ≤3.3", GoF "small ≥0.1, medium ≥0.25, large ≥ 0.36", SPR "acceptable if ≥ 0.7, ideally =1", RSCR "acceptable if ≥ 0.9, ideally = 1", SSR "acceptable if ≥0.7", and NLBCDR "acceptable if ≥0.7". The proposed four-factor model provided well-fitted data "APC=0.441, P<0.001; ARS=0.479, P<0.001; AARS=0.477, P<0.001; AVIF=1.568; AFVIF=1.737; GoF=0.544; SPR=1.000; RSCR=1.000; SSR=1.000; and NLBCDR=0.900".

Table 1. Item loadings, Cronbach alpha, CR, AVE, and VIFs

Construct	Indicators	Loading	CR	CA	AVE	VIF
Green Organizational Learning (GOL)	GOL.1	0.868	0.954	0.945	0.724	1.370
	GOL.2	0.837				
	GOL.3	0.861				
	GOL.4	0.841				
	GOL.5	0.873				
	GOL.6	0.862				
	GOL.7	0.834				
	GOL.8	0.828				
Sustainable Work Behavior (SWB)	SWB.1	0.752	0.916	0.892	0.608	1.231
	SWB.2	0.770				
	SWB.3	0.824				
	SWB.4	0.768				
	SWB.5	0.799				
	SWB.6	0.775				
	SWB.7	0.768				
Green Intrinsic Motivation (GIM)	GIM.1	0.798	0.851	0.788	0.542	2.266
	GIM.2	0.803				
	GIM.3	0.806				
	GIM.4	0.853				
	GIM.5	0.565				
	GIM.6	0.525				
Green Training (GT) "CR: Composite reliability; CA: Cronbach's alpha; AVE: average variance extracted; VIF: variance inflation factors "	GT.1	0.810	0.911	0.882	0.630	2.079
	GT.2	0.785				
	GT.3	0.797				
	GT.4	0.791				
	GT.5	0.780				
	GT.6	0.799				

The research constructs exhibited composite reliability ratings beyond the lowest acceptable threshold (CR>0.70) and statistically significant item loadings (item loading >0.50, p<0.05), as indicated by the data displayed in Table (1). Green organizational learning, sustainable work behavior, green intrinsic motivation, and green training all had AVE values (AVE>0.50) that supported convergent validity. Since the VIF for each latent variable is ≤3.3, the model is likewise thought to be free of common method bias. The constructs' discriminant validity was confirmed by ensuring their square root of the AVE is greater than off-diagonal correlations (Table. 2) and by calculating the HTMT (Table. 3).

Table 2. Discriminant validity results - Fornell-Larcker Criterion

	SWB	GIM	GOL	GT
Sustainable Work Behavior (SWB)	**0.780**	0.416	0.270	0.371
Green Intrinsic Motivation (GIM)	0.416	**0.711**	0.496	0.707
Green Organizational Learning (GOL)	0.270	0.496	**0.851**	0.453
Green Training (GT)	0.371	0.707	0.453	**0.794**
"Off-diagonal elements are correlations, and diagonal elements are square roots of AVE"				

Table 3. HTMT for validity

HTMT ratios (good if < 0.90, best if < 0.85)	SWB	GIM	GOL	GT
Sustainable Work Behavior (SWB)				
Green Intrinsic Motivation (GIM)	0.610			
Green Organizational Learning (GOL)	0.294	0.557		
Green Training (GT)	0.423	0.829	0.496	
P values (one-tailed) for HTMT ratios (good if < 0.05)	**SWB**	**AIA**	**GIM**	**GOL**
Sustainable Work Behavior (SWB)				
Green Intrinsic Motivation (GIM)	<0.001			
Green Organizational Learning (GOL)	<0.001	<0.001		
Green Training (GT)	<0.001	<0.001	<0.001	

Results of testing hypotheses

Figure 3 and Table 4 show green organizational learning (GOL) positively affects employees' sustainable work behavior (SWB) (β=0.32, P<0.01), green intrinsic motivation (GIM) (β=0.71, P<0.01), and green training (GT) (β=0.68, P<0.01).
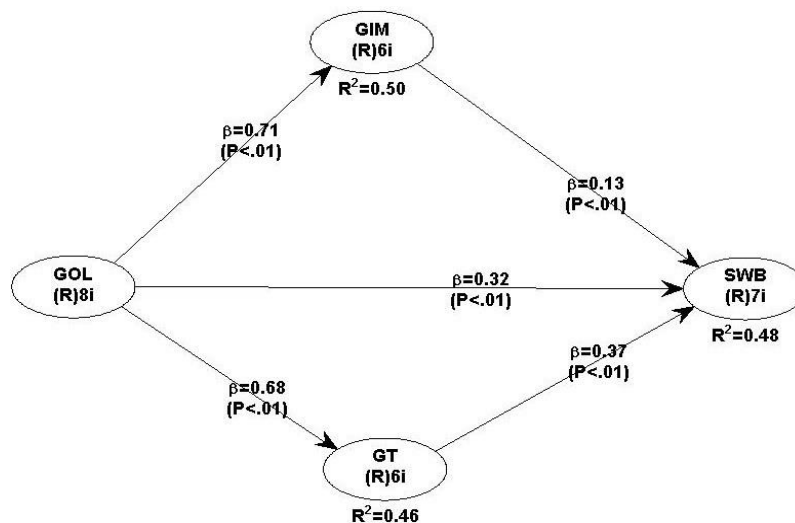
Figure 3. Final model of the study

This means GOL leads to an increase in employees' SWB, GIM, and GT, thus supporting the hypothesis H1, H2, and H5. In addition, SWB is positively affected by GIM (β=0.13, P<0.01) and GT (β=0.37, P<0.01), this means that GIM and GT increases SWB, supporting H3 and H6.

Table 4. Direct effects

Hs	Relationship	Direct effect (β)	**Sig.**	**Decision**
H1	GOL→SWB	0.32	P<0.01	Supported
H2	GOL→GIM	0.71	P<0.01	Supported
H3	GIM → SWB	0.13	P<0.01	Supported
H5	GOL →GT	0.68	P<0.01	Supported
H6	GT → SWB	0.37	P<0.01	Supported

Furthermore, the mediation effect of GIM was calculated as per the method developed by Preacher and Hayes (2008). The bootstrapping analysis revealed a significant indirect effect of GIM {β=0.092 (0.710×0.130), SE=0.034, P<0.01, t-value=2.715}. The indirect effect of 0.092, with a 95% bootstrapped confidence interval (LL=0.026, UL=0.159), does not

cross a 0 between, indicating mediation. The study found that GIM significantly mediates the GOL→SWB relationship, supporting the hypothesis 6. For the mediation effect of GT, the bootstrapping analysis revealed a significant indirect effect of GIM {β=0.252 (0.680×0.370), SE=0.034, P<0.01, t-value=7.400}. The indirect effect of 0.252, with a 95% bootstrapped confidence interval (LL=0.185, UL=0.318), does not cross a 0 between, indicating mediation. The study found that GT significantly mediates the GOL→SWB relationship, supporting the hypothesis 7.

Table 5. Mediation analysis' Bootstrapped Confidence Interval

Hypo.		Path a GOL→GIM	Path b GIM→SWB	Indirect Effect	SE	t-value	Bootstrapped Confidence Interval		Decision
							95% LL	95% UL	
H4	GOL→GIM→SWB	0.710	0.130	0.092	0.034	2.715	0.026	0.159	Mediation
H7	GOL→GT→SWB	0.680	0.370	0.252	0.034	7.400	0.185	0.318	Mediation

DISCUSSION

This study explores the effect of green organizational learning (GOL) on sustainable work behavior (SWB) in tourism and hospitality businesses, by investigating the role of green intrinsic motivation (GIM) and green training (GT) as mediator in GOL→SWB relationship.

The study reveals that GOL significantly affects employees' SWB, in line with previous research by Achdiat et al. (2023) and Zivanovic et al. (2023). Green organizational learning nurtures employees' critical and creative thinking in relation to sustainability challenges. Through the provision of learning opportunities, experimentation, and knowledge sharing, organizations create an environment that promotes innovation in sustainable work practices (JASIM et al., 2024). This enables employees to identify novel solutions, propose improvements, and actively contribute to the development of sustainable initiatives within their respective work domains (Jiang et al., 2018; Alqarni et al., 2023).

The study also reveals that GOL significantly affects employees' GIM, in line with previous research by Iqbal and Ahmad (2021) and Lu et al. (2023). Green organizational learning initiatives play a role in fostering higher levels of job satisfaction among employees. When employees are given the chance to participate in meaningful work that aligns with their values and interests, it positively impacts their overall job satisfaction. By promoting sustainability and offering resources for learning and development, organizations establish a work environment that supports employees' intrinsic motivation and well-being (Amrutha and Geetha, 2021; Lysova et al., 2019).

In addition, the study reveals that GIM significantly affects employees' SWB, in line with previous research by Masri and Jaaron (2017) and Patwary et al. (2024). Green intrinsic motivation is inclined to lead to persistent and enduring engagement in sustainable work behavior. In contrast to extrinsic motivators that may waver over time, intrinsic motivation is internally generated and enduring. Employees who possess intrinsic motivation to participate in sustainable practices are more likely to sustain their commitment and involvement in sustainability endeavors over the long term (Patwary et al., 2024; Van Dam et al., 2017; Jerónimo et al., 2020).

Moreover, the study reveals that GIM significantly mediates GOL→SWB relationship, in line with previous research by Al-Romeedy and Khairy (2024) and Bianchi et al. (2022). Green organizational learning facilitates the dissemination of knowledge and skills pertaining to sustainability among employees. This transfer of knowledge can take place through formal training programs, informal knowledge sharing, and collaborative participation in sustainability projects. As employees acquire and exchange knowledge, it not only enriches their understanding of sustainability but also cultivates a sense of community and shared responsibility. This social dimension contributes to green intrinsic motivation, as employees perceive themselves as part of a larger purpose and are motivated to engage in sustainable work behavior to contribute to the collective endeavor (Gaafar, 2020; Afsar et al., 2016; Norton et al., 2015).

Furthermore, the study reveals that GOL significantly affects GT, in line with previous research by Al-Romeedy (2024) and Brandi and Thomassen (2021). Green organizational learning cultivates a culture of ongoing enhancement that extends to green training endeavors (Tang et al., 2018; Gaafar, 2020). By assimilating knowledge from experiences and collecting feedback on the effectiveness of green training programs, organizations can make necessary adaptations and improvements. Insights gained from the implementation of sustainability initiatives can inform the refinement of training content, methodologies, and delivery formats. This iterative process of improvement guarantees that green training stays pertinent, captivating, and influential over time (Al-Romeedy, 2024).

Additionally, the study reveals that GT significantly affects employees' SWB, in line with previous research by Alshehri et al. (2024) and Usman et al. (2023). Green training frequently underscores the significance of collaboration and teamwork in attaining sustainable outcomes. Training programs may incorporate activities or simulations that necessitate employees to collaborate in order to address sustainability-related challenges (Kay et al., 2018; Abina et al., 2022). By promoting collaboration, green training stimulates employees to share ideas, pool resources, and collectively devise innovative solutions to sustainability issues. This collaborative mindset extends beyond the training environment and can influence sustainable work behavior by fostering cooperation and a sense of collective responsibility in day-to-day operations (Shah et al., 2024; Mishra et al., 2022). Lastly, the study reveals that GT significantly mediates GOL→SWB relationship, in line with previous research by Abdollahi et al. (2023) and Alshehri et al. (2024). Green training has the potential to exert a significant influence on employee engagement and motivation towards sustainable work behavior (Usman et al., 2023). As employees undergo training and acquire the necessary skills and knowledge, they experience a sense of empowerment and value from the organization. Training programs demonstrate a commitment to employee development and well-being, which can enhance job satisfaction and intrinsic motivation (Rigby and Ryan, 2018).

Engaged and motivated employees are more inclined to embrace sustainable practices and actively seek opportunities to contribute to sustainability goals (Ercantan and Eyupoglu, 2022; Alshammari and Alshammari, 2023).

Theoretical implications

The examination of the mediation roles of green intrinsic motivation and green training in the relationship between green organizational learning and sustainable work behavior within the tourism and hospitality context has the potential to make valuable contributions to Social Cognitive Theory (SCT) in multiple ways.

The study expands the application of SCT to the realm of environmental sustainability by investigating the mediating roles of green intrinsic motivation and green training in the relationship between green organizational learning and sustainable work behavior. SCT primarily aims to comprehend human behavior across diverse contexts, and the incorporation of sustainability-related factors broadens the theory's scope.

Significantly, the study contributes to SCT by examining the role of green intrinsic motivation in influencing sustainable work behavior. It recognizes the importance of individuals' intrinsic motivation for sustainability, which is driven by personal values and beliefs, in shaping their engagement in sustainable behaviors. This understanding enhances the motivational aspect of SCT and provides valuable insights into fostering and nurturing intrinsic motivation within the realm of sustainability. As well, the study's examination of the mediating role of green training enriches SCT by highlighting the significance of environmental training in fostering sustainable work behavior. It acknowledges that training programs have the potential to enhance employees' knowledge, skills, and self-efficacy, which are pivotal factors in determining behavior according to SCT. By explicitly incorporating the role of training, the study expands SCT's scope beyond individual and environmental factors to encompass the impact of structured learning experiences. Lastly, the study integrates environmental factors into SCT by investigating the interplay between green organizational learning, green intrinsic motivation, green training, and sustainable work behavior. It acknowledges the distinct context of environmental sustainability and its influence on individuals' motivation and behavior. This integration broadens the scope of SCT, making it applicable to environmental issues and emphasizing the significance of addressing the unique challenges and opportunities presented by sustainability.

Practical implications

The study holds significant practical implications for organizations in the tourism and hospitality sector. It underscores the significance of cultivating green organizational learning within these businesses. Organizations can concentrate on fostering a culture of continuous learning and knowledge-sharing concerning sustainability practices. This may involve implementing formal mechanisms such as training programs, workshops, and seminars, where employees can acquire and exchange knowledge about sustainable work behavior.

By prioritizing green organizational learning, businesses can cultivate a shared understanding of sustainability and equip employees with the essential groundwork to actively participate in sustainable practices.

In addition, the study highlights the importance of green training programs in fostering sustainable work behavior. It is recommended that organizations dedicate resources to develop and implement training initiatives that specifically address sustainable practices relevant to the tourism and hospitality industry. These programs should provide employees with the necessary knowledge, skills, and resources to actively engage in sustainable work behavior.

Training sessions can cover various topics, including energy conservation, waste management, responsible tourism, and sustainable procurement. By offering comprehensive and customized training, organizations can enhance employees' competencies and self-efficacy in executing sustainable practices. The study also underscores the significance of green intrinsic motivation in promoting sustainable work behavior. Organizations have the opportunity to foster an environment that nurtures employees' intrinsic motivation toward sustainability. This can be accomplished by integrating sustainability goals and values into the organizational mission and vision, acknowledging and incentivizing employees who actively participate in sustainable practices, and creating avenues for employees to contribute to sustainability initiatives within the organization. By fostering green intrinsic motivation, businesses can cultivate a sense of purpose and dedication among employees toward sustainable work behavior.

Importantly, organizations have the opportunity to identify and promote sustainability role models within their workforce and encourage employees to observe and learn from their practices. They can also leverage peer influence by establishing platforms for employees to share their sustainability initiatives and success stories, fostering a culture of peer learning and inspiration. By showcasing positive examples and facilitating peer influence, organizations can create a social environment that motivates and reinforces sustainable work behavior. Moreover, organizations should take proactive measures to communicate the impact of employees' sustainability efforts in order to enhance their outcome expectations and motivation. This can be achieved by sharing progress reports, success stories, and environmental performance data with employees. Furthermore, organizations can incorporate sustainability messaging in their external communications to customers, suppliers, and other stakeholders. By effectively communicating the environmental outcomes, organizations can strengthen employees' motivation and instill a sense of pride in their sustainable work behavior.

In order to encourage sustainable work behavior, organizations can incorporate explicit sustainability-related responsibilities and expectations into job descriptions and performance evaluation criteria. By aligning job roles with sustainability objectives, organizations can effectively communicate the significance of sustainable practices and motivate employees to integrate them into their daily tasks. Performance evaluations can also assess employees' contributions to sustainability, offering feedback and recognition for their efforts and establishing accountability for

sustainable work behavior. Organizations have the opportunity to actively engage employees in sustainability initiatives and decision-making processes. This can be accomplished by establishing cross-functional sustainability teams, conducting brainstorming sessions or workshops to generate innovative ideas, and soliciting employee input on sustainability-related policies and practices. By involving employees in the development and implementation of sustainability initiatives, organizations can foster a sense of ownership and dedication, resulting in heightened engagement and motivation for sustainable work behavior. Finally, acknowledging and rewarding employees' sustainable work behavior can serve as a potent motivator. Organizations have the opportunity to implement recognition programs that celebrate and appreciate employees who consistently exhibit sustainable practices or contribute innovative ideas in the realm of sustainability. Rewards can take different forms, including bonuses, incentives, public recognition, or career development opportunities. By recognizing and rewarding sustainable work behavior, organizations reaffirm the importance they assign to sustainability and inspire employees to sustain their efforts.

Limitations and future research

While the study offers valuable insights, it is essential to recognize its limitations and propose directions for future research. The findings of the study may be context-specific, pertaining to a particular region (Saudi Arabia) and specific types of tourism and hospitality businesses (travel agents and hotels). Future research should strive to replicate the study in various settings and different types of businesses to evaluate the generalizability of the relationships proposed. Comparative studies across different countries or cultural contexts (e.g., Egypt, UAE, etc.) can provide insights into the impact of contextual factors on the examined relationships. Besides, the findings of the study are contingent upon the measures and methods employed. To enhance the validity and reliability of the constructs, future research can investigate alternative measures for green intrinsic motivation, green training, green organizational learning, and sustainable work behavior. Furthermore, employing different research designs, such as longitudinal or experimental approaches, can yield stronger evidence of causality and assist in establishing temporal relationships.

Additionally, while the study primarily examines the mediating roles of green intrinsic motivation and green training, it is important to acknowledge the potential existence of other mediating or moderating factors that can impact the relationship between green organizational learning and sustainable work behavior. Future research can explore additional psychological, social, or organizational variables that may elucidate or strengthen the relationships investigated in the study. The study primarily focuses on the immediate effects of green intrinsic motivation and green training on sustainable work behavior. However, it is valuable for future research to examine the long-term implications of these variables on sustained sustainable work behavior over time. Investigating the factors that contribute to the maintenance and reinforcement of sustainable practices can offer valuable insights for organizations seeking to cultivate a lasting culture of sustainability. Further, while the study examines the mediating roles of green intrinsic motivation and green training, it is important to recognize that there may be additional external factors that influence sustainable work behavior in tourism and hospitality businesses. Future research can investigate the impact of external factors, such as organizational culture, leadership styles, or industry regulations, on the relationships being examined. This expanded exploration can contribute to a deeper understanding of the intricate dynamics that shape sustainable work behavior within the industry.

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