ROLE OF MOTIVATIONAL STATES AND ORGANIZATIONAL RESILIENCE IN DETERMINING THE RELATIONSHIP BETWEEN ETHICAL LEADERSHIP AND EMPLOYEE GREEN BEHAVIOUR

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Abstract
Ethical leadership is considered a critical tool in achieving sustainable behavior in an organization. This study aims to examine the influence of ethical leadership on employees' green behaviors via the mediating roles of motivational states and moderating role of organizational resilience. This study utilized Structural Equation Modelling to test the proposed model using a sample of human resource managers and employees selected randomly form the hospitality sector of Pakistan. Our findings revealed that ethical leadership practices influence the employees to motivate them internally and externally for the implementation of the green behavior in the organization. In addition, organizational resilience also helps to promote green behavior amongst the employees. Therefore, ethical leadership influences employees' green behavior directly and indirectly via the mediating roles of motivational states and moderating role of organizational resilience in the hospitality sector. The study outcomes confirm the significance of incorporating sustainability measures into the human resource management system as well as the important role of human resource management on environmental sustainability for the attainment of long-term sustainability in hospitality development. The findings of our study are especially relevant to hospitality sector in all countries, as it encourages them to engage in more sustainable practices such as lowering resource consumption. These findings provide important implications for ethical leadership-green behavior link by developing and validating a multilevel model empirically in the hospitality sector.

Keywords: Ethical Leadership, Employee Green Behavior, Organizational Resilience, Controlled Motivation, and Autonomous Motivation.

1. Introduction

In the recent times, the models of conventional social governance has encountered abundant impediments (Khalil et al., 2024). The framework of corporate governance which focus on stronger moral and ethical standards have been established (Kopnina et al., 2024). The organizations are becoming more mindful to abide by the models of corporate governance with raising concerns for environmental sustainability. As the environmental situations are deteriorating, the organizations are considered to be the major cause of this alarming conditions (Zhong et al., 2025). Because of this, it is crucial that the ecological issues should be integrated into the organizational practices, policies, activities, and procedures (Rafiq & Xiuqing, 2025; Hao et al., 2025). Globally the organizations are taking initiatives to motivate the employees to exhibit environmental friendly behavior (Mo et al., 2025). Employee green behaviors (EGB) are becoming one of the crucial aspect in the organizational behavior area (Ashraf et al., 2024). EGB are ecofriendly behavior of the employees that they depict within their workplace setting (Rafiq et al., 2024; Alherimi et al., 2024). To implement the policies of the organization the role played by the leaders of that

organizations cannot be overlooked (Kaur et al., 2025). Besides this the leadership of the organization is prominent to instill green behaviors in the workers (Jabeen et al., 2025). The leader who is ethically and environmentally conscious shape ecological behavior in their subordinates (Serang et al., 2024). In this regards the role of ethical style of leadership and motivational states are substantial factors that leads towards advancing environmental conscious behavior in employees to protect the environment from the activities and operations of the organization (Kanojia & Dhiman, 2025; Şengüllendi et al., 2024; Ashraf et al., 2024; Rasheed et al., 2024). Ethical leadership is referred as "the demonstration of normatively appropriate conduct through personal actions and interpersonal relationships, and the promotion of such conduct to followers through two-way communication, reinforcement, and decision-making" (Brown et al., 2005, p.120]. Past research studies examined the direct influence of ethical leadership on a range of behavioral and attitudinal factors (Saleem et al., 2020; Dinc, 2015).

Despite the fact, there is scarcity in the literature that examined the mechanisms through which ethical leadership and motivational factors influence the ecofriendly behaviors of employees in the tourism and hospitality industry (Chilufya, 2023; Chilufy et al., 2019). Previous research investigated the organizational resilience as an outcome of ethical leadership considering cognitive, organizational, and affective perspective (Osafo et al., 2021; Ouakouak et al., 2020; Zoghbi-Manrique-de-Lara et al., 2019). The impact of ethical leadership and organizational resilience has been studied with the mediation mechanisms of motivational states on green behavior (Saleem et al., 2020). Organizational resilience has been examined as a moderating mechanism among the relationship of ethical leadership and EGB (Pirzada et al., 2023; Wood et al., 2021). However further empirical evidence is required to corroborate the association of ethical leadership and employee green behavior since the review of existing body of knowledge highlighted that there is need to theoretical justify that whether and how the ethical style of leadership influence the EGB which remain unexamined and not tested sufficiently leading towards dearth systematic and integrative empirical testing limiting the generalizability of the previous research studies that has been already published (Tourigny et al., 2019; Su and Swanson, 2017). In order to address the deficiencies in the literature the present study is going to evaluate the significance of motivational states in the direct relationship of ethical leadership and employee green behaviors along with understanding the moderation of organizational resilience. The findings of the previous study provide useful insights into the association among organizational resilience and ethical leadership but these are not providing a detailed understanding of the dynamics of ethical leadership and its consequences within the organization, specifically the underlying mechanism through which ethical leadership enhance EGB through motivational factors. According to Su and Swanson, (2017), the parallel mediation mechanism of motivational states between ethical style of leadership and EGB is still missing and not understood completely (Su and Swanson, 2017). Examining the comprehensive process through which ethical leadership and motivational states drive EGB in the organizational setting enhances theoretical advancement and practical implications, assisting impactful intervention and strategies of the organization (Tourigny et al., 2019). As a result, the focus of hospitality industry to identity and analyze the key antecedents of green behavior is up surging in the recent years (Su and Swanson, 2017). The extensive literature review in the hospitality sector highlighted that the understanding regarding ethical leadership influence on the EGB is lacks clarity.

Hence the present study is focusing on seeking answers on the given research questions **RQ1**. What are the direct and indirect effect of ethical leadership on employee green behavior? **RQ2**. Does the organizational resilience moderates between the ethical

leadership and employee green behavior? **RQ3**. Do motivational states mediate the link between ethical leadership and employee green behavior?

The prevailing research study emphases on the unit of employees to address the link of ethical leadership and EGB through the mediation of motivational states and moderation of organizational resilience. The study is significant as it offers useful insight into the comprehensive process to drive environmental friendly practices in the organizations specifically in the hospitality sector that how ethical style of leadership shape EGB. The mediation of motivational states help in the clarification of the mechanism by which ethical leader improve such behaviors where the moderation of organizational resilience provides a framework to understand that how internal as well as external challenges impact the direct relationship. The research contributes to advance the management practices specifically environmental sustainability, providing effective strategies for the supervisors for enhancing the behaviors of their subordinates. Moreover, the study offer valuable contributions to develop a resilient workplace setting that equipped for navigating the complexities in the workplace setting and environment by promoting sustainable policies and procedures.

The article is divided into four section comprising literature review describing the variables of the study, their relationship, theoretical background, hypotheses, and conceptual model. Then the next section demonstrate the research methodology employed and another section described the results with the last section explaining discussion, implications, and conclusion of the research.

2. Theoretical background and hypotheses development
2.1. Theoretical background

The research is retrieving theoretical support from social learning theory given by Bandura (Bandura & Walters, 1977). The theory posit that individual learn vicariously when they are observing their supervisor. The theory states that leaders acts as a role model for their followers leading towards learning the actions, values, norms, beliefs, and practices of their leaders. Considering social learning theory, the present study suggests that ethical leaders influence the ethical behaviors of their subordinates because the ethical leader is involved in moral actions and ethical standards (Azhar et al., 2025). Before acting on the strategies and policies of the organization employee should perceive and interpret the environment of their workplace (Rice et al., 2025). Ethical leaders pay extra attention to make the climate of the organization ecological and environmental friendly by inspiring and encouraging the employees by different means such as rewarding and appreciating their green behaviors. The leaders are considered to be an interpretative filters of the procedures, visions, and policies of the business firm for their followers. The policies and the practices of the organization are helpful for the employees when these are presented to them by their leaders to influence their follower's perception of environmental protection (Serang et al., 2024). Ethical leaders positively shape the ecological behaviors of the employee as according to social learning theory they learn from their role models by observing them. Leaders are the genuine role models for the normative actions of the employee at the workplace setting by implying moral behavior, attitude, values, and thoughts in their followers. The perceptions of the employees about the policies, practices, and procedures of the organization regarding environmental protection and sustainable development are influenced by their leaders making extra effort for fostering motivation of the employees. When the employees feel that their organizational environment support environmental friendly behavior they are likely to exhibit in EGB. Moreover, ethical leaders also motivate the employee by their ethical and moral conduct by fostering their controlled and autonomous motivation. Furthermore, organizational resilience can also strengthen the link, since when the organization is resilient and able to adapt changes, recover from hindrances, and maintain continuity, creating an

environment for the ethical leaders in which they feel empowered for effectively modeling and reinforcing ecological values. In such organizations, workers internalize and mirror the sustainable values through environmental friendly behaviors, as the culture of the organization support long-lasting responsibility and thinking. Therefore, the influence of ethical leadership on green behaviors of the employees are amplified when the organization is resilient that focus on embracing sustainability and adaptability.

2.2. Hypothesis Development

2.2.1. Ethical Leadership and Employee Green Behavior

Extant of literature review highlighted that the influence of leadership on the green behaviors of the employees have been studied extensively. When the style of leader is based on spiritual leadership, then he/she focus on developing organizational environment which is spiritual eventually leading towards enhancing the eco-friendly behavior of the employees (Luu, 2020; Afsar et al., 2016). According to the research study of Xiao et al., (2024) and Tuan, (2022) when the leader have responsible style of leadership it also drive environmental friendly attitude and behavior in the workers. Keeping in view the research of Zafar et al., (2025), Imran (2024), and Peng at al., (2022) environmentally conscious servant leadership style also shape the behavior of the employees in an eco-focused manner leading towards fostering the green responses of the employees. Specifically it is concluded that supervisors can influence the environmental friendly behaviors of their subordinates. The leaders who have task-specific style of leadership also predict eco-friendly behavior in their followers (Robertson and Barling, 2013).

Leaders who are environment conscious and concerned about the protection of the environment inspire their followers to safeguard the environment from the harmful activities and operations of the organization (Robertson and Barling, 2017). Nevertheless, there are few studies that focused on examining the influence of ethical leader on the ecological behaviors of the workers (Khan et al., 2019). Ethical leaders is a powerful style of leadership having moral management resulting in ecofriendly behavior of the personnel at the workplace (Saleem et al., 2020). Islam et al., (2021a) concluded that ethical leaders work as a role model for their subordinates and encourage them to exhibit actions and behaviors in accordance to their values. The focus of the organization for sustainable development and protection of the environment are deliberated as one of the ethical and moral issue of the firm since safety and protection comes under the domain of one of the responsibility of the organizations (Ahmad et al., 2021), in which workers are considered to be the key stakeholders playing a crucial role towards the environmental protection and sustainability (Dey et al., 2022).

The role played by the leader to build and develop ecofriendly culture and environment in the setting of the organization by inspiring their subordinates cannot be overlooked in the organization who are focused on the environment (Saleem et al., 2020). Ethical leader drive ecological behavior through his passion to protect the environment by small acts such as switching off lights, AC, fans, and other electric items to save energy) in his/her followers inspiring them to depict environmental friendly conduct. The results of study conducted by Ahmad et al. (2022) indicated that when the personnel feel that their supervisor encourage them in ecological cause, their inclination towards pro-environmental behavior increases. Social learning theory (Bandura & Walters, 1977) recommended that the workers copy the actions of their leaders because their leaders are acts as role models in the workplace. The different behaviors are learned by the employed by observing how their supervisors behave in certain situation and workplace setting (Lu et al., 2025; Aryati, 2025). The learning process in social learning theory is substantial when the work behavior is EGB as leaders affect and drive the behaviors in their followers by their status, power, and role (Brown et al., 2005). Based on the above discussion, it is hypothesized:

H1: Ethical leadership positively influence employee green behaviors.

2.2.2. Motivational States as a Mediator

Ethical style of leadership impacts the behaviors, conducts, and attitudes of the personnel in the organization including citizenship behavior of the workers (Sharif & Scandura, 2013), commitment of the employees (Harvey et al., 2013), employee satisfaction (Brown et al., 2005), and organizational and employee performance (Sharif & Scandura, 2013), however the motivational procedure underlying theses impacts is still ambiguous. According to Self-determination theory (SDT) (Deci and Ryan, 2000), humans have three major psychological needs such as, autonomy, relatedness, and competence generating high level of motivation (Gagne and Deci, 2005). Based on the SDT, it is determined that ethical leaders might drive positive workplace outcomes in the employees, explicitly, motivation. Ethical leaders make fair decisions, they are moral and honest individuals (Brown and Trevino, 2006). Brown and Mitchell, (2010), concluded that ethical leaders communicate moral beliefs, develop explicit ethical values, and manage rewards and sentences for ensuring compliance driving controlled motivation by internal standards and external regulations. Ethical leaders create an environment in the organization in which employees develop abilities and skills to achieve the organizational goals by motivating the workers competence is consistent with moral values and ethical standards (Kuvaas, 2006; Gagne and Deci, 2005). Ethical leaders inspire the employees by being truthful, respectful, responsible, rational, and impartial while interacting with their followers leading towards motivation of the employees by encouraging autonomy (Brown and Mitchell, 2010). Ethical leaders exhibit compassion, service to others however valuing the self-respect and moralities of others which is mandatory for relatedness. Ethical leadership creates an environment in the organization that enhance psychological safety and trust eventually enhancing autonomous motivation of the employees when their basic needs are fulfilled as mentioned in SDT. Considering this, the following hypotheses are proposed:

H2: Ethical leadership positively influence controlled motivation.

H3: Ethical leadership positively influence autonomous motivation.

SDT theory suggests that kind of motivation possessed by the individuals is significant factor of their behavior (Deci and Ryan 2000). As motivation is categorized into two kinds such as autonomous motivation and controlled motivation. Controlled motivation is a kind of motivation state in which the individual engage due to specific behaviors caused by internal or external pressures. In comparison to controlled motivation, autonomous motivation is a type of motivation individuals engage because of particular behaviors caused by an individual's own will, personal beliefs, self-interest, and free choice. The mentioned motivational states are not contradictory to one another and can also occur at the same time. The ecological behaviors of the employees are impacted by the different types of motivation at the workplace (Norton et al. 2015). Particularly, ecofriendly behaviors of the employees in the organizational settings are effected by the controlled and autonomous motivation. The research of Gagné and Deci (2005) recommended that different behaviors of the individuals are caused by autonomous and controlled motivational states. In general, workers need supervision when they perform tasks that are important and necessary but perceived as tedious and uninteresting predominantly when performance is based on anticipated results (for instance getting paid and receiving promotions) (Norton et al. 2015; Gagné and Deci 2005). Therefore, employee who have controlled motivation holds a sense of accountability and pressure (Deci and Ryan 2000). For this reason, the workers who are influenced by the controlled motivation often respond to pressures and restrictions of the organizational demands eventually leading towards engaging the employees in environmental friendly behaviors. Nonetheless, the employees who have autonomous motivation are involved in

specific activities because of their self-interest and own will (Deci and Ryan 2000). Consequently, personnel who are affected by autonomous motivation consider eco-friendly behaviors significant and are eager to exhibit ecological behaviors. Therefore, the following hypotheses are postulated:

H4: Controlled motivation positively influence employee green behavior.

H5: Autonomous motivation positively influence employee green behavior.

Ethical leaders are the one who set explicit expectations, support responsibility, and implement administrative standards that underscore moral and viable conduct. These conducts generate an organized atmosphere in which personnel feel beholden to obey with ecological practices because of exterior pressures, such as manager beliefs, directions, or distress of dissatisfaction (Gagné & Deci, 2005). Controlled motivation prompt the personnel to depict ecological action specifically environmental friendly behavior (Tian et al., 2020). As a consequence ethical leader's acts as a driving factor channeling workers behavior through external rules, resulting to comply with the goals of the organization aimed at sustainable development (Islam et al., 2021b). Ethical leader's helps to foster employee controlled motivation that in turn improve the environmental conscious behaviors of the employees. Ethical leaders indorse ethics such as honesty, equality, and ecological responsibility empowering their subordinates through dependence, support, and reassurance. Ethical style of leadership gratify their follower's psychological needs which fosters their motivational state (Deci & Ryan, 2000). When the workers consider that sustainability is crucial and they personally feel committed to safeguard the environment and concerned about achieving environmental goals are have high tendency to depict environmental friendly behaviors at the work place even if it is not required in their job (Gagné & Deci, 2005). So ethical leadership is a style of leaders that creates a positive work environment to enhance individual intrinsic interest along with the personal countersignature of ecological standards, prominent for self-driven environmental friendly activities (Ouakouak et al., 2020). Consequently, autonomous motivation works as a vital psychosomatic mechanism through which green behavior of the employees are influenced by ethical leadership. Based on the arguments, the following hypotheses are posited:

*H6: Controlled motivation mediates the positive influence of ethical leadership on employee green behavior.*

H7: Autonomous motivation mediates the positive influence of ethical leadership on employee green behavior.

2.2.3. Moderating role of Organizational Resilience

The concept of organizational resilience is not new in the area of management sciences but it has been extensively used in the different fields such as engineering, psychology, environmental management, social sciences, business, and etc. The concept was defined first time in the discipline of management by Staw et al. (1981) as a negative alteration with outside environment along with protecting internal dynamics altogether. Organizational resilience is referred as the ability of the organization to reconstruct the models of the business organization by utilizing the resources of the organization for optimizing processes and meeting the external environment (Hillmann & Guenther, 2021; Chen, et al. 2021). In the area of organizational research investigating the influence of ethical leadership on EGB has garnered substantial attention. The employees are influenced by the ethical leader to depict environmental conscious behavior by signifying honesty and environmental responsibility. Nevertheless, the mechanism and conditional process of this association is still in its early stages. Previous studies examined the relationship by different mediators and moderators. The study of Yang and Liu (2022) concluded that green organizational identity mediates and strategic flexibility moderates the relationship of ethical

leadership and ecological innovation behavior of the employees. Likewise the previous research of Khan et al. (2019) also highlighted that green psychological climate plays the role of mediator while environmental awareness moderates the influence of ethical leadership on ecological behaviors of the employees. The moderation mechanism of organizational resilience is still unexamined. Organizational resilience is capacity of the business firm to predict, prepare, respond, and adapt the changes and disruption in the environment influence how the ethical leaders can shape the ecological conducts and actions of the employees so that they behave in environmental conscious manner (Hernes et al., 2025). It is easy for the ethical leader to encourage employees to implement environmental initiatives when the organization is resilient to changes and ready to adapt it which also leads towards encouraging the employees to accept change. In the resilient organizations, the workers are more open to environmental friendly behaviors as they perceive it as these behaviors are aligned with the adaptive abilities of the organization and long-term sustainable development goals. In contract to this, the organization that have low level of resilience, the impact of ethical leadership on shaping the eco-friendly behavior of the employees might be reduced. Because employees will consider environmental friendly initiatives are not aligned with the abrupt significances of the organization and risky resulting in resistance of the employees to show green behaviors at the workplace setting. For this reason, it is important to examine the potential conditional effect of organizational resilience in the relationship of ethical leaders and green behaviors of the employees. Based on this, the following hypothesis is conjectured:

H8: Organizational resilience moderates the positive influence of ethical leadership on employee green behavior.

Figure 1: Conceptual Model
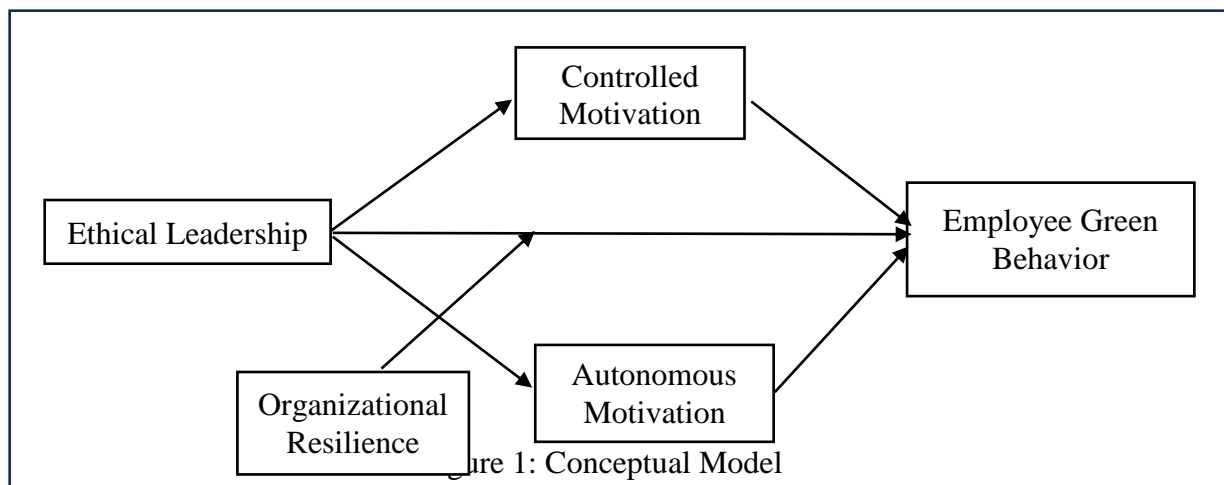
3. Research Methodology
3.1 Procedures, Population, and Sample

The research focused on examining the influence of ethical leadership on EGB through the mediation of controlled motivation and autonomous motivation and moderation mechanism of organizational resilience. The research study used quantitative research methodology which is a systematic approach to gather and analyze the numerical data in order to quantify phenomenon, identify patterns, and analyze the hypotheses using statistical methods (Bloomfield & Fisher, 2019). The study employed cross-sectional research design in which the data was collected from the participants of the study at one point of time (Cummings, 2018). The research strategy utilized in the present study was deductive approach as the purpose of study was to test the theory and move from general to specific and

test the hypotheses developed using already existing theory (Reyes, 2004). The data was collected from the respondents of the study using self-administered survey questionnaire. The research study targeted population was all four and five star hotels of Pakistan. The hotels were selected as targeted population as they pay more attention on the emotional representation of the employees and they are given a detailed and explicit rules and regulation and focus on adopting green behaviors in the workplace setting. There were 32 hotels all over Pakistan out of which 20 hotels were five star hotels demonstrating 65 percent of the total whereas 11 hotels were four star hotels representing 35 percent of the total hotels situation all over Pakistan including provinces and Federal. The list of hotels is available at www.pha.org.pk. in which five hotel belongs to Federal region, fourteen hotels are from Punjab, two were from KPK, nine were from Sindh, and two were from Baluchistan. The data was collected from the employees who were working in the hotels. Employees are the drivers of the sustainable development initiatives undertaken by the organizations. Organizations set vision and create policies but behavior of the employee determine the success and failure of the organizational sustainability goals. For the present research, a multi-stage sampling strategy was used which stratified proportionate convenience sampling. The data was collected from the participants of the study from (May 2022 to September 2022) out of 560 questionnaire 430 questionnaires were returned completely filled. Out of the 430 filled questionnaires the 398 questionnaires were used for the further analysis after the screening and cleaning of data. Data collection using cross-sectional approach can lead towards response bias such as common method bias leading towards restricting the validity of the research findings (Podsakoff et al., 2003). The common method bias risk was mitigated by ensuring the confidentiality and privacy of the participants of the study as their responses were kept confidential. The data collected was analyzed using SPSS and AMOS.

3.2 Measures

Ethical leadership was measured using a six-item scale developed by (Brown et al., 2005), which is further validated by the Lin et al., (2017). The motivational states are measured by the 12 items scale used by the (Gagne et al., 2010), which is further validated by the Tian et al., (2020). The employee green behavior is measured by the six items scale of Norton et al., (2014) which is further validated by the Tian et al., (2020). The organizational resilience is measured by the 4 items scale used by the Goncalves et al., (2022).

4. Analysis

4.1 Demography of the study

Table 1 provides a summary of the demographic profile of the 398 respondents who participated in the study. The sample was evenly divided between employees from 4-star and 5-star hotels, with each group making up 50% of the total. In terms of gender, a significant majority were male (70.6%), while females represented 29.4% of the participants. Looking at educational background, most respondents held a Master's degree (57.3%), followed by those with a Bachelor's degree (30.7%), and the remaining 12.1% had other qualifications. Regarding job designation, the majority were in middle-level positions (55.5%), 41.2% were working in front-line roles, and only a small fraction (3.3%) held top-level positions. As for total work experience, 30.4% of the respondents had 6 to 10 years of experience, 26.1% had been working for 11 to 15 years, 22.9% had 16 to 20 years of experience, 14.1% had 1 to 5 years, and only 6.5% reported over 20 years in the field. This distribution gives a clear view of the respondents' professional backgrounds and workplace demographics.

Table 1: Demographical characteristics of respondents

Demographics			
Name of Organization	4 Star hotels	199	50
	5 Star Hotels	199	50
	Total	398	100.0
Gender	Female	117	29.4
	Male	281	70.6
	Total	398	100.0
Qualification	Bachelor	122	30.7
	Master	228	57.3
	Other	48	12.1
	Total	398	100.0
Designation	Front Line Job	164	41.2
	Middle Level Job	221	55.5
	Top Level Job	13	3.3
Total Experience	1-5 year	56	14.1
	6-10year	121	30.4
	11-15 year	104	26.1
	16-20 year	91	22.9
	above 20 year	26	6.5
	Total	398	100.0

4.2 Data Normality Analysis
Table 2: Data skewness, mean, and kurtosis

Variables	Mean	St. Deviation	Skewness	Kurtosis
Ethical Leadership	3.6432	.58793	-.847	-.212
Autonomous Motivation	3.5678	.62975	-.120	-.459
Continuous Motivation	3.5946	.67551	-.630	-.134
Organizational Resilience	3.6420	.70974	-.466	-.283

Employee Green Behavior	3.8032	.65582	-.826	.740

Based on the presented table, it is evident that the data exhibits a normal distribution. The skewness value, determined through the application of Bulmer's rule of thumb, is expected to fall within the range of +1 to -1. In the current study, the calculated skewness value aligns with this range. Similarly, the kurtosis value, computed using MacGillivary and Balandan's method, is anticipated to fall within the interval of +3 to -3, which is indeed the case for this investigation. The table presents descriptive statistics for five key variables in the study: Ethical Leadership, Autonomous Motivation, Continuous Motivation, Organizational Resilience, and Employee Green Behavior. Among these, **Employee Green Behavior** has the highest mean score at **3.80**, indicating that participants generally rated their engagement in green behaviors positively. It also shows a noticeable negative skewness of **-0.826**, suggesting that responses leaned toward higher values, and a kurtosis of **0.740**, implying a distribution slightly more peaked than normal. **Ethical Leadership** follows closely with a mean of **3.64** and the lowest standard deviation (**0.59**) among the variables, showing relatively consistent responses. Its skewness is **-0.847**, indicating a strong leftward skew, and its kurtosis of **-0.212** suggests a slightly flatter distribution. **Organizational Resilience** also shares a mean close to Ethical Leadership, at **3.64**, but with more variability (**standard deviation of 0.71**). It has a mild negative skew (**-0.466**) and slightly low kurtosis (**-0.283**), indicating a fairly even spread of responses. **Continuous Motivation** and **Autonomous Motivation** have similar mean values (**3.59** and **3.57**, respectively). Continuous Motivation shows moderate skewness (**-0.630**) and near-normal kurtosis (**-0.134**), while Autonomous Motivation has the least skewed distribution (**-0.120**) and the lowest kurtosis (**-0.459**), suggesting responses were more evenly spread. Overall, all variables show negative skewness, indicating that respondents tended to agree or respond favorably to the items. The kurtosis values vary, but none indicate extreme deviations from a normal distribution.

Table 3: Reliability Analysis

Variable	Cronbach alpha	No of items
Ethical Leadership	0.750	06
Autonomous Motivation	0.770	06
Continuous Motivation	0.760	06
Organizational Resilience	0.790	04
Employee Green Behavior	0.810	06
Overall Reliability	0.928	28

To mitigate potential disruptive variables, a reliability analysis was performed to evaluate the instrument and questionnaire items. Before employing alternative approaches, it is imperative to conduct instrument testing to mitigate potential disturbances. Based on the conventional guideline, a Cronbach's alpha coefficient beyond 0.7 is typically regarded as satisfactory, surpassing 0.8 is preferable, and surpassing 0.9 is ideal for assessing the reliability of an instrument. The table above demonstrates that all variables exhibit a Cronbach's alpha coefficient surpassing the threshold of 0.7, widely acknowledged as indicative of strong internal consistency. In addition, it is worth noting that the instrument has a commendable level of reliability, surpassing 0.7, so indicating highly favorable results. The table presented above demonstrates that all of the values above the threshold of 0.7. The table presents the reliability statistics for the variables in the study. **Ethical Leadership** has a Cronbach's alpha of **0.750**, based on six items. **Autonomous Motivation** follows closely with a Cronbach's alpha of **0.770**, also using six items. **Continuous Motivation** has a reliability score of **0.760**, measured by six items. **Organizational Resilience** shows the highest

reliability score among the variables, with a Cronbach's alpha of **0.790**, based on four items. **Employee Green Behavior** has the highest reliability at **0.810**, based on six items. Overall, the reliability across all 28 items in the study is strong, with a Cronbach's alpha of **0.928**, suggesting excellent internal consistency for the measurement scales used.

TABLE 4: CORRELATION ANALYSIS

Item	EL	AM	CM	ORGR	GIWB
Ethical Leadership	1				
Autonomous Motivation	.538**	1			
Continuous Motivation	.631**	.476**	1		
Organizational Resilience	.572**	.451**	.554**	1	
Employee Green Behavior	.543**	.543**	.614**	.614**	1

A two-tailed test at a significance level of 0.01 indicates that the correlation is statistically significant, and the same is observed at a significance level of 0.05. The correlation matrix should range from 0 to 1, with p-values of 0.01 and 0.05 being considered significant. A correlation coefficient of 1 indicates a very strong association between the independent and dependent variables, while a value of 0 indicates no association between the variables. As demonstrated in the table above, all variables display a highly significant correlation at the 1% significance level. The table shows the correlation coefficients between five key variables: Ethical Leadership (EL), Autonomous Motivation (AM), Continuous Motivation (CM), Organizational Resilience (ORGR), and Employee Green Behavior (GIWB). All correlations are statistically significant at the ** level, indicating meaningful relationships between the variables.

Ethical Leadership (EL) is positively correlated with all the other variables. It has a moderate positive relationship with Autonomous Motivation (r = 0.538), Continuous Motivation (r = 0.631), and Organizational Resilience (r = 0.572), suggesting that higher levels of ethical leadership are associated with increases in these factors. The correlation with Employee Green Behavior is also significant (r = 0.543), indicating that ethical leadership is positively related to environmentally-friendly behavior among employees. Autonomous Motivation (AM) shows strong positive relationships with Continuous Motivation (r = 0.476), Organizational Resilience (r = 0.451), and Employee Green Behavior (r = 0.543), which implies that as autonomous motivation increases, so does the likelihood of increased motivation, resilience, and green behavior. Continuous Motivation (CM) has positive correlations with Organizational Resilience (r = 0.554) and Employee Green Behavior (r = 0.614), suggesting that motivated employees are also more resilient and exhibit greater green behaviors. Finally, Organizational Resilience (ORGR) shows a strong positive correlation with Employee Green Behavior (r = 0.614), implying that more resilient organizations tend to foster more green behavior among employees. Overall, the correlations indicate that all the variables are positively related, with some of the strongest associations occurring between Organizational Resilience and Employee Green Behavior, as well as between Continuous Motivation and Employee Green Behavior.
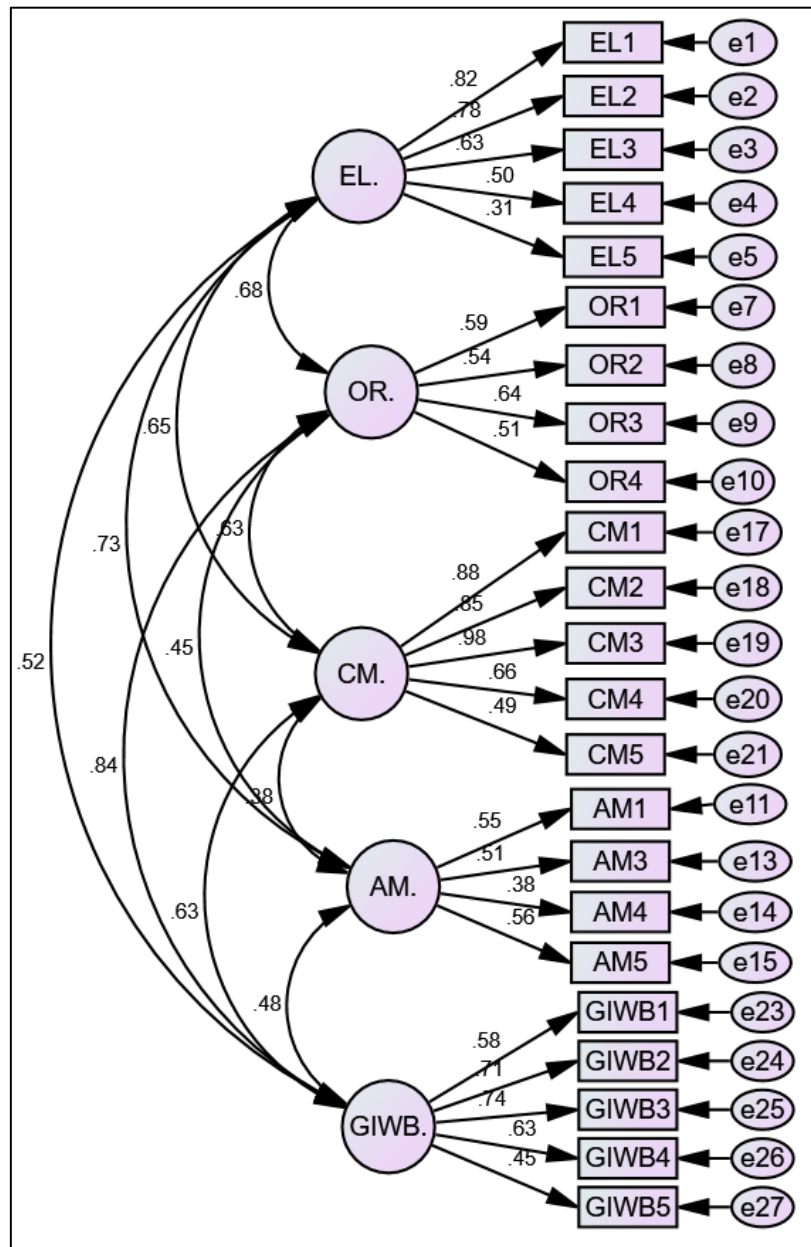
TABLE 5: Fitness Summary's

Model	Hypothesized	Thresholds
CMIN/DF	2.270	Less than 3
CFI	0.900	Near to 0
AGFI	0.895	Greater or equal to 0.90
GFI	0.899	Greater or equal to 0.80
RMR	0.045	Greater or equal to 0.90
RMSEA	0.050	Less than 0.080

The data in this study underwent analysis and presentation through the utilization of Structural Equation Modelling (SEM), a statistical technique that encompasses factor analysis, route analysis, and regression. This methodology is advantageous for scrutinizing inferential variables and comprehending both confirmatory and foundational models. Confirmatory Factor Analysis (CFA) was performed to assess the reliability of the model

using AMOS 28. The research produced a total of 28 figures utilizing the AMOS software to represent each individual element. After the completion of the CFA, the subsequent task involved the development of an appropriate model. Hu and Bentler (1999) stated that the Comparative Fit Index (CFI), which serves as an indicator of the model's goodness of fit, is expected to fall within the range of 0 to 1. The observed values for the model in this investigation were found to be within the acceptable range.

Direct Relationship

	Estimate			S.E.	C.R.	P	Hypothesis	
EGB	<---	EL	.526	.041	12.526	***	H1	Accepted
CM	<---	EL	.572	.073	11.499	***	H2	Accepted
AM	<---	EL	.652	.065	10.598	***	H3	Accepted
CM	<---	EGB	.457	.025	11.082	***	H4	Accepted
AM	<---	EGB	.374	.020	08.086	***	H5	Accepted

This table shows the results of hypothesis testing in a structural equation model. Each row represents a proposed relationship between two variables, along with statistical estimates indicating the strength and significance of those relationships. For the first hypothesis (H1), Ethical Leadership (EL) has a significant positive effect on Employee Green Behavior (EGB), with an estimate of 0.526. The standard error is 0.041, the critical ratio (C.R.) is 12.526, and the p-value is highly significant (indicated by ***), meaning the result is statistically strong and H1 is accepted. In H2, EL also shows a significant positive influence on Commitment to the Environment (CM), with an estimate of 0.572 and a critical ratio of 11.499. The p-value again indicates strong significance, supporting the acceptance of H2. Similarly, H3 examines the effect of EL on Affective Motivation (AM), showing a strong positive relationship with an estimate of 0.652, a standard error of 0.065, and a critical ratio of 10.598. The result is statistically significant, confirming H3. H4 tests the influence of EGB on CM and finds a significant positive estimate of 0.457. The critical ratio is 11.082, and the p-value confirms the effect is significant, thus H4 is accepted. Lastly, H5 explores the relationship between EGB and AM, revealing a positive estimate of 0.374 with a critical ratio of 8.086. The significance of this result leads to the acceptance of H5 as well. Overall, all five hypotheses (H1 to H5) are accepted based on the strong and statistically significant relationships between the variables in the model.
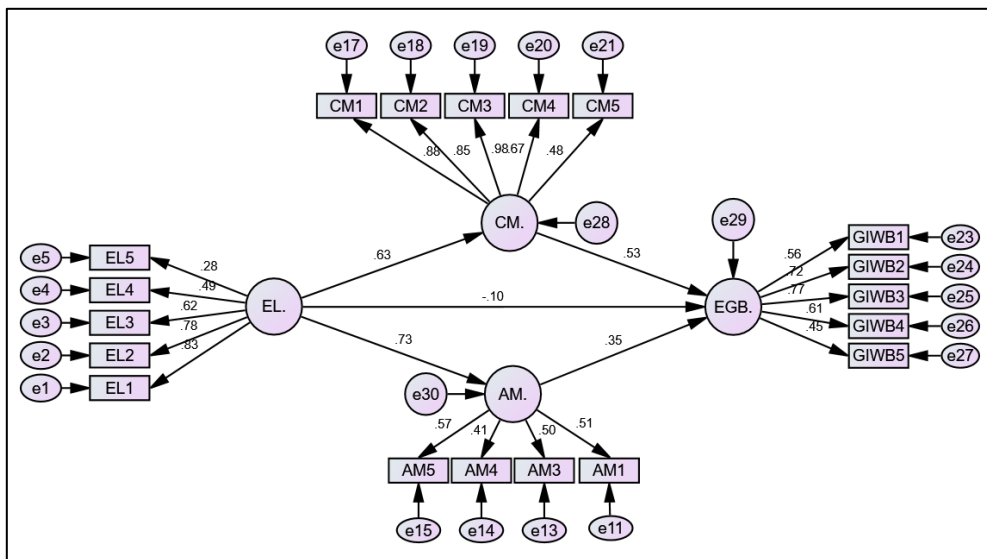
4.3 Mediation

The mediation table presents the results of two hypothesized indirect relationships involving a mediator between an independent variable and a dependent variable. In the first hypothesis (EL→CM→EGB), the direct effect of EL (presumably Ethical Leadership) on EGB (likely Employee Green Behavior) without including the mediator CM (continuous motivation) is not statistically significant (β = 0.323, p = 0.324). However, when CM is introduced as a mediator, the direct effect of EL drops to β = 0.138 and becomes statistically significant (p = 0.001), while the indirect effect through CM is also significant (β = 0.169, p = 0.001). This indicates full mediation, meaning the effect of EL on EGB operates entirely through CM.

Similarly, in the second hypothesis (EL→AM→EGB), the direct path from EL to EGB is non-significant without the mediator AM (which might stand for Autonomous Motivation) (β = 0.360, p = 0.340). After including AM as a mediator, the direct effect decreases to β = 0.118 with a significant p-value (0.001), and the indirect effect through AM is also significant

(β = 0.110, p = 0.001). This again supports full mediation, suggesting that the influence of EL on EGB is fully channeled through AM. These results highlight that both CM and AM are crucial pathways through which EL impacts EGB.

Hypothesis	Dβ W/O Med.	Dβ with Med.	Iβ	Med. Type
EL→CM→EGB	β = 0.323 p = 0.324	β = 0.138 p = 0.001	β = 0.169 p = 0.001	Full Mediation
EL→AM→EGB	β = 0.360 p = 0.340	β = 0.118 p = 0.001	β = 0.110 p = 0.001	Full Mediation

4.4 Moderation

This study examines the moderation effect using the AMOS software and interprets the results using graphical representations provided by the stat-tool wiki. The unstandardized regression coefficients (B) were computed for all variables. The initial variable, EL (IV), exhibits an unstandardized regression coefficient of B1 = 0.322 (p = 0.002). The second variable, OR (moderator), has an unstandardized regression coefficient of B2 = 0.250 (p = 0.000). The third variable in the study indicates the interaction between the independent variable of EL, the dependent variable of EGB, and the moderator of OR. The unstandardized regression coefficient for this interaction is B3 = 0.112, which is statistically significant with a p-value of 0.000. The results of this study indicate that the use of Or has a positive impact on the relationship between EL (independent variable) and EGB (dependent variable).
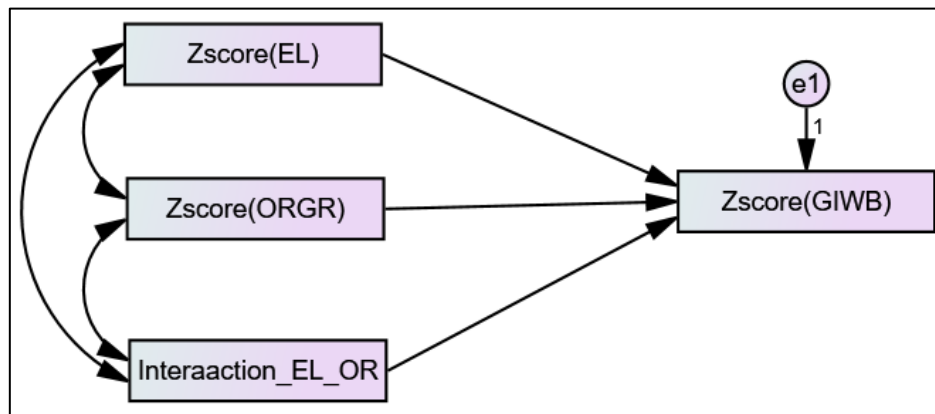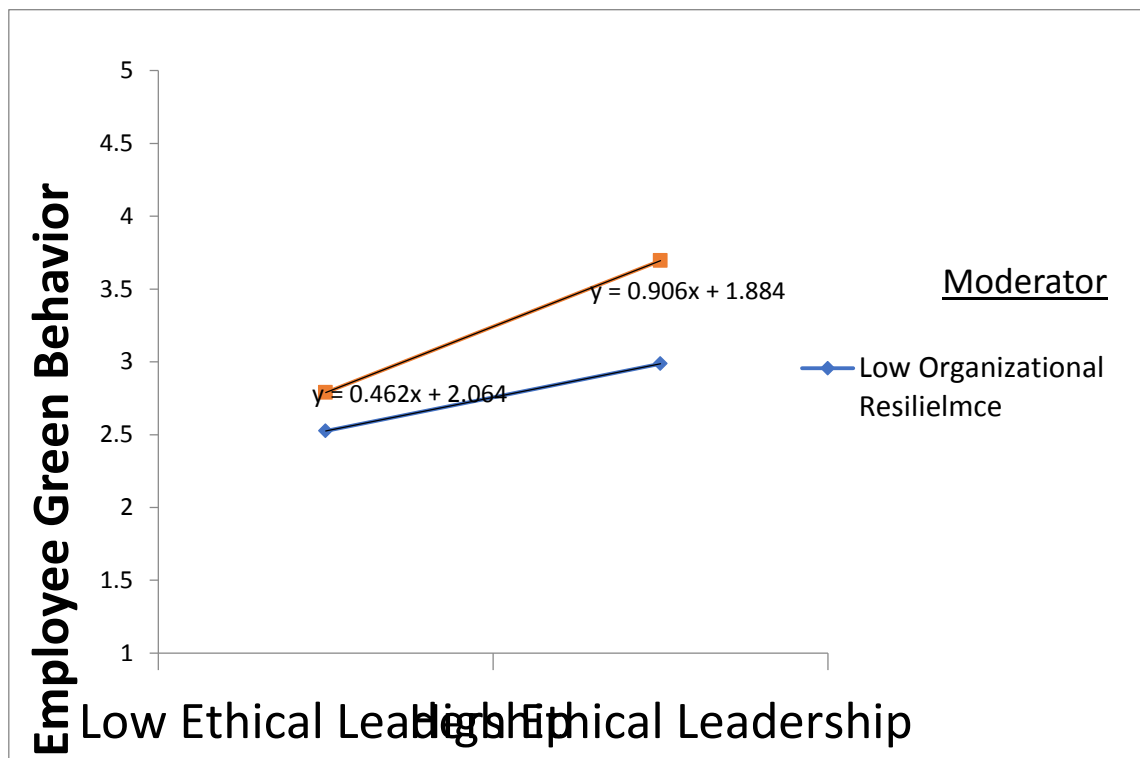
Item	Component Rotated Matrix								
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
EL1	0.510								
EL2	0.535								
EL3	0.610								
EL4	0.664								
EL5	0.674								
EL6	0.618								
AM1			0.616						
AM2			0.600						
AM3			0.726						
AM4			0.730						
AM5			0.633						
AM6			0.795						

CM1	0.696		
CM2	0.715		
CM3	0.682		
CM4	0.619		
CM5	0.618		
CM6	0.625		
OR1		0.715	
OR2		0.826	
OR3		0.888	
OR4		0.793	
GIWB1			0.715
GIWB2			0.623
GIWB3			0.662
GIWB4			0.516
GIWB5			0.742
GIWB6			0.613

A **rotated matrix** table like the one you've shared typically arises from factor analysis or structural equation modeling (SEM), where multiple items (such as questions, measures, or indicators) are used to measure latent variables. In this case, the matrix appears to be showing how various components (likely representing factors or constructs) load onto different items.

Matrix Structure

- **Rows (Items/Indicators)**: These are the measured items or indicators in your study. The rows include variables like EL1, EL2, EL3, etc., and these likely represent different observed variables from your data.

- **Columns (Components)**: These represent the factors or components extracted from a statistical technique like factor analysis. There are 9 components shown in the table, numbered 1 through 9.

- **Values**: The numbers in the cells of the matrix represent the **factor loadings**, or the correlations between each item and each component. These values range from 0 to 1, indicating the strength of the relationship. Higher values (closer to 1) suggest a stronger relationship between the item and the component.

Interpretation of Specific Entries

- **EL1 (0.510)** under Component 1: This indicates that EL1 is moderately correlated with Component 1, with a loading of 0.510. This suggests that EL1 contributes moderately to the variance in Component 1.

- **AM1 (0.616)** under Component 2: AM1 shows a higher loading of 0.616 on Component 2, indicating a moderate to strong relationship between AM1 and Component 2.

- **GIWB1 (0.715)** under Component 9: GIWB1 has a very high loading of 0.715 on Component 9, indicating a strong association with this component.

Understanding Factor Loadings

- **Loadings Close to 1**: A high factor loading, like 0.8 or above, means that the item is strongly related to the factor and contributes significantly to it.

- **Loadings Close to 0**: Loadings closer to zero (e.g., below 0.3) mean that the item is weakly related to the factor and contributes less to explaining the variance in that factor.

General Trends

- Items like **EL5, EL6, AM6** load strongly on their respective components, suggesting that they have a significant relationship with those factors.

- Some items, like **GIWB1 to GIWB6**, load only on Component 9, indicating that these items are most strongly related to this factor.

In factor analysis, the "rotation" process adjusts the factors to make the interpretation of the data easier. There are different rotation techniques (like **Varimax**, **Oblimin**, etc.), and the goal is to achieve a simpler, more interpretable structure. After rotation, the loadings are redistributed across components to make the relationships between items and factors clearer, often resulting in more distinct groupings of items under each component.

5.1 Discussion and Conclusion

In the present and future generations, one of the troublesome issue is climate change. The growing interest on climate is not only the matter of discussion for the local or global level, the firms are also recognizing its importance for the survival of human being (Dekoninck & Schmuck, 2025). Based on the outcomes of the organization and ecological concerns, the business community are focusing on environmental protection in their organizational goals. Moreover, as the procedures and actions of the businesses are changing it is also attracting the attention of the research scholars and academics on the sustainable business practices (Jindal, 2025). Focusing on this, the present study investigated the role played by ethical leaders in the organizational setting to improve the green behaviors of the employees. The present study results showed that based on the theoretical foundation of social learning theory (Bandura & Walters, 1977) that the individual learn from the actions of their role model, therefore ethical leader play an important role in the organization through individual as well as organizational level mechanism to shape the organizational outcomes of their followers enhancing their green behaviors. Previous studies indicated that the ecological concerns should not be considered at strategic level only in the organizational setting but it is important that these issues are given importance at the operational level in which the role played by the employees of the organization is more crucial as compared to the senior level management positions (Farooq et al., 2023; Farooq et al., 2021; Khan et al., 2019). In this regard the employee positive work outcome is needed especially employee green behavior which is a valued behavior (Ragusa, 2022; Islam et al., 2021b; Arshad et al., 2020). The factors that are leading towards influencing the behavior of the employee to protect and safeguard the environment is area of attention for the scholars and practitioners (Khan et al., 2019; Robertson & Barling, 2017). The present study also hypothesized that controlled motivation and autonomous motivation serve as an explanatory mechanism among ethical leadership and green behavior of the employees. The results of study concluded that controlled motivation and autonomous motivation mediates the positive influence of ethical leadership on employee green behaviors. The results of the study is consistent with the previous studies that emphasized the importance of ethical leaders in the job related outcomes (Bedi et al., 2016; Ng and Feldman, 2015). Keeping in view the study of Harrison, (2025), the ethical style of leadership motivate the employees by improving their psychological states so that they are engaged in positive work behaviors and work outcomes. Ethical leaders communicate moral beliefs and ethical values that drive controlled motivation in the workers by internal standards and external regulations (Brown and Mitchell, 2010). The ethical

leaders develop a culture in the workplace setting which improve psychological safety and trust in the employees improving their autonomous motivation when their needs are fulfilled. The environmental friendly behaviors of the employee are influenced by different types of motivational states such as controlled motivation and autonomous motivation (Norton et al. 2015). Ethical leaders act as a key driver to channel behavior in the employees through exterior procedures, to comply with the aims of the business firm to achieve sustainable development (Islam et al., 2021a). Ethical leaders enhance controlled motivation in the employees which foster ecological behavior in the employees. Ethical leaders encourage ethics such as morality, impartiality, and ecological responsibility allowing their subordinates through dependency, support, and assurance. Ethical style of leadership satisfy the psychological needs of their followers which nurtures their motivational state (Deci & Ryan, 2000), which improves environmental conscious behavior of employees. The present study also postulated that organizational resilience moderates the significant relationship among ethical leadership and EGB. When the organizations are resilient, the ethical leader can easily encourage the worker to work on the ecological initiatives. In resilient organizations the employees are ready to adapt the changes that leads towards improving their changed behavior as the workers are open to ecological conducts since they perceive that these behaviors are aligned with the organizational adaptive capabilities and long-term sustainable development goals. So the conditional mechanism of organizational resilience is investigated considering the organizational level factor that influence the environmental behaviors of the employee because of ethical leaders. The findings of past studies showed that eco-friendly behavior of the workers are the result of the factors that are related with supervision, organization, and individual (Khan et al., 2019; Saeed et al., 2019). The studies has investigated the influence of organizational, leaders, and individual related factors separately ignoring the combined effect of the said factors on shaping the ecological behaviors of the employees, so the study examining the deterministic mechanisms are limited (Yuriev et al., 2020). So focusing on the gaps in the research study, the present study is an attempt to investigate the influence of all three levels on the green behaviors of the employees including ethical leadership (supervision), controlled and autonomous motivation (employees), and organizational resilience (organization).The existing study concluded that the influence of ethical leadership on EGB is mediated by controlled and autonomous motivation and moderated by organizational resilience.

5.2 Practical and Theoretical Implications

The results of the prevailing study has numerous practical and theoretical inferences to theory and practice. The study contributes to the existing body of knowledge by providing novel paths that links ethical style of leadership with the ecological behaviors of the worker depicted by them at the workplace setting. The increase in the environmental challenges and issues has raised the role of the business organizations to protect the environment and nature (Zaidi & Azmi, 2024; Islam et al., 2021b). In response to the environmental concerns growing demands, the organization are shifting their policies, procedures, and practices to sustainable actions and conducts (Tessema et al., 2025; Alzaidi & Iyanna, 2022). Furthermore, the role of leadership cannot be disregarded in this matter (Saeed et al., 2019). Moreover, retrieving support from social learning theory, the study tries to examine the moderation of organizational resilience in the link of ethical leadership and green behaviors of the employee with the mediation mechanism of controlled motivation and autonomous motivation of the employees. The study add to the literature review by empirically investigating the said relationship that how the ethical style of leaderships lead towards motivating the employee including their different motivational states such as controlled and autonomous motivation, improving the environmental conscious conduct and actions of the

employees. The study extends the application of social learning theory in the organizational and environmental behavior literature in the workplace setting to analyze the association among supervision and psychological constructs that influence employee to do what they do at their workplace. The study contributes to the area of motivational states, organizational resilience, supervision, and employee job related outcomes, providing empirical evidence for the relation in the context hospitality industry of a developing country. The study supports that the ethics of leaders needs to be cultivated in the hospitality industry of Pakistan so that climate challenges can be mitigated and the sustainable development initiatives can be achieved. The business organization are able to inspire employees to exhibit ecological behavior by enlightening ethical style of leadership and creating an environment and culture in the organization that empower the employee and motivate them to take part in the ecological actions and eco-conscious behaviors.

5.3 Limitations and Future directions

In presence of numerous contributions of theory and practice, there are some specific limitations of the study that are supposed to be the direction for the future researchers. The context of the study was Pakistan which is one of the developing country, retraining the generalization of the research study findings. In future developed and emerging countries can be considered to investigate the research model used in this study. The study was cross-sectional in nature that restrict investigating the relation at different point of time so in future longitudinal study can be conducted. The study was quantitative limiting the broader perspective and reasoning behind the responses of the respondents. For future the mixed methodology can be employed so that in depth information and data can be gathered on the topic of study. The hospitality sector was targeted in the present study, not allowing the generalizability to the other sector so in future diverse sectors can be taken into consideration to increase the generalization.

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