

**LINKING GENERATIVE LEADERSHIP WITH PRO-
ENVIRONMENTAL ORGANIZATIONAL CITIZENSHIP BEHAVIOR:
A MEDIATED MODEL OF GENERATIVE CONCERN IN THE
TOURISM SECTOR OF PAKISTAN**

Naveed Farooq

Associate Professor, Department of Human Resource and Information
Management, Abdul Wali Khan University, Mardan, Pakistan
naveedfarooq151@awkum.edu.pk

Akhtar Nawaz

Lecturer, Hazara University, Mansehra, Pakistan. akhtar_nawaz@hu.edu.pk

Muhammad Waseem

Associate Professor, Hazara University, Mansehra, Pakistan.
mwaseem@hu.edu.pk

Qasim Shahzad

Deputy Director A&R, Hazara University, Mansehra, Pakistan.
kasimswati@gmail.com

Abstract

This study investigates the impact of Generative Leadership (GL) on Employees' extra-role behavior (ERBE) for the environment and analyzing the mediating role of Generative Concern (GC). A conceptual model is proposed to explain how generative leadership fosters environmentally responsible behavior among employees, ultimately contributing to a firm's long-term sustainable advantage. Employing a quantitative, cross-sectional research design, this study adapts standardized scales from prior literature and collects data from 350 executives, managers, and business owners operating within the tourism and hospitality industry. The findings demonstrate that generative leadership significantly promotes employees' engagement in ERB for environmental sustainability. Furthermore, the results reveal that man-nature orientation (generative concern) serves as a key mediating mechanism in this relationship. This research offers two major contributions: first, it provides empirical evidence to support the strategic role of generative leadership in fostering environmental responsibility among employees; second, it offers practical insights for advancing sustainability efforts within the tourism and hospitality sector.

Keywords: Generative Leadership, Pro-Environmental Organizational Citizenship Behavior, Tourism Sector Pakistan

1. INTRODUCTION

The tourism industry is considered as key driver of local development and fiscal growth. But it is also increasingly been identified as a key contributor to environmental degradation, presenting a pressing issue that demands immediate and strategic intervention (Li, Wu, & Patwary, 2022). Despite its substantial economic value, the sector's rapid expansion and reliance on unsustainable practices have resulted in significant ecological challenges. In response, scholars and practitioners have intensified their efforts to identify and implement sustainable practices that balance economic prosperity with environmental responsibility. Within this context, organizational sustainability cannot be achieved solely through formal processes and compliance mechanisms. Instead, it requires the proactive involvement of employees who are willing to engage in voluntary, discretionary behaviors that extend beyond their formal job responsibilities. These behaviors, often referred to as ERBE, encompass self-initiated actions by employees aimed at enhancing environmental sustainability within the workplace. Such type of engagement for developing a culture of environmental sustainability and driving long-term environmental improvements in the tourism industry. Nevertheless, involving ERBE for the environment poses a significant challenge. Previous research has explored different factors that predict ERB. However, among these factors, scholars have predominantly emphasized the influence of leaders in shaping employee ERB.

For instance, Islam, Khan, Ahmed, and Mahmood (2021) investigated the effect of ethical leadership on ERBE, while Srivastava and Dhar (2019) emphasized the impact of authentic leadership in promoting such behaviors. Similarly, Aboramadan, Hamid, Kundi, and El Hamalawi (2022) examined how servant leadership shapes ERB among employees. Collectively, these

studies underscore the pivotal role that leadership styles play in motivating employees to engage in environmentally responsible behaviors. However, there remains a lack of consensus on which leadership style is most effective within the tourism industry—particularly in the context of Pakistan’s volatile, uncertain, complex, and ambiguous (VUCA) environment (Bushe, 2019). While leadership styles such as ethical, servant, and transformational leadership have shown promise, their applicability and effectiveness in the specific and often unpredictable landscape of Pakistan’s tourism sector remain uncertain (Alma Çallı, Özşahin, Coşkun, & Rıfat Arık, 2022). This underscores the need for further empirical investigation to identify a leadership approach best suited to fostering ERB in this unique context.

In response to this gap, scholars such as Bushe (2019) and Kearney and Lichtenstein (2023) advocate for Generative Leadership as a promising framework for navigating uncertain and dynamic environments. This leadership paradigm views organizations as networks of conversations and posits that addressing complex challenges requires transforming the narratives and dialogues that shape individual and collective behavior (Adams, Mombourquette, & Townsend, 2019). Generative Leadership empowers employees to transcend formal job responsibilities by cultivating a culture of innovation, ownership, and proactive engagement (Afridi, Shahjehan, Zaheer, Khan, & Gohar, 2023; Macaux, 2010, 2012). By offering a compelling vision and fostering an environment that prioritizes learning, growth, and collaboration, generative leaders inspire employees to take initiative, embrace creative problem-solving, and contribute meaningfully to organizational goals (Alma Çallı et al., 2022; Klimek, Ritzenhein, & Sullivan, 2008; Bushe, 2019). In this regard, generative leadership may hold unique relevance for the tourism sector in Pakistan, offering a context-sensitive strategy to mobilize ERB and enhance environmental performance.

In the context of the tourism industry, generative leadership may play a crucial role in promoting employee engagement in extra role behavior (ERB)

for the environment. Because, by fostering a culture of sustainability and empowering employees (Afridi et al., 2023; Demirbilek, 2022), generative leaders encourage their teams to actively participate in environmental initiatives, beyond their primary job responsibilities. Such leaders may inspire employees to adopt sustainable practices, promote responsible tourism behavior, and contribute to environmental conservation efforts. They provide support, resources, and autonomy for employees to take ownership of sustainability initiatives, encouraging innovation and creative problem-solving (Kearney & Lichtenstein, 2023; Surie & Hazy, 2006).

Despite the recognized importance of Generative Leadership (GL) in navigating volatile, uncertain, and ambiguous environments—such as that characteristic of Pakistan’s tourism sector (Afridi et al., 2023; Bushe, 2019; Kearney & Lichtenstein, 2023)—there remains a notable scarcity of empirical research examining this relationship. This gap in the literature is particularly evident concerning the role of GL in encouraging the ERBE among employees in the tourism industry of Khyber Pukhtunkhwa. Accordingly, the primary objective of this study is to explore the relationship between GL and employees’ environmentally focused ERB.

Furthermore, given the limited research on how and under what conditions GL impacts ERB, this study seeks to address this gap by utilizing Social Learning Theory (Bandura & Walters, 1977) as a theoretical lens. Specifically, it investigates the mediating role of the psychological construct of Generative Concerns (GC) in shaping this relationship.

The study is significant because it is focusing on important concepts that can drive meaningful changes in the tourism industry. By uncovering the psychological pathways through which generative leadership influences generative concerns, the research can inform leadership development practices, enhance employee engagement, and advance sustainability initiatives. Ultimately, the findings may contribute to the long-term

reputation, competitiveness, and environmental responsibility of Pakistan's tourism sector.

2. LITERATURE REVIEW

The literature review of the important variables in this research is as follows:

Generative Leadership and Environmental Behavior

According to Klimek et al. (2008), four types of leadership styles are there which depends on what generative it means: explorative, pragmatic, traditional, and generative. One of the effective and advanced leadership types is generative leadership. Leaders of this type grab and senses opportunities and convince an environment that raises new types of cooperation, supports innovation, and encourages and fosters new ideas. Managers with this leadership go beyond the values set for them and highlight the new procedures and innovative ideas inside the organization (Çetin & Demirbilek, 2020).

Generative leadership, characterized by its focus on innovation, creativity, and long-term sustainability, has been identified as a significant factor influencing employees' environmental behaviors (Kuenzi & Schminke, 2009). Leaders who exhibit generative qualities inspire their followers to go beyond their formal job roles and engage in ERBE (Norton et al., 2017). By fostering a culture of innovation and empowerment, generative leaders encourage employees to proactively identify and implement environmentally responsible practices within their organizations.

Research in the field of generativity and leadership and exploring the relationship between them is relatively new and emerging in majority of studies over the past decade (Hazy & Prottas, 2018; Surie & Hazy, 2006). Erikson (1950) introduced the concept of generativity, and Jaworski (1996) was the first to relate it with leadership. Jaworski defined GL as "*creating a domain in which human beings become more capable of participating in the unfolding of the future*" (p. 2).

Based on Jaworski's ideas, Welch (1998) explored how sentimental influential nurture a generative society within organizations by complimenting both intrapersonal and interpersonal skills. The initial studies on the subject were mainly relational, reflecting Erikson's (1950) conjured on generativity as a development process. Later on, the research extended this viewpoint by investigating the generativity in relation to secretarial structures, systems, and set-up which were often expressed as complex variables that resist change (Cooperrider & Srivastava, 1987; Surie & Hazy, 2006). Within this developmental trajectory, Generative Leadership (GL) has emerged as a framework for addressing organizational complexity and fostering new pathways for growth and innovation.

Extra Role Behavior for the Environment

ERBE are the unrestricted behaviors which are not ingredient of employees' formal, in-role responsibilities and are not included in the formally agreed compensation system. Such behaviors are the results of individuals' intrinsic motivation to help (Srivastava & Dhar, 2015), ERBE plays a significant role in redesigning organizational processes. These voluntary behaviors are oriented toward the benefit of the organization and are multidimensional in nature, encompassing contributions at the individual, team, and organizational levels (Krug, 2015). Moreover, ERBE is often regarded as a positive outcome of the psychological contract, which is rooted in employees' perceptions of mutual obligation. In the education sector, for example, teachers act as central agents in demonstrating extra-role behaviors that support their institutions, students, and colleagues (Belogolovsky & Somech, 2010).

According to Bakari et al. (2017), extra-role behaviors involve discretionary actions that require effort beyond simple compliance or routine job maintenance. Behaviors such as cooperation, advocacy, and voluntary initiative fall within this category. Importantly, extra-role behavior differs from both championing behavior and OCB. In this sense, ERBE provides organizations with a safeguard against unethical, illegal, or unsafe practices by

empowering employees to act as whistle-blowers or to engage in principled dissent when confronted with injustice or wrongdoing in the workplace. Unlike “extra effort,” which may be rewarded through appraisals or future incentives, ERB is inherently voluntary and typically excluded from formal evaluation systems (Peus et al., 2012). Extra role behavior, also identified as organizational citizenship behavior (OCB), refers to discretionary actions which an employee commences for the benefit of their organizations, apart from their formal job requirements (Organ & Ryan, 1995). In the context of environmental sustainability, extra role behaviors may perhaps incorporate initiatives such as waste reduction, energy conservation, and contribution towards environmental conservation activities (Lapierre et al., 2012). Research suggests that employees who observe supportive leadership are more likely to engage in extra role behaviors for the environment (Dangelico & Pujari, 2010).

Hypothesis-1: GL positively influences ERB for the Environment in the context of Pakistan's tourism industry.

Mediating Role of Generative Concerns

Erikson (1963) initially linked generative concern primarily to middle adulthood period. Subsequent research has examined the developmental track of this construct, suggesting that it may be less prominent during teens and rising adulthood (Damon, Menon, & Bronk, 2003) for instance, found GC to be relatively low in young adults compared with midlife and older adults, while no significant difference between the latter two groups. Later, McAdams (2001) argued that generativity is not exclusive to midlife and proposed that certain aspects may emerge more strongly in youth than others. Building on this, Stewart and Vandewater (1998) developed theory of generativity, suggesting that early life is characterized by concern and motivation to be generative, whereas midlife and later years emphasize generative capacity and achievement. Compared with mature adults, emerging adults engage less in activities related to children and youth, partly due to fewer societal

expectations and opportunities, though they may still direct concern toward younger generations when given the chance. McAdams (2001) identified the developmental roots of early generative concern as a key area for further study. One possible factor is that emerging adults often exhibit greater idealism than older adults (Arnett, 2007), which may shape the generative issues they prioritize, such as environmental engagement (Alisat, Norris, Pratt, Matsuba, & McAdams, 2014).

Hypothesis-2: GC acts as a mediator in the relationship between GL and ERB for the Environment in the tourism industry of Pakistan.

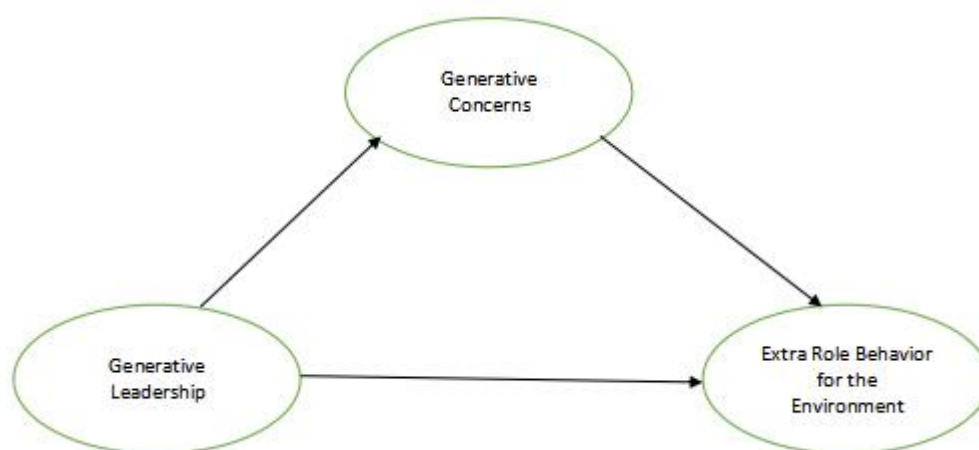


FIGURE: 1 THEORATICAL FRAMEWORK

3. METHODOLOGY

The study is cross-sectional and focuses on examining the relationship between GL and ERBE for the environment. The population of interest was the employees working in the tourism industry-Khyber of Pakhtunkhwa. The study mainly focuses on capturing a diverse range of employees across different job roles and organizations within the tourism sector such as employees of hotels, restaurants, and catering businesses. Khyber Pakhtunkhwa province is selected for this study because it is known for its diverse ecological landscapes, including mountains, forests, rivers, and national parks. This diversity offers a wide range of environmental settings and allows for studying the impact of Generative Leadership on Extra-Role

Behavior for the Environment in different contexts. Moreover, KP province has significant tourism potential, with popular tourist destinations such as Swat Valley, Chitral, Nathiagali, and Kalam. The tourism industry in KP is growing (Sanaullah, Rabbi, Khan, & Zamin, 2020; Ullah, Rasli, Shah, & Orakzai, 2019), making it a relevant context for examining the hypothesized relationships.

The study employed a both convenience and stratified sampling techniques. Initially, the participants were selected after on volunteer basis, while the stratified sampling has ensured representation of employees from various organizations and job roles within the tourism industry. Quantitative data was collected through self-administered questionnaires and assessed variables such as generative leadership, generative concern, and employees' ERB for the environment. The collected data was analyzed through correlation and regression analysis. For Mediation analysis, we relied on Hayes macros.

Measurements

Generative Leadership was measured with the help of a 27 items scale proposed by (ÇETİN & DEMİRBİLEK, 2019) used by (Afridi et al., 2023) in the tourism industry. Similarly, Generative concern was measured using the generative concern scale developed by de St. Aubin et al. (2004) and also used by (Akhtar et al., 2024) whereas, ERBE was assessed through a the scale developed by Boiral & Paillé (2012).

Sampling and Data Collection

A dual sampling strategy, combining convenience sampling and stratified sampling, was implemented to ensure both practicality and representativeness. The study targeted stakeholders operating under the jurisdiction of the Kaghan Development Authority, including hotels, restaurants, tour operators, and travel agencies. From a total of 536 questionnaires distributed, 417 were successfully returned, yielding a high response rate. After thorough screening for completeness and validity, 410 questionnaires were deemed suitable for statistical analysis. Data were collected using self-administered questionnaires

specifically designed to measure GL, GC, and ERB, ensuring direct engagement with respondents.

Measures

The measurement instruments used in this study were adapted from well-established and validated scales in prior research, ensuring reliability and comparability with existing literature. Generative Leadership (GL) was assessed through a 27-item scale adapted from Çetin and Demirbilek (2019). While Generative Concerns (GC) were measured using a 20-item scale developed by de St. Aubin (2004). Whereas Extra-Role Behavior (ERB) for the Environment was evaluated using a 12-item scale by Boiral and Paillé (2012).

4. DATA ANALYSIS

The proposed hypotheses were tested through correlation and regression analysis. These techniques are suitable to explore the strength and direction of associations, For mediation analysis Hayes macros were used. These methods provided a comprehensive examination of the data, enabling robust and evidence-based conclusions.

Reliability and Descriptive Statistics

Table 1 describes the descriptive statistics for the study variables, including mean values, standard deviations, and Cronbach's alpha coefficients. Generative Leadership (GL) reported a mean score of 3.08 with a standard deviation of 0.66 and a Cronbach's alpha of 0.78, indicating acceptable reliability. Generative Concern (GC) shows a mean of 3.16, a standard deviation of 0.61, and a Cronbach's alpha of 0.76, also reflecting good reliability. Extra-Role Behavior for the Environment (ESRBE) recorded the highest mean score of 3.26 with a standard deviation of 0.80 and a Cronbach's alpha of 0.80, demonstrating strong reliability. Collectively, these results suggest that respondents hold moderately positive perceptions of all three variables, while the reliability indices confirm that the measures are internally consistent and suitable for further analysis.

Table: 1 Reliability and Descriptive Statistic

Sr. No	Variable	Mean	S.Dev	Alpha
1	GL	3.0803	.65872	.783
2	GC	3.1629	.60649	.758

(N=410)

Hypotheses Testing

To evaluate the proposed hypotheses, mediation analysis was conducted using Andrew Hayes's Model 4. The analytical process began with examining the mediating role of each variable individually, allowing for a clear understanding of the unique contribution of Generative Concern (GC) in linking Generative Leadership (GL) to ERBE. Subsequently, mediation analysis was conducted using Model 4 to examine the mediating effects of GC within a unified analytical framework. The study utilized data from 410 participants and yielded significant findings. Results revealed a statistically significant association between generative leadership and ERBE. The R value in table 2 of 0.3343 indicates a moderate positive correlation, suggesting that as leaders display more generative behaviors, employees are more inclined to participate in environmentally responsible actions. The R-squared value of 0.1118 shows that generative leadership accounts for approximately 11.18% of the variation in ERBE. While this proportion is relatively modest, it still reflects a noteworthy influence of leadership on employees' environmentally responsible conduct, acknowledging that additional factors outside the model also play a role. Moreover, the unstandardized coefficient for generative leadership (0.4061) implies that each one-unit increase in generative leadership corresponds to a 0.4061-unit rise in ERBE. The substantial t-value (7.16) and highly significant p-value ($p < 0.0001$) further reinforce the reliability of this result.

Table: 2 GLDR-ESRBE

OUTCOME VARIABLE	ESRBE						
	R	R-sq	MSE	F	df1	df2	p
	.3343	.1118	.5702	51.332	1.000	408.000	.000
				8	0	0	0
Model	Coeff	SE	T	P	LLCI	ULCI	
Constant	2.013	.1785	11.275	.0000	1.6622	2.3642	
	2		6				
GL	.4061	.056	7.1647	.0000	.2947	.5176	
		7					
Standardize	Coeff						
d							
coefficients							
GL	.3343						

The findings highlighted a strong and meaningful relationship between generative leadership and generative concern. The R-square value of 0.521 indicates that generative leadership alone explains about 52% of the variation in generative concern, which is a considerable proportion in social science research. The results indicate that leaders who demonstrate generative qualities—such as focusing on long-term development, care for others and creating value for future generations—significantly shape how individuals express concern for generativity.

The F-value of 443.73 is significant ($p < .0001$) and shows that overall model is statistically sound and not the result of chance. Similarly, the coefficient for generative leadership (0.6646) is positive and statistically significant ($p < .0001$), meaning that as generative leadership increases, generative concern also rises. The standardized coefficient of 0.7218 strengthens this conclusion by showing a strong positive effect size. In practical terms, this means that leaders who practice generative leadership

behaviors strongly encourage individuals or groups to demonstrate higher levels of generative concern.

In the subsequent stage of the investigation, the linkages between GL and (ESRBE) was examined, this time while controlling of GC. The model yielded an R^2 is 0.1590, signifying that GL and GC jointly account for approximately 15.9% of the variance in ESRBE. Although the explained variance is modest, it is still meaningful, given the complexity of human behavior in organizational and environmental contexts. The F-value of 38.47, which is highly significant ($p < .0001$), confirms that the overall model is statistically significant. While taking into consideration the direct effects, the coefficient for generative leadership on ESRBE (0.1307) found insignificant ($p = 0.1021$). This indicates that generative leadership by itself does not directly explains whether individuals engage in voluntary, environmentally supportive behaviors. However, generative concern demonstrated a significant and positive influence (coefficient = 0.4144, $p < .0001$), suggesting that individuals with higher generative concern are much more likely to participate in extra-role environmental behaviors.

The above results collectively suggest the presence of an indirect pathway or mediation effect: generative leadership influences ESRBE primarily through its impact on generative concern rather than exerting a direct effect. In other words, generative concern operates as a key psychological mechanism that translates the influence of leadership into actual pro-environmental actions. The above finding argued that leadership and sustainability research by showing that leadership effectiveness is not only about direct influence but also about shaping followers' internal values and motivations. Specifically, it highlighted the mediating role of generative concern as a bridge between leadership practices and sustainable, extra-role behaviors.

The results also carry important practical implications for managers, policymakers, and organizational leaders. Leadership development initiatives

should not focus solely on technical or administrative competencies but should also integrate training that nurtures values of responsibility, care, and long-term thinking. Organizations can foster generative concern by embedding sustainability into their mission, recognizing and rewarding environmentally supportive behaviors, and creating opportunities for employees to connect their daily roles with broader environmental and social goals. By doing so, leaders can indirectly but effectively encourage members to adopt sustainable behaviors that go beyond formal job requirements, thereby supporting both organizational performance and long-term environmental well-being.

Table: 3 GL-Concern

Outcome Variable:	Gencr n						
	R	R-sq	MSE	F	df1	df2	p
	.7218	.5210	.1766	443.732	1.000	408.000	.000
				9	0	0	0
Model	Coeff	SE	T	P	LLCI	ULCI	
constant	1.1158	.099	11.228	.0000	.9205	1.3112	
		4	8				
GL	.6646	.0315	21.065	.0000	.6025	.7266	
			0				
Standardize	coeff						
d							
coefficients							
GL	.7218						

Table: 4 GL-GC-ERBE

OUTCOME VARIABLE:	ESRB E						
	R	R-sq	MSE	F	df1	df2	p
	.3988	.1590	.5412	38.474	2.000	407.000	.000
				6	0	0	0
Model	Coeff	SE	T	P	LLCI	ULCI	
constant	1.5508	.1990	7.792	.0000	1.1596	1.9421	
			5				
GL	.1307	.079	1.638	.1021	-.0261	.2876	
		8	5				
GC	.4144	.086	4.781	.0000	.2440	.5848	
		7	8				
Standardize d coefficients	Coeff						
GL	.1076						
GCNCRN	.3141						

The total effect of generative leadership on extra-role behaviors is statistically significant at (0.4061, $p < .0001$). It shows that leadership plays an important role in developing such type of pro environmental behaviors. However, the direct effect is not significant (0.1307, $p = 0.1021$), indicating that the relationship mainly functions through the mediating variable.

Table: 5 GCNCRN Effects

	Effect	SE	T	P	LLCI	ULCI	c_cs
Total effect	.4061	.0567	7.1647	.0000	.2947	.5176	.3343
Direct effect	.1307	.0798	1.6385	.1021	-	.2876	.1076
					.0261		

Indirect effect(s)	Effect	BootSE	BootLLCI	BootULCI
GCNCRN	.2754	.0712	.1474	.4236

Completely standardized indirect effect(s)

	Effect	BootSE	BootLLCI	BootULCI
GCNCRN	.2267	.0575	.1227	.3448

The above analysis suggested that the total effect of generative leadership on extra-role behaviors is statistically significant (0.4061, $p < .0001$). It indicates that leadership plays a significant role in promoting such behaviors. However, insignificant of direct effect (0.1307, $p = 0.1021$), suggests that the effect of generative leadership does not evident directly. However, the findings indicate towards the mediating process, the indirect effect through generative concern was both substantial and statistically significant, with an estimated value of 0.2754 (BootSE = 0.0712) and a confidence interval that excluded zero (BootLLCI = 0.1474, BootULCI = 0.4236). The fully standardized indirect effect (0.2267) further supports the mediating role of generative concern. These results indicate that generative concern serves as a critical mechanism through which generative leadership enhances extra-role behaviors, thereby strengthens the overall impact of leadership.

5. DISCUSSION AND CONCLUSION

This study has examined the relationship between generative leadership and employees' environmental extra-role behaviors in the tourism industry of Pakistan. The findings of the study have confirmed that generative leadership significantly and positively influences employees' pro- environmental behaviors, thereby emphasizing the importance of leadership styles that prioritize sustainability and responsibility for future generations. Moreover, it was also observed that generative mediates the relationship between generative leadership and environmental extra role behaviors. Therefore, it is

suggested that leaders' ability to inculcate concern for long-term environmental well-being serves as a critical mechanism through which employees are motivated to engage in environmentally responsible behaviors. These results contribute to the growing body of literature on leadership and sustainability by validating the relevance of generative leadership in service-oriented industries, particularly in developing country contexts such as Pakistan.

The findings also carry significant industrial and practical implications. For the tourism industry, the results highlight the importance of leadership practices that encourage environmental stewardship among employees. Tourism organizations should therefore invest in leadership development programs that foster generative qualities, including empathy, responsibility toward future generations, and sustainability-oriented decision-making. Managers can promote environmental extra-role behaviors by embedding sustainability goals into organizational policies, performance management systems, and reward structures. At the policy level, tourism authorities and industry associations may use these insights to design training workshops, awareness campaigns, and sustainability frameworks aimed at institutionalizing environmental responsibility across the sector. Such practices not only contribute to environmental preservation but also enhance the competitiveness and reputation of Pakistan's tourism industry in the global market.

The contributions of this study are both theoretical and practical. Theoretically, the study advances leadership and sustainability research by empirically validating the role of generative leadership in promoting environmental extra-role behaviors, an area that remains underexplored in South Asian contexts. By identifying generative concern as a mediating mechanism, the study enriches understanding of the psychological processes through which leadership influences employees' pro-environmental actions. Practically, the study provides actionable insights for managers and

policymakers, underscoring the importance of leadership approaches that integrate sustainability into organizational practices. The results highlight that generative leadership is not only a driver of employee behavior but also a strategic resource for organizations seeking to achieve environmental sustainability.

Although the study has significant contributions in the field, it has some limitations. First, the data were collected solely from the tourism industry in Pakistan, which may restrict the generalizability of the findings to other industries or cultural contexts. Second, the cross-sectional design of this research limits the ability to establish causal relationships or capture the long-term impact of generative leadership on environmental extra-role behaviors. Third, reliance on self-reported measures introduces the possibility of common method variance and social desirability bias, which may have influenced responses. Lastly, while the sample was adequate for the study's objectives, it may not fully represent the diversity of the tourism industry across different regions of Pakistan.

Considering these limitations, future research could adopt longitudinal or experimental designs to better assess the causal effects of generative leadership on pro-environmental behaviors. Expanding the scope to include other industries such as manufacturing, healthcare, or education, or conducting comparative studies across different cultural contexts, would enhance the generalizability of findings. Moreover, future scholars may investigate additional mediators such as organizational culture, environmental values, or employee engagement, as well as potential moderators including organizational support or regulatory frameworks. Incorporating qualitative approaches such as interviews or case studies may also provide deeper insights into the processes through which generative leadership fosters environmental responsibility.

In conclusion, this research demonstrates that generative leadership plays a pivotal role in fostering environmental extra-role behaviors within Pakistan's

tourism industry. By inspiring generative concern among employees, leaders can create a culture of sustainability that extends beyond formal job roles and contributes to the long-term success of organizations and the preservation of natural resources. While further research is needed to test these findings across contexts and over time, this study provides a valuable foundation for understanding the intersection of leadership, employee behavior, and environmental sustainability in emerging economies.

REFERENCES

- Aboramadan, M., Hamid, Z., Kundi, Y. M., & El Hamalawi, E. (2022). The effect of servant leadership on employees' extra-role behaviors in NPOs: The role of work engagement. *Nonprofit Management and Leadership*, 33(1), 109-129.
- Adams, P., Mombourquette, C., & Townsend, D. (2019). *Leadership in education: The power of generative dialogue*: Canadian Scholars' Press.
- Afridi, S. A., Khan, W., Haider, M., Shahjehan, A., & Afsar, B. (2021). Generativity and Green Purchasing Behavior: Moderating Role of Man-Nature Orientation and Perceived Behavioral Control. *SAGE Open*, 11(4), 21582440211054480.
- Afridi, S. A., Shahjehan, A., Zaheer, S., Khan, W., & Gohar, A. (2023). Bridging Generative Leadership and Green Creativity: Unpacking the Role of Psychological Green Climate and Green Commitment in the Hospitality Industry. *SAGE Open*, 13(3), 21582440231185759. doi:10.1177/21582440231185759
- Akhtar Nawaz, Dr. Sajjad Afridi, & Muhammad Waseem. (2024). HOW GENERATIVE LEADERSHIP INFLUENCES ENVIRONMENTAL BEHAVIOR AT WORK: THE MEDIATING ROLE OF MAN-NATURE ORIENTATION. *International Journal of Contemporary Issues in Social Sciences*, 3(3), 2490–2495.
- Alma Çallı, B., Özşahin, M., Coşkun, E., & Rıfat Arık, A. (2022). Do Generative Leadership and Digital Literacy of Executive Management Help

- Flourishing Micro and Small Business Digital Maturity? *International Journal of Organizational Leadership*, 11(3), 307-332.
- Bandura, A., & Walters, R. H. (1977). *Social learning theory* (Vol. 1): Englewood cliffs Prentice Hall.
- Boiral, O., & Paillé, P. (2012). Organizational citizenship behaviour for the environment: Measurement and validation. *Journal of Business ethics*, 109, 431-445.
- Bushe, G. R. (2019). Generative leadership. *Canadian Journal of Physician Leadership*, 5(3), 141-147.
- Castillo, E. A., & Trinh, M. P. (2019). Catalyzing capacity: absorptive, adaptive, and generative leadership. *Journal of Organizational Change Management*, 32(3), 356-376.
- ÇETİN, M., & DEMİRBİLEK, M. (2019). Generative leadership scale development study. *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi*, 35(4), 887-903.
- Chan, R. Y. (2001). Determinants of Chinese consumers' green purchase behavior. *Psychology & marketing*, 18(4), 389-413.
- de St Aubin, E. E., McAdams, D. P., & Kim, T.-C. E. (2004). The generative society: Caring for future generations.
- Demirbilek, M. (2022). An examination of the relationships between school principals' entrepreneurial competencies, sustainable management behaviours and generative leadership. *Asia Pacific Journal of Education*, 1-20.
- Hobfoll, S. E. (1989). Conservation of resources: A new attempt at conceptualizing stress. *American psychologist*, 44(3), 513.
- Hobfoll, S. E. (2011). Conservation of resources theory: Its implication for stress, health, and resilience.
- Islam, T., Khan, M. M., Ahmed, I., & Mahmood, K. (2021). Promoting in-role and extra-role green behavior through ethical leadership: mediating

- role of green HRM and moderating role of individual green values. *International Journal of Manpower*, 42(6), 1102-1123.
- Kearney, C., & Lichtenstein, B. (2023). Generative Emergence: Exploring the Dynamics of Innovation and Change in High-Potential Start-Up Ventures. *British Journal of Management*, 34(2), 898-914.
- Klimek, K. J., Ritzenhein, E., & Sullivan, K. D. (2008). *Generative leadership: Shaping new futures for today's schools*: Corwin Press.
- Kluckhohn, C. (1951). Values and value-orientations in the theory of action: An exploration in definition and classification Toward a general theory of action (pp. 388-433): Harvard university press.
- Li, L., Wu, B., & Patwary, A. K. (2022). How marine tourism promote financial development in sustainable economy: new evidences from South Asia and implications to future tourism students. *Environmental Science and Pollution Research*, 29, 1155-1172.
- Liu, Z., Lan, J., Chien, F., Sadiq, M., & Nawaz, M. A. (2022). Role of tourism development in environmental degradation: A step towards emission reduction. *Journal of environmental management*, 303, 114078.
- Macaux, W. P. (2010). Generative Leadership and Organizational Sustainability. *The Next Generation Responsible Leaders*, 89.
- Macaux, W. P. (2012). Generative leadership: responding to the call for responsibility. *Journal of Management Development*.
- Meeks, T. W., & Jeste, D. V. (2009). Neurobiology of wisdom: A literature overview. *Archives of general psychiatry*, 66(4), 355-365.
- Osgood, J. M., & Muraven, M. (2015). Self-control depletion does not diminish attitudes about being prosocial but does diminish prosocial behaviors. *Basic and Applied Social Psychology*, 37(1), 68-80.
- Patwary, A. K. (2023). Examining environmentally responsible behaviour, environmental beliefs and conservation commitment of tourists: a path towards responsible consumption and production in tourism. *Environmental Science and Pollution Research*, 30(3), 5815-5824.

- Patwary, A. K., Mohd Yusof, M. F., Bah Simpong, D., Ab Ghaffar, S. F., & Rahman, M. K. (2022). Examining proactive pro-environmental behaviour through green inclusive leadership and green human resource management: an empirical investigation among Malaysian hotel employees. *Journal of Hospitality and Tourism Insights*.
- Pearson, K. R. (2022). Imaginative leadership: A conceptual frame for the design and facilitation of creative methods and generative engagement. *Co-Creativity and Engaged Scholarship: Transformative Methods in Social Sustainability Research*, 165-204.
- Sanaullah, F., Rabbi, S. A., Khan, Z., & Zamin, M. (2020). Visitors' willingness to pay for conservation of the biodiversity and tourism in Kalam valley of Khyber Pakhtunkhwa, Pakistan. *Sarhad Journal of Agriculture*, 36(1), 81-94.
- Srivastava, A. P., & Dhar, R. L. (2019). Authentic leadership and extra role behavior: A school based integrated model. *Current Psychology*, 38, 684-697.
- Sun, Y., Duru, O. A., Razzaq, A., & Dinca, M. S. (2021). The asymmetric effect eco-innovation and tourism towards carbon neutrality target in Turkey. *Journal of environmental management*, 299, 113653.
- Surie, G., & Hazy, J. K. (2006). Generative leadership: Nurturing innovation in complex systems. *EMERGENCE-MAHWAH-LAWRENCE ERLBAUM-*, 8(4), 13.
- Ullah, M., Rasli, A. B., Shah, F. A., & Orakzai, M. A. (2019). An exploratory study of the factors that promote, or impede sustainable eco-tourism development in Saiful Muluk national park Khyber Pakhtunkhwa. *Journal of Political Studies*, 26(1), 103-118.
- Uzuner, G., & Ghosh, S. (2021). Do pandemics have an asymmetric effect on tourism in Italy? *Quality & Quantity*, 55(5), 1561-1579.

- Ali, W., Tariq, M., & Hussain, S. (2019). Environmental Impacts of Tourism and Hospitality Industry in Mansehra Region: A Case Study of Balakot and Naran. *Journal of South Asian Studies*, 7(2), 287-298.
- Bissing-Olson, M. J., Iyer, A., Fielding, K. S., & Zacher, H. (2013). Relationships between daily affect and pro-environmental behavior at work: The moderating role of pro-environmental attitude. *Journal of Organizational Behavior*, 34(2), 156-175.
- Dangelico, R. M., & Pujari, D. (2010). Mainstreaming green product innovation: Why and how companies integrate environmental sustainability. *Journal of Business Ethics*, 95(3), 471-486.
- Kaiser, F. G., Wölfling, S., & Fuhrer, U. (1999). Environmental attitude and ecological behaviour. *Journal of Environmental Psychology*, 19(1), 1-19.
- Kuenzi, M., & Schminke, M. (2009). Assembling fragments into a lens: A review, critique, and proposed research agenda for the organizational work climate literature. *Journal of Management*, 35(3), 634-717.
- Lapierre, L. M., Hackett, R. D., & Taggar, S. (2012). Catalysts or inhibitors: CEO leadership behaviors and team engagement-mediated links to financial performance. *Journal of Business Research*, 65(5), 558-565.
- Mayer, F. S., & Frantz, C. M. (2004). The connectedness to nature scale: A measure of individuals' feeling in community with nature. *Journal of Environmental Psychology*, 24(4), 503-515.
- Norton, T. A., Zacher, H., & Ashkanasy, N. M. (2017). On the importance of proactivity: Fostering environmental behavior change in organizations. *Industrial and Organizational Psychology*, 10(3), 551-555.
- Organ, D. W., & Ryan, K. (1995). A meta-analytic review of attitudinal and dispositional predictors of organizational citizenship behavior. *Personnel Psychology*, 48(4), 775-802.
- Schultz, P. W. (2001). The structure of environmental concern: Concern for self, other people, and the biosphere. *Journal of Environmental Psychology*, 21(4), 327-339.

- Çetin, M., & Demirbilek, M. (2020). Generative leadership scale development study. *Hacettepe Egitim Dergisi*, 35(4), 887– 903.
<https://doi.org/10.16986/HUJE.2019052441>
- Srivastava, A.P. (2016). Authentic leadership as a predictor of school teacher's extra role behavior. Doctoral dissertation, Indian Institute of Technology Roorkee.
- Krug, M. T. (2015). Academic optimism, organizational citizenship behavior, and principal support: An examination of factors effecting teacher agency in elementary schools. Doctoral dissertation, The College of William and Mary.
- Bakari, H., Hunjra, A. I., & Niazi, G. S. K. (2017). How does authentic leadership influence planned organizational change? The role of employees' perceptions: Integration of theory of planned behavior and Lewin's three step model. *Journal of Change Management*, 1–33.
- Near, J. P., & Miceli, M. P. (2016). After the wrongdoing: What managers should know about whistleblowing. *Business Horizons*, 59(1), 105–114.
- Peus, C., Wesche, J. S., Streicher, B., Braun, S., & Frey, D. (2012). Authentic leadership: An empirical test of its antecedents, consequences, and mediating mechanisms. *Journal of Business Ethics*, 107(3), 331–348.
- Kluckhohn, F. R., & Strodtbeck, F. L. (1961). Variations in value orientations.
- Jandt, F.E., 2004. An Introduction to Intercultural Communication: Identities in a Global Community, 4th ed. Sage Publication, Thousand Oaks, CA.
- Wijaya, T. (2009). Studi perilaku membeli makanan organik. Research project.
- Mayer, F. S., & Frantz, C. M. (2004). The connectedness to nature scale: A measure of individuals' feeling in community with nature. *Journal of Environmental Psychology*, 24(4), 503–515.
- Schultz, P. W. (2001). The structure of environmental concern: Concern for self, other people, and the biosphere. *Journal of Environmental Psychology*, 21(4), 327–339.

Kaiser, F. G., Wölfling, S., & Fuhrer, U. (1999). Environmental attitude and ecological behaviour. *Journal of environmental psychology*, 19(1), 1-19.