Is transformational leadership instrumental to environmental sustainability? A perspective of Pakistani textile sector

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ABSTRACT – REZUMAT

Is transformational leadership instrumental to environmental sustainability? A perspective of Pakistani textile sector

This study proposes to highlight the role of transformation leadership in enabling environmental sustainability efforts. In this regard, a mediating role of green human resource management is investigated to understand the association between transformation leadership and environmental sustainability. The study follows a quantitative and cross-sectional research approach. A self-administered questionnaire was used to collect the responses from 200 managerial-level employees of ISO-14001 certified textile organizations in Lahore, Pakistan. Furthermore, the study hypotheses were tested by applying linear regression and Hayes' Process in SPSS to determine the interconnected dependence of the study variables. The findings of the study demonstrate that transformational leadership plays an instrumental role in the implementation of environmental sustainability strategy. The results also reveal that green human resource management significantly mediates the relationship between transformational leadership and environmental sustainability. The research outcomes portray a stringent need to apply the transforming abilities of the organizational leaders for fostering environmental initiatives; a contribution to a broader cause of global environmental sustainability.

Keywords: *transformational leadership, environmental sustainability, green human resource management, textile sector, Pakistan*

Este leadership-ul transformaţional important în sustenabilitatea mediului? O perspectivă a sectorului textil din Pakistan

Acest studiu își propune să evidenţieze rolul leadership-ului transformaţional în facilitarea eforturilor de sustenabilitate a mediului. În acest sens, rolul de mediere al managementului ecologic al resurselor umane este investigat, pentru a înţelege asocierea dintre leadership-ul transformaţional și sustenabilitatea mediului. Studiul urmează o abordare de cercetare cantitativă și transversală. Un chestionar auto-administrat a fost folosit pentru a colecta răspunsurile de la 200 de angajaţi la nivel managerial din organizaţiile textile certificate ISO-14001 din Lahore, Pakistan. Mai mult, ipotezele studiului au fost testate prin aplicarea regresiei liniare și a procesului Hayes în SPSS, pentru a determina dependenţa interconectată a variabilelor de studiu. Concluziile studiului demonstrează că leadership-ul transformaţional joacă un rol esenţial în implementarea strategiei de sustenabilitate a mediului. Rezultatele arată, de asemenea, că managementul ecologic al resurselor umane mediază în mod semnificativ relaţia dintre leadership-ul transformaţional și sustenabilitatea mediului. Rezultatele cercetării prezintă o nevoie stringentă de a aplica abilităţile de transformare ale liderilor organizaţionali, pentru promovarea iniţiativelor de mediu; o contribuţie la o cauză mai extinsă a sustenabilităţii globale a mediului.

Cuvinte-cheie*: leadership transformaţional, sustenabilitatea mediului, managementul ecologic al resurselor umane, sectorul textil, Pakistan*

INTRODUCTION

It has become essential for leaders to understand the antecedents of motivating organizational members to deal with the increasing complexities of a fast-changing environment. Leaders influence the work behaviours of the employees to get positive outcomes from the organizational procedures and processes. This positive influence not only helps to keep the employees motivated but triggers the efficacy of improved business practices [1]. In the workplace, leaders possess the authority of evaluating and monitoring the performance of the employees. Hence, leaders' behaviour may craft the behaviour of the employees in a manner desired by the organization. According to a few initial researches, transformational leadership is a kind of leadership that allows leaders and followers to work together for a better motivation level [2, 3]. The consequent high level of motivation enables the employees to follow the direction given by their leader to accomplish the organizational goals. Furthermore, transformational leadership enables the leaders and followers to create beneficial outcomes for achieving the desired tasks [4]. This prevalent leadership style can sensitize the employees about their work practices through collaborative

efforts to achieve the desired results. For this, transformational leadership exhibits a helping behaviour that initiates holistic efforts for adopting better and more creative work practices [5]. Considering the importance of transformational leadership, organizations need to understand how they can adopt this leadership style to deal with vigorous environmental challenges; such as natural environment protection. Like other major business challenges, sustainability also needs the attention of organizational leaders. The Brundtland Commission report [6] takes credit for introducing sustainability as "meeting the needs of the present without compromising the ability of future generations to meet their needs". This report included a focus on sustainable social development along with creating long-term ecological impacts.

Sustainability primarily encompasses a three-dimensional business perspective: profit, people and planet, commonly known as the Triple Bottom Line (TBL) approach [7]. A World's Economic and Social Survey report [8] emphasizes exerting holistic efforts to embrace sustainability. According to Pless and Maak [9], sustainability needs the relational and collaborative nature of leadership for embedding in organizational culture. Moreover, instilling the TBL approach in business operations poses various challenges for the leadership of an organization [10]. According to Crews, five major challenges for the leaders to implement sustainability are: engaging the stakeholders, creating a sustainability culture, continuous learning, inclusive approach, and disclosure.

A study on the Turkish hospitality industry reveals that transformational leadership has an affirmative impact on adopting sustainability measures [11]. According to this study, transformational leaders facilitate environmental-friendly or green business strategies by building psychological capital; a positive state of an individual's mind for development [12]. Another study depicts that green business strategies are applied through green human resource practices involving environmentally responsible employees [13]. Thus, an integrated approach of transformational leaders may help to transform the employees by encouraging green human resource practices within an organization. For instance, transformational leaders may focus on developing mechanisms to enhance the green competencies of employees [14]. Such employees may ultimately become able to contribute to achieving the ecological goals of a sustainable organization. Therefore, it is pertinent to learn about the role of transformational leadership in supporting the eco-friendly/green business practices of an organization.

This study will focus on identifying the association between transformational leadership and environmental sustainability in the textile manufacturing sector of Pakistan. A mediating role of green human resource practices will also be highlighted in determining the association between transformational leadership and environmental sustainability. Overall, this research will be a significant contribution to enriching the existing literature in this area. Finally, subsequent arguments will consist of the literature review, methodology, data analysis and discussion of the results of the research.

LITERATURE REVIEW

Transformational leadership

James MacGregor Burns [3] conceptualized transformational leadership from a political framework by explaining the phenomenon as the leadership's ability to inspire others to achieve extraordinary results. Later, Bass [6] presented transformational leadership from an organizational perspective wherein, transformational leaders inspire and empower the followers to grow and develop themselves in line with the organizational course. According to Bass, transformational leaders motivate their followers to generate a high level of motivation and organizational commitment. Furthermore, transformational leaders encourage the employees of an organization to develop creative solutions for organizational problems through its four main components: idealized influence, inspirational motivation, intellectual stimulation and individualized consideration [4].

For an idealized influence, transformational leaders act in a way that exemplifies them as role models for their followers or employees. The leaders are admired, trusted and respected by their fellow beings leading to creating a collective sense of purpose [15]. Moreover, transformational leaders motivate their employees by giving meaning to their tasks. The employees are encouraged to work in teams, a positive future state is displayed and clear communication is done to keep the employees motivated [4]. Additionally, intellectual stimulation is done by inspiring the employees to be creative and innovative to address organizational issues in new and better ways [16]. It happens when new ideas are not considered alienated in organizations. Furthermore, transformational leaders focus on individual followers' coaching, mentoring and facilitation. Leaders offer new learning opportunities, interactive communications and personalized growth to the employees for improved organizational performance [15].

Transformational leadership also includes an impression of bringing change/transformation to the organization [9] especially when it comes to a critical organizational change; for example, environmental sustainability. Few empirical researches reveal a positive role of transformational leadership in promoting environmentally-responsible business practices among employees [14, 17]. The findings of these studies emphasize that transformational leaders motivate and facilitate the employees to adopt green business practices, for a larger cause of embracing sustainability.

Environmental sustainability and transformational leadership

Environmental Sustainability is one of the biggest challenges faced by human beings at present. The negligent activities of humans such as deforestation,

increased carbon emission, climate change, pollution and depletion of natural fossil fuels have destroyed the safety threshold of planetary boundaries [18]. In this regard, the concept of environmental sustainability encompasses the body of knowledge, practices and strategies that may lead to the protection of the natural environment from hazardous human activities [19]. The adoption of eco-friendly practices includes an enduring commitment of organizational leadership to translate its environmental goals into business decisions by developing an environmental management system [20]. Consequently, this environmental management system enables the organizations to work according to the sustainability parameters. A study conducted in the Jordanian banking sector [21] revealed that transformational leadership significantly influences organizational performance. Leaders employing this leadership approach not only develop better employee satisfaction and commitment but also effectively bolster organizational performance.

In recent times, addressing environmental challenges is also an innovative way of gaining a competitive advantage [22, 23]. That is why, sustainable organizations tend to incorporate responsible/ethical work practices which lead to better organizational performance; especially in terms of social and environmental sustainability. Considering this, sustainability also demands the attention of organizational leaders adopt innovative practices and develop a competitive and sustainable place not only for themselves but for the society at large [24].

According to Robertson and Barling, pro-environmental behaviours of organizational leaders depict a vital role in making organizations environmentally sustainable. It is primarily because the leadership of sustainable organizations has an enhanced focus on employee motivation through career development, skill improvement and a safe work environment [25] to accomplish the ecological goals. Nonetheless, the transformative ability of leaders helps organizations in combating ecological issues by ensuring the provision of employee engagement, motivation, creativity and resilience [11]. Thus, it is inevitable for organizations to comprehensively understand the role of transformational leadership in embracing environmental sustainability.

Green human resource management and transformational leadership

For environmental sustainability, the notion of green management has emerged as an imperative managerial insinuation that promises increased profitability without damaging the natural environment [26]. Green management practices offer an admirable opportunity to promote the eco-friendly behaviours of the employees for better environmental outcomes [27]. In addition to this, a study has proposed green human resource management as an essential measure of eco-friendly business practices which significantly impacts organizational performance [28]. Green human resource practices assist to impart environmental-friendly skills and proficiencies to the

employees allowing them to lessen the negative environmental footprint [13]. The knowledge and abilities instilled by green human resource practices perform a significant role in creating environmental awareness among employees; particularly in developing economies [29]. However, leadership's commitment to deal with sustainability challenges is inevitable for implementing environmentally responsible business practices.

A study on medical firms in Northeast China reveals that transformational leaders inspire the employees to adopt eco-friendly business practices through green human resource practices [14]. According to Jia, Liu, Chin and Hu, the transforming abilities of leaders use green human resource management to establish the norms of cooperation, innovation and creativity for fostering environmental-friendly behaviours of employees. Similarly, an empirical study on small and medium-size enterprises claimed a noteworthy impact of transformational leadership on green human resource management [19]. The findings of this empirical research propose that transformational leaders encourage green practices among employees which ultimately adds to the environmental performance of the organization. For instance, transformational leaders may help to motivate the employees and stimulate their intellect through green training; a green human resource practice which facilitates ecological learning [30]. Resultantly, these environmentally-responsible employees positively contribute to the ecological performance of an organization [13].

Green human resource management and environmental sustainability

According to research, green human resource practices, focused on developing environmentally-responsible employees, are found to have a substantial impact on the environmental sustainability efforts of an organization [31]. Consequently, the competent employees feel motivated to follow the organization's direction for achieving the ecological goals [32]. Moreover, green human resource management is an influential approach for building ecology-oriented employee behaviours and attitudes [33], necessary to support environmental sustainability within an organization. Research on the hotel industry of Jordan depicts that green human resource practices help to foster employee engagement with environmental initiatives [34]. Similarly, an enhanced focus on adopting eco-friendly/green human practices such as green training may aid to create green skills and competencies among employees to embrace environmental sustainability [13].

Furthermore, a constructive mediating role of green human resource management has also been studied to determine how transformational leadership influences the environmental performance of an organization via eco-friendly behaviours and attitudes of employees [14, 35]. The findings of these studies highlight the facilitating part of green human resource

management in implementing better business practices for embracing sustainability.

It is pertinent to mention that there is limited literature available on these research variables in the manufacturing sector of emerging economies of South Asia such as Pakistan, Bangladesh, and India. Regarding the research background of this study, Pakistan being a developing country is facing numerous environmental issues [36] including serious climate change, industrial waste, deforestation, soil degradation, shortage of clean water, depletion of fossil fuels and many more [37]. Irresponsible state behaviour and negligent corporate policies have deteriorated the natural environment conditions. Nevertheless, a few research efforts in the recent past have illustrated the role of transformational leadership and green human resource practices in dealing with the ecological concerns within the Pakistani manufacturing context [38–40]. But the existing literature lacks a comprehensive understanding of these concepts for developing sustainable and resilient business operations in the Pakistani industrial sector. Hence, this research will provide meaningful insights by presenting an empirical analysis of transformational leadership and environmental sustainability efforts in the textile industry of Pakistan; a novel perspective for any such research. Last but not least, the following hypotheses are suggested for the study:

H1: Transformational leadership is significantly and positively related to environmental sustainability.

H2: Transformational leadership is significantly and positively related to green human resource management.

H3: Green human resource management is significantly and positively related to environmental sustainability.

H4: Green human resource management significantly mediates the association between transformational leadership and environmental sustainability.

Figure 1 presents a proposed conceptual model for this research. The model is developed based on a literature review and subsequently proposed hypotheses which will be empirically tested in this study. The conceptual model for this study involves transformational leadership as an independent variable, environmental sustainability as a dependent variable and green human resource management as a mediating

variable. The empirical analysis of this model will determine the association of these variables in the textile sector of Pakistan.

METHODS

The research applied a quantitative and cross-sectional approach. ISO-14001 qualified textile organizations of Lahore, Pakistan were selected to test the research hypotheses. These organizations were selected primarily because the manufacturing processes of these organizations may involve different environmental issues such as air, land or water pollution. The international clientele of this industrial sector also imposes stringent environment-oriented challenges for the organizations to deal with. Hence, it is meaningful to investigate the influence of transformational leadership on the environmental sustainability efforts of textile manufacturing organizations operating in Pakistan (table 1). The data was sought from the individual employees through purposive sampling and Cochran's formula [41] was used to identify the sample size. So, the minimum sample size calculated was 246 respondents (with a margin of error = 0.05 and p = 0.2) to examine the hypotheses of the study. However, valid responses received were 200 showing a response rate of almost 81%. According to the estimated sample specifics (table 2), 75% of respondents were male and 25% of respondents in the study were female. Additionally, 10% of the respondents were top-level managers, 50% respondents were middle managers and 40% respondents were lower-level managers. A majority of the respondents belonged to the age group of 36–45 years (48%). Lastly, all the respondents had at least 5 years of work experience.

Further, the data was collected by using a self-administered questionnaire developed by adopting items from the research literature. For this, ten items for transformational leadership were adopted from a study by Bass and Rigio [42] including "Leaders in my organization are trusted and admired" and "Leaders in my organization adopt effective communication strategies to engage the employees". In addition to this, a ten-item scale was used for measuring the perception of employees about green human resource management in their organizations. The scale was developed by Mamun [43] to measure the awareness of green human resource management among employees of a South Asian country, Bangladesh. The sample items for this variable included "Green job designs are practised in my organization" and "My organization offers green training to the employees". Lastly, six items for environmental sustainability were adopted from a study by Jabbour [44]. A sample item for measuring this variable was "My organization focuses on energy conservation". The reliability analysis of the questionnaire was performed by using Cronbach's alpha value for individual scales. The Cronbach's alpha values for transformational leadership, green human
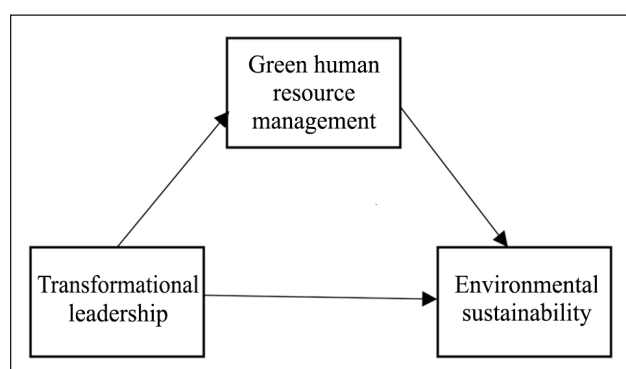

Fig. 1. Conceptual model

Table 1

QUESTIONAIRE CONRTENT	
Variable	**Items**
Transformational Leadership	**Q1:** The leadership of my organization go out of the way to make subordinates feel good to be around them. **Q2:** The leadership of my organization help subordinates with their self-development. **Q3:** The leadership of my organization help subordinates to understand visions of the organization through the use of tools, such as images, stories, and models. **Q4:** The leadership of my organization ensure subordinates get recognition and/or rewards when they achieve difficult or complex goals. **Q5:** The leaders of my organization are trusted and admired. **Q6:** The leadership of my organization provide challenges for subordinates to help them grow. **Q7:** Leaders in my organization adopt effective communication strategies to engage the employees **Q8:** The leadership of my organization rarely gives direction or guidance to others. **Q9:** The subordinates do not follow the leadership of my organization out of fear. **Q10:** The leadership of my organization provide an empathic shoulder when others need help.
Green Human Resource Management	**Q1:** In my organization, great effort goes into selecting candidates committed to environmental issues. **Q2:** Green job designs are practised in my organization. **Q3:** My organization offers green training to the employees **Q4:** In my organization environmental training is designed to enhance employees' environmental skills & knowledge. **Q5:** My organization exerts strong efforts to develop eco-friendly culture. **Q6:** My organization encourages employees to apply environmental knowledge in their jobs. **Q7:** In my organization performance appraisal includes environmental incidents, responsibilities, concerns and policy. **Q8:** In my organization employees get a reward for environmental management. **Q9:** In my organization employee gets rewarded for acquiring specific environmental competencies. **Q10:** In my organization employees are involved to become environmentally responsible.
Environmental Sustainability	**Q1:** My organization emphasizes reducing waste within the entire value chain process. **Q2:** My organization contributes to complying with environmental regulations. **Q3:** My organization contributes to preventing and mitigating environmental crises. **Q4:** My organization spends on developing/using renewable energy sources. **Q5:** My organization contributes to limiting environmental impact. **Q6:** My organization focuses on energy conservation.

Table 2

SAMPLE SPECIFICS		
Characteristics	**Categories**	**Percentage (N=200)**
Gender Mean = 0.37 SD = 0.41	Male	75%
	Female	25%
Age Mean = 36.5 SD = 6.16	25 years & Under	5%
	26 – 35 years	20%
	36 – 45 years	48%
	46 – 55 years	15%
	55 years & Above	12%
Managerial-level Mean = 1.89 SD = 0.76	Top	10%
	Middle	50%
	Lower	40%
Experience Mean = 12.75 SD = 9.26	5 – 10 years	20%
	11 – 15 years	55%
	16 years & Above	25%

Note: SD = Standard Deviation.

resource management and environmental sustainability were calculated to be 0.892, 0.847 and 0.855; respectively.

Moreover, a five-point Likert scale involving a range of Strongly Disagree = 1 to Strongly Agree = 5 was used to quantify the responses against individual statements. The analysis of data was done by using Statistical Package for the Social Sciences (SPSS) software. Finally, linear regression and macro Process [45] analysis were used to test the hypotheses of the study.

DATA ANALYSIS AND RESULTS

The data reliability was calculated through Cronbach's alpha which shows the internal consistency of the items included in the questionnaire. The acceptable value of Cronbach's alpha is considered to be 0.5 or above [46]. Table 3 shows that the Cronbach's alpha values for all the three variables of the study were above 0.5 and hence, the instrument was reliable for the analysis purpose. The descriptive statistics including the mean and standard deviation of the factors are also depicted in table 3.

Furthermore, the AVE (average variance extracted) value shows the convergent validity of the factor and should be 0.5 or more [47]. Table 3 also presents the CR (composite reliability) values to measure the content validity of the factors. The CR value should be greater than 0.7 for model reliability.

Hypotheses testing

To test the H1, H2 and H3 of the study, linear regression analysis was conducted. The results in table 4 depict a significant and positive effect of transformational leadership on environmental sustainability ($\beta = 0.687$, $p = 0.000$ and $t = 6.934$) and green human resource management ($\beta = 0.826$, $p = 0.000$ and $t = 6.527$). These results finally prove H1 and H2 of the study. Therefore, it can be inferred that transformational leadership plays a vital role in facilitating the environmental initiatives of an organization. Similarly, green human resource management is strongly influenced by the transforming abilities of organizational leaders.

Table 4 proves that green human resource management and environmental sustainability are significantly and positively correlated ($\beta = 0.615$, $p = 0.000$ and $t = 5.503$). The results portray that eco-friendly human resources practices, such as instilling green competencies among employees, may help to yield better environmental impacts. Hence, H3 is also accepted. Additionally, the R-square values depicted in table 4 exist within the standard limit between 0 and 1 [48] and explain the percentage change in dependent variables caused by the independent variables. Moreover, all the VIF values are below 5 which means there is no sign of multicollinearity in the model [49]. Finally, these results prove the first three hypotheses of the study tested through linear regression.

Mediation analysis

The Andrew Hayes Process [45] using model 4 was performed for the mediation analysis. The results shown in table 5 present an indirect effect of transformational leadership on environmental sustainability while using green human resource management as a mediator.

It can be inferred from the results mentioned in table 5 that green human resource management significantly mediates the relationship between transformational leadership and environmental sustainability (95% CI: 0.067, 0.285). Thus, H4 is proved and accepted.

Table 3

DESCRIPTIVE STATICS OF SSE COMPOSITE DAILY RETURNS FOR THE SAMPLE PERIOD DECEMBER 1990 – DECEMBER 2020						
Variables/Factors	**N**	**Cronbach's Alpha**	**Mean**	**SD**	**AVE**	**CR**
Transformational Leadership	10	0.892	4.229	0.72	0.58	0.87
Green Human Resource Management	10	0.847	4.101	0.68	0.51	0.84
Environmental Sustainability	6	0.855	4.192	0.70	0.53	0.85

Note: SD = standard deviation, AVE = average variance extracted, CR = composite reliability

Table 4

LINEAR REGRESSION ANALYSIS DATA			
Factors	**Transformational Leadership → Environmental Sustainability**	**Transformational Leadership → Green Human Resource Management**	**Green Human Resource Management → Environmental Sustainability**
β Coefficient	0.687	0.826	0.615
p-value	0.000	0.000	0.000
T value	6.934	6.527	5.503
R-Square	0.403	0.532	0.401
VIF	1.387	1.872	1.776
Sample Mean	0.622	0.725	0.556
Standard Deviation	0.085	0.083	0.092

Note: VIF = variance inflation factor.

Table 5

MEDIATION ANALYSIS				
Indirect Effect	**Effect**	**Boot SE**	**Boot LLCI**	**Boot ULCI**
Transformational Leadership → Green Human Resource Management → Environmental Sustainability	0.508	0.0427	0.067	0.285

Note: CI = confidence interval, SE = standard error.

DISCUSSION AND CONCLUSION

This study aims to augment the existing literature in the domain of transformational leadership and environmental sustainability through an empirical analysis of the Pakistani textile manufacturing sector (ISO-14001 certified). The findings of the research point toward the promising development of environmental sustainability notion and its drivers in this developing region of the world i.e., Pakistan. To explain this, the study encompassed transformational leadership as a key component of organizational structure that facilitates the ecological initiatives of textile organizations.

Overall, the findings of the study corroborate with the present literature and show a significant and positive correlation between transformational leadership and environmental sustainability [14, 17, 20]. It can be inferred from the findings of H1 that the transforming abilities of the leaders can play a vital role in enabling an organization to become environmentally responsible. Transformational leaders tend to offer responsible leadership thereby, creating a positive influence on employees [9] to accomplish the ecological objectives of their organization [10]. Transformational leaders may also encourage and motivate the employees to get engaged in their work for better organizational performance [1]. This high level of work engagement may subsequently lead to the adoption of pro-environment business practices that are part of the manufacturing process. Resultantly, these motivated and engaged employees employ their intellect for a positive contribution to achieving the environment-related goals of an organization; such as conserving natural resources [50]. Hence, transformational leadership may help to develop a favourable work environment mandatory to support business sustainability. These findings are now validated in a developing country's context, thus, posing a dire need for the organizational leaders to perform their transforming roles in enabling textile organizations to become sustainable and resilient.

Furthermore, the results of H2 have illustrated a substantial and positive effect of transformational leadership on green human resource management. The literature shows that transformational leaders have a keen focus on practising environmentally-responsible human resource activities; whether it be employee training, performance appraisal or selection [14]. It has been found that transformational leaders motivate employees to learn and adopt innovative business practices [1, 42]. These innovative business practices may also include green human resource practices for developing eco-friendly behaviours and attitudes among employees [10, 13, 20, 38].

Although, the role of transformational leadership has been extensively studied in building a competitive advantage [51] very limited literature is available on the association between transformational leadership and green human resource management in developing economies. Therefore, this research offers a contextual novelty to the literature and refers to an imperative understanding that transformational leadership can have a dynamic part in instilling green human resource practices in Pakistani textile organizations.

Additionally, findings of H3 suggest that green human resource management strongly influences the environmental sustainability initiatives of an organization. This result is in line with the previous literature that supports the role of green human resource management in facilitating the implementation of environmental strategies of an organization [31]. Moreover, it can be said that green human resource management may help to impart the desired level of capabilities, skills and competencies to the employees necessary for the protection of the natural environment [38, 43, 44]. For instance, green training ensures the delivery of relevant knowledge to the employees that may influence the employee motivation level for better involvement in environmental management efforts [13, 30]. This provision of environmental knowledge for employees may also result in their individualized facilitation for better performance.

Finally, the results of H4 depict a meaningful mediation of green human resource management in determining the association between transformational leadership and environmental sustainability. The struggling sustainable organizations need to understand that the transforming abilities of their leaders cannot bear fruitful results for sustainability efforts unless the adoption of green human resource management is ensured. For instance, transformational leaders can motivate and assist their employees to get engaged in learning innovative business practices mandatory for better environmental performance [35, 40, 41]. This employee engagement can be enhanced by having a deep focus on developing an environmentally-responsible human capital through varied human resource activities. This may lead to embarking on an organization on the journey toward environmental sustainability.

Implications

The outcomes of this study provide meaningful understandings for the leaders/managers of textile manufacturing organizations who want to improve the environmental performance of their organizations. All the progressive textile manufacturers need to promote transformational leadership within their organizations because it helps to motivate and encourage the employees to effectively follow the direction given by their leadership/organization. Hence, transformational leadership is strongly recommended for sustainable organizations to achieve their ecological goals. Furthermore, the leaders of growing textile manufacturers should critically examine the benefits of adopting green human resource management for their better comprehension of using such innovative practices. For instance, integrating environmental efforts into employee performance appraisal can be a pertinent step toward implementing environmental initiatives. Lastly, the governmental authorities of Pakistan need to take firm steps in

developing an environmental policy framework for the manufacturing sector of the country. This framework must include a comprehensive check and balance system for enhancing organizational efficiency in terms of protecting the natural environment.

In addition to this, there are a few theoretical implications of the study. The existing literature does not offer adequate insights into the role of transformational leadership in promoting the environmental efforts of an organization. Therefore, this study is valuable in determining the relationship between transformation leadership and environmental sustainability through the mediating role of green human resource management. The research results enrich the literature by offering Pakistan a unique research context to study these emerging variables. Last but not least, the findings of the research pose a grave need to explore the antecedents and consequences of transformational leadership in stimulating the environmental sustainability efforts of an organization. Hence, it can be safely said that transformational leadership is instrumental for environmental sustainability and its related concerns; thus, contributing toward a larger cause of environmental sustainability.

Recommendations

This study is a preliminary effort to investigate these variables in an emerging economy's context which leaves a space for further deliberation in future research. Therefore, more comprehensive research with advanced analysis should be performed in sustainable organizations across other business sectors of Pakistan. Further research efforts will allow an inclusive understanding of environmental sustainability efforts in this region. A cross-cultural or cross-country analysis may also augment the research outcomes of environmental sustainability.

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