

Green HRM and Ethical Leadership: Building a Culture of Sustainability through Transformational Leadership

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Abstract: This research examines the effect of Green HRM on green behavior of employees in public hospitals in Pakistan with green transformational leadership as a mediator. Data collected from 380 participants using PLS-SEM, the findings verify that Green HRM has a significant effect on green behavior both directly and indirectly. The findings validate Conservation of Resources (COR) theory and highlight the influence of leadership on promoting sustainability. This study provides real-world insights for applying green practices to HRM and leadership in healthcare.

Keywords: Green Human Resource Management, Green Transformational Leadership, Employee Green Behavior, Moral Norms, Sustainable Practices

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1. Introduction

Sustainability has turned into a limelight for most researchers following United nations published its sustainable development goals (SDGs) which acknowledged that companies can be sustainable when ecosystem is satisfying [1]. Environmental concerns and corporate sustainability are currently in the spot light as key domains which are an important area that all firms need to take care of [2]. If organizations are far reaching environmental sustainability, behavioral norms and strategy than organizations green human resource management, production processes and other processes would be in a better position to address the emerging challenges of global warming [3]. However, emphasize on social development goals is particularly noteworthy since organizations have a direct connection with central variables of study such as green transformational leadership and green behaviour among employees.

These Social development goals lead firms and organisations to adopt practices that not only achieve their sustainability promise but also encourage a culture of environmental responsibility within employees. Organisations can set their strategies to align with world standards of environmental sustainability by prioritising these objectives, ensuring that leadership and employee behaviours and intended to deliver significant ecological advantages [4]

According to Tuan [5], Human Resource Management practices have been found to be at core of promoting employee behaviour and Green Human Resource practices play a vital role

in influencing members to react to the organizations green objective. In this current study, Employee green behaviour contributes to achieving sustainability goals of health organizations such as government hospitals. In Pakistan, public service sector is instrumental advancement of the country and welfare. Pakistan's urban sustainable development directly connects the importance of public services and utilities, infrastructure, energy consumption, water use and environmental considerations [6].

The significance of solving ethical issue and problems in public organization management has been acknowledged and highlighting the need for ethical management and governance in the public service sector. Hence the Pakistani hospitals public sector is confronted with serious challenges concerning governance, service delivery and capacity building and service delivery all of which are vital to the development and stability of the country.[7].

In-depth analysis, as conducted by E. Akins, Giddens [8] has established as managers who use an environmentally oriented transformational style of leadership are highly influential in inspiring employee green behavior (EBG) in organizations. Additional study such as those of [9], reveals that transformational leadership not only increases employee motivation and productivity but also positively impacts internal communication and employee satisfaction. These combine to enhance sustainable organizational practices. Moreover, with the special reference to green transformational leadership, scholars have investigated the connection of GTL with several individual and organizational outcomes. According to Shah, Pan [10], GTL works effectively leads followers towards organisational goals in a sustainable manner, thus enhancing sustainability in organisations. In public sector GTL has been effective in fostering environmental sustainability and driving innovation. The advent of GHRM also supports the initiatives of transformational leaders. GHRM involves embracing environmental friendly HRM practices in organization.[11].

This study enriches the current literature by enhancing a more profound understanding how GTL and GHRM affect EGB. It highlights the imperative necessity for hospital to embrace the sustainable methods in an increasingly environmentally aware marketplace. Through taking into account the perspective of numerous doctors in public hospitals and patients, the research here undergoes the multifaceted nature of organizations attempt at sustainability and their far reaching effect on social and environmental health. The proposed model claims that GTL acts as a fundamental catalyst for PMNs, shaping organizational practice and determining the employee behavior. Organizations such as public hospitals anticipate GTL adoption to strengthen GHRM practices and successfully foster EGBs. Based on the principals of COR, the model proposes that GTL enables employees by aligning their own

moral values with the objectives of the organization , thus creating a work place that is sustainable and ethically oriented.

2. Literature Review

GTL as defined by Chen and Chang [12], empowers employee with clear vision, motivation and inspiration, essential to foster their growth to meet to organizations environmental objectives. GTL encourages employees learning and participative involvement in green processes and product innovation, thus strengthening the organisation performance regarding sustainability as reported by [13]. GHRM demonstrated that strategic commitment of the organization to environmental stability. This includes upper management actively overseeing and setting precedence for processes and strategies that motivates employees to involve themselves in eco-friendly job activity and cut environmental emissions states [14]. Studies have shown positive relationship between GTL and Green creativity , organization green learning and green OCB as established by research undertaken by [15]. Chen and Wu [4] studies disclose that the integration of GTL and GHRM has the ability to motivate environmentally conscious behavior among employees individually. Based on COR theory, sustainability-focused leaders who exercise GTL supply beneficial resources to the organization, including knowledge support and green practice motivation. The resources help build GHRM practices which are crucial in enhancing sustainability practices [16].

Further more research has revealed that the introduction of GHRM e.g, managers active management offering training and education , empowering staff and taking into account of employee life cycle positively affects EGB [17]. These practices have positive impact on employees awareness and engagement in environmentally friendly actions, with leadership that encourages environmental transformation and people perception of their potential to create change playing a constructive role towards the development of these behaviours.[18].

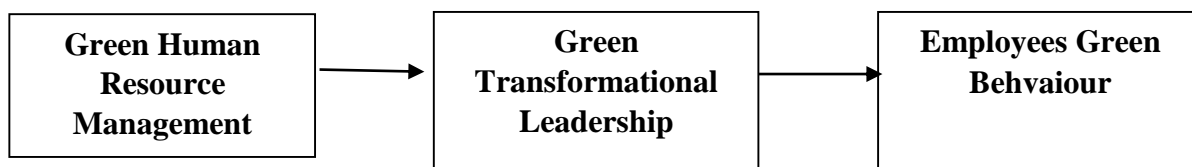
Academic literature recognises the profound influence of individuals values in shaping attitudes and behaviours , a notion given credence by more recent evidence from [19]. People tend to affiliate with social groups that align with their values, fulfilling their psych needs of belongings and purpose as underscored by [20]. Research has indicated that adopting GHRM like active participation of managers offering learning and development , enabling staff members and paying attention to employees life cycle, positively affects EGB [17]. In addition research has identified that introducing green training and development programs can significantly impacts employees behavior towards environmental sustainability. This

subsequent has direct impact on the performance of employees and their intention to stay with the organization [21].

2.1 Theoretical Support

The conservation of resource theory framework serves as the core of our model's basis particularly in the context of public service hospital's environment in Pakistan. Fundamentally COR theory states that the people are driven to gain and maintain valuable resource a notion thoroughly tested in scholarly work [16]. This research extends beyond the typical application of COR examining green resources as valuable elements of what drives worker. There are broader array of resources including social, physiological, relational and economical resources that enhance both individuals and communal well-being [22].

2.2 Theoretical Framework



2.3 Hypothesis

1. GHRM positively influence green transformational leadership
2. Green transformational leadership positively influence employeeed green behavior
3. Green transformational leadership mediates the relationship between GHRM and employees green behavior

3. Methodology

3.1 Sample and Procedure

We gathered data from administrative staff and doctors working in public service hospitals in Pakistan by inviting them to complete an online questionnaire. We selected these individuals due to their crucial roles on the activities perform on daily basis in hospitals, which made their insights particularly valuable for exploring internal communication and organisational dynamics. Pakistan's national health infrastructure includes 1202 hospital. However, data has been collected from the staff of 5 hospitals such as Nishtar Hospital Multan , Chaudhry Pervaiz Elahi Institute Multan, Mayo hospital Lahore, Sir Ganga Ram hospital,Lahore and Bakhtawar Amin Memorial Multan.

We used the survey approach because of its effectiveness in gathering excessive data in a short period and affordability compare to other approaches [23]. Surveys provide flexibility in dissemination through multiple channels such as telephone, email, which was useful in this

research. Hence we established initial contact with potential participants with the help of human resource department. We then sent administrative assistant with email with a link to survey. Data collection occurred between august and september 2024, with 500 questionnaire distributed and 380 responses received resulting in 76 % response rate.

Table 1. Primary data

Variable	Categories	n	%
Gender	Male	200	52.6
	Female	180	47.4
Age	20 - 30	120	31.5
	31 – 40	100	26.3
	41 – 50	90	23.6
	51 and above	70	18.4
Marital status	Married	200	52.6
	Single	180	47.4
Education	bachelors	30	7.8
	Masters	28	7.3
	Mbbs	198	52.1
	Specialized	124	32.6
Year of experience	< 1	40	10.5
	1 to 5	70	18.4
	6 to 10	78	20.5
	11 to 15	100	26.3
	More than 15	92	24.2

3.2 Measuring Instruments

We sourced all items in this survey from existing research that had been already published, stringently testing them for reliability and validity to make our data collection process stronger. Participants rated every item on a 5 – point Likert scale from "strongly disagree to strongly agree". The measurement of GTL was drawn from six taken items from [12]. The GHRM scale also included six items following the one developed by [24]. Bissing-Olson, Iyer [25] came up with the six item scale to measure EGB.

3.3 PLS Predict

This research make up use of smart PLS 3.0 to estimate structural equations through the PLS method as recommended by [23]. PLS-SEM is well known for its efficiency in dealing with complex models and conducting mediating analysis which is of great benefit when working with limited sample size. The method is all equipped to uncover latent constructs and evaluate their effect on performance indicator. Hence we applied the PLS technique known for its capacity to predict outcomes on new unseen data [26] to maximize the predictive capability of model. This involves choosing suitable folds and interations for the cross valdiation procedure

making sure the training sample has atleast the model's minimum sample size and using prediction measure like mean absolute error and roots mean squared error to measure prediction error. In addition we included Q²- values to determine the predicitive utility method.

4. Results

4.1 Measurement Model Evaluation.

Validity and reliability of the constructs were measured by factor loadings, Composite Reliability (CR), and Average Variance Extracted. The constructs had good values, passing the 0.70 benchmark for CR and 0.50 for AVE.

4.2 HTMT Analysis.

The Heterotrait-Monotrait Ratio (HTMT) was applied to test discriminant validity. All the values were lower than the conservative cutoff of 0.90, which supports adequate discriminant validity among constructs.

4.3 Structural Model Evaluation.

The structural model was assessed by measuring path coefficients, R-square (R²) values, and predictive relevance (Q² values). The findings report strong and significant relationships between the variables.

4.4 Mediation Analysis

To check for the mediating role of GTL in the relationship between GHRM and EGB, a bootstrapping method involving 5,000 samples was employed.

Table 2: Reliability and Validity Statistics

Construct	Cronbach's Alpha	CR	AVE
GHRM	0.877	0.907	0.620
GTL	0.896	0.920	0.659
EGB	0.899	0.923	0.666

Table 3: HTMT Values

Constructs	GHRM	GTL	EGB
GHRM	—	0.78	0.80
GTL	0.78	—	0.75
EGB	0.80	0.75	—

Table 4: Hypotheses Testing (Direct Relationships)

Hypothesis	Path Coefficient (Beta)	t-value	p-value
H1: GTL → GHRM	0.807	34.581	0.000
H2: GHRM → EGB	0.712	19.246	0.000

Table 5: Mediation Effects

Mediation Path	Indirect Effect	t-value	p-value
GTL → GHRM → EGB	0.574	13.501	0.000

Table 6: Variance Explained (R²)

Construct	R ²
GHRM	0.651
EGB	0.507

Table 7: Predictive Relevance (Q²)

Construct	Q ²
GHRM	0.633
EGB	0.393

The analysis confirmed all hypothesized associations between the constructs. GTL has a significant effect on GHRM, and it significantly affects EGB. In addition, GTL has a significant mediating effect on the relationship between GHRM and EGB. The model also revealed high predictive power and relevance, supporting its strength in predicting employee green behavior in healthcare organizations. This empirical evidence offers a useful basis for formulating strategies to improve environmental sustainability through leadership and HRM practices in Pakistani public hospitals.

5. Discussion

The research had the objective to assess the role of Green Human Resource Management (GHRM) on Employee Green Behavior (EGB), with Green Transformational Leadership (GTL) as the intervening variable. Focusing on mechanisms by which the practices of Human Resource Management are able to boost sustainability at workplaces, the application of Conservation of Resources (COR) theory characterized the nature of the investigation. Finding reveals that in addition to positively affecting EGB directly GHRM influences EGB indirectly through GTL mediation as well.

The results indicate that GHRM strongly predicts EGB, confirming that green recruitment, training, and performance management have positive effects on employees' environmentally friendly behaviors. This is consistent with COR theory, which posits that access to and reinforcement of valuable resources such as sustainability support from HRM result in desirable behaviors such as EGB.

In addition, the findings show that there is a significant and positive relationship between GTL and GHRM. Leaders who practice environmental values and behaviors establish an enabling environment for green HR practices to be supported and strengthened. This process sustains

the mediating role of leadership as a transformative and motivating factor, that allows GHRM policies to be translated into effective EGB. The mediating analysis also supports that GTL plays a critical role in translating HRM intentions into employees' behaviors. Employees are likely to be aligned with organizational sustainability objectives when they are led and motivated by green-directed leadership. These results also add to existing literature by providing empirical evidence of GTL's mediating effect, emphasizing its significance in fostering environmentally sustainable behavior in hospitals.

5.1 Theoretical Contributions

This research builds on COR theory by illustrating how environmental resource provision through HR policies and transformational leadership—facilitates sustainable behavioral outcomes. The results confirm that structural resources (e.g., green HR policies) as well as social - psychological resources (e.g., inspirational leadership) are necessary to promoting EGB. In addition, the research lends support to the increasing awareness of GTL as a key driver in sustainability research. By combining leadership theory with HRM models under the COR perspective, this study advances a comprehensive view of how organizational interventions affect green behavior.

5.2 Practical Implications

Healthcare institutions and public sector organizations can benefit from actionable insights in this research. The HR department must prioritize the incorporation of green principles in all HRM functions, ranging from recruitment and training to assessment. Meanwhile, leadership development programs must develop transformational leadership skills oriented toward sustainability.

When both HRM and leadership are aligned in promoting environmental goals, employees are more likely to exhibit green behaviors, enhancing the hospital's overall sustainability performance. Organizational commitment to sustainability can also have reputational and operational benefits, particularly in resource-constrained settings like public healthcare.

5.3 Future Research Directions

Future research can enhance from these conclusions by investigating longitudinal data to provide evaluation of behaviour changes over the passage of time. Additionally, an investigation on other mediators or moderators, such as organization culture, work engagement, or individual environmental concerns, might increase comprehension. Comparison with cross-industry or even cross-nations can further be beneficial for establishing wider applicability of results.

5.4 Conclusion

This study verifies the critical function of GHRM and GTL in promoting EGB. The results affirm the COR model by demonstrating how organizational resources and leadership interact to affect behavior. Overall, this helps both theory and practice, showing the promise for green HR and leadership approaches to promote sustainability within public healthcare systems.

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