

Examining the Effects of Green Human Resource Management Practices, Green Psychological Climate, and Organizational Pride on Employees' Voluntary Pro-Environmental Behavior

Organization & Environment

1–29

© The Author(s) 2024



Article reuse guidelines:

sagepub.com/journals-permissions

DOI: 10.1177/10860266241241532

journals.sagepub.com/home/oe

Hina Zafar^{1,2}  and Yuliani Suseno³ 

Abstract

Drawing on social exchange theory and social identity theory, we examined a sequential mediation process linking green human resource management practices and employees' voluntary pro-environmental behavior. We also considered the aspects of green psychological climate and organizational pride in the relationship between green human resource management practices and voluntary pro-environmental behavior. Through the analysis of data from 459 employees and their 109 respective managers working in Pakistan's textile industry, we found that a green psychological climate mediates the relationship between green human resource management practices and organizational pride. We also found that green psychological climate and organizational pride sequentially mediate the relationship between green human resource management practices and employees' voluntary pro-environmental behavior. The findings of the study provide important implications for theory and practice, as they offer insights into how organizations can effectively implement green human resource management practices and encourage their employees to engage in voluntary pro-environmental behavior.

Keywords

green human resource management practices, green psychological climate, organizational pride, voluntary pro-environmental behavior, textile industry

Introduction

In light of the significant impact sustainability has on the financial performance of organizations (O'Donohue & Torugsa, 2016; Sroufe & Gopalakrishna-Remani, 2019), there is a growing trend among businesses to move beyond the mere integration of environmental and social dimensions

¹Universiti Putra Malaysia, Serdang, Malaysia

²University of Newcastle, New South Wales, Australia

³RMIT University, Melbourne, Victoria, Australia

Corresponding Author:

Yuliani Suseno, Professor of Management, School of Management, College of Business and Law, RMIT University, Melbourne 3000, Victoria, Australia.

Email: yuli.suseno@rmit.edu.au

into their operations. Instead, they are actively adopting and implementing green human resource management (GHRM) practices and policies (Al-Swidi et al., 2021). GHRM, a relatively new concept, pertains to the “parts of sustainable HR management dealing with the needs that relate to environmental sustainability” (Wagner, 2013, p. 444). It is also defined as the “phenomena relevant to understanding relationships between organizational activities that impact the natural environment and the design, evolution, implementation and influence of HRM systems” (Ren et al., 2018, p. 778).

The existing body of scholarly literature regarding GHRM has consistently demonstrated its positive impact on an organization’s financial performance (O’Donohue & Torugsa, 2016), positioning it as a key topic in environmental sustainability research (Garavan et al., 2023; Renwick et al., 2013). GHRM has also been shown to enhance environmental performance (Y. J. Kim et al., 2019; Roscoe et al., 2019). Yet, scholars note that the “green HRM narrative is still in its infancy” (Dumont et al., 2017, p. 614) and that “the emerging GHRM field is underdeveloped” (Ren et al., 2018, p. 792). In addition, the role of GHRM in enhancing employees’ green behaviors in the workplace “remains widely unexplored” (Sabokro et al., 2021, p. 2). Therefore, further understanding of GHRM and how this benefits the organization through its influence on employee behavior has emerged as a crucial issue, in terms of both theoretical understanding and practical implications.

The majority of existing studies on GHRM have been conducted at the organizational level. Dumont et al. (2017) highlighted the need to further investigate the relationships between GHRM practices and employee-related outcomes. Hameed et al. (2020) argued that the current research on how GHRM affects employee workplace outcomes is still at an early stage. Garavan et al. (2023, p. 4) further noted that “employee perceptions of these [GHRM] practices remain under-investigated in the literature.” More specifically, further studies are needed to explore the intervening mechanisms by which organizational policies, such as the implementation of GHRM, lead to employee outcomes (Ahmad et al., 2022; Chaudhary, 2020).

This study is essentially focused on the impact of GHRM on employees, recognizing their pivotal role in supporting the organization’s sustainability efforts (Ahmad et al., 2022; Al-Swidi et al., 2021; Dumont et al., 2017). We extend studies that have examined the relationship between GHRM and employee outcomes, with a particular emphasis on how GHRM practices can effectively facilitate employees’ voluntary pro-environmental behavior (VPEB; Ababneh, 2021; Garavan et al., 2023). By focusing on VPEB, we extend the scope of previous studies that primarily concentrated on employee green behavior (e.g., Dumont et al., 2017). This distinction is essential as it acknowledges that green (or pro-environmental) behaviors can be either voluntary or involuntary. The latter is what Norton, Parker, et al. (2015) described as “required employee green behavior.” VPEB in our study demonstrates employees’ discretionary behaviors that are carried out to support the organization’s environmental sustainability, and these actions do not necessarily fall within or are governed by formal organizational policies or defined as part of employee responsibilities (A. Kim et al., 2017). VPEB encompasses a range of activities, including recycling, double-sided printing, energy-saving measures like turning off lights (Norton, Zacher, & Ashkanasy, 2015) as well as actions such as lobbying and activism (Norton, Parker, et al., 2015). Recognizing that research exploring the predictors of VPEB in the workplace is still in its infancy (Tian & Robertson, 2019), our study is significant in addressing this gap by specifically examining employees’ voluntary actions in support of green activities and exploring the variables that may serve as mediators in the relationship between GHRM and VPEB.

This study is essentially framed by two research questions:

Research Question 1: To what extent do contextual and individual psychological factors play a role in the relationship between GHRM practices and employees’ voluntary green behaviors?

Research Question 2: How do GHRM practices influence employees' voluntary green behaviors, as perceived by supervisors and employees?

To address the first research question, Chaudhary (2020) emphasized the need to consider different mediating mechanisms to understand the dynamic process of the relationships between GHRM and employee green behaviors. In addition, Hameed et al. (2020, p. 1062) noted that "further research is needed to find new social and psychological processes to connect GHRM to employees' outcomes." Thus, in framing the first research question, the study addresses the gap in the literature about how employee's VPEB can be facilitated by exploring the mechanisms of contextual and psychological factors that motivate them to do something for the organization without being requested or obligated to do so (Garavan et al., 2023; Hameed et al., 2020).

The study also focuses on the contextual factor of green psychological climate and the individual psychological factor of organizational pride. Green psychological climate refers to how individuals perceive an organization's policies, procedures, and practices related to environmental sustainability (Dumont et al., 2017). The green psychological climate is of particular relevance as a mediator to understanding individuals' perceptions and sentiments toward their workplace, and the organization's values, policies, and practices that foster environmental responsibility (Dumont et al., 2017; Sabokro et al., 2021). Building upon Norton et al.'s (2017, p. 1000) argument, the green psychological climate is also chosen as a more suitable "proximal predictor of behavior" due to its alignment with the individual-level nature of both psychological climate and work behavior.

In addition, in this study, we incorporated the individual psychological factor of employees' organizational pride, as a mediating variable that influences their behavior in the workplace. Ng et al. (2019) noted that there is a lack of research exploring organizational pride in organizational behavior research, motivating us further to investigate the role of organizational pride in fostering voluntary green initiatives. In addition, we integrate the concept of organizational pride, as suggested by Hameed et al. (2020) for future research, where organizational pride represents the emotional state experienced by employees, characterized by feelings of joy, self-respect, and a sense of belonging derived from their affiliation with the organization (Jones, 2010). Organizational pride also represents an emotional response to being associated with a socially and ethically responsible organization (Gouthier & Rhein, 2011). It can thus be argued that employees who take pride in their organization are more likely to exhibit higher levels of identification with it and actively engage in voluntary initiatives that benefit the organization (Boğan & Dedeoğlu, 2020; Zafar, Ho, et al., 2023).

In addressing the second research question, we consider the need to further understand the mediating mechanisms in the relationship between GHRM and employees' outcomes (Ahmad et al., 2022; Ren et al., 2018). In this study, we focus on not only examining the direct relationship between GHRM and employees' VPEB but also investigating the indirect effects of GHRM and employees' VPEB via both green psychological climate and organizational pride as the mediators. Prior studies have not examined how the contextual and individual psychological factors can function together in the relationship between GHRM and employees' VPEB (Norton, Zacher, & Ashkanasy, 2015). The sequential mediation process that specifically considers the inclusion of green psychological climate and organizational pride provides a novel insight into offering a more comprehensive understanding of the underlying mechanisms through which GHRM practices influence employees' VPEB.

Drawing on social exchange and social identity theories, we, therefore, address the two research questions by investigating if (a) green psychological climate mediates the relationship between GHRM and employees' VPEB, (b) organizational pride mediates the relationship between green psychological climate and employees' VPEB, and (c) green psychological climate and organizational pride sequentially mediate the relationship between GHRM and employees'

VPEB. Considering that extant studies predominantly rely on cross-sectional data and gather responses about the extent of GHRM implementation from one party in the relationship—whether it be supervisors or HR professionals (e.g., Rubel et al., 2021), or employees (e.g., Kim et al., 2019; Sabokro et al., 2021; Umrani et al., 2020)—this study takes a novel approach. Our objective is to investigate how GHRM practices influence employees' voluntary green behaviors by considering the perspectives of both supervisors and their employees at separate time periods.

The study explores the context of a developing country, specifically focusing on the textile industry in Pakistan. The industry holds significant importance as it accounts for around 60% of the country's exports, ranking it as the fourth-largest cotton-producing industry globally (Hayat et al., 2020). However, despite its economic significance, the textile industry, on a global scale, is considered the world's second-largest contributor to pollution after the oil industry (Saha et al., 2021; United Nations, 2019), contributing significantly to global greenhouse gas emissions and water pollution. Approximately 93 billion cubic meters of water, enough to meet the needs of five million people, are used by the fashion industry each year. In addition, about 500,000 tons of microfiber, equivalent to 3 million barrels of oil, are discharged into the ocean annually. The fashion industry also contributes to carbon emissions, with its impact surpassing the combined total emissions from all international aviation and maritime shipping (United Nations, 2019).

This alarming environmental impact has led Pakistan to receive a low score on sustainability (33.1 out of 100; Environmental Performance Index, 2020). The Global Sustainable Competitive Index 2021 has also ranked Pakistan 170 out of 180 countries severely affected by the environment (Solability, 2021). Nonetheless, there exists a scarcity of research focusing on critical industries in developing Asian countries (Cooke et al., 2020; Hameed et al., 2020), highlighting the need for further investigation into the development of sustainable business operations in this region in general. Specifically, there is a need to investigate Pakistan's textile industry, a significant contributor to the economy, and delve deeper into understanding how to transform this industry into one that is environmentally friendly, and sustainable in particular (Saha et al., 2021).

The study thus contributes to the GHRM literature in several ways. First, we add to the emerging research on GHRM behavioral literature by focusing on employees' attitudinal and behavioral changes, specifically their VPEB. Second, we build on the current knowledge of GHRM by testing a novel model that investigates the impact of GHRM on employees' VPEB, taking into account the role of a green psychological climate (Norton et al., 2017). While prior research has highlighted a connection between a green work climate and employees' proactivity in green behaviors (Norton et al., 2012, 2014; Zientara & Zamojska, 2018), there remains a need for further investigation into green psychological climate as a mediator that enhances employee green behavior (Norton, Parker, et al., 2015). Third, our study extends the literature by investigating the psychological factor of organizational pride, in explaining the relationship between GHRM, green psychological climate, and employees' VPEB. By doing so, we enhance the understanding of how the contextual condition of green psychological climate, along with employees' psychological attachment to the organization, namely their organizational pride, influences their attitudes toward GHRM and their engagement in voluntary green behaviors.

Theoretical Background and Hypotheses Development

Drawing on social exchange theory (Blau, 1964) and social identity theory (Ashforth & Mael, 1989), we explore the interplay between GHRM, the contextual condition of a green psychological climate, and the individual psychological factor of organizational pride. Specifically, we examine how these factors are interconnected and influence employees' willingness to engage in voluntary green behavior, as shown in Figure 1.

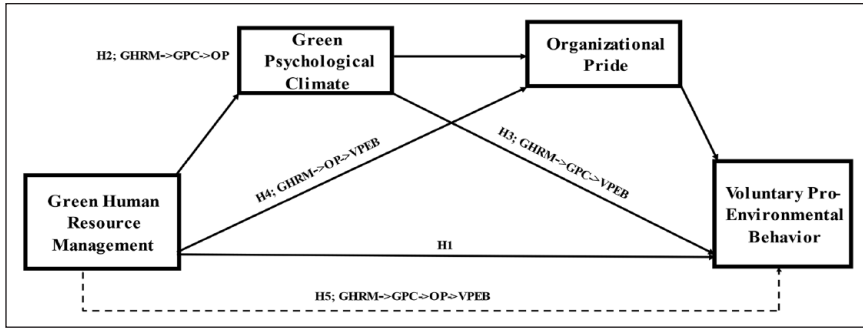


Figure 1. Research Framework.

Social exchange theory contends that employees and their organizations engage in a reciprocal exchange relationship, highlighting their distinct entities (Blau, 1964). In contrast, social identity theory implies a sense of unity between employees and their organizations (van Knippenberg et al., 2007). Despite this apparent divergence, these theories are psychologically interconnected (He et al., 2014) in that social exchange processes shape an employee's identity with the organization, while an employee's inclination to reciprocate in the exchange also depends on how much they identify with the organization (Tavares et al., 2016). Recognizing this interplay, we integrate these two theories in this study to explore the complex relationships between GHRM, green psychological climate, organizational pride, and employees' VPEB.

Social exchange theory posits that exchanges between actors occur based on the principle of reciprocity, where individuals feel compelled to do something in return after receiving a favor from another party (Blau, 1964). This theory has been applied to explain a variety of social exchanges that take place between organizations and their employees (Cropanzano & Mitchell, 2005; Gould-Williams, 2007; Karatepe et al., 2022). According to the theory, when individuals perceive that they are appreciated or treated well by the organization, they experience a sense of obligation and are more inclined to exert greater effort in the workplace (Bos-Nehles & Meijerink, 2018; Paillé et al., 2013). An organization establishes a social exchange relationship with its employees through various means, such as providing them with meaningful jobs, offering support, ensuring fair compensation, and recognizing their contributions. In response to this exchange, employees reciprocate by engaging in discretionary and voluntary actions that benefit the organization. Arguably, when an organization demonstrates support and concern for specific initiatives, such as green initiatives (Paillé & Valéau, 2021), employees perceive this as an expectation to support and participate in these initiatives, with the anticipation of receiving benefits or rewards in return.

Social identity theory highlights that individuals develop an identity aligned with the group to which they belong (Ashforth & Mael, 1989). The theory helps explain the relationship and shared interests between employees and their organization. When organizations implement practices, such as green activities for sustainability, they convey specific cues to employees, fostering a sense of social identity with green values (Jones, 2010). Some scholars contend that employees who integrate their organization's values are more likely to demonstrate greater engagement in behaviors that go beyond their formal roles or responsibilities (Blader & Tyler, 2009). Social identity theory further postulates that employees who identify with their organization's values are more inclined to invest additional effort and engage in behaviors that align with, and advance, those values (Shen & Benson, 2016). Accordingly, when employees recognize the cues that evoke positive feelings toward their organization (Ng et al., 2019; Rubel et al., 2021), they are more likely to experience a sense of pride in being associated with an organization that has a

positive reputation for environmental and community service (John et al., 2019). This sense of pride then serves as a motivation for employees to actively participate in behaviors that contribute to the organization's sustainable efforts (Ashforth & Mael, 1989; John et al., 2019; Zafar, Ho, et al., 2023).

GHRM and Employees' Voluntary Pro-Environmental Behavior

The existing body of research on GHRM identifies a set of HR practices that organizations can employ to promote sustainability. These practices include strategies such as recruiting and selecting environmentally conscious employees, assessing employee performance based on their contributions to environmental causes, and providing environmental training to enhance employees' environmental awareness and skills (Hameed et al., 2020). In addition, employees may be given the opportunity to contribute suggestions for environmental improvement within the organization (Umrani et al., 2020). Such GHRM practices serve as signals, indicating that the organization is committed to investing in its employees and rewarding their environmental endeavors.

In accordance with social exchange theory (Blau, 1964), when an organization demonstrates its commitment to investing in and recognizing its employees' green efforts, employees feel a sense of obligation to reciprocate the positive treatment they have received (Cropanzano & Mitchell, 2005; Paillé et al., 2013). This reciprocal response arises from the organizational support they have received, such as participating in green training (Pham et al., 2018), receiving green rewards, and being actively involved in environmental initiatives as part of the organization's GHRM practices. By implementing these practices, the organization effectively signals its values and priorities, thereby empowering and motivating employees to contribute toward the organization's objectives (Kim et al., 2019; Sabokro et al., 2021). For instance, Kim et al. (2020) found that organizational environment policy can encourage employees to voluntarily take part in environmental initiatives and actions. Thus, we argue that when employees are supported and rewarded for their environmental actions, they experience a heightened sense of obligation to take part in voluntary green initiatives that align with the organization's sustainability objectives (Hameed et al., 2020; Paillé et al., 2020). We thus hypothesize that:

Hypothesis 1a: GHRM practices are positively related to employees' voluntary pro-environmental behavior.

GHRM and Green Psychological Climate

In line with social identity theory, individuals find an emotional connection in their association with an organization, especially when its values align with their own (Ashforth & Mael, 1989; Jones, 2010). This alignment is particularly salient in the context of environmental sustainability. When organizations implement GHRM practices, such as providing green training sessions or rewarding eco-friendly behaviors, they not only demonstrate a commitment to environmental issues but also actively involve organizational actors in these initiatives (Dumont et al., 2017). This involvement serves a dual purpose: It reinforces the organization's commitment to sustainability and, at the same time, fosters a sense of collective responsibility in the organization (Norton et al., 2017).

Through effective GHRM practices, which facilitate such collective effort, a positive green organizational climate can be nurtured (Sabokro et al., 2021). Green recruitment, for instance, involves a focus on attracting and selecting employees who align with values related to environmental sustainability (Dumont et al., 2017). As another example, employing a green performance appraisal process is crucial for evaluating green training needs and assessing the outcomes of environmentally friendly initiatives (Zafar, Malik, et al., 2023). The implementation of GHRM

practices is thus likely to lead organizational actors to align their actions and behaviors with the organization's green policies (Dumont et al., 2017). Green psychological climate is also viewed as a direct consequence of GHRM practices (Sabokro et al., 2021), wherein individuals perceive that these practices have the potential to establish a nurturing environment that can influence their behavior (Sabokro et al., 2021). With GHRM practices, individual organizational actors become cognizant of their organization's policies, procedures, and practices supporting the environment. In this regard, they are more inclined to perceive their organization's commitment to the environment positively, contributing to the reinforcement of a positive green psychological climate. The following hypothesis is thus formulated:

Hypothesis 1b: GHRM practices positively affect green psychological climate.

GHRM and Organizational Pride

When an organization implements GHRM practices, it communicates a strong message of commitment to environmental sustainability beyond pure economic gains (Dumont et al., 2017). In line with social identity theory (Ashforth & Mael, 1989), an individual's sense of self is, in part, shaped by their affiliation with a group and the emotional bonds formed within it. Belonging to a group that aligns with one's values and identity enhances one's feeling of pride. Newman et al. (2015), for example, found that corporate social responsibility (CSR) practices in organizations positively influence employees' pride in their organization. This is attributed to how CSR activities highlight key organizational attributes like prestige and fairness, thereby enhancing the organization's external image and consequently boosting employee pride.

Likewise, the implementation of GHRM practices serves as a demonstration of an organization's strong environmental commitment (De Roeck et al., 2016; Ismail et al., 2022). Employees often take pride in being associated with sustainable organizations, perceiving them as competent, responsible, and committed to environmental stewardship (Jones et al., 2014). The significance of organizational pride, as emphasized by Gouthier and Rhein (2011), lies in its positive impact on employee attitudes and behaviors. The more an individual perceives alignment with the organization's environmental values, the higher the likelihood that they experience a sense of pride in their organization. Essentially, the organization's commitment to implementing GHRM practices can intensify employees' feelings of pride and strengthen their connection to their organization.

Hypothesis 1c: GHRM practices positively affect organizational pride.

GHRM, Green Psychological Climate, and Organizational Pride

In line with social identity theory, employees recognize the emotional significance associated with their membership in a particular group or organization (Ashforth & Mael, 1989; Jones, 2010). This theory further asserts that individuals experience a sense of belonging when they are affiliated with an organization whose values are aligned with their own. As previously argued, when an organization implements GHRM practices, such as offering green training and providing rewards for green behaviors, they send a clear signal to employees that the company cares about sustainability and is taking action to address environmental issues (Dumont et al., 2017). Managers commonly play a pivotal role in influencing an organization's environmental policies, initiatives, and culture (De Smet et al., 2021). Their attitudes toward environmental sustainability frequently mirror the organization's overall approach toward adopting green practices. Consequently, there is a heightened awareness of a positive psychological climate indicating the company's commitment to sustainability efforts (Saburo et al., 2021).

Employees are also more likely to experience a sense of pride when the climate of the organization promotes proactive environmental and societal actions (Jones, 2010). For those who value and prioritize environmental sustainability, a green organizational climate becomes a crucial factor that allows them to recognize and understand the organization's commitment to green values. Consequently, their sense of pride in being part of the company grows (Zafar, Ho, et al., 2023), as individuals' perceptions align with the organization's values and commitment to environmental sustainability (Tian & Robertson, 2019; Zientara & Samosa, 2018). Based on these theoretical arguments, we contend that a green psychological climate serves as a link between GHRM and employees' organizational pride.

Hypothesis 2: Green psychological climate mediates the positive relationship between GHRM practices and organizational pride.

GHRM, Green Psychological Climate, and Voluntary Pro-Environmental Behavior

Adopting a social exchange theory perspective (Blau, 1964), it has been established that organizations' beneficial and positive actions create an obligation for employees to reciprocate. GHRM practices, such as green training, play a significant role in enhancing employees' understanding of green activities and their societal impact (Pham et al., 2019). Similarly, providing employees with opportunities to offer suggestions for improving the organization's environmental performance enhances employee participation (Hameed et al., 2020). Arguably, GHRM practices are likely to promote a green psychological climate by signaling the organization's commitment to environmental responsibility and its desire to create green values (Dumont et al., 2017).

Building upon social exchange theory, we further argue that a green psychological climate shapes individuals' perceptions regarding organizational policies aimed at enhancing sustainability. Organizational leaders have a role in fostering support for the firm's environmental efforts by cultivating a positive green organizational climate (Zientara & Zamojska, 2018). Such a climate is likely to empower members of the organization to create an environmentally responsible organization (Zafar, Ho, et al., 2023). Consequently, a positive green psychological climate fosters a mutually beneficial exchange dynamic, where organizational actors are motivated to be environmentally conscious (Sabokro et al., 2021) and voluntarily engage in actions to support the organization's sustainability goals (Kim et al., 2020; Norton et al., 2017; Pail e & Val eau, 2021). We thus hypothesize that:

Hypothesis 3: Green psychological climate mediates the relationship between GHRM practices and employees' voluntary pro-environmental behavior.

GHRM, Organizational Pride, and Voluntary Pro-Environmental Behavior

Studies have shown that corporate social responsibility practices elicit positive emotions among employees (John et al., 2019; Ng et al., 2019). When an organization embraces green practices, it is typically viewed as an exemplary role model, both by employees and the wider public (Zafar, Ho, et al., 2023). In line with the tenets of social identity theory, employees believe that they, too, play a role in contributing to the greater good. The provision of training, opportunities for involvement, and rewards for engaging in green behaviors as part of GHRM practices (Zhao et al., 2021) further reinforces employees' feeling of being valued, thereby enhancing their feelings of pride in being part of the organization.

In addition, this positive psychological feeling of organizational pride is likely to serve as a motivator for employees to align their actions with the organization's green goals (John et al., 2019; Sabokro et al., 2021). When employees feel they are supported, trained, and rewarded for

contributing to environmental sustainability as part of the organization's GHRM practices, they are also more inspired to engage in voluntary green actions to support the organization (Saeed et al., 2019; Zafar, Ho, et al., 2023). We thus contend that GHRM practices motivate employees to voluntarily engage in pro-environmental behavior by fostering a sense of pride among employees, as their values and actions are aligned with the organization's sustainability commitment (Tian & Robertson, 2019). Thus:

Hypothesis 4: Organizational pride mediates the relationship between GHRM practices and employees' voluntary pro-environmental behavior.

GHRM, Green Psychological Climate, Organizational Pride, and Voluntary Pro-Environmental Behavior

In this study, we emphasize the significance of the implementation of GHRM practices, encompassing practices such as green training, green recruitment and selection, compensation for green initiatives, employee involvement in green activities, and reward systems that recognize green behaviors. By implementing these practices, organizations not only improve employees' work-related abilities, empowerment, and personal development but also contribute to their health and well-being (Amrutha & Geetha, 2020; Francoeur & Paillé, 2022). In addition, these GHRM practices play a crucial role in shaping organizational actors' perceptions of the organization's green psychological climate (Sabokro et al., 2021), as such practices have the potential to cultivate goodwill and positive sentiments among organizational members.

Their perceptions of the organization's green psychological climate in turn fulfill employees' sense of pride. Their affiliation with the organization inspires them, as they desire to be associated with a company that positively contributes to the community (Chaudhary, 2020). Based on social identity theory, it is evident that individuals' perceptions of the organization shape how they construct their identities. A company that encourages and supports employee involvement in green activities and rewards them for doing so, sends a clear signal about the activities valued by the company. As employees become more conscious of their roles and expectations of green endeavors, they are also more likely to appreciate the importance of their actions in supporting the organization's long-term sustainability goals and the potential societal impact of their contributions. As a result, they develop a sense of pride in their work, deriving satisfaction from their affiliation with the organization (Ng et al., 2019; Zafar, Ho, et al., 2023).

Organizational pride can then serve as a psychological catalyst, motivating employees to voluntarily participate in activities that support their organization's endeavors (John et al., 2019). Consistent with social exchange theory, when individuals receive support and rewards from the company for their actions, they feel a sense of obligation to repay the organization (Gould-Williams, 2007). In this way, the implementation of GHRM practices is more likely to foster voluntary green behavior in the workplace (Amrutha & Geetha, 2020). Therefore, we hypothesize that GHRM practices influence employees' VPEB by creating a green psychological climate and nurturing organizational pride:

Hypothesis 5: Green psychological climate and organizational pride sequentially mediate the relationship between GHRM practices and employees' voluntary pro-environmental behavior.

Method

Sample and Procedure

Data for the study were collected at the individual level as the unit of analysis. We surveyed employees and managers from 31 textile companies situated in the Punjab province of Pakistan.

The managers were approached via email, wherein they received a cover letter explaining the objective of the research study, and data collection procedures, together with a copy of the questionnaire. The cover letter also assured respondents of the anonymity and confidentiality of their responses. Due to the COVID-19 pandemic, it was not feasible to conduct an on-site survey. Instead, we had to use the drop-and-collect method of data collection, which required leaving the questionnaires with the managers and arranging a later date to collect the completed questionnaires. This approach improved the response rate, as participants were able to complete the questionnaires at their convenience.

A similar cover letter was also distributed to the employees as part of the employee surveys. Given the diverse operations within the sector, we focused on respondents who were office workers who held positions most relevant for responding to the concepts explored in the study, such as GHRM practices. We also took into consideration all the procedures to achieve a good response rate. For instance, follow-up calls were made, and follow-up letters were sent to the participants as reminders. In addition, as a token of appreciation, participants were given sweets. While seemingly insignificant, this gesture held considerable importance in a context like Pakistan.

To minimize the threat of common method bias (Podsakoff et al., 2003), we employed two strategies. First, we utilized multisource data by administering separate surveys comprising different questions to different groups—that is, employees and their respective direct supervisors (managers). Each team was overseen by one manager. While all managers managed more than five employees under their direct supervision, for this study, each manager, on average, assessed no more than three employees under their direct supervision. This is to avoid a data nesting issue, with a comparable method being used in prior research (e.g., Afsar et al., 2017; Ahmad et al., 2022). These employees had been working under the supervision of their respective managers for a minimum of 2 years. To ensure alignment, the questionnaires for employees and their managers were assigned identical identification codes, allowing for subsequent matching of responses.

Second, the data collection involved two waves (T1 and T2) after a 3-week gap (Carnevale et al., 2019; Kong, 2016). At Time 1 (T1), a total of 800 questionnaires were distributed to employees, with 570 responses returned (71% response rate). The responses were received from a total of 267 teams from 31 organizations. Each employee completed a questionnaire that contained demographic information as well as questions regarding GHRM practices and the size of the organization. The manager's survey, on the contrary, included questions about the organization's green psychological climate, as they are the individuals responsible for creating such a climate (De Smet et al., 2021). By assessing the green psychological climate from the managers' perspectives, this study seeks to capture unique insights into how GHRM practices contribute to an organizational climate that supports environmental sustainability. During T1, 155 questionnaires were distributed to the managers, 128 of which were returned, and 109 responses were valid (70% response rate).

At T2, questionnaires were given out to the 570 employees who had participated in T1. Before distributing the T2 questionnaires, the names of employees who had completed the T1 questionnaires were written on the T2 questionnaires by the first author, although she did not know any of the employees. This step was undertaken as a way to assist the companies in accurately distributing the T2 questionnaires to the employees who had participated in the T1 survey. None of the responses were linked to any of the respondents, ensuring the anonymity and confidentiality of the responses. The employees then completed the second questionnaire, with questions related to their organizational pride and VPEB. Questions about social desirability were also included in the questionnaire. A total of 490 were returned (response rate of 86%), but only 459 responses were valid. We tested for the potential for nonresponse bias, and this was not a concern, as nonrespondents did not differ significantly from those who responded.

From the responses received, 20% of the returned surveys were from medium-sized organizations, while the remaining 80% were from large organizations. The size of the organization was

determined based on the number of employees, with large organizations being defined as those employing more than 250 employees, while medium-sized organizations were characterized as those employing 50 to 250 employees. On average, the majority of the organizations included in the data collection were large organizations, with a range of employees employed between 251 to 500.

Measures

As the native language of the respondents is Urdu, the measurement scales were subjected to a double translation process to eliminate discrepancies, from English into Urdu and from Urdu to English, using Brislin's (1970) back-translation procedure. A pre-test was also conducted to ensure the content validity of the survey in that all respondents understood the questions. A seven-point Likert-type scale was utilized for all the constructs in this study, ranging from 1 (*strongly disagree*) to 7 (*strongly agree*).

GHRM Practices. GHRM practices were assessed using six items (Kim et al., 2019). Sample items include "my organization relates eco-friendly behavior of employees to rewards and compensation," and "my organization provides adequate training to promote environmental management as a core organizational value." Cronbach's alpha of this construct was .90.

Green Psychological Climate. This construct was assessed using a five-item scale by Chou (2014). The scale measured individuals' perceptions of their organization's environmental responsibility and green activities. Sample items include "my organization is interested in supporting environmental policies," and "my organization is interested in becoming more environmentally friendly." Cronbach's alpha was .86.

Organizational Pride. Organizational pride was measured using a scale from Cable and Turban's (2003) study. The three-item scale measured the extent to which employees felt a sense of pride for being part of the organization. Sample items include "I would be proud to be an employee of this organization," and "I would be proud to tell others that I work for this organization." Cronbach's alpha of this construct was .94.

Voluntary Pro-Environmental Behavior. Employees' VPEB was evaluated using a six-item scale by Kim et al. (2017) to assess the extent to which employees engaged in voluntary green initiatives within the organization. Sample items include "I avoid unnecessary printing to save papers," and "I recycle reusable things in the workplace." Cronbach's alpha of this construct was .78.

Table 1 displays the measurement items of the constructs in this study.

Control Variables. We controlled for firm size, social desirability bias, and organizational tenure. The first control variable, firm size, has been shown to influence green psychological climate and the extent to which environmental practices are implemented (Cordano et al., 2010; Tuan, 2019). Larger firms typically have more resources and infrastructure, enabling them to adopt and implement environmental practices more effectively. As such, this was controlled and measured based on the number of employees in the organization. This is linked to green psychological climate and VPEB, given the existing literature supporting the potential influence of firm size on both the development of a green psychological climate and the extent of VPEB.

The second control variable was social desirability bias which was assessed using a 10-item scale by Strahan and Gerbasi (1972). Socially desirable responses can lead to a false association between variables (Larson, 2019), which can then influence respondents' behavior and attitudes when responding to questionnaire items. We included social desirability as a control variable in relation to VPEB. For VPEB, this is frequently regarded as a social norm, prompting individuals

Table 1. Measurement Items.

Constructs	Measurement items
GHRM Practices	<p>My organization provides adequate training to promote environmental management as a core organizational value.</p> <p>My organization considers how well employee is doing at being eco-friendly as part of their performance appraisals.</p> <p>My organization relates employees' eco-friendly behavior to rewards and compensation</p> <p>My organization considers personal identity-environmental management fit in recruitment and selection.</p> <p>Employees fully understand the extent of corporate environmental policy.</p> <p>My organization encourages employees to provide suggestions on environmental improvement.</p>
Green Psychological Climate	<p>Engaging in and supporting green and sustainable initiatives is important in my organization.</p> <p>My organization is interested in supporting environmental policies.</p> <p>My organization believes it is important to protect the environment.</p> <p>My organization is concerned with becoming more environmentally friendly.</p> <p>My organization emphasizes the use of less paper, energy and disposable products.</p>
Organizational Pride	<p>I would be proud to be an employee of this organization.</p> <p>I would be proud to tell others that I work for this organization.</p> <p>I would be proud to identify myself personally with the organization.</p>
Voluntary Pro-environmental Behavior	<p>I avoid unnecessary printing to save papers.</p> <p>I use personal cups instead of disposable cups.</p> <p>I use stairs instead of elevators when going from floor to floor in the building.</p> <p>I reuse papers to take notes in the office.</p> <p>I recycle reusable things in the workplace.</p> <p>I sort recyclable materials into their appropriate bins when other group members do not recycle them.</p>

to exhibit socially desirable responses when questioned about environmentally friendly practices (Moore & Rutherford, 2020). This tendency therefore has the potential to skew the perceived relationship between variables. Hence, we specifically linked social desirability to VPEB to control for this bias, ensuring that the responses accurately reflect the behaviors rather than socially desirable answers.

Finally, researchers have also found a link between organizational tenure (years worked in the organization) and VPEB (Dumont et al., 2017; Kim et al., 2017). This is because employees with longer tenure in an organization are likely to develop stronger loyalty to the organization, aligning more closely with the company's long-term objectives (Kim et al., 2017). This alignment often translates into a greater propensity to engage in VPEB. As such, this variable is controlled in this study.

Common Method Variance

To mitigate the possibility of common method bias, we conducted Harman's single-factor test (Podsakoff et al., 2012). If the unrotated single latent factor extracted from all observed variables was less than 50%, common method variance (CMV) was not a concern (Podsakoff et al., 2012).

Table 2. Correlations Among Latent Variables and Marker Variable.

Constructs	GHRM	GPC	Organizational pride	Social desirability	VPEB
GHRM	1				
GPC	0.57	1			
Organizational pride	0.72	0.68	1		
Social desirability	0.01	-0.08	-0.07	1	
VPEB	0.61	0.78	0.68	-0.07	1

The result of the test indicated that the unrotated single latent factor on all observed variables was 33%, indicating that CMV was not a problem.

In this study, we also analyzed the partial least squares (PLS) model with social desirability as a marker variable to check for CMV (Podsakoff et al., 2003). In the PLS model, the marker variable was added and linked to all the constructs, and the analysis was then run. The results indicated that after removing the marker variable, there was only a marginal change in the path estimates, with a maximum of 0.01. This minimal change indicates that CMV did not significantly influence the results (Chin et al., 2013). Furthermore, the nonsignificant relationship of the marker variable was observed with all the variables, affirming that CMV was not a major issue in this study (Chin et al., 2013).

In addition, the correlation analysis, adhering to Lindell and Whitney's (2001) method and employing social desirability as a marker variable, reinforced the absence of significant common method bias in this study. This approach is also in line with the findings of Williams et al. (2010) and Williams and McGonagle (2016) who advocate for the use of marker variables in identifying and controlling for common method bias in behavioral research. Employing social desirability as a marker variable thus constituted an important aspect of robustness checks, providing an empirical basis to evaluate and control for the presence of CMV. The correlations between social desirability and key variables—GHRM, green psychological climate, organizational pride, and VPEB—were notably low, all well under the 0.3 threshold (refer to Table 2). This suggests that the impact of CMV is minimal, supporting the validity of our research findings.

Analysis and Results

This study employed structural equation modeling (SEM) using the Smart PLS software. SEM enables a two-step validation process to validate the measurement and structural models. The measurement model was evaluated in the first stage, and the estimations were then assessed in the second stage by evaluating the structural model.

Measurement Model

The Heterotrait-Monotrait ratio of the correlations (HTMT) met the threshold criteria of less than 0.90 (Table 3; Hair et al., 2017), indicating discriminant validity. The measurement model results thus provide sufficient robustness to test the relationships between the variables in this study.

To validate the measurement model, we checked the reliability and validity of the data (Table 4). As shown in Table 4, all factor loadings were greater than 0.60, suggesting convergent validity (Hair et al., 2011, 2017). The composite reliability (CR) scores for all the variables were also greater than 0.70, indicating that all of the measurement scales had internal consistency reliability (Hair et al., 2017). The average variance extracted of all constructs was also greater than the threshold value of 0.50 (Hair et al., 2017), further demonstrating convergent validity.

Table 3. Assessment of Discriminant Validity.

Constructs	1	2	3	4	5
1. GHRM					
2. Green psychological climate	0.66				
3. Organizational pride	0.89	0.77			
4. Social desirability	0.07	0.09	0.09		
5. Voluntary pro-environmental behavior	0.73	0.89	0.80	0.09	

Table 4. Assessment of Convergent Validity and Internal Consistency.

Constructs	Items	Loading	CA	Rho_A	CR	AVE
GHRM	GHRM1	0.62	0.83	0.85	0.88	0.55
	GHRM2	0.60				
	GHRM3	0.76				
	GHRM4	0.76				
	GHRM5	0.89				
	GHRM6	0.79				
Green psychological climate	GPC1	0.79	0.88	0.88	0.91	0.68
	GPC2	0.85				
	GPC3	0.80				
	GPC4	0.86				
	GPC5	0.81				
Organizational pride	OP1	0.83	0.77	0.78	0.87	0.68
	OP2	0.84				
	OP3	0.80				
Voluntary pro-environmental behavior	VPEB1	0.75	0.84	0.85	0.88	0.55
	VPEB2	0.69				
	VPEB3	0.68				
	VPEB4	0.76				
	VPEB5	0.72				
	VPEB6	0.84				
Social desirability	SD1	0.69	0.91	0.94	0.92	0.53
	SD2	0.75				
	SD3	0.70				
	SD4	0.77				
	SD5	0.76				
	SD6	0.75				
	SD7	0.68				
	SD8	0.77				
	SD9	0.69				
	SD10	0.71				

Note. GHRM = Green human resource management, CR = composite reliability, CA = Cronbach alpha, AVE = average variance extracted.

Table 5. Descriptive Statistics and Correlations.

Variables	<i>M</i>	<i>SD</i>	GHRM	GPC	OP	VPEB	<i>SD</i>
GHRM	5.11	0.98					
GPC	5.88	1.26	.56**				
OP	5.83	1.29	.69**	.64**			
VPEB	5.82	1.21	.60**	.76**	.64**		
<i>SD</i>	5.50	0.69	.00	-.08	-.06	-.07	
Firm size	2.29	0.88	-.13**	-.06	-.03	-.12*	-.079

Note. GHRM = Green human resource management, GPC = Green psychological climate, OP = Organizational pride, VPEB = Voluntary pro-environmental behavior, *SD* = Social Desirability.

*Correlation is significant at the .05 level (2-tailed). **Correlation is significant at the .01 level (2-tailed).

We conducted confirmatory factor analysis (CFA) using partial least squares structural equation modeling (PLS-SEM) to evaluate the adequacy of the model structure. A critical aspect of this assessment involved scrutinizing the standardized root mean square residual (SRMR) value, a key indicator in determining model fit within the PLS-SEM framework. Our analysis yielded an SRMR value below the established threshold of 0.08 (Hair et al., 2017). This result suggests a strong model fit, as values below this threshold indicate minimal discrepancies between the observed and model-implied correlation matrices. The SRMR value in our study further indicates the model's reliability and validity in representing the underlying data structure.

We also assessed the unweighted least squares value, resulting in a value of 0.97, indicating a small discrepancy between the observed and estimated covariances. The Geodesic Discrepancy value was 0.50, reflecting a favorable fit concerning covariances. The Chi-square value for this model was 1,167.98, suggesting an acceptable level of fit. These fit indices collectively suggest that the proposed final model offers a reasonable representation of the observed data.

Descriptive Statistics

In terms of the respondents' profile, male respondents made up 90% of the employee sample. Although the majority of the respondents in this present study comprised males, this ratio is typical for the textile sector in Pakistan which has a high ratio of males as compared with females (Dad et al., 2020). The "All Pakistan Textile Mills Association" (APTMA, 2021) also acknowledges that Pakistan is among the third-worst countries in global rankings for gender equality where women have a high unemployment rate because of gender discrimination.

Around 79% of the employees had worked for their companies for 1 to 5 years, and 21% of them had between 6 to 10 years of experience with their organizations. In terms of education, 60% of employees indicated they had completed a bachelor's degree, while 40% mentioned they had obtained a postgraduate degree. For the managerial sample, the majority of the managers (64%) had between 6 to 10 years of work experience. Approximately 82% of the managers also had postgraduate education.

Table 5 shows the mean, standard deviations, and correlations for all measures. The results showed that the mean values range from 5.11 to 5.88, and the standard deviation was between 0.98 and 1.29 for the constructs. All the correlations were significant.

Structural Model

The structural model, as shown in Figure 2, was analyzed to test the hypotheses.

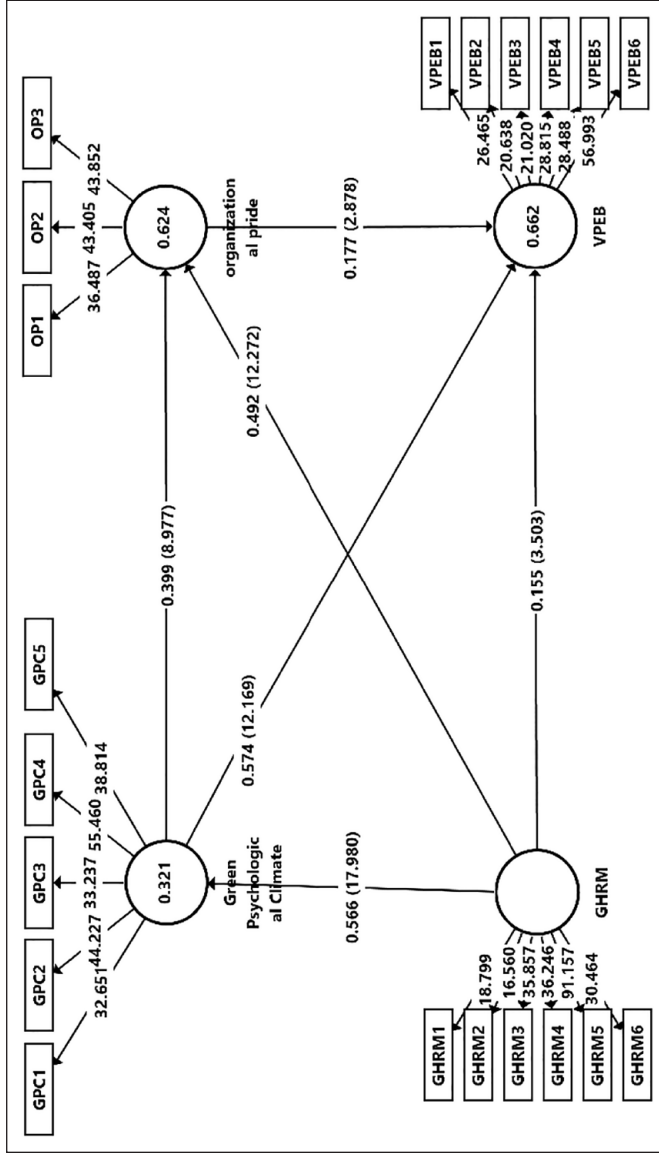


Figure 2. Structural Model.
 Note: GHRM: Green human resource management; VPBE: Voluntary pro-environmental behavior.

Table 6. VIF Values for Collinearity Assessment.

Constructs	GHRM	GPC	OP	VPEB
GHRM	0.00	1.00	1.47	2.12
GPC	0.00	0.00	1.47	1.89
OP	0.00	0.00	0.00	2.66
VPEB	0.00	0.00	0.00	0.00

Note: GHRM = Green human resource management, GPC = Green psychological climate, OP = Organizational pride, VPEB = Voluntary pro-environmental behavior.

Table 7. Results of PLS Predict.

Indicators	Q ² Predict	PLS-SEM		Linear-Model Benchmark	
		RMSE	MAE	RMSE	MAE
GPC5	0.24	1.35	1.02	1.38	1.04
GPC4	0.21	1.33	0.97	1.34	1.01
GPC3	0.21	1.32	1.02	1.34	1.01
GPC2	0.22	1.27	0.96	1.31	0.99
GPC1	0.16	1.58	1.24	1.61	1.25
VPEB4	0.17	1.37	1.06	1.39	1.08
VPEB3	0.19	1.64	1.26	1.67	1.28
VPEB6	0.24	1.31	0.98	1.34	1
VPEB5	0.23	1.72	1.48	1.74	1.45
VPEB2	0.18	1.41	1.06	1.45	1.07
VPEB1	0.21	1.29	0.95	1.32	0.97
OP2	0.43	1.18	0.86	1.16	0.82
OP1	0.35	1.25	0.88	1.2	0.86
OP3	0.28	1.33	1.01	1.36	1.05

Note: GHRM = Green human resource management, GPC = Green psychological climate, OP = Organizational pride, VPEB = Voluntary pro-environmental behavior, RMSE = Root mean squared error, MAE = Mean absolute error.

In terms of examining the issue of multicollinearity, the variance inflation factor (VIF) values for all the variables were less than 5.0 (Table 6). These results indicate that there are no multicollinearity issues in the data (Hair et al., 2017).

The predictive accuracy (Q²) of the model was evaluated using the blindfolding procedure. All Q² values for the endogenous variables were greater than zero, green psychological climate (GPC) = 0.21, organizational pride (OP) = 0.40, VPEB = 0.36, showing the fair predictive accuracy of the structural model (Hair et al., 2017). PLS predict was also used to assess the sample predictive quality of the model, following the procedure by Shmueli et al. (2016). The values for Q² predict for all the endogenous constructs were positive (Table 7). Furthermore, the indicators of GPC, OP, and VPEB had smaller prediction errors (root mean squared error [RMSE] and mean absolute error [MAE]) when these were compared with the RMSE and MAE of the linear model benchmark. Therefore, the proposed research model demonstrated sufficient predictive power.

The effect size (f^2) which measures the relative impact of a particular exogenous construct on an endogenous construct, was also assessed in the structural model (Cohen, 1988). Cohen (1988) defined the effect sizes of $f^2 \geq 0.02$, $f^2 \geq 0.15$, and $f^2 \geq 0.35$ as small, moderate, and large effect sizes, respectively. From the results presented in Table 8, GHRM practices had a large effect on

Table 8. Results of Direct Effects, Control Variables, Effect Size (f^2), and Coefficient of Determination (R^2).

Relationship	β	SE	t value	p value	CIs (5.0%-95.0%)	Results	R^2 (with CV)	R^2 (without CV)	f^2
Direct effects									
GHRM→GPC	0.57	0.03	17.98	.00	(0.52; 0.62)	Accepted	.32	.32	0.47
GHRM→VPEB	0.15	0.04	3.50	.00	(0.08; 0.23)	Accepted	.00	.00	0.03
GHRM→OP	0.49	0.04	12.27	.00	(0.43; 0.56)	Accepted	.00	.00	0.44
GPC→VPEB	0.57	0.05	12.17	.00	(0.50; 0.65)	Accepted	.00	.00	0.52
GPC→OP	0.40	0.04	8.98	.00	(0.32; 0.47)	Accepted	.62	.62	0.29
OP→VPEB	0.18	0.06	2.88	.00	(0.07; 0.27)	Accepted	.67	.66	0.03
Control variables									
SD→VPEB	-0.03	0.04	0.77	.22	(-0.09; -0.03)	NS			
FirmSize→VPEB	-0.06	0.03	2.27	.01	(-0.10; -0.02)	Significant			
FirmSize→GPC	0.02	0.04	0.45	.33	(-0.04; 0.08)	NS			
OT→VPEB	0.02	0.03	0.63	.26	(-0.03; 0.06)	NS			

Note: GHRM = Green human resource management; GPC = Green psychological climate; OP = Organizational pride; VPEB = Voluntary pro-environmental behavior; SD = Social desirability; CIs = Confidence intervals; SE = Standard error; CV = Control variable; OT = Organizational Tenure; NS = Non-significant; p value < 0.05.

green psychological climate ($f^2 = 0.47$) and organizational pride ($f^2 = 0.44$), but only a small effect on VPEB ($f^2 = 0.03$). The impact of green psychological climate on organizational pride was moderate ($f^2 = 0.29$; refer to Table 8); however, its impact on VPEB was large ($f^2 = 0.52$). Furthermore, organizational pride had a small effect on VPEB ($f^2 = 0.03$).

Table 8 also shows the coefficient of determination (R^2) of all the endogenous constructs. This measure gauges the explanatory power of the variables, illustrating the amount of variance in each of the endogenous constructs that is explained by all associated exogenous constructs (Hair et al., 2017). The R^2 value for green psychological climate was .32, indicating that GHRM practices accounted for a 32% variance of GPC. 62% of the variance in organizational pride was explained by GPC ($R^2 = .62$), and 66% of the variance in VPEB was explained by OP ($R^2 = .66$). Moreover, a minor change (1%) was observed in the R^2 value of VPEB after adding the control variables. The R^2 values of green psychological climate and organizational pride did not change at all, indicating no issue of common method bias in the present study (Hair et al., 2017).

We also tested the impact of social desirability bias on VPEB. This was found to be non-significant ($\beta = -.03$, $p = .22$). Firm size did not have a significant effect on green psychological climate ($\beta = .02$, $p = .33$) but had a significant effect on VPEB ($\beta = -.06$, $p = .01$). Hence, the results for responses related to VPEB should be interpreted with caution. Moreover, a non-significant impact of organizational tenure was observed for the VPEB of employees ($\beta = .02$, $p = .26$).

Subsequently, a model comparison was conducted using PLS-SEM (Hair et al., 2017), as outlined in Table 9. This approach involves comparing various structural models to determine the one that best explains the data. This comparison is typically based on criteria such as the coefficient of determination (R^2) for endogenous constructs, the significance of path coefficients, predictive relevance (Q^2), and other model evaluation criteria, including convergent and discriminant validity. The analysis of five distinct models enhances our understanding of the relationships between GHRM, green psychological climate, organizational pride, and VPEB.

Model 1, which examines the direct effect of GHRM on VPEB, was provided as a baseline to compare the incremental explanatory power of the mediators. This model had a moderate explanatory power ($R^2 = 0.37$). Model 2, introducing green psychological climate as a mediator, showed a notable increase in explanatory power for VPEB ($R^2 = 0.65$), highlighting the mediating role

Table 9. Summary of Model Comparisons for GHRM, Green Psychological Climate, Organizational Pride and VPEB.

Model	Description	Key path coefficients	R ² values	Q ² values
Model 1	GHRM→VPEB	GHRM→VPEB: 0.61	VPEB: 0.37	VPEB: 0.20 to 0.24
Model 2	GHRM→Green Psychological Climate→VPEB	GHRM→Green Psychological Climate:0.57, Green Psychological Climate→VPEB: 0.64, GHRM→VPEB:0.25	Green Psychological Climate:0.32, VPEB:0.65	Green Psychological Climate: 0.17 to 0.24, VPEB: 0.17 to 0.24
Model 3	GHRM→Organizational Pride→VPEB	GHRM→Organizational Pride:0.72, Organizational Pride→VPEB: 0.46, GHRM→VPEB:0.28	Organizational Pride:0.52, VPEB:0.47	Organizational Pride: 0.28 to 0.43, VPEB: 0.17 to 0.24
Model 4	GHRM→Green Psychological Climate→Organizational Pride→VPEB (without direct GHRM→VPEB)	GHRM→Green Psychological Climate:0.57, Green Psychological Climate→Organizational Pride: 0.71, Organizational Pride→VPEB: 0.70	Green Psychological Climate:0.32, Organizational Pride:0.50, VPEB:0.48	Green Psychological Climate: 0.17 to 0.24, Organizational Pride: 0.24 to 0.28, VPEB: 0.13 to 0.17
Model 5	GHRM→Green Psychological Climate→Organizational Pride→VPEB (with complete mediation chain)	GHRM→Green Psychological Climate: 0.57, Green Psychological Climate→Organizational Pride: 0.40, Organizational Pride→VPEB: 0.18, GHRM→VPEB: 0.16, Green Psychological Climate→VPEB: 0.57, GHRM→Organizational Pride: 0.49	Green Psychological Climate:0.32, Organizational Pride:0.62, VPEB:0.66	Green Psychological Climate: 0.17 to 0.24, Organizational Pride: 0.28 to 0.43, VPEB: 0.17 to 0.24

of green psychological climate. Model 3, incorporating organizational pride as the mediator, also demonstrated a significant mediating effect, with an R^2 of .47 for VPEB. Model 4 further expanded the mediation chain, linking GHRM, green psychological climate, and organizational pride sequentially to VPEB. This model offered substantial insights with an R^2 of .48 for VPEB, but it lacked the direct path from GHRM to VPEB.

Model 5, the proposed final model, presents a comprehensive mediation chain from GHRM on VPEB via green psychological climate and organizational pride. This model achieves the highest explanatory power ($R^2 = 0.66$ for VPEB) among all models. The inclusion of multiple pathways in Model 5, both direct and mediated, thus offers a nuanced understanding of how GHRM influences VPEB, highlighting the roles of green psychological climate and organizational pride. Its substantial predictive relevance, as indicated by the Q^2 values, and the statistical robustness of the path coefficients further affirm the choice of the model. Overall, Model 5, with its complex mediation structure, effectively captures the nuanced interplay between GHRM, green psychological climate, and organizational pride in influencing VPEB.

Table 10 shows the results of the hypotheses testing. The results indicate that GHRM was found to be positively associated with VPEB ($\beta = .15, p \leq .05$), green psychological climate ($\beta = .57, p \leq .05$) and organizational pride ($\beta = .49, p \leq .05$), supporting Hypotheses 1a, 1b and 1c. To test the mediation and serial mediation, bootstrapping on 5,000 resamples was performed. The bootstrapping estimations revealed that GHRM indirectly influenced organizational pride through GPC ($\beta = 0.23, p \leq .05$; see Table 7). Hypothesis 2 was thus supported. The results further demonstrated that green psychological climate mediated the influence of GHRM practices on VPEB ($\beta = .33, p \leq .05$), indicating that Hypothesis 3 was supported. The indirect effect

Table 10. Mediation and Serial Mediation Analysis.

Relationships	β	SE	t-value	p value	CIs [5.0%, 95.0%]	Results
Mediation analysis						
GHRM→GPC→OP	0.23	0.03	7.65	.00	[0.18, 0.28]	Accepted
GHRM→GPC→VPEB	0.33	0.03	9.49	.00	[0.27, 0.39]	Accepted
GHRM→OP→VPEB	0.09	0.03	2.67	.00	[0.03, 0.14]	Accepted
Serial mediation analysis						
GHRM→GPC→OP→VPEB	0.04	0.01	2.97	.00	[0.02, 0.06]	Accepted

Note. GHRM: Green human resource management; GPC: Green psychological climate; OP: Organizational pride; VPEB; Voluntary pro-environmental behavior, CIs: Confidence intervals; SE = Standard error; p-value < 0.05.

of GHRM on VPEB through organizational pride was found to be significant ($\beta = 0.09$, $p \leq .05$). Furthermore, the serial mediation of green psychological climate and organizational pride enhanced the effect of GHRM practices on VPEB (H5; $\beta = .04$, $p \leq .05$). Therefore, both Hypotheses 4 and 5 were supported.

Discussion

In this study, we proposed and empirically tested a model on employees' VPEB and analyzed the mediating mechanisms that explain the influence of GHRM practices and employees' VPEB. In addressing the first research question, the results of the study provide evidence that GHRM practices exert direct (Ahmad et al., 2022; Garavan et al., 2023) and indirect effects on employees' VPEB (Al-Swidi et al., 202; Chaudhary, 2020). Regarding the direct effect, GHRM exhibits a significant positive impact on employees' VPEB. The study highlights that employees who perceive their organization to be more supportive of sustainability initiatives and actions are more likely to reciprocate to engage voluntarily in environmental endeavors (Paillé et al., 2020). The results of our study are consistent with earlier research (Ababneh, 2021; Dumont et al., 2017; Sabokro et al., 2021).

Furthermore, we identified an indirect relationship between GHRM practices and employees' VPEB through the influence of both contextual and individual psychological factors. Our results demonstrate that GHRM practices foster a green psychological climate, which subsequently positively affects employees' VPEB. When an organization demonstrates a genuine concern for the environment, it takes measures to implement GHRM practices to recruit, train, and reward employees in relation to environmental sustainability. Consistent with Dumont et al.'s (2017) and Sabokro et al.'s (2021) studies, these practices contribute to the establishment of a green psychological climate.

Our findings also revealed that GHRM practices have an indirect effect on employees' VPEB via the individual psychological factor of organizational pride. When employees perceive that their organization is actively committed to positive environmental actions, such as reducing energy costs and mitigating environmental pollution, they experience a sense of pride in being associated with an organization that demonstrates a genuine concern for the environment (Jones et al., 2014). Such organizations often enjoy favorable perceptions from society (Jones, 2010), further infusing employees with a sense of pride in their workplace (Ng et al., 2019). We thus expand prior studies by elucidating the role of individual emotions in inspiring employees to engage in environmental sustainability actions. Specifically, we emphasize that organizational pride can serve as an intervening mechanism between the green psychological climate of the workplace and employees' VPEB.

In relation to the second research question, the findings of the study indicate that GHRM practices encourage employees' VPEB by creating a green psychological climate and fostering organizational pride. Notably, this study is the first to demonstrate a serial mediation chain wherein the green psychological climate and organizational pride serve as mediating factors connecting GHRM to VPEB. In contrast, previous researchers primarily focused on examining the direct relationship between green psychological climate and VPEB (Dumont et al., 2017; Hameed et al., 2020; Sabokro et al., 2021). This research provides evidence that fostering a green psychological climate is an effective approach to nurturing employees' pride and encouraging their voluntary engagement in green initiatives. The findings further reinforce the need to integrate sustainability within the HRM system of the organization to enhance employees' green skills, knowledge, and capabilities (Saeed et al., 2019). By implementing such practices, employees develop a perception of the organization's green climate and enhance their pride, consequently leading to their enhanced voluntary participation in green initiatives.

Theoretical Implications

The findings of the study make several theoretical contributions to the GHRM literature. First, the present study extends the literature on GHRM by examining the predictors of VPEB in the workplace (Tian & Robertson, 2019). While prior studies have predominantly focused on examining green behaviors in general (e.g., Dumont et al., 2017), they have not specifically addressed employees' voluntary engagement with environmental actions and initiatives. Our results imply that GHRM practices reflect the organization's commitment to achieving its green goals by ensuring that employees are knowledgeable, trained, and rewarded to participate in green activities (Sabokro et al., 2021). This, in turn, fosters employees' engagement in VPEB that aligns with the firm's environmental practices and goals.

Second, the study further advances the existing literature by exploring novel mediating mechanisms linking GHRM and VPEB (Chaudhary, 2020), specifically focusing on contextual and individual psychological factors. By empirically examining the indirect effect of GHRM on employees' VPEB, this study fills a significant research gap highlighted by researchers who have called for investigations into the underlying mechanisms through which GHRM practices influence employees' voluntary green activities (e.g., Dumont et al., 2017). In response to this call, we investigate the indirect effect by examining two mediators, namely green psychological climate and organizational pride, that serve as pathways linking GHRM and employees' VPEB.

The contextual condition of green psychological climate aligns with the underlying assumption that organizational practices promoting environmental sustainability contribute to individuals' perception of the values that really matter to the organization (Sabokro et al., 2021). This alignment of values motivates employees to voluntarily engage in activities that support the collective goals and actions of the organization (Hameed et al., 2020). Our study contributes by highlighting the significance of organizational pride in motivating employees to volunteer and participate in green activities that benefit the organization. From this perspective, employees experience a sense of pride in being associated with an organization that not only cares about environmental issues but also takes concrete actions to address them. This sense of pride fosters a stronger identity within the organization, prompting employees to reciprocate by voluntarily engaging in pro-environmental behaviors.

Finally, this present study is the first to demonstrate a serial mediation chain involving both green psychological climate and organizational pride, which serves as a pathway linking GHRM and VPEB. The findings suggest that fostering a green psychological climate serves as a means to build employees' pride and motivate them to voluntarily participate in green projects. The identification of the mediating effects of green psychological climate and organizational pride is

significant as it sheds light on a crucial intervening mechanism through which GHRM influences employees' VPEB.

Practical Implications

The study has several important implications for practitioners aiming to promote voluntary environmental behavior among their employees. First, organizations should embrace and implement GHRM practices. Mere verbal acknowledgment of the importance of green activities is insufficient; managers must wholeheartedly champion and advocate for such activities, while also monitoring the outcomes of their corporate green endeavors. Research has indicated that GHRM practices stimulate employees' responsible behaviors (Hameed et al., 2020), fostering their environmental consciousness in the workplace (Ababneh, 2021). In this sense, GHRM practices serve as a constant reminder to employees of the organization's commitment to sustainability and environmental concerns (Renwick et al., 2013).

Another practical implication is the role of managers in cultivating a positive green psychological climate within the organization. Existing literature highlights the importance of aligning the organization's HRM practices with its environmental goals (Ababneh, 2021). In the absence of such alignment, employees may not be motivated to participate in green initiatives, let alone be proactive in engaging in VPEB. It is therefore crucial to cultivate a positive green psychological climate to enhance the knowledge, skills, and awareness of sustainability among organizational actors for them to better understand the broader social impact of their behaviors (Al-Swidi et al., 2021).

Third, for employees to voluntarily engage in pro-environmental activities, it is imperative for managers to foster a sense of pride among employees. Employees are more likely to be attracted to, and identify with, a green organization that is recognized as ethically responsible (Ababneh, 2021). Managers can further reinforce employees' sense of pride by adopting sustainability practices that go above and beyond industry standards (Jones et al., 2014), such as obtaining recognition and awards from reputable third-party organizations and celebrating employees' sustainability achievements. Investments in these activities can significantly contribute to the cultivation of organizational pride, rendering the company's value proposition more appealing to attract and retain employees.

Research Limitations and Future Studies

Notwithstanding its contributions, the present study has some limitations. First, the data was collected from Pakistan's textile industry, which may limit the generalizability of the research findings. While we ensured that common method bias was not a problem by collecting multi-data at separate time periods, future research could expand on these findings by investigating different cultural contexts or regions. Future research might, for example, examine the textile industry in China, especially considering its status as the world's top textile producer and its long-term culture (Lee et al., 2018). Such research, including those of a longitudinal nature, could provide valuable insights into potential variations in the implementation and impact of GHRM practices.

At the same time, the majority of employee respondents in this study were individuals with at least a bachelor's degree, with a substantial majority being male. Due to the reliance on textile companies for survey distribution, we were not able to specifically request certain demographics to complete our surveys. We intentionally targeted office workers as our sample because their roles were pertinent to the concepts explored in the study. Our sample was also largely drawn from large organizations, which could account for the higher proportion of respondents with at least a bachelor's degree. While our results did not indicate a significant effect of firm size on VPEB, future studies may explore the generalizability of the findings in the context of small- or medium-sized companies.

Future studies could also explore other organizational and individual variables. For instance, there is a possibility to examine employees' performance orientation in influencing their VPEB. Performance orientation refers to an individual's ability to seek positive appraisal of their abilities from others (Zhao et al., 2021). Another factor that can be considered is the aspect of leadership, which has been demonstrated to influence organizational and individual employee actions (Zhao et al., 2021). Specifically, research into a particular leadership style, such as sustainable leadership (Iqbal et al., 2020), has the potential to provide insights into how leaders can inspire employees to voluntarily engage in pro-environmental behavior. Sustainable leadership, characterized by essential attributes like promoting a shared vision, nurturing employee support, and cultivating an ethical workplace, considers the needs and viewpoints of various organizational stakeholders concerning sustainability matters. In addition, there is a likelihood that non-sustainability-related factors could be influencing organizational pride and subsequently, their engagement in VPEB. Incorporating additional organizational and individual variables could thus provide deeper insights into the complex dynamics of factors influencing employees' voluntary engagement in pro-environmental behaviors.

Finally, another limitation of the study is that it only gathered data on the green psychological climate from managers. It is important to acknowledge that the perspectives of employees are equally valuable, and we recognize that they may provide another dimension in evaluating the organization's green psychological climate. Moreover, perceptions of green psychological climate may differ among different groups or employees reporting to different managers, which could influence their VPEB. Future research could thus incorporate surveys or interviews with employees to ensure a more comprehensive analysis of the construct of a green psychological climate and further enhance our understanding of the factors influencing employees' VPEB.

Conclusion

In conclusion, our study provides empirical evidence regarding the impact of GHRM practices on employees' VPEB. We demonstrate that the relationship between GHRM practices and employees' VPEB is mediated by a green psychological climate. Our findings also indicate that organizational pride serves as a mediator between a green psychological climate and employees' VPEB. In addition, both green psychological climate and organizational pride sequentially mediate the relationship between GHRM practices and employees' VPEB. It is crucial for organizations to not only implement HRM practices that support and encourage green activities but also foster a positive psychological climate where employees feel supported and rewarded for their involvement in green initiatives. Furthermore, instilling a sense of pride among employees in being part of an organization committed to achieving green goals is essential. These findings have important implications for managers seeking to motivate employees to engage in VPEB.

Acknowledgments

H.Z. was responsible for conceptualization, methodology, formal analysis and investigation, original draft writing and preparation. Y.S. was responsible for conceptualization, review and editing of the manuscript.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

Ethical Approval


All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional research committee.

Participant Consent

Informed consent was obtained from all individual participants included in the study.

ORCID iDs

Hina Zafar  <https://orcid.org/0000-0002-0349-4902>

Yuliani Suseno  <https://orcid.org/0000-0002-7865-5213>

Data Availability Statement

Data will be provided upon reasonable request.

References

- Ababneh, O. M. A. (2021). How do green HRM practices affect employees' green behaviors? The role of employee engagement and personality attributes. *Journal of Environmental Planning and Management*, 64(7), 1204–1226. <https://doi.org/10.1080/09640568.2020.1814708>
- Afsar, B., Badir, Y. F., Saeed, B. B., & Hafeez, S. (2017). Transformational and transactional leadership and employee's entrepreneurial behavior in knowledge-intensive industries. *The International Journal of Human Resource Management*, 28(2), 307–332. <https://doi.org/10.1080/09585192.2016.1244893>
- Ahmad, I., Ullah, K., & Khan, A. (2022). The impact of green HRM on green creativity: Mediating role of pro-environmental behaviors and moderating role of ethical leadership style. *The International Journal of Human Resource Management*, 33, 3789–3821. <https://doi.org/10.1080/09585192.2021.1931938>
- All Pakistan Textile Mills Association. (2021). *Tech, human Factor and gender parity: Prerequisites for economic growth*. <https://aptma.org.pk/tech-human-factor-and-gender-parity-prerequisites-for-economic-growth/>
- Al-Swidi, A. K., Gelaidan, H., & Saleh, R. M. (2021). The joint impact of green human resource management, leadership and organizational culture on employees' green behaviour and organisational environmental performance. *Journal of Cleaner Production*, 316, 128112. <https://doi.org/10.1016/j.jclepro.2021.128112>
- Amrutha, V. N., & Geetha, S. N. (2020). A systematic review on green human resource management: Implications for social sustainability. *Journal of Cleaner Production*, 247, 119131. <https://doi.org/10.1016/j.jclepro.2019.119131>
- Ashforth, B. E., & Mael, F. (1989). Social identity theory and the organization. *Academy of Management Review*, 14(1), 20–39. <https://doi.org/10.5465/amr.1989.4278999>
- Blader, S. L., & Tyler, T. R. (2009). Testing and extending the group engagement model: Linkages between social identity, procedural justice, economic outcomes, and extrarole behavior. *Journal of Applied Psychology*, 94(2), 445–464. <https://doi.org/10.1037/a0013935>
- Blau, P. (1964). *Exchange and power in social life*. Wiley.
- Boğan, E., & Dedeoğlu, B. B. (2020). Hotel employees' corporate social responsibility perception and organizational citizenship behavior: Perceived external prestige and pride in organization as serial mediators. *Corporate Social Responsibility and Environmental Management*, 27(5), 2342–2353. <https://doi.org/10.1002/csr.1996>
- Bos-Nehles, A. C., & Meijerink, J. G. (2018). HRM implementation by multiple HRM actors: A social exchange perspective. *The International Journal of Human Resource Management*, 29(22), 3068–3092. <https://doi.org/10.1080/09585192.2018.1443958>
- Brislin, R. W. (1970). Back-translation for cross-cultural research. *Journal of Cross-Cultural Psychology*, 1(3), 185–216. <https://doi.org/10.1177/135910457000100301>
- Cable, D. M., & Turban, D. B. (2003). The value of organizational reputation in the recruitment context: A brand-equity perspective. *Journal of Applied Social Psychology*, 33(11), 2244–2266. <https://doi.org/10.1111/j.1559-1816.2003.tb01883.x>

- Carnevale, J. B., Huang, L., & Paterson, T. (2019). LMX-differentiation strengthens the prosocial consequences of leader humility: An identification and social exchange perspective. *Journal of Business Research*, *96*, 287–296. <https://doi.org/10.1016/j.jbusres.2018.11.048>
- Chaudhary, R. (2020). Green human resource management and employee green behavior: An empirical analysis. *Corporate Social Responsibility and Environmental Management*, *27*(2), 630–641. <https://doi.org/10.1002/csr.1827>
- Chin, W. W., Thatcher, J. B., Wright, R. T., & Steel, D. (2013). *Controlling for common method variance in PLS analysis: The measured latent marker variable approach*. https://doi.org/10.1007/978-1-4614-8283-3_16
- Chou, C.-J. (2014). Hotels' environmental policies and employee personal environmental beliefs: Interactions and outcomes. *Tourism Management*, *40*, 436–446. <https://doi.org/10.1016/j.tourman.2013.08.001>
- Cohen, J. (1988). Set correlation and contingency tables. *Applied Psychological Measurement*, *12*(4), 425–434. <https://doi.org/10.1177/014662168801200410>
- Cooke, F. L., Schuler, R., & Varma, A. (2020). Human resource management research and practice in Asia: Past, present and future. *Human Resource Management Review*, *30*(4), 100778. <https://doi.org/10.1016/j.hrmr.2020.100778>
- Cordano, M., Marshall, R. S., & Silverman, M. (2010). How do small and medium enterprises go “green”? A study of environmental management programs in the U.S. wine industry. *Journal of Business Ethics*, *92*(3), 463–478. <https://doi.org/10.1007/s10551-009-0168-z>
- Cropanzano, R., & Mitchell, M. S. (2005). Social exchange theory: An interdisciplinary review. *Journal of Management*, *31*(6), 874–900. <https://doi.org/10.1177/0149206305279602>
- Dad, A., Karim, A. M., & Devi, R. (2020). Women empowerment in the textile factories: Study on Punjab province, Pakistan. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, *10*(1), 55–70. <https://doi.org/10.6007/IJARAFMS/v10-i1/6992>
- De Roeck, K., El Akremi, A., & Swaen, V. (2016). Consistency matters! How and when does corporate social responsibility affect employees' organizational identification? *Journal of Management Studies*, *53*(7), 1141–1168. <https://doi.org/10.1111/joms.12216>
- De Smet, A., Gao, W., Henderson, K., & Hundertmark, T. (2021). *Organizing for sustainability success: Where, and how, leaders can start*. <https://www.mckinsey.com/capabilities/sustainability/our-insights/organizing-for-sustainability-success-where-and-how-leaders-can-start>
- Dumont, J., Shen, J., & Deng, X. (2017). Effects of green HRM practices on employee workplace green behavior: The role of psychological green climate and employee green values. *Human Resource Management*, *56*(4), 613–627. <https://doi.org/10.1002/hrm.21792>
- Environmental Performance Index. (2020). *Environmental performance index*. <https://sedac.ciesin.columbia.edu/data/set/epi-environmental-performance-index-2020>
- Francoeur, V., & Paillé, P. (2022). *Green behaviors in the workplace*. Springer. <https://doi.org/10.1007/978-3-030-94541-1>
- Garavan, T., Ullah, I., O'Brien, F., Darcy, C., Wisetsri, W., Afshan, G., & Mughal, Y. H. (2023). Employee perceptions of individual green HRM practices and voluntary green work behaviour: A signalling theory perspective. *Asia Pacific Journal of Human Resources*, *61*, 32–56. <https://doi.org/10.1111/1744-7941.12342>
- Gould-Williams, J. (2007). HR practices, organizational climate and employee outcomes: Evaluating social exchange relationships in local government. *The International Journal of Human Resource Management*, *18*(9), 1627–1647. <https://doi.org/10.1080/09585190701570700>
- Gouthier, M. H. J., & Rhein, M. (2011). Organizational pride and its positive effects on employee behavior. *Journal of Service Management*, *22*(5), 633–649. <https://doi.org/10.1108/09564231111174988>
- Hair, J. F., Jr., Hult, G. T., Ringle, C., & Sarstedt, M. (2017). *A primer on partial least squares structural equation modeling (PLS-SEM)*. Sage.
- Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a silver bullet. *Journal of Marketing Theory and Practice*, *19*(2), 139–152. <https://doi.org/10.2753/MTP1069-6679190202>
- Hameed, Z., Khan, I. U., Islam, T., Sheikh, Z., & Naem, R. M. (2020). Do green HRM practices influence employees' environmental performance? *International Journal of Manpower*, *41*(7), 1061–1079. <https://doi.org/10.1108/IJM-08-2019-0407>

- Hayat, N., Hussain, A., & Lohano, H. D. (2020). Eco-labeling and sustainability: A case of textile industry in Pakistan. *Journal of Cleaner Production*, 252, 119807. <https://doi.org/10.1016/j.jclepro.2019.119807>
- He, H., Pham, H. Q., Baruch, Y., & Zhu, W. (2014). Perceived organizational support and organizational identification: Joint moderating effects of employee exchange ideology and employee investment. *The International Journal of Human Resource Management*, 25(20), 2772–2795. <https://doi.org/10.1080/09585192.2014.908315>
- Iqbal, Q., Ahmad, N. H., Nasim, A., & Khan, S. A. R. (2020). A moderated-mediation analysis of psychological empowerment: Sustainable leadership and sustainable performance. *Journal of Cleaner Production*, 262, 121429. <https://doi.org/10.1016/j.jclepro.2020.121429>
- Ismail, H., El Irani, M., & Kertechian, K. S. (2022). Green HRM and nongreen outcomes: The mediating role of visionary leadership in Asia. *International Journal of Manpower*, 43(3), 660–681. <https://doi.org/10.1108/IJM-04-2020-0162>
- John, A., Qadeer, F., Shahzadi, G., & Jia, F. (2019). Getting paid to be good: How and when employees respond to corporate social responsibility? *Journal of Cleaner Production*, 215, 784–795. <https://doi.org/10.1016/j.jclepro.2019.01.074>
- Jones, D. A. (2010). Does serving the community also serve the company? Using organizational identification and social exchange theories to understand employee responses to a volunteerism programme. *Journal of Occupational and Organizational Psychology*, 83(4), 857–878. <https://doi.org/10.1348/096317909X477495>
- Jones, D. A., Willness, C. R., & Madey, S. (2014). Why are job seekers attracted by corporate social performance? Experimental and field tests of three signal-based mechanisms. *Academy of Management Journal*, 57(2), 383–404. <https://doi.org/10.5465/amj.2011.0848>
- Karatepe, O. M., Hsieh, H., & Aboramadan, M. (2022). The effects of green human resource management and perceived organizational support for the environment on green and non-green hotel employee outcomes. *International Journal of Hospitality Management*, 103, 103202. <https://doi.org/10.1016/j.ijhm.2022.103202>
- Kim, A., Kim, Y., Han, K., Jackson, S. E., & Ployhart, R. E. (2017). Multilevel influences on voluntary workplace green behavior: Individual differences, leader behavior, and coworker advocacy. *Journal of Management*, 43(5), 1335–1358. <https://doi.org/10.1177/0149206314547386>
- Kim, W. G., McGinley, S., Choi, H.-M., & Agmapisarn, C. (2020). Hotels' environmental leadership and employees' organizational citizenship behavior. *International Journal of Hospitality Management*, 87, 102375. <https://doi.org/10.1016/j.ijhm.2019.102375>
- Kim, Y. J., Kim, W. G., Choi, H.-M., & Phetvaroon, K. (2019). The effect of green human resource management on hotel employees' eco-friendly behavior and environmental performance. *International Journal of Hospitality Management*, 76, 83–93. <https://doi.org/10.1016/j.ijhm.2018.04.007>
- Kong, D. T. (2016). The pathway to unethical pro-organizational behavior: Organizational identification as a joint function of work passion and trait mindfulness. *Personality and Individual Differences*, 93, 86–91. <https://doi.org/10.1016/j.paid.2015.08.035>
- Larson, R. B. (2019). Controlling social desirability bias. *International Journal of Market Research*, 61(5), 534–547. <https://doi.org/10.1177/1470785318805305>
- Lee, S. H. N., Ha-Brookshire, J., & Chow, P.-S. (2018). The moral responsibility of corporate sustainability as perceived by fashion retail employees: A USA-China cross-cultural comparison study. *Business Strategy and the Environment*, 27(8), 1462–1475. <https://doi.org/10.1002/bse.2196>
- Lindell, M. K., & Whitney, D. J. (2001). Accounting for common method variance in cross-sectional research designs. *Journal of Applied Psychology*, 86(1), 114–121. <https://doi.org/10.1037/0021-9010.86.1.114>
- Moore, H. E., & Rutherford, I. D. (2020). Researching agricultural environmental behaviour: Improving the reliability of self-reporting. *Journal of Rural Studies*, 76, 296–304. <https://doi.org/10.1016/j.jrurstud.2020.04.012>
- Newman, A., Nielsen, I., & Miao, Q. (2015). The impact of employee perceptions of organizational corporate social responsibility practices on job performance and organizational citizenship behavior: Evidence from the Chinese private sector. *The International Journal of Human Resource Management*, 26(9), 1226–1242. <https://doi.org/10.1080/09585192.2014.934892>
- Ng, T. W. H., Yam, K. C., & Aguinis, H. (2019). Employee perceptions of corporate social responsibility: Effects on pride, embeddedness, and turnover. *Personnel Psychology*, 72(1), 107–137. <https://doi.org/10.1111/peps.12294>

- Norton, T. A., Parker, S. L., Zacher, H., & Ashkanasy, N. M. (2015). Employee green behavior: A theoretical framework, multilevel review, and future research agenda. *Organization and Environment, 28*(1), 103–125. <https://doi.org/10.1177/1086026615575773>
- Norton, T. A., Zacher, H., & Ashkanasy, N. M. (2012). On the importance of pro-environmental organizational climate for employee green behavior. *Industrial and Organizational Psychology, 5*(4), 497–500. <https://doi.org/10.1111/j.1754-9434.2012.01487.x>
- Norton, T. A., Zacher, H., & Ashkanasy, N. M. (2014). Organisational sustainability policies and employee green behaviour: The mediating role of work climate perceptions. *Journal of Environmental Psychology, 38*, 49–54. <https://doi.org/10.1016/j.jenvp.2013.12.008>
- Norton, T. A., Zacher, H., & Ashkanasy, N. M. (2015). Pro-environmental organizational culture and climate. In J. L. Robertson & J. Barling (Eds.), *The psychology of green organizations* (pp. 322–348). Oxford University Press.
- Norton, T. A., Zacher, H., Parker, S. L., & Ashkanasy, N. M. (2017). Bridging the gap between green behavioral intentions and employee green behavior: The role of green psychological climate. *Journal of Organizational Behavior, 38*(7), 996–1015. <https://doi.org/10.1002/job.2178>
- O'Donohue, W., & Torugsa, N. A. (2016). The moderating effect of “green” HRM on the association between proactive environmental management and financial performance in small firms. *International Journal of Human Resource Management, 27*(2), 239–261. <https://doi.org/10.1080/09585192.2015.1063078>
- Paillé, P., Boiral, O., & Chen, Y. (2013). Linking environmental management practices and organizational citizenship behaviour for the environment: A social exchange perspective. *International Journal of Human Resource Management, 24*(18), 3552–3575. <https://doi.org/10.1080/09585192.2013.777934>
- Paillé, P., & Valéau, P. (2021). “I don’t owe you, but I am committed”: Does felt obligation matter on the effect of green training on employee environmental commitment? *Organization & Environment, 34*(1), 123–144. <https://doi.org/10.1177/1086026620921453>
- Paillé, P., Valéau, P., & Renwick, D. W. (2020). Leveraging green human resource practices to achieve environmental sustainability. *Journal of Cleaner Production, 260*, 121137. <https://doi.org/10.1016/j.jclepro.2020.121137>
- Pham, N. T., Phan, Q. P. T., Tučková, Z., Vo, N., & Nguyen, L. H. L. (2018). Enhancing the organizational citizenship behavior for the environment: The roles of green training and organizational culture. *Management & Marketing, 13*(4), 1174–1189. <https://doi.org/10.2478/mmcks-2018-0030>
- Pham, N. T., Tučková, Z., & Jabbour, C. J. C. (2019). Greening the hospitality industry: How do green human resource management practices influence organizational citizenship behavior in hotels? A mixed-methods study. *Tourism Management, 72*, 386–399. <https://doi.org/10.1016/j.tourman.2018.12.008>
- Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology, 88*(5), 879–903. <https://doi.org/10.1037/0021-9010.88.5.879>
- Podsakoff, P. M., MacKenzie, S. B., & Podsakoff, N. P. (2012). Sources of method bias in social science research and recommendations on how to control it. *Annual Review of Psychology, 63*, 539–569.
- Ren, S., Tang, G., & Jackson, S. E. (2018). Green human resource management research in emergence: A review and future directions. *Asia Pacific Journal of Management, 35*(3), 769–803. <https://doi.org/10.1007/s10490-017-9532-1>
- Renwick, D. W. S., Redman, T., & Maguire, S. (2013). Green human resource management: A review and research agenda. *International Journal of Management Reviews, 15*(1), 1–14. <https://doi.org/10.1111/j.1468-2370.2011.00328.x>
- Roscoe, S., Subramanian, N., Jabbour, C. J. C., & Chong, T. (2019). Green human resource management and the enablers of green organisational culture: Enhancing a firm’s environmental performance for sustainable development. *Business Strategy and the Environment, 28*(5), 737–749. <https://doi.org/10.1002/bse.2277>
- Rubel, M. R. B., Kee, D. M. H., & Rimi, N. N. (2021). Green human resource management and supervisor pro-environmental behavior: The role of green work climate perceptions. *Journal of Cleaner Production, 313*, 127669. <https://doi.org/10.1016/j.jclepro.2021.127669>
- Sabokro, M., Masud, M. M., & Kayedian, A. (2021). The effect of green human resources management on corporate social responsibility, green psychological climate and employees’ green behavior. *Journal of Cleaner Production, 313*, 127963. <https://doi.org/10.1016/j.jclepro.2021.127963>

- Saeed, B., Bin Afsar, B., Hafeez, S., Khan, I., Tahir, M., & Afridi, M. A. (2019). Promoting employee's pro-environmental behavior through green human resource management practices. *Corporate Social Responsibility and Environmental Management*, 26(2), 424–438. <https://doi.org/10.1002/csr.1694>
- Saha, K., Dey, P. K., & Papagiannaki, E. (2021). Implementing circular economy in the textile and clothing industry. *Business Strategy and the Environment*, 30(4), 1497–1530. <https://doi.org/10.1002/bse.2670>
- Shen, J., & Benson, J. (2016). When CSR is a social norm: How socially responsible human resource management affects employee work behavior. *Journal of Management*, 42(6), 1723–1746. <https://doi.org/10.1177/0149206314522300>
- Shmueli, G., Ray, S., Velasquez Estrada, J. M., & Chatla, S. B. (2016). The elephant in the room: Predictive performance of PLS models. *Journal of Business Research*, 69(10), 4552–4564. <https://doi.org/10.1016/j.jbusres.2016.03.049>
- Solability. (2021). *The global sustainable competitiveness index*. <https://solability.com/the-global-sustainable-competitiveness-index/the-index>
- Sroufe, R., & Gopalakrishna-Remani, V. (2019). Management, social sustainability, reputation, and financial performance relationships: An empirical examination of U.S. firms. *Organization & Environment*, 32(3), 331–362. <https://doi.org/10.1177/1086026618756611>
- Strahan, R., & Gerbasi, K. C. (1972). Short, homogeneous versions of the Marlow–Crowne social desirability scale. *Journal of Clinical Psychology*, 28(2), 191–193. [https://doi.org/10.1002/1097-4679\(197204\)28:2<191::AID-JCLP2270280220>3.0.CO;2-G](https://doi.org/10.1002/1097-4679(197204)28:2<191::AID-JCLP2270280220>3.0.CO;2-G)
- Tavares, S. M., van Knippenberg, D., & van Dick, R. (2016). Organizational identification and “currencies of exchange”: Integrating social identity and social exchange perspectives. *Journal of Applied Social Psychology*, 46(1), 34–45. <https://doi.org/10.1111/jasp.12329>
- Tian, Q., & Robertson, J. L. (2019). How and when does perceived CSR affect employees' engagement in voluntary pro-environmental behavior? *Journal of Business Ethics*, 155(2), 399–412. <https://doi.org/10.1007/s10551-017-3497-3>
- Tuan, L. T. (2019). Effects of environmentally-specific servant leadership on green performance via green climate and green crafting. *Asia Pacific Journal of Management*, 36(3), 1–29. <https://doi.org/10.1007/s10490-019-09687-9>
- Umrani, W. A., Channa, N. A., Yousaf, A., Ahmed, U., Pahi, M. H., & Ramayah, T. (2020). Greening the workforce to achieve environmental performance in hotel industry: A serial mediation model. *Journal of Hospitality and Tourism Management*, 44, 50–60. <https://doi.org/10.1016/j.jhtm.2020.05.007>
- United Nations. (2019). *UN launches drive to highlight environmental cost of staying fashionable*. <https://news.un.org/en/story/2019/03/1035161>
- van Knippenberg, D., van Dick, R., & Tavares, S. (2007). Social identity and social exchange: Identification, support, and withdrawal from the job. *Journal of Applied Social Psychology*, 37(3), 457–477. <https://doi.org/10.1111/j.1559-1816.2007.00168.x>
- Wagner, M. (2013). “Green” human resource benefits: Do they matter as determinants of environmental management system implementation? *Journal of Business Ethics*, 114(3), 443–456. <https://doi.org/10.1007/s10551-012-1356-9>
- Williams, L. J., Hartman, N., & Cavazotte, F. (2010). Method variance and marker variables: A review and comprehensive CFA marker technique. *Organizational Research Methods*, 13(3), 477–514. <https://doi.org/10.1177/1094428110366036>
- Williams, L. J., & McGonagle, A. K. (2016). Four research designs and a comprehensive analysis strategy for investigating common method variance with self-report measures using latent variables. *Journal of Business and Psychology*, 31(3), 339–359. <https://doi.org/10.1007/s10869-015-9422-9>
- Zafar, H., Ho, J. A., Cheah, J.-H., & Mohamed, R. (2023). Promoting pro-environmental behavior through organizational identity and green organizational climate. *Asia Pacific Journal of Human Resources*, 61, 483–506. <https://doi.org/10.1111/1744-7941.12347>
- Zafar, H., Malik, A., Gugnani, R., Agarwal, R., & Nijjer, S. (2023). Green thumbs at work: Boosting employee eco-participation through ecocentric leadership, green crafting, and green human resource management. *Journal of Cleaner Production*, 432, 139718. <https://doi.org/10.1016/j.jclepro.2023.139718>
- Zhao, H., Zhou, Q., He, P., & Jiang, C. (2021). How and when does socially responsible HRM affect employees' organizational citizenship behaviors toward the environment? *Journal of Business Ethics*, 169(2), 371–385. <https://doi.org/10.1007/s10551-019-04285-7>

Zientara, P., & Zamojska, A. (2018). Green organizational climates and employee pro- environmental behaviour in the hotel industry. *Journal of Sustainable Tourism*, 26(7), 1142–1159. <https://doi.org/10.1080/09669582.2016.120655>

Author Biographies

Dr Hina Zafar is a recent PhD graduate of UPM School of Business and Economics, Universiti Putra Malaysia, and the Newcastle Business School, University of Newcastle, Australia. Her research interests lie in green human resource management, sustainability, industrial ethics, leadership, and employee outcomes. She has published her research in top-tier journals, including the prestigious Academy of Management Proceedings.

Yuliani Suseno is Professor of Management, RMIT University, Australia. Her research interests are in the areas of innovation management, entrepreneurship, and social capital. She publishes extensively, including in the *Journal of Business Ethics*, *Information Systems Journal*, *Journal of Strategic Information Systems*, *Journal of Business Research*, *Technological Forecasting and Social Change*, *Asia Pacific Journal of Management*, and the *International Journal of Human Resource Management*.