Article

Sustainable HRM and Green HRM: The Role of Green HRM in Influencing Employee Pro-environmental Behavior at Work

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ABSTRACT

Considering the increasing social class gap and environmental crisis these days, sustainable development is a must for business-making. Business starts with human resources (HR). Applying sustainability to manage HR in order to achieve organizational sustainability is essential, because human resource management (HRM) can influence a company's relationship with its external environment in terms of firm's effect on society and ecology.

Forming part of the environmental dimension of sustainable HRM, green HRM (GHRM) defines organizational environmental policies and practices of HRM that contribute to the establishment of green organizations. Those green practices can result in a better corporate image and competitive advantage.

Employee pro-environmental behavior (PEB), both voluntary and prescribed, can be influenced by GHRM that may act as a guiding mechanism for organizational personnel to engage in green behaviors aimed at saving organizational resources, which may contribute to achieving corporate sustainability. Voluntary PEB may also be influenced by organizational and individual factors. In this study, we propose a theoretical framework that gathers GHRM policies, organizational and individual factors together in one model to understand the complex mechanisms that promote voluntary PEB at work. We also propose a different classification of voluntary PEB that underlines the importance of target of PEB.

KEYWORDS: sustainable HRM; green HRM; environmental footprint; environmental assessment; organizational sustainability; employees' pro-environmental behavior

INTRODUCTION

During many decades, the main goal of business and business management has been the achievement of short-term economic goals [1].

However, after the industrial revolution and population crisis, the impossibility of this growth system and the need to perform business activities respecting environment and society has become evident.

Being able to accept or collectively reject any organizational policies and affect the way those are performed, employees can be considered an extremely important unit of any organization [2]. Being actively involved in organizational activities, personnel can significantly change their working environment by engagement in certain behavior [3], such as the application of environmental initiatives into their working routine. As a result, employee behavior towards implementation of environmental initiatives is crucial for organizational greening [4].

Employee pro-environmental behavior (PEB) contributes to decreasing organizational footprint [5,6], reducing future environmental degradation and climate change [7]. PEB supports consistency within organizational socially and environmentally responsible goals contributing to sustainable development and organizational success [8].

Prior literature underlines that employees' voluntary PEB improves companies' environmental performance, which could lead to a firm's sustainability, also increasing the firm's competitiveness [9,10]. The direct results of voluntary PEB are a decrease in energy and raw material usage, a decrease in pollution and wastes, while indirectly affecting the detection of faults in plant and equipment harming the environment and the change of eco-harmful company practices [11].

Employees' voluntary PEB is a relatively new concept that needs further development in terms of content and operationalization [12]. Despite its importance, research on the topic is scarce [13,14], which reveals important gaps in the study of voluntary PEB at work.

There are different denominations of similar concepts, which are defined similarly, but named differently. For instance, OCBE [15], voluntary workplace green behavior [16], voluntary pro-environmental behavior [11,17], workplace environmentally friendly behavior [18] are similar but at the same time different concepts currently used by various researchers (e.g., [9,16,19]).

No unique denomination and insufficiency in consensus results in different classifications of PEB, which are drawn up considering different aspects such as the type of the behavior [20–22], its level of influence (direct and indirect) and work inclusion (in-role and extra-role) [23].

These different conceptualizations result in the development of different measures of voluntary PEB at work and the absence of a unique theoretical framework that hinders future research [24].

In addition, determinants of such behavior at work are not well-studied [13,14] on both practical and theoretical levels [25]. As a result, knowledge of motivational factors that promote voluntary PEB in organization is still scarce [26,27].

Prior literature presents various studies that demonstrate different classifications of antecedents of voluntary PEB and similar concepts, using

different theoretical frameworks for the analysis [5,12,20–22,28]. There are some studies [9,21,29,30] that focus on determinants of employees' voluntary PEB at work from different perspectives such as general organizational research [17,31], psychological research [11,26,32], OCBE research [27,33] and GHRM [34–36], being bound by chosen theories. Even though there are studies analyzing some organizational and individual factors together [37], prior research usually considers theories from business literature to examine antecedents related to organizational context [38]. Other authors use theories from psychology research to mention antecedents related to the individual [39]. However, there is no one common classification.

Particularly, there is no theoretical framework linking voluntary PEB and sustainable HRM (STHRM) and green HRM (GHRM).

STHRM can be described as the application of sustainable development principles to HRM. From the beginning of the twenty first century, STHRM can be seen as a new important approach to managing people [40].

Under a STHRM approach, the concept of green HRM (GHRM) can represent the environmental dimension of sustainable development. GHRM is presented as a new approach based on various aspects such as the development of the environmentally friendly working conditions and creation of a green workforce [41–43]. The implementation of GHRM to company management can lead to a better corporate image [44] and competitive advantage on the market [43,45,46].

Besides, GHRM officially established and implemented policies and practices can directly influence employee behavior, guiding company personnel to engage in pro-environmental behavior (PEB) at work.

Prior research usually links the influence of GHRM practices implementation with prescribed PEB at work. We believe that GHRM practices can also influence voluntary PEB directly and indirectly through organizational context and individual factors. Taking this into account, the main objective of the current study is to propose a theoretical framework that examines the antecedents of voluntary PEB at work, underlining the role of GHRM. The proposed framework embraces antecedents of a different nature altogether, which may broaden the understanding of the origin of motivational factors that promote employee engagement in voluntary PEB at work.

Those antecedents in our study include GHRM policies, which also influence prescribed PEB. However, we want to note the direct influence of GHRM policies and practices on voluntary PEB, also underlining their impact on organizational and individual factors, which influence voluntary PEB. Such a framework has not been previously developed in the proposed manner.

The theoretical framework described above contributes to prior literature by underlining the importance of GHRM to promote voluntary PEB, which emphasizes the significance of GHRM in boosting engagement in both obliged and voluntary PEB. This possibility was not mentioned

before. Moreover, the proposed framework in this study introduces the possibility of GHRM to indirectly influence voluntary PEB through organizational and individual factors, besides its direct impact. This facilitates designing research models that include mediating mechanisms not extensively considered by prior studies.

The paper is structured as follows. First, the concept of STHRM is defined. Then different levels of analysis of STHRM are described and compared. Second, GHRM is defined and the implications for business success and survival are underlined. In the same section the influence of GHRM practices on employee engagement in pro-environmental behavior at work is mentioned. Further, the analysis of the origin of potential antecedents of voluntary PEB at work is presented. The conclusion reveals the insights obtained.

SUSTAINABLE HUMAN RESOURCE MANAGEMENT (STHRM)

Sustainable human resource management (STHRM) could be defined as "the management of human resources to meet the optimal needs of the company and community of the present without compromising the ability to meet the needs of the future" [47].

The term was interpreted from different points of view such as corporate sustainability, corporate social responsibility and sustainable work systems [1,48], underlining two important factors of STHRM. Those are (i). having multiple and contradictory goals of each dimension of triple bottom line, and (ii). interrelation between HRM system and its working environments, both internal and external, to control externalities and resource regeneration.

In order to add light to the concept of STHRM, it is interesting to consider the relevance of the sustainable development concept to HRM on multiple levels of analysis: macro, meso and micro level [49]. The importance of the application of sustainable development to HR can be reflected in (i). the interaction of the organization with its economic and social working environment (macro level), and (ii). sustainable development applied to the internal elements of the organizations (meso and micro levels) [50].

The macro level of analysis refers to sustainable development as a sustainable societal development relevant for business when delivering critical resources, interrelation of society and business when it comes to justice and resource allocation. Hence, the macro level is usually linked with social and environmental dimensions of sustainable development [50], where HR practices play an important role in the incorporation of the latter and facilitation of employee environmental behavior [51,52]. Social bottom line HRM practices can be represented by the implementation of fair hiring and firing practices, respecting human rights and using no forced and/or child labor [51]. The environmental bottom line practices can be aimed at reducing the environmental footprint of the company such as the provision of environmental responsibility and challenges, the

development of environmentally friendly technologies [51], employee training on environmental topics [50].

Overall, STHRM may nurture environmental values and attitudes of employees, establishing a working environment and organizational culture that supports the idea of being eco-friendly [53]. All those aspects contribute to better organizational reputation, long-term business success, transparency and accountability creation, firm performance, improvement of life of company employees and society [54], reduction of risks of the loss of social legitimacy (the costs derived from impacts on natural environment and society could be internalized) and creation of value by product/service greening that would attract consumers willing to pay higher prices for the value of the product/service and addressing the needs that were not addressed before (social impacts) [51].

Sustainable company behavior is not only beneficial from the point of view of minimization of the environmental footprint of the organization, but also from the point of view of fewer resources used, which affects costs.

The importance of HRM in the achievement of organizational sustainable development is underlined at meso level. Here the main idea is that, in order to be economically, ecologically and socially sustainable, organizations need to implement the sustainable development concept in organizational sub-systems such as HRM [50]. Also, the quality of working life including safe working conditions and employee perception of their own well-being, measured by the overall job quality index, was created to establish norms of a working environment [51].

The micro level or individual level of analysis considers human sustainability or the development of discrete human resources [50]. In other words, human sustainability [50] is the main concern at a micro level. The main idea centers on a belief that the critical human resources of the organization are exploited and abused rather than developed and regenerated [55–57], which results in eroding trust, joblessness [47,54], burnout, and work-related stress and health issues [54,55]. Some researchers also claim that throughout time business strategies have changed a lot due to complex business environmental factors, rocketing competition and globalization [54,55].

GREEN HUMAN RESOURCE MANAGEMENT (GHRM)

GHRM and the Organization

Since environmental issues have gained the central stage of the sustainable development debate [40,58], the environmental dimension of STHRM became a new important topic under research focus and a requirement of 21st century [59].

GHRM can be considered within the framework of STHRM because GHRM includes environmental aspects related to HRM [60] that are aimed at contributing to the corporate environmental agenda [61] and improving

overall organizational environmental performance [62] needed for long term business survival [63]. GHRM (Table 1) can be considered as one of the main contributors to the paradigm shift in scientific thinking towards more environmentally friendly organizations and management of people [58]. The term is used to define the policies and practices of the organization aimed at contributing to the corporate environmental agenda [61]. Those environmental policies and practices may be promoted by an organizational management team or performed by employees themselves.

The main focus of greening that can also be applied to the organizational context is summarized in four essential ideas: preservation of natural environment, conservation of nature, minimization of environmental footprint and generation of natural places [64]. Transferred to business context, this focus of the new paradigm based on sustainability perspective suggests various implications for HRM. In particular, implementation of GHRM strategies can contribute to sustainable use of organizational resources, establishment of environmental support and environmental organizational culture [43,65,66], improving overall organizational environmental performance [62].

Table 1. Definitions of green HRM.

AUTHOR	DEFINITION
Bombiak and Marciniuk-Kluska, 2018, p. 5 [43]	"A new approach to the realization of the HR function, the nature of which is to include ecological objectives in all HRM sub-areas, from employment planning, through recruitment, selection, employee motivation and development, to their evaluation and influence on working conditions"
Jabbour, 2013, pp. 147–148 [67]	"Systemic, planned alignment of typical human resource management practices with the organization's environmental goals"
Jackson, Renwick, Jabbour and Muller-Camen, 2011, p.101 [68]	"Links between HRM and environmental management"
Jain and D'lima, 2018, p.201 [59]	"The involvement of HR policies and procedures towards the broader corporate ecological agenda of protection and conservation of natural assets"
Mandip, 2012, p. 244 [69]	"Green human resources refer to using every employee touch point/interface to promote sustainable practices and increase employee awareness and commitments on the issues of sustainability. It involves undertaking environment-friendly HR initiatives resulting in greater efficiencies, lower costs and better employee engagement and retention which in turn, help organizations to reduce employee carbon footprints by the likes of electronic filing, car-sharing, job-sharing, teleconferencing and virtual interviews, recycling, telecommuting, online training, energy-efficient office spaces etc."

Table 1. *Cont.*

AUTHOR	DEFINITION
Muster and Schrader, 2011 [70]	Green HRM is the implementation of environmental management into HR
Opatha and Arulrajah, 2014, p. 104 [71]	"Green HRM is referred to all the activities involved in development, implementation and on-going maintenance of a system that aims at making employees of an organization green. It is the side of HRM that is concerned with transforming normal employees into green employees so as to achieve environmental goals of the organization and finally to make a significant contribution to environmental sustainability. It refers to the policies, practices and systems that make employees of the organization green for the benefit of the individual, society, natural environment, and the business."
Pillai and Sivathanu, 2014 [61]	Definition of the policies and practices of the organization aimed to contribute to the corporate environmental agenda
Ren, Tang and Jackson, 2018, p. 778 [62]	"Phenomena relevant to understanding relationships between organizational activities that impact the natural environment and the design, evolution, implementation and influence of HRM systems"
Renwick, Jabbour, Muller-Camen, Redman and Wilkinson, 2016 [72]	The link between environmental management and HRM
Renwick, Redman and Maguire, 2013, p. 1 [73]	"The HRM aspects of environmental management"
Shah, 2019, p.1 [74]	"Green human resource management (GHRM) is defined as the incorporation of green management elements into job design, staffing, training and development, motivation, and maintenance functions of human resource management (HRM) to improve employee pro-environmental behavior, meet employee expectations, and achieve organizational objectives"
Shen, Dumont and Deng, 2018, p. 1 [44]	"Green human resource management (green HRM) refers to a set of HRM practices that organizations adopt to improve employee workplace green performance."
Yusoff, Nejati, Kee and Amran, 2018, p. 3 [75]	"Green HRM can be defined as the portion of the sustainable HRM that engages with the requirements associated with environmental sustainability"
Zoogah, 2011, p.118 [65]	"The use of HR policies, philosophies and practices to promote sustainable use of resources and prevent harm arising from environmental concern within business organisations"

Source: [53].

Several HRM functions, practices and activities can be designed in line with green management perspectives in order to achieve green culture and green strategy of the organization [76], such as green job analysis and design [43], green employee planning [77], green recruitment [78,79], green selection, green induction, green performance evaluation, green health and safety management, green employee relations [77], green training and development [80].

As can be seen, the majority of the standard HRM practices may have a green element in them, contributing to organizational sustainability. For instance, green job analysis and design [43] may include the

environmental dimension as a duty on job description [71], green competencies as a special component of job specification [71] and environmental, social, personal, and technical requirements of the organizations in job descriptions [79]. In turn, green recruitment practices may be focused on employing personnel that share a firm's environmental values and are committed to participate in related activities [73]. It may also include environmental criteria in recruitment messages [71] such as green branding, pro-environmental image, green job description, incorporation of green knowledge and skills in the job description of all organizational job positions [81].

GHRM policies and practices implementation may contribute to the general workforce development by increasing the demand for green employees. In addition, GHRM may boost the discussion on the importance of the application of GHRM policies and practices because of their positive effect on overall organizational greening [64]. By attracting and retaining potential employees with strong pro-environmental views, GHRM may also encourage the improvement of an environmentally responsible corporate image by improving a corporate socially responsible strategy [82], which will contribute to the attraction of new personnel with strong pro-environmental views even more.

Moreover, the aforementioned aspects and practices implemented by GHRM can result in a better corporate image [44], competitive advantage on the market [43,45,46] and the establishment of green organizations with green organizational processes [43,83,84], including the achievement of organizational sustainability.

GHRM and the Employee

Up to this point, the organizational improvements motivated by the implementation of GHRM policies and practices were considered. However, GHRM can have a direct effect on organizational employees, especially, on their behavior towards greening at work or employee pro-environmental behavior.

Pro-environmental behavior (PEB) can be performed at home [70] or at work [9,21,29,30]. PEB practiced in both the aforementioned domains can be of a prescribed or voluntary nature.

PEB at home includes behavioral activities performed out of the workplace [70,85], and PEB at work includes behavioral traits performed in the workplace [9].

Some of the examples of policies that influence prescribed PEB at home may include fees for burning domestic waste that cause pollution, penalties for incorrect domestic waste recycling (e.g., Belgium), differentiated city center traffic order, prohibition of traffic in the city center (e.g., London and Madrid) [86,87] or social pressure [88].

Examples of voluntary PEB at home could be recycling cans, bottles, paper and plastic [6], using electricity and water efficiently [89], buying eco-labelled products [90] or products made from recycled items [91],

regulating heating during cold months, preferring public transport to personal car [92], or talking to friends and family about the importance of eco-friendly consumption patterns [91]. Those behavioral actions are considered voluntary when performed because of the connectivity with nature [93] or self-identify characteristics of the individual [42].

In turn, PEB at work can be defined as the action "that includes all types of voluntary or prescribed activity undertaken by individuals at work that aim to protect the natural environment or improve organizational practices in this area" [9].

The significance of PEB at work for organizations cannot be ignored because of the contribution it makes to the achievement of the organizational overall greening [5,6]. It adds up to the consistency with a firm's socially and environmentally responsible goals, contributing to the sustainable development and success of the organization [8], reducing future environmental degradation and climate change [7].

Prescribed PEB at work may be imposed by organizational green regulations. Some of GHRM policies and practices, such as green discipline management, are established to control employee green behavior in the workplace prescribing certain behavior or punishing for non-fulfilment of it. Those control mechanisms clearly influence employee PEB at work [94].

Examples of PEB at work may include practices performed on the job such as recycling paper, printing on both sides when possible, helping colleagues when environmental issues arise, raising environmental awareness among colleagues, participating in projects or events that address environmental issues, suggesting practices to improve environmental performance of the organization, conserving everyday used resources such as water and electricity and turning off lights when not in use [15,42,95].

In both domains (home and work), prescribed behavior may lead to undesirable consequences such as negation and unwillingness to perform this kind of behavior [94]. In some cases, obligatory behavior negatively affects the brain resulting in anxiety [96] and cognitive dissonance [97]. It may even be neglected when not controlled or rewarded directly. For example, in the case of green rewards management, directly rewarded PEB at work is only performed when the reward is present [11].

Since obliged behavior can be undesirable due to its potentially negative consequences, this study is mainly focused on voluntary PEB at work. Some authors highlight that obliged behaviors are half-way on the road to corporate greening [11]. A significant part of the process lies in initiatives and volunteer behavior of the employees towards the environment [98], which is crucial for success in the process of implementing sustainability into organizations [4].

Voluntary PEB at work is the behavior which is "not organizationally prescribed or mandatory, namely, behavior that is not explicitly included in formal role descriptions, role expectations or job requirements" [11]. It could be categorized as green personal behavior [11,23,37,97–99]:

1. connected with the job, but not obliged to perform (i.e., involves personal initiative, rather than order),
2. not recognized by the official organizational reward system,
3. exceeding organizational expectations from the employee such as making environmental interests a priority when making work decisions,
4. usually performed with no or minimum external influence on an individual level (intrinsic desire to improve environmental situation),
5. future oriented and non-beneficial directly to the person performing PEB.

Employee engagement in voluntary PEB at work benefits organizational sustainability in terms of improving organizational environmental performance, also increasing the firm's competitiveness [9,10]. Organizational advancement towards sustainability because of employee voluntary PEB can be seen directly through the decrease in energy and raw material usage, or decrease in pollution and wastes. The indirect effects can also be evident by underlining faults in the plant and equipment harming the environment and changing eco-harmful company practices [11].

Despite the importance of the employees' voluntary PEB at work for the organization, there is no consensus between researchers when it comes to the clear definition and study of its antecedents. It is also a relatively new term that needs further development in terms of content and operationalization [12].

Some researchers provide similar definitions. These definitions point out that the behavior is: (i). connected with the employee job, but not obliged to perform, (ii). not recognized by an official reward system, (iii). usually performed by intrinsic desire and future oriented [11,23,97–99]. Some examples of denominations of such behavior can be voluntary workplace green behavior [16], workplace environmentally friendly behavior of employees [18], OCBE [15], employee green behavior [21,22,100], and employee sustainable behavior [35].

Importantly, OCBE [5,33,101] is a very similar concept to voluntary PEB, since OCBE includes the extra-role behavior of the employees towards environmental improvement in the organizational setting [5,14], which is in line with voluntary PEB at work.

One of the most used classifications of voluntary PEB at work is derived from the study of OCBE [5,20], which groups voluntary pro-environmental behavior according to its type: eco-helping, eco-civic engagement and eco-initiatives. Other authors [28] also classify antecedents as situation-related (e.g., organizational ambidexterity and leadership style) and person-related (e.g., prosocial values). Another more complex taxonomy classifies both voluntary and prescribed PEB into transforming, conserving, avoiding harm, influencing others and taking initiative [21,22], again, in relation to the type of the behavior. Recently this framework has been expanded [12], proposing categorizing employees' green behaviors at

work using three parameters: (i). their type [21,22], (ii). their level of influence (direct vs indirect), and (iii). their degree of inclusion in work tasks (in-role vs extra-role).

Also, despite there being no systematic classification of potential antecedents [102], different types of classification of antecedents from different areas of study such as psychological research, general organizational research, OCB research, proactivity research and GHRM research are provided. For instance, some authors from the area of proactivity literature [103] divide possible determinants into two groups: individual differences (e.g., job involvement, proactive personality, taking charge) and contextual factors (e.g., organizational culture, organizational norms, management support, public or private setting), while others [104] focus on Big Five personality factors (neuroticism, extraversion, openness, agreeableness, conscientiousness).

In turn, some authors from psychological research field [32] classify potential antecedents into personal factors (childhood experience, knowledge and education, personality and self-construal, sense of control, values, political and world views, goals, felt responsibility, cognitive biases, place attachment, age, gender, chosen activities) and social factors (religion, urban–rural differences, norms, social class, proximity to problematic environmental sites, cultural and ethnic variations). Other authors [105] specifically focus on factors such as HEXACO personality traits (honesty, emotionality, extraversion, agreeableness, conscientiousness, openness).

In addition, some base their antecedent selection on prior theory such as the norm activation model [11] and theory of planned behavior [11,106,107].

Using the GHRM approach, very few studies have examined how organizational GHRM policies and practices affect employee engagement in PEB at work [108].

As we have previously stated, GHRM policies and practices influence prescribed pro-environmental behavior [94]. Some of these practices, such as green discipline management, are prescribed practices that control employees' PEB in the workplace, resulting in obligatory PEB. However, some studies performed on the topic also underline that various GHRM practices such as green training and development may result in voluntary PEB because of the knowledge that an employee possesses after such training regarding the environmental situation. Also, the creation of various environmentally related initiatives (green health and safety management practices) for the reduction of employee stress and occupational disease caused by a hazardous work environment [109] may encourage employees to contribute to organizational well-being by practicing voluntary PEB. Providing opportunities for the employee to involve and participate in green suggestion schemes as a part of green employee relations practices [73,78] may also motivate the development of employees' voluntary PEB.

Besides the direct influence of GHRM and formal policies and practices [110] on voluntary PEB, other factors may influence employees' voluntary PEB at work. GHRM may also influence them. We believe that they can be classified in two groups: factors originated from organizational context and individual factors.

The organizational context can influence voluntary PEB at work by boosting individual motivation to behave in a certain way, in this case, to behave pro-environmentally. The factors originated from a particular context, can be subjective or objective [11,111,112]. The ones related to individual perception are subjective factors and influence the preference of certain behavior, whereas objective factors influence the performance of certain behavior. Both of those are found to be strong predictors of PEB in an individual [111]. Considering the fact that employees are creatures that spend their lives within certain communities (in this case, a particular organization where employee works can be perceived as a community), the interaction of the employee with and within that community depends on many contextual or situational factors, including exchanges performed between the individual and the community itself [113,114].

Some of the factors from the organizational context that can influence voluntary PEB at work include job satisfaction and perception of work-life balance organizational support [31], perceived supervisory support for environmental initiatives [115], environmental transformational leadership [116], green climate [34], supervisors and colleagues workplace environmentally friendly behavior [18], colleagues affective commitment [35], perceived supervisory support [11] or perceived colleague support [117].

Another group of elements influencing PEB at work may originate from individual differences among employees. According to various theories, such as the social identity theory [118–121], importance of self-conception and individual characteristics is essential when analyzing individual behavior within the group. The theory of planned behavior [122] also highlights the significance of personal attitudes and norms when acting in a certain way.

For instance, individual factors may include environmental values [116], environmental self-perception [31], harmonious environmental passion [6,18], social norms [26], environmental knowledge [123], employee attitudes toward environment [124], problem awareness [125], descriptive norms, injunctive norms, goal attractiveness [126], environmental concern [127], and environmental knowledge [128].

This classification of the antecedents of voluntary PEB at work can be also applied to the behavior itself. Considering the target of the behavior, voluntary PEB at work can be classified into two groups: behavior that benefits the organization (we call them WPEB-O) and voluntary PEB directed at helping other members of the workplace, benefitting the organization indirectly (WPEB-I) [53]. This is in line with the classification

of OCB proposed by a prior study [129], which distinguishes between OCB-O and OCB-I.

Some examples of WPEB-O can include giving suggestions to managers for improving pro-environmental behavior at work, taking the initiative to contribute to the pro-environmental behavior of the company the employee works in, organizing trainings, conferences and debates for organizational greening, and suggesting new practices that can improve organizational environmental performance [53]. In turn, examples of WPEB-I may include encouraging colleagues to express their ideas and opinions on environmental topics, dedicating time and efforts to help colleagues solve environmental issues, speaking to organizational members in order to help them understand the importance of taking the environment into account [53].

The antecedents of WPEB-O and WPEB-I may originate from different sets of factors [53]. WPEB-O may be influenced by factors coming from organizational context, while WPEB-I may be determined by factors coming from individual characteristics developed by the employee [53].

The analysis of the factors which lead to PEB is still more complex, since there is a bidirectional relationship between organizational formal GHRM policies and practices and the pool of context-induced and individual factors.

Some recent studies show that GHRM practices and policies besides influencing employees' PEB directly, may facilitate some employees' PEBs through organizational context-induced and individual factors [16,36,130] (we summarize these ideas in Figure 1).
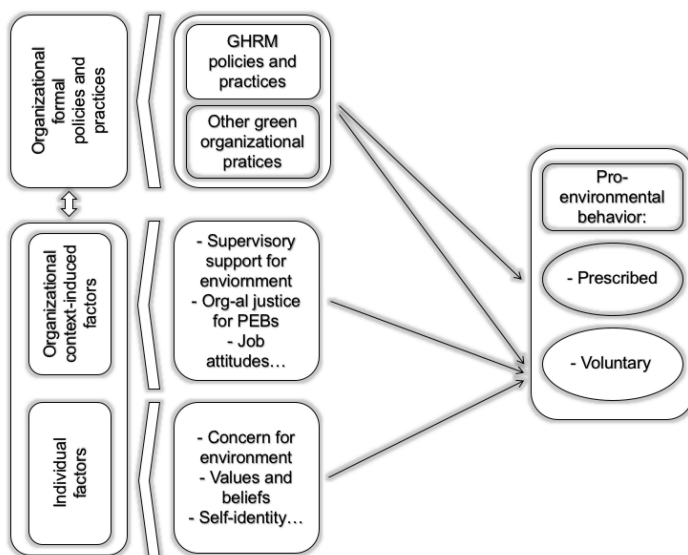

Figure 1. Proposed framework to analyze the role of GHRM in promoting pro-environmental behavior at work from a STHRM perspective. Other green organizational practices may include some practices such as green supply management [131], green supply chain management [132], green accounting [109], green marketing [133,134], green product development [135]. Source: [53].

The firm's internal policies, rules and regulations influence the atmosphere among employees regarding a certain topic that may have an impact on working conditions [43]. Because of the formal policies and practices towards green behavior, the co-workers may be engaged in this kind of behavior. Since learning by observing is important in the development of certain behavior [136], colleagues PEB may induce other green behavior of employees. Formal green policies and practices may increase willingness to learn about ecological problems raising employee awareness on the topic and forming environmental values [53].

In addition, selection of the personnel who are fully aware of greening and the development of induction programs showing green citizenship behavior of current employees [71] may help in promoting formal policies and practices towards greening because of the establishment of a green organizational culture and working climate [34,137–139] that may encourage employees to voluntarily behave in a pro-environmental way [140].

In turn, organizational context-induced and individual factors may also influence the formation of formal GHRM policies and practices. For instance, if the employees possess high levels of environmental passion and environmental values and attitudes (individual factors), they may encourage the management to promote environmental policies [53]. Employees can also demand recycling points in offices or design environmental training programs and information meetings to raise environmental awareness. Those employee initiatives may result in the establishment of formal green regulations or policies on environmental issues in the company.

CONCLUSIONS

Considering that corporate influence on environmental issues and society is immense, there is a need to be able to perform business activities that respect the environment and society. Despite the fact that in the past, social and environmental issues were seen as a burden for business-making [141], nowadays sustainability plays a key role in the achievement of strategic advantage on the market and better economic performance. The application of those principles to all business areas is crucial, including human resources.

Sustainable human resource management and GHRM see standard management principles as short-term and superficial, emphasizing the importance of new ways of global thinking that can be implemented locally [58]. The importance of interconnectedness of organizational objectives and goals of global sustainability is underlined by STHRM.

HR may be a driver of change in the organization towards environmentalism through aligning its policies and practices with environmental dimension aims of sustainable development [69]. An important representation of such an alignment may be considered as GHRM. Some important organizational policies and practices may be

found under the focus of GHRM such as virtual interviews, teleconferencing, recycling, online employee training, telecommuting and energy efficient office spaces [64].

As a result of the implementation of GHRM policies and practices, some organizational aspects can be improved, such as corporate image [44]. Of course, GHRM also contributes to achieving greener organizations in general [43,83,84]. Besides that, organizational employees' pro-environmental behavior, both obliged and voluntary, may also be influenced by GHRM through various practices.

This research proposes a theoretical framework for analyzing the role of GHRM in promoting pro-environmental behavior at work, including direct and indirect relationships.

Few researchers have studied the direct influence of GHRM practices and policies on PEB at work [35,36,108,123,142], but as far as we know, the indirect influence through the pool of organizational context-induced and individual factors has not been previously examined. Hence, the proposed framework shows a broader view of the influence of GHRM on PEB at work.

The consideration that organizational regulations such as GHRM policies and practices can indirectly influence voluntary PEB at work also notes a bidirectional relationship between organizational formal GHRM policies and practices and antecedents of PEB at work.

The firm's internal policies, rules and regulations influence the working climate among employees, which may have an impact on working conditions [43]. Because of the formal policies and practices towards pro-environmental behavior, the co-workers may be engaged in such practices. Since learning by observing is important in the development of certain behavior [136], pro-environmental behavior of co-workers resulting from GHRM practices may induce the same behavior in other employees. GHRM policies and practices may also increase the desire to learn about ecological problems raising employee awareness on the topic and forming environmental values (individual factors).

Organizational and individual factors may also influence the formation of GHRM policies and practices. For instance, if the employees possess high levels of environmental passion and environmental values and attitudes (individual factors), they may encourage the management to establish environmental practices such as the provision of recycling points in the offices within the organizational recycling policy or designing environmental training programs [53].

The proposed framework also connects different approaches to analyze antecedents of voluntary PEB at work.

For instance, some articles employ the theory of planned behavior in order to explain the relationship between individual determinants and voluntary PEB [11,39,143,144]. In turn, other authors implement the social exchange theory to explain the organizational factors selection and analysis of their impact on voluntary PEB at work [38,145]. The proposed

framework allows researchers to have a better idea of all possible determinants of voluntary PEB.

Our proposal also allows us to highlight the importance of the target of the behavior. Voluntary PEB at work, benefitting the organization directly (WPEB-O), such as recycling wastes and using electronic materials instead of printing, could be better predicted by organizational-context induced factors. On the other hand, voluntary PEB at work related to helping others (WPEB-I), e.g., dedicating time to help colleagues take the environment into account at work and explaining environmental problems, could be better predicted by individual factors [53]. Although future research is needed, recent studies are in line with this idea [53]. These findings may have important implications for future research in terms of providing a clear theoretical framework that may help researchers propose and test new hypotheses. We hope that the proposed framework helps in this task.

AUTHOR CONTRIBUTIONS

NS: Conceptualization, Investigation, Writing—original draft, review & editing. AC-P: Conceptualization, Writing—original draft, review & editing. ER-S: Writing—original draft, review & editing. All authors discussed the implications and commented on the manuscript at all stages.

CONFLICT OF INTERESTS

The authors declare that there is no conflict of interests that could be perceived as prejudicing the impartiality of the research reported.

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