Green Human Resources Practices and Person-Organization Fit: The Moderating Role of the Personal Environmental Commitment

Francisco Cesário ¹*, Ana Sabino ², Ana Moreira ³, Teresa Azevedo ³

¹ ISPA - Instituto Universitário & Atlantica Instituto Universitário & CAPP – ISCSP, Universidade de Lisboa, Lisbon, Portugal.
² ISPA- Instituto Universitário, APPsyCl - Applied Psychology Research Center Capabilities Inclusion & CAPP – ISCSP, Universidade de Lisboa, Lisbon, Portugal
³ ISPA- Instituto Universitário, Lisbom, Portugal & Instituto Superior Manuel Teixeira Gomes, Portimão, Portugal

Abstract

Based on the 2030 Agenda of the United Nations (UN), where 17 Sustainable Development Goals (SDGs) are identified, the present study aims to (1) propose a measure for the perception of green human resources management practices; (2) investigate its relationship with the employees’ person-organization fit, and (3) analyze the moderating role of personal environmental commitment in the relationship between the perception of green human resources management practices and employees’ person-organization fit. A quantitative and hypothetical-deductive approach was used, and a sample of 204 Portuguese employees responded to an online questionnaire. The results showed (1) that the proposed measure for the perception of green HR practices was adapted to the Portuguese population and showed excellent internal consistency; (2) a significant and positive relationship between perceived green HR practices and person-organization fit; and (3) that this relationship can be moderated by high personal environmental commitment. The study presents novelty and contributes to the existing literature concerning green HR practices by proposing an adapted measure, relating it to person-organization fit, and verifying the moderated role of personal environmental commitment. Thus, the effective implementation of green HRM practices is highlighted to promote positive consequences in the organization and the employees.

Keywords:
Green Human Resources Practices; Person-Organization Fit; Personal Environment Commitment.

1- Introduction

In 1987, the World Commission on Environment and Development [1] proposed a "sustainability" definition that emphasized the actions of countries, governments, societies, and organizations towards development focused on meeting today's needs, not compromising future generations' capability to achieve their own needs. Following that approach, Elkington [2] proposed the Triple Bottom Line theory, which presents the three main pillars on which sustainable development is based: environmental, social, and economic. Environmental sustainability focuses on the capability to manage our planet and its resources effectively; the social pillar refers to creating positive relationships between different stakeholders to achieve equity. Finally, the economic approach to sustainability focuses on economic and financial prosperity through the productive capacity of the stakeholders [2, 3].

Reinforcing the human responsibility for sustainability, in 2015, 193 ONU state members approved the 17 Sustainable Development Goals (SDGs). Those goals have challenged countries, organizations, and individuals to act toward sustainable development.

* CONTACT: fcesario@ispa.pt

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Considering both the Triple Bottom Line approach and the SDGs, climate change has increased attention. It has become a growing concern for governments, organizations, and society in general [4], reflected in SDG 13 “Climate Change”, which aims to take urgent action to combat climate change and its impacts. In addition, the organizational responsibility towards sustainability, mainly the environmental pillar, is reflected in SDG 8, "Decent Work and Economic Growth," which plans to promote sustained, inclusive, and sustainable economic growth; full and productive employment; and decent work.

This call for action has driven change at different levels. Organizations are called to assume a more active role in world environmental sustainability by realizing that their contribution goes beyond competitiveness and adding financial value. Organizations are also responsible for adjusting their business models towards environmental awareness and behavior change. This behavior change focuses on developing corporate activities and practices that seek to inspire and motivate employees to adopt behaviors and attitudes to enhance a sustainable future, increasing personal environmental commitment. When organizations increase their awareness of environmental-oriented business models, it benefits the planet, society, and the well-being of all employees.

This green movement is seen across many areas of the organizational setting: green accounting, green marketing, green retailing, green management, and lately, Green Human Resource Management (GHRM) [5, 6]. Ren et al. [7] defined GHRM as a phenomenon relevant to understanding relationships between organizational activities that impact the environment and the design, evolution, and implementation of HRM practices. Although it is growing in interest and has theoretical and practical implications, there is no consensus regarding GHRM practices and how we can measure them. In addition, several proposals were made in different cultural settings. Based on a measure for the employees' perception of HR practices, well established in Portugal [8], we aim to incorporate a set of previous proposals for GHRM practices [9, 10] to suggest a measure for the perception of green human resources practices (GHRM practices) adapted to the Portuguese population.

In addition, both conceptual and empirical works have highlighted the importance of sustainable (and green) HRM practices on green employees' attitudes and behaviors. For instance, Ansar et al. [11] studied the relationship between green human resources management and employees' pro-environmental behaviors. Yusoff et al. [12] related green human resources management with environmental performance. However, studies relating GHRM practices to employees' non-green attitudes and non-green behaviors are scarce but critical to understanding the role of GHRM practices in organizations' attractiveness [3] and retention [4], a key topic for strategic HRM. Based on the Paauwe and Boselie [13] approach, HR strategy and HR practices influence employees' attitudes and behaviors. Still, no studies were found relating green HRM practices and employees' non-green attitudes and behaviors such as person-organization fit. Given the relevance of studying the fit between organization and employee as a mechanism to guarantee more attractiveness and retention, our second goal is to contribute to a deeper understanding of the relationship between the studied GHRM practices and person-organization fit. This transmission of positive and environmental values through HR practices could make the employees feel good within the organization and even feel that the values that the organization transmits meet their own, creating a more positive fit between the two.

In addition, environmental awareness has been increasing worldwide and across different generations. Both Triple Bottom Line and the 17 SDGs reinforce that a sustainable world is only possible with the effort of all humanity; organizations, governments, societies, and every person making a personal environmental effort. Achieving the desired results is only possible with a high personal environmental commitment. Thus, our third goal is to understand if personal environmental commitment affects the influence of GHRM practices and person-organization fit.

Therefore, the present work aims to contribute to the previous challenges through three main goals: (1) the proposal of a measure for the perception of green human resources practices (GHRM practices) adapted to the Portuguese population; (2) the analysis of the influence of GHRM practices on the person-organization fit; and (3) the moderating role of personal environmental commitment in this relationship. With the answer to these three main goals, we seek to contribute with a measure focused on the GHRM practices, with a better clarification of how this environmental approach to HRM could contribute to the person and organization fit, and if the individuals’ environmental commitment played any role in this relationship.

The paper is organized into the following sections: literature review, method, results and discussion, and, at last, the conclusions. The managerial and theoretical implications of our results will be highlighted.

2- Theoretical Foundation and Hypotheses Development

2-1- Green Human Resources Management

Organizations are challenged to balance financial and economic growth with social and environmental factors to achieve success, sustainable profit, and competitiveness. In addition, organizations feel increasing pressure from stakeholders, such as government, clients, and partners, to take environmental actions, as this impacts their reputation [14]. Thus, organizations must develop and employ environmental management practices to relieve the negative
influence of their activities on the natural environment [15-18]. Those practices can be applied in all organization’s contexts, for instance, during the development of new products or / and processes, in the adoption of new technologies, or the implementation of environmental management programs [17-19]. Such initiatives help organizations to minimize, for instance, the organization and their employees' carbon footprints. Wang et al. [18] enhance that environmental management practices may reduce more than 50% pollution levels.

Furthermore, by investing in HRM systems, organizations can increase the capabilities of their employees to support the execution of their strategic goals [20]. That said, HRM practices can be considered a set of internal resources to create unique, valuable, and inimitable employees' capabilities, through which the organization can maintain its competitive advantage [21].

Thus, based on the assumption that (1) environmental management practices are a responsibility of all organizational areas and (2) the strategic role of HRM; there is a growing need for the integration of environmental management into human resource management (HRM) systems and practices [22, 23]. This recent development in HRM is known as green human resources management (GHRM). It refers to using human resources practices as sustainable practices and raising employee awareness and commitment towards going green [22]. Opatha and Pavitra [23] defined GHRM as all activities developed by HR to increase employees' environmentally friendly behaviors. Ren et al. [7] proposed that GHRM is a phenomenon relevant to understand the relationships between organizational activities that impact the natural environment and the design, evolution, implementation, and influence of HRM systems. Amrutha and Geetha [24] emphasized the recent attention on the development of GHRM practices, mainly in European and Asian countries. The authors refer that “the human side of sustainability is at its infant stage” [24]. Thus, HR departments can play a major role in leading the green movement towards the organizations through its GHRM practices that could influence the entire organization [25, 26]. It is important to note that such impact might be indirect, through employees’ perceptions of HRM, as shown in the literature in recent years [27].

GHRM practices are related to positive outcomes such as the promotion of organizations image, increases employee morale, and promotes teamwork and organizational culture increases employees and organization performance [10, 28]. Pinzone et al. [29] also argued that the development of GHRM practices supports environmental performance improvement.

Although its increase in popularity, there is no consensus regarding GHRM practices [28]. Several authors developed different approaches; for instance, Amrutha and Geetha [24] identified four GHRM practices: green employee acquisition, green employee appraisal, green employee rewards; Dumont et al. [30] proposed a unidimensional measure for GHRM; Zaid et al. [31] examined green hiring, green training and involvement and green performance management and compensation; Jabbar and Abid [10] studied green recruitment, green rewards and compensation and environmental training; Tang et al. [32] proposed five GHRM practices: green recruitment and selection, green training, green performance management, green pay and reward and green involvement. Nawang Sari and Sutawidjaya [33] suggested the following practices green recruitment, green performance management, green training and development, green compensation, and green employee relations. Shah [34] proposed a model comprising seven GHRM practices: green compensation management, green health and safety, green job design, green labor relations and green performance management, green recruitment and selection and green training and development. Although no studies were found regarding green HRM practices in Portugal, research focused on employees’ perceptions of HR practices [8] and its antecedents and outcomes [35, 36].

According to the study developed by Saeed et al. [37], GHRM practices positively influence the employees' pro-environmental behavior. The authors’ results also suggested that the employees' environmental knowledge moderate the effect of GHRM practices on pro-environmental behavior. Paillé et al. [4], demonstrated the mediating effect of discretionary environmental behaviors of employees by linking strategic GHRM practices with the organizational environmental performance. The results presented by Dumont et al. [30] demonstrated the effect of GHRM practices on the pro-environmental behavior of employees and the mediation effect of the green psychological climate. However, when and how GRHM practices influence an organization's environmental performance need further studies [7].

2-2- Person-Organization Fit

The compatibility between individual and organizational environment (also called person-environment fit) has been studied in its different forms: person-organization fit; person-vocation fit; person-group fit [38, 39]. Kristoff [39] clearly distinguished them, enhancing the person-organization fit, which has been considered the key to maintaining a flexible and committed workforce capable of facing the competitive work environment [39, 40]. Kristoff [39] defined it “as the compatibility between people and organizations that occurs when: (a) at least one entity provides what the other needs, or (b) they share similar fundamental characteristics, or (c) both”. The person-organization fit highlights the importance of suitability between employees, work processes, and the importance of creating an organizational identity by institutionalizing consistent values in an organization's culture [41], thus allowing for greater compatibility between the organization and its employees. There are several processes by which an individual can experience compatibility with
an organization. Supplementary fit occurs when a person “supplements, embellishes or possesses characteristics similar to other individuals” in an environment [42]. On the other hand, the complementary fit occurs when a person’s characteristics add to what is missing in the environment [42]. Complementary fit covers demand-abilities fit, when employee’s abilities satisfy the organizational demands, and needs-supplies fit, which happens when employees' needs and preferences are fulfilled by the organization’s supplies. Thus, when both the organization's and the individual's characteristics meet each other, there is a greater connection/identification towards the organization [43]. The attraction-selection-attraction (ASA) model is often associated with the person-organization fit [44]. This model suggests that individuals tend to be attracted, choose, and stay in organizations similar to them in some characteristics, such as personality and personal values. The authors also distinguish two different techniques to measure the fit between the employees and their organizations – perceived (subjective) and actual (objective) fit. The first (perceived fit) is the most used one. It is conceptualized as the self-evaluation of the fit between the person and its organization, usually asking what degree the person considers that the fit exists. On the other hand, the actual (objective) fit can be measured by comparing individual and organizational characteristics [40].

Previous research has been established the influence of HR practices on employees’ perception of person-organization fit. Boon et al. [43] found strong relations between HR practices and person-organization fit. Kakar et al. [45] also found a positive influence of HR practices with person-organization fit. Amarnah and Muthuvelooa [46] found significant relations between recruitment & selection and performance appraisal with person-organization fit. On the other hand, the author did not find a significant relation with training and development. Cooper-Thomas et al. [47] studied the socialization tactics on changes in the newcomer perceived person-organization fit, founding that those tactics influence perceived fit, but not actual (objective) one. Autry and Wheeler [48] suggested the multi-dimensionally of person-organization fit and studied the long-term impact of socialization and training on employee perceptions of affective and cognitive person-organization fit. Results suggested that affective person-organization fit increases with time spent in socialization among employees with more than six months tenure, and cognitive person-organization fit increases with time spent in formal training.

To sum up, the person-organization fit is a psychological consequence of a relationship between the organization's characteristics, mostly transmitted through HR practices, and the individual's characteristics, which are transmitted through values, personality, beliefs, etc. Therefore, if an individual has a positive perception of HR practices, it will better fit the organization. In the present study, we aim to add a specific characteristic of the HR practices – their environmental orientation – but the HR practices remain. Thus, the following hypothesis was formulated:

\[ \text{Hypothesis 1: Green HRM practices are positively and significantly related to person-organization fit.} \]

2-3- Personal Environmental Commitment

Since the early conceptualization of commitment, its definition has not been clear and consensual [49]. Commitment has been defined as a bond resulting from a given force, between the individual and a target, such as organization [49, 50]. In 2012 Klein et al. [51] in the reconceptualization of commitment, the authors proposed the following definition “a volitional psychological bond reflecting dedication to and responsibility for a particular target” [51]. Becker [52] enhanced that commitment can be related to different foci, defined as the certain entities or targets to whom an individual is attached. Usually, commitment foci are related to organizational settings (e.g. co-workers, superiors, subordinates, customers, and other groups and individuals that collectively comprise the organization). However, other foci, organization and non-organization related, have been emerging. See Klein et al. [49] study where the authors compared the following other commitment foci: organization goals, academic goals, union or occupation.

Considering that environmental protection has emerged as one of the most demanding societal priorities [29], researchers address an environmental target of commitment. Therefore, research on different levels has been developed. From a macro point of view, Kete and Baumert [53] studied country climate commitment, and Neumayer [54] explored the international environmental commitment. From an organizational level, several studies addressed the organizational environmental commitment [18, 55-57]. And from an individual level, the personal environmental commitment, which refers to the individuals’ sense of responsibility and dedication towards environment, has been received less attention when related with its impacts on an organizational setting [58].

According to Hsu and Roth [59], environmental awareness is “the individual's knowledge and attitudes towards environment and environmental issues, skills and motivation to work towards the resolution of environmental problems and active involvement in work to maintain a dynamic balance between the quality of life and the quality of the environment”. Thus, an individual who commits to the environment also has a strong orientation and awareness towards the environment [59]. Following Pinzone et al. [29] research on employees' environmental commitment is an important component of the organizational environmental commitment, which significantly contributes to improving environmental performance. Paillé et al. [4] suggested that organizational environmental commitment moderates the relation between strategic HR practices and organizational citizenship behaviors towards the environment. Therefore, based on this assumption, the following hypothesis was formulated:
Hypothesis 2: Personal environmental commitment moderates the relation between green human resources practices and person-organization; therefore, the relation will be weaker in the lower environmental committed participants.

3- Method
3-1- Research Design and Data Collection Procedure

The present research is quantitative, hypothetical-deductive, and cross-sectional. Figure 1 summarizes the flowchart of our research methodology.

![Flowchart of Research Methodology](image)

Figure 1. Flowchart of Research Methodology

This study had the voluntary participation of 204 professionals working in organizations based in Portugal. Data was collected through an online questionnaire between December and February of 2020. The questionnaire was created on the qualtrics platform, and the link was sent to contacts of the researchers via email or via LinkedIn. The data collection process was the non-probabilistic, convenience, intentional, and snowball type [60]. There was no incentive (cash or otherwise) for participating in this project. All the participants were over 18 years old and at the beginning of the questionnaire, the research objectives were explained and that the invitation to participate was completely voluntary. The questionnaire contained information about the study's goals, and the confidentiality of the answers given by the participants was guaranteed. The questionnaire consisted of five sociodemographic questions (age, gender, seniority, sector, and whether you were an HR professional or not) and three instruments (GHRM practices, person-organization fit, and personal environmental commitment).

3-2- Participants

Among the 204 participants in this study, 107 (52.5%) were female, with a mean age of 47 years (SD = 13.77), ranging from 19 years to 77 years. Regarding tenure in the organization, most of the participants have been working in the organization for more than 5 years (58%), and 48.5% did not work in HR roles at the time of the study. With respect to the sector in which they work, the participants affirmed that they work in a variety of sectors, particularly the renewable energy sector (21.1%), tourism and real estate (13.2%), and services (11%).

3-3- Data Analysis Procedure

After the collection, the data were imported into SPSS Statistics 26 software. The first step was to test the metric qualities of the instruments used in this study. To test the validity of the GHRM practices instrument, an exploratory factor analysis was performed, since it is a new instrument intended to be adapted to the Portuguese population. Afterwards, a confirmatory factor analysis was performed using the AMOS Graphics 26 software to confirm this instrument's factor structure. Following Hu & Bentler [61] recommendations, the evaluation of the overall goodness of fit of the models was based on the combination of several fit indices (RMSEA ≤ 0.07; GFI ≥ 0.90; CFI ≥ 0.90; IFI ≥ 0.90; χ² / df ≤ 3). Convergent validity was calculated through AVE which should be greater than 0.50 [62].
To test the validity of the person-organization fit and personal environmental commitment instruments, exploratory factor analyses were performed because these instruments consist of three and four items, respectively. To test the internal consistency of the instruments, Cronbach's alpha value was calculated, which, in organizational studies, should be higher than 0.70. However, since the validity of Cronbach's alpha has been questioned [63] we also calculated construct reliability for the GHRM practices instrument. Thus, for construct reliability to be adequate, it should have a value greater than 0.70 [62]. The study of the association, intensity, and direction between the variables was performed through Pearson's correlations. Macro Process 3.5 (model 1), developed by Hayes [64], was used to test our research hypotheses.

3-4- Instruments

**Green Human Resources Management Practices**

To measure GHRM practices 18 items were used based on (1) a range of literature related to green HRM practices and previous empirical studies [9, 10] and (2) a scale related to employee’s perceptions of human resources management practices [8] already validated for Portugal. The items were selected considering five HR practices (table 1 – Green Recruitment and Onboarding; Green Training; Green Performance Management & Rewards; Green Internal Communication, and Green Sustainable Culture). A group of HR practitioners were consulted to search for ambiguous and unclear items. First, we asked participants if they knew if their company had those practices. If yes, the participants answered the questionnaire items using a 5-point Likert frequency scale, ranging from 1 (never) to 5 (always).

The exploratory factor analysis suggested the existence of 5 factors, corresponding to each of the GHRM practices. A KMO value of 0.95 was obtained, which can be considered very good [65]. Bartlett’s test of sphericity was significant at p< 0.001, indicating that the data are from a multivariate normal population [66]. The 5 factors explain 80% of the total scale variability.

The next step was to test construct validity by confirmatory factor analysis. We tested two models: the five-factor model which reflected the proposed structure and a single-factor model where all items weight on a single factor. Although both models presented an adequate fit (five-factor model: [RMSEA = 0.06; GFI = 0.90; CFI = 0.97; IFI = 0.97; \( \chi^2 / df = 1.7 \); single-factor model: RMSEA = 0.07; GFI = 0.88; CFI = 0.96; IFI = 0.96; \( \chi^2 / df = 1.9 \)) the five-factor model best fits to our research goals. With concerning the convergent validity all dimensions present AVE values higher than 0.50. These values are 0.63 for green recruitment and onboarding, 0.80 for green training, 0.58 for green

![Table](image-url)

<table>
<thead>
<tr>
<th>Table 1. Green HRM Practices Factor Loadings</th>
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<tbody>
<tr>
<td>Descriptions</td>
</tr>
<tr>
<td>In recruitment advertisements, my company publicizes its commitment to environmental sustainability.</td>
</tr>
<tr>
<td>In the selection process of new employees, my company values environmentally conscious candidates</td>
</tr>
<tr>
<td>During onboarding, my company presents the activities it develops towards environmental sustainability.</td>
</tr>
<tr>
<td>During onboarding, my company discloses our goals and targets towards environmental sustainability.</td>
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<tr>
<td>In the job description, my company includes information on how to carry out tasks with an environmental sustainability orientation (energy saving, waste elimination, etc.)</td>
</tr>
<tr>
<td>In my company, there are opportunities to attend training courses related to environmental sustainability</td>
</tr>
<tr>
<td>In my company, the training goals also include the acquisition of skills related to protecting the environment.</td>
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<tr>
<td>In my company, training programs in environmental management are developed to increase employees' awareness of environmental protection issues.</td>
</tr>
<tr>
<td>In my company, performance goals also include criteria related to environmental sustainability.</td>
</tr>
<tr>
<td>In my company, during the performance appraisal, attitudes and behaviours that promote the protection of the environment are also evaluated.</td>
</tr>
<tr>
<td>In my company, contributions to improving environmental sustainability are rewarded.</td>
</tr>
<tr>
<td>In my company, there are monetary or other rewards (e.g., distinctions and praises) for employee initiatives towards environmental protection.</td>
</tr>
<tr>
<td>In my company, successful initiatives that promote environmental sustainability are publicized and celebrated.</td>
</tr>
<tr>
<td>My company uses communication channels, formal or informal, to disseminate guidelines on environmental protection.</td>
</tr>
<tr>
<td>In my company, employees have the opportunity to make suggestions or to get involved in work groups to solve environmental problems</td>
</tr>
</tbody>
</table>
Green Sustainable Culture (GSC)

My company is committed to promoting an organizational culture oriented towards environmental sustainability. 0.78

In my company, managers motivate employees to reflect and contribute to the environmental improvement of their daily activities. 0.82

My company periodically organizes activities to involve employees in environmental protection initiatives. 0.83

Note. In this study, all the scale items were formulated in Portuguese; if they are used in English, we suggest refining the phrasing.

**Person-Organization Fit**

Person-Organization Fit was assessed through a three-item scale developed by Cable and Judge [67]. An item example includes: “Do you think the values and ‘personality’ of this organization reflect your own values and personality?” The participants answered the questionnaire items using a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree).

After performing the exploratory factor analysis, it was found that the factor structure of this instrument is based on a single factor. A KMO value of 0.67 was obtained, a little below the minimum acceptable [65]. Bartlett's test of sphericity was significant at p < 0.001, indicating that the data are from a multivariate normal population [66]. All items have factor weights above 0.60. The factor explains 82% of the total scale variability. As for internal consistency, a Cronbach's alpha of 0.89 was obtained (Table 2).

<p>| Table 2. Means, standard deviations, and correlations among variables |
|-----------------|---|---|---|---|---|---|---|---|</p>
<table>
<thead>
<tr>
<th>n</th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.GRO</td>
<td>204</td>
<td>2.83</td>
<td>1.18</td>
<td>(0.90)</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2.GT</td>
<td>204</td>
<td>2.68</td>
<td>1.21</td>
<td>0.80** (0.92)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>3.GPMPR</td>
<td>204</td>
<td>2.14</td>
<td>1.10</td>
<td>0.78** 0.72** (0.85)</td>
<td></td>
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<td></td>
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<tr>
<td>4.GIC</td>
<td>204</td>
<td>3.13</td>
<td>1.20</td>
<td>0.80** 0.82** 0.69** (0.87)</td>
<td></td>
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</tr>
<tr>
<td>5.GSC</td>
<td>204</td>
<td>3.01</td>
<td>1.13</td>
<td>0.84** 0.85** 0.74** 0.90** (0.85)</td>
<td></td>
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<tr>
<td>6.PO-Fit</td>
<td>204</td>
<td>3.60</td>
<td>0.92</td>
<td>0.54** 0.53** 0.51** 0.60** 0.62** (0.89)</td>
<td></td>
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<tr>
<td>7.PEC</td>
<td>204</td>
<td>4.29</td>
<td>0.53</td>
<td>0.13 0.16* 0.17* 0.13 0.18** 0.06 (0.70)</td>
<td></td>
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</tbody>
</table>

Note. (cronbach alfa); GRO = green recruitment and onboarding; GT = green training; GPMPR = green performance management and rewards; GIC = green internal communication, GSC = green sustainable culture; PO-Fit = person-organization fit; PEC = Personal Environmental Commitment.

**Personal Environmental Commitment**

Personal Environmental Commitment was assessed through a four-item scale developed by Hsu and Roth [59]. An item example includes: “I feel that I have a responsibility to intervene in solving environmental problems.” The participants answered the questionnaire items using a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree).

Exploratory factor analysis suggests us that this instrument consists of a single factor. A KMO value of 0.70 was obtained, considered acceptable [65]. Bartlett's test of sphericity was significant at p < 0.001, indicating that the data are from a multivariate normal population [66]. All items have factor weights above 0.70. The factor explains 63% of the total scale variability. As for internal consistency, a Cronbach’s alpha of 0.80 was obtained (Table 2).

**4- Results and Discussion**

**4-1- Measurement Models**

Following Hu and Bentler [61] recommendations we tested our measurement model which covered seven factors (i.e. green recruitment and onboarding; green training; green performance management & rewards; green internal communication, green sustainable culture, person-organization fit and personal environmental commitment). This model obtained a suitable fit [χ2/df = 1.89, GFI = 0.83; CFI = 0.94; IFI = 0.94; RMSEA = 0.06]. We compared this model with the single factor model, i.e., Harman’s single factor test, in which all items were loaded on a single latent variable, which obtained a poor fit [χ2/df = 4.5; GFI = 0.66; CFI = 0.76; IFI = 0.76; RMSEA = 0.13]. We conclude that the theoretical structure, which comprised seven dimensions (GHRM practices), adequately represents the observed data.
4-2- Descriptive Analysis

The means and standard deviations of the study variables are presented in Table 2. From all GHRM practices, green performance management and rewards (GPMR) was the dimension evaluated as the least present (M = 2.14; SD = 1.10) followed by green training (GT) and green recruitment and onboarding (GRO) (M = 2.68; SD = 1.21 and M = 2.83; SD = 1.18, respectively). The participants considered that green sustainable culture (GSC) and the green internal communication (GIC) are sometimes present in their organizations (M = 3.01; SD = 1.13 and M = 3.13; SD = 1.20, respectively). Regarding person-organization fit (PO-Fit) and the personal environmental commitment (PEC), the results suggested higher levels thus participants are more attached towards their organizations (PO-Fit M = 3.60; SD = 0.92) and have a high level of environmental responsibility and commitment (M = 4.29; SD = 0.53).

Regarding the correlation matrix between the studied dimensions, the results suggested that the GHRM practices are highly correlated (0.69 < r < 0.90, p < 0.01). In general, the observed pattern of correlations showed significant and positive correlations between all GHRM practices and person-organization fit (0.51 < r < 0.60, p < 0.01). With concern with the personal environmental commitment, this variable is associated with green training (r = 0.16, p < 0.05), green performance management and rewards (r = 0.17, p < 0.05) and green sustainable culture (r = 0.18, p < 0.01).

We observed high correlations between green recruitment and onboarding with green training and between green internal communication and green sustainable culture that may be explained by the fact that, not only in practice but also theoretically, those practices share antecedents and have similar procedures. On the other hand, it is also important to highlight that participants evaluated with lower scores the green HRM practices that are more present and extrinsic to the employee and that have a lower strategic mindset (i.e. green recruitment and onboarding, green training, green performance management and rewards). In contrast, the most strategic green HRM practices, such as green internal communication and sustainable green culture, were the only ones whose average is slightly above the central point, which may suggest that these practices were the ones that participants perceived as being most present, that is, the ones that are practiced more frequently by HR practitioners. The other green practices are much more specialized and therefore, their green nature could be more challenging to implement.

4-4- Hypothesis Testing

Following the correlation results, it is already possible to have an idea of the probable relation between all constructs. By performing the PROCESS macro in SPSS IBM Statistics, it was possible to complete regression analysis to verify the relationship between all five GHRM practices and person-organization fit and analyze the moderating role of personal environmental commitment, as well. The model used for performing the PROCESS macro was Model 1 (Hayes).

The relationship between all GHRM practices and the person-organization fit is positive and significant (0.28 < R² < 0.39; p < 0.05). Green performance management and rewards is the green practice that explain less person-organization fit (R² = 0.28) and green internal communication is the practice that explain more of person-organization fit (R² = 0.39). Therefore, we confirm hypothesis 1.

As expected, our results suggested that all green HRM practices positively influence person-organization fit. On the other hand, when employees have a lower perception of green HRM practices, the person-organization fit does not increase. Although the study did not investigate the sustainable side of HR, the present results align with previous studies [43, 45], which reinforced that employees who have a higher perception of HRM practices are more likely to evaluate the values and expectations organization more positively. Regarding the study of Amarned and Muthuveloo [46], our results align with the significant relationship between HRM practices and recruitment and selection and performance, but because we found a significant relationship between green training and person-organizations fit we cannot confirm the authors results. Based on our results it is relevant to address the crucial role of an effective development and implementation of green HRM practices since the person-organization fit increases when employees understand, respect and share the values of their organization, which are transmitted mainly through their HR practices, and in this particular case, green HRM practices.

Regarding our last hypothesis, as presented in Table 3, the interactions between personal environmental commitment and each GHRM practice are significant in predicting a person's job fit. As we have a positive moderation effect, and after the analysis of the interaction plots, the results suggest that for participants with a high environmental commitment, the influence of all green HRM practices on the person-organization fit is higher than for participants with a low environmental commitment. Thus, hypothesis 2 is confirmed. Although we confirm the moderation analysis, in the performance management and rewards practice, the effect of personal environmental commitment is low (B = 0.19; p = 0.04). Some possible explanations for this result maybe be the different theoretical approaches to what is performance management (i.e. performance management being different from performance appraisal) [68], the fact previous studies have shown the complexity of how the employees deal with his/her supervisor feedback [68] or even the fact performance management and rewards could be, for some organizational settings, seen as autonomous practices.
Our results suggest that proper GRHM practices can positively affect organizations, such as the person-organization fit. Following our results, applying these practices in contexts where employees have a strong personal environmental commitment will contribute to a greater person-organization fit. Although up to date, no studies were found to relate these variables, our results are in line with the work of Pinzone et al. [29] and Paillé et al. [4]. The firsts [29] reinforced that individual environmental commitment is an important component of organizational environmental commitment. The seconds [4] found that organizational environmental commitment moderates the relation between strategic HR practices and organizational citizenship behaviors towards the environment.

That said, we highlight the need to understand and measure personal environmental commitment at an early stage of recruitment and selection [69] process. In this sense, it is important that HR practices and procedures be align with sustainable goals so that employees and organizations can increase their awareness and personal environmental commitment to work synergistically to boost organization environmental sustainability. This shift to GHRM practices implies that HR has an essential role with regard to driving change in the organization, creating a strategic mission of the organization [13] in order to make the organization sustainable.

This study presents a set of theoretical and practical implications. Regarding the theoretical implications, we contribute to the HRM and the environmental management literature because we proposed a measure for the GHRM practices that enhance a set of important practices – green recruitment and onboarding; green training; green performance management and rewards; green internal communication and green sustainable culture – and present a good validity and reliability. On a managerial point of view, our results suggested that participants still do not have a lot of information regarding GHRM practices thus, in their point of view organizations still do not promote them regularly. Still, internal communication of green activities and the promotion of a green sustainable culture are the practices with higher results. However, the reinforcement of the other green practices needs further attention. Therefore, managers should work on the promotion of all practices, mainly green recruitment and onboarding, green training and green performance management and rewards, as they are mechanisms to promote organizational attractiveness and retention. Secondly, our

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results indicate that the personal environmental commitment affects the relationship between GHRM practices and person-organization fit; therefore, this study reinforce the importance of personal environmental commitment for increasing the intensity of the relationship between the perception of GHRM practices and the person-organization fit, which indicates that, if an organization intends to implement practices oriented towards the environment, firstly it must take into account the environmental commitment of its employees. Considering the attraction-selection-attraction model [44], the personal environmental commitment should be considered right in the recruiting and selection phase, being one specific characteristic to look for in the future potential employees. Thus, looking for candidates and employees that have characteristics similar to the ones proposed by the organization, will enabling a greater fit with the organization. This person-organization fit will also bring positive outcomes, such as better performance/task performance [70] and higher organizational commitment [71].

Although this research has important strengths, certain limitations should be taken into consideration. First, this study has a cross sectional design and, therefore, causality cannot be established. Therefore, futures studies could study this phenomenon in a longitudinal point of view. In addition, all the measures were based on self-reports, causing concerns about common method bias. However, we applied some of the methodological recommendations by Podsakoff et al. [72], for instance, we demonstrated the best fit of our model compared with a single factor model by conducting confirmatory factor analysis; we guaranteed anonymity and confidentiality of responses; we indicated in every questionnaire that there were no right or wrong answers and finally, for the GHRM practices measure, it was built based on measures already proposed by different authors [9, 10], for GHRM practices but also the most used measure of employees perceptions of HR practices in Portugal [8]. The measure proposed was reviewed by professionals with experience in HR and environmental sustainability, who agreed to read and verify the adequacy of the issues and reduce the ambiguity of some terms. Thus, more studied are needed to establish and validate the proposed measure GHRM practices for the Portuguese population.

Finally, based on the Triple Bottom Line approach [2, 3], we only considered one dimension of sustainability – the environmental one. Future studies relating the three dimensions of sustainability – environmental, social, and economic – its antecedents and outcomes should be taken into consideration.

5- Conclusion

Based on the increasing interest in sustainability, we focused our analysis on the environmental pillar of sustainability to contribute to a deeper understanding of SDG 13 "Climate Change" and SDG 8 "Decent Work" through three main research goals. Firstly, we proposed a five-factor measure to assess perceived GHRM practices, which revealed adequate validity and reliability. The confirmed GHRM practices were green recruitment and onboarding, green training, green performance management and rewards, green internal communication, and green sustainable culture. This proposed and adapted measure for Portugal allows us to understand the specificities of each GHRM practice and that participants perceived them as being different.

Although there are previous studies relating HRM practices with person-organization fit, no studies were found considering the environmental side of HRM practices. Thus, our second goal was to verify if participants’ perceptions of each GHRM practice influenced the fit between them and their organizations. Our results confirmed these relationships, which present the same pattern as the non-green HRM practices. Finally, because we found individuals' increased interest and active role in boosting sustainability, our last goal was to understand the moderating role of personal environmental commitment on the relationship between GHRM practice and person-organization fit. There have been no studies relating these variables to date. Our results suggest that, when participants experienced high environmental commitment, the influence of all green HRM practices on the person-organization fit is greater than for participants with low environmental commitment. The implications for HR strategy, organizational attractiveness, and retention were discussed.

6- Declarations

6-1- Author Contributions

Conceptualization, F.C., T.A. and A.S.; methodology, F.C. and A.S.; software, T.A. and A.M.; formal analysis, A.M. and F.C.; investigation, T.A. and A.S.; writing—original draft preparation, T.A. and A.S.; writing—review and editing, F.C and A.M.; All authors have read and agreed to the published version of the manuscript.

6-2- Data Availability Statement

The data presented in this study are available on request from the corresponding author.

6-3- Funding

The authors received no financial support for the research, authorship, and/or publication of this article.
6-4 Institutional Review Board Statement

Not Applicable.

6-5 Informed Consent Statement

Informed consent was obtained from all subjects involved in the study.

6-6 Conflicts of Interest

The authors declare that there is no conflict of interest regarding the publication of this manuscript. In addition, the ethical issues, including plagiarism, informed consent, misconduct, data fabrication and/or falsification, double publication and/or submission, and redundancies have been completely observed by the authors.

7 References


