Article

Green Workplace Behaviors: Can Employees Make the Difference?

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Abstract: Promoting environmental sustainability is becoming a priority for organizations. There is thus increasing interest in understanding to what extent green workplace behaviors are linked, alongside contextual determinants, to employees' characteristics. This study investigated the relationship between green workplace behaviors, various employee characteristics, and organizational determinants. A sample of 513 employees from the energy sector was administered a survey assessing green workplace behaviors and the management of events (e.g., weak signals) which could anticipate the occurrence of incidents with harmful environmental impacts. Employees' job-related (proneness toward behaving pro-environmentally at work) and broader individual characteristics (personality and human-nature connectedness), as well as their perceived organizational support (e.g., green climate and leadership), were also examined. The results from the structural equation models showed that green workplace behaviors were associated with employees' proneness toward behaving pro-environmentally at work and perceived organizational support. Indirect effects from organizational support, personality, and human-nature connectedness on green workplace behaviors, mediated by employees' proneness toward behaving pro-environmentally at work, also emerged. These findings highlight that employees' characteristics also favor their adoption of green workplace behaviors, with important implications for developing interventions promoting environmental sustainability in organizations.

Keywords: green workplace behaviors; individual personal factors; pro-environmental attitudes; personality; human-nature connectedness

1. Introduction

The rapid and accelerating depletion of natural resources, pollution, and loss of biodiversity caused by human activities (e.g., industrial production, electricity generation, and transport) are increasingly threatening the long-term survival of biological life. Environmental sustainability has, therefore, emerged as an imperative issue for organizations.

It is well known that organizations cannot accomplish their environmental sustainability goals without employees performing green behaviors at work (i.e., "scalable actions and behaviors that employees engage in that are linked with and contribute to or detract from environmental sustainability") [1–5].

According to the well-established Green Five taxonomy [1,2], employees' green workplace behaviors are not limited to actions aimed at preserving resources and avoiding wastefulness, such as recycling and composting, reusing, repurposing, and reducing use (conserving), but also encompass behaviors aimed at changing work products and processes to make them more environmentally sustainable (transform), avoiding negative environmental impacts, mitigating or restoring environmental damage (avoiding harm),

spreading environmental sustainability behaviors to others (influencing others), and engaging in proactive, entrepreneurial actions (e.g., initiating programs and policies and activism) toward environmental protection (taking initiative).

Since green workplace behaviors represent a driving force for organizations' contributions to environmental sustainability, understanding which antecedents may facilitate or constrain them has become paramount [6–12].

1.1. Contextual and Individual Determinants of Green Workplace Behaviors

It has been shown that contextual antecedents, in terms of organizational characteristics external to employees, could foster or hinder employees' green behaviors at work [6–10]. For instance, a recent meta-analysis [9] found moderate positive associations between green workplace behaviors and, among other factors, perceived organizational support, perceptions of green human resource management, and a green climate. Moreover, the environment-related involvement of superiors or supervisors enacts employees' green workplace behaviors [8,10]. Katz et al. [6] found moderate positive associations between employees' green workplace behaviors and perceptions of environment-specific transformational leadership, servant leadership, and supervisor support. Conversely, a nongreen corporate culture, job constraints (e.g., lack of communication), or lack of support and guidance from supervisors and colleagues are contextual barriers to green workplace behaviors [7].

Alongside contextual antecedents, there is increasing interest in understanding which employees' characteristics (internal factors) lead them to act pro-environmentally at work, with a focus on their general pro-environmental attitudes (e.g., environmental awareness or concerns and connectedness with nature), norms (e.g., personal and social), and intentions [8,13]. For instance, green workplace behaviors were moderately and positively associated with employees' pro-environmental attitudes, norms, and pro-environmental behavioral intentions [8,9].

Overall, it seems that green workplace behaviors are promoted by contextual and organizational determinants and employees' individual-level factors. It is worth mentioning, however, that the predominance of previous studies focused on "green office" behaviors (e.g., paper recycling, double-sided printing, and turning off lights) without accounting for the contingent, sector-specific nature of green workplace behaviors [3]. Moreover, the link between green behaviors at work and other individual characteristics known to influence individuals' pro-environmental attitudes and behaviors in everyday life as personality traits (i.e., a particular characteristic pattern of thoughts, feelings, and actions) [11,14,15] have rarely been examined thus far. There is indeed only some suggestion linking employees' green behaviors to high conscientiousness (i.e., a tendency to be responsible, organized, hard-working, and goal-directed) and openness, or a propensity for intellectual curiosity and a liberal attitude [9,16], as well as other individual dispositions related to this latter trait, such as curiosity [15,17], or a desire for acquiring new knowledge and new sensory experiences which motivate exploratory behavior [18]. Most of the studies conducted thus far thoroughly assessed the antecedents of green workplace behaviors engaged in by employees in the tourism, education, health, information technology, or social services sectors, but rather few of them involved employees from industries with a more extensive environmental impact, such as the coal or oil power generation industries [19–22]. These latter studies focused on the role of organizational determinants (e.g., green recruitment and selection, green training and development, green performance management and appraisal, and green rewards and compensation) on employees' pro-environmental behaviors without accounting for internal antecedents [21,22].

1.2. Rationale and Aims of This Study

Given the abovementioned literature gaps, the present study aimed to examine the determinants of green workplace behaviors engaged in by employees in a sector with a potential extensive environmental impact, such as the energy industry, jointly accounting

for various job-related and broader (internal) individual characteristics and contextual (external) organizational determinants.

To capture the sector-specific nature of green workplace behaviors [3], employees' adoption of behaviors aimed at changing work products and processes to make them more environmentally sustainable and to avoid negative environmental impacts was assessed. Moreover, employees' ease in identifying environmental anomalies, such as near misses (potential hazard), unsafe conditions (conditions which can cause harm to people and the environment), and environmental weak signals (abnormal, minor, uncertain, and at first sight insignificant signs which can be observed in the workplace) [23,24], was also newly considered. Such behaviors have been examined in the context of occupational health and safety [23–25], but organizations are now increasingly interested in encouraging such behaviors to prevent potential major environmental disasters.

Then, alongside the well-known influence of green workplace behaviors, such as organizational determinants (perceived organizational support and pro-environmental leadership) and employees' human-nature connectedness characteristics (environmental awareness and connectedness with nature) [8], employees' proneness toward behaving pro-environmentally at work and their personality dispositions were also considered. As for personality, we focused on conscientiousness, openness, and curiosity since they seem to represent dispositions more likely to be associated with one's interest in nature and pro-environmentalism [9,15,17].

According to well-established conceptual frameworks [8,13], contextual factors interact with broad employee characteristics in predicting motivational states related to environmental sustainability, which are assumed to influence green workplace behaviors. Therefore, taking inspiration from previous conceptual models [8,11,13], we tested for the first time a model of whether organizational determinants (external to employees) as well as personality and human-nature connectedness dispositions (internal factors), prompt employees' proneness toward behaving pro-environmentally at work, which in turn mediates pro-environmental behavior at work. We might expect higher perceived organizational support, positive personality dispositions (high conscientiousness, openness to experience, and curiosity), and human-nature connectedness characteristics (high environmental awareness and greater connectedness with nature) to be associated with a greater inclination toward pro-environmental behavior at work and, in turn, with the adoption of green workplace behaviors [8,13].

2. Materials and Methods

2.1. Study Design

This is a cross-sectional study examining the associations between green workplace behaviors and different contextual and individual determinants through a self-constructed survey in a convenience sample of employees working in the energy industry sector.

2.2. Participants

A sample of energy sector employees from two organization sites was involved in this study. All employees (N = 854), from the management to the operational levels according to the organizational tenure characteristics of the organization sites, were invited to participate in this study, with no criteria for their selection. Of the employees invited, 625 (73%) agreed to participate and completed the survey. Data were screened for careless responses using long-string analysis. A total of 112 participants (18%) were excluded following this procedure, and therefore the final sample consisted of 513 employees. Table 1 shows the descriptive statistics of the sociodemographic and job-related characteristics of the sample.

Table 1. Employees' sociodemographic and job-related characteristics.

	n	%
Age		
18–30 years	105	20.04%
31–40 years	96	18.71%
41–50 years	152	29.62%
51–60 years	114	22.22%
+61 years	46	8.96%
Gender		
Male	444	86.54%
Female	39	7.60%
Prefer not to answer	30	5.84%
Educational attainment		
High school	22	4.28%
College	392	76.41%
Bachelor's degree	22	4.28%
Master's degree	75	14.61%
PhD	2	0.38%
Organizational tenure		
Senior management	22	4.28%
Middle management	69	13.45%
Operational	423	82.61%
Percentage of time working in the plant		
None	117	22.80%
Less than 50% of working time	182	35.47%
More than 51% of working time	214	41.71%
Seniority in the company		
Less than 1 year	66	12.9%
1–5 years	91	17.7%
6–10 years	48	9.4%
11–20 years	146	28.5%
More than 21 years	162	31.6%

2.3. Materials

The BE-GREEN Survey was designed ad hoc for the present study and contained 61 items organized into 11 subscales. Table 2 shows the structure and content of the BE-GREEN Survey, along with the reliability of all subscales (reporting high internal consistency; α from 0.75 to 0.94). Forty-one out of 61 items were selected and adapted from extant instruments, carefully choosing those items which more likely reflected the construct of interest according to the psychometric characteristics of the original questionnaire. The remaining 20 items were taken from a previous survey implemented by the organization to assess environmental culture and employees' ease of adopting behaviors which prevented potential major environmental disasters (i.e., identifying environmental anomalies). This choice was made to capture perceived environmental support as well as green workplace behaviors with statements which specifically reflected the characteristics of the organization in which the employees operated, as well as the sector-specific nature of green workplace behaviors in which they were prompted to engage, using a terminology shared within the organization which was familiar for them.

Table 2. Structure and content of the BE-GREEN Survey and the reliability of each subscale.

Section	Scale	Example of Items	Source	n° Item	α
1: Green workplace behaviors	Green workplace behaviors	«I fulfilled responsibilities specified in my job description in environmentally friendly ways»	Adapted from Francouer et al. [3]	5	0.90
	Management of environmental anomalies	«Employees detect environmental weak signals»	Ad hoc *	6	0.91
2: Organizational support	Environmental culture and organizational support	«Environmental issues are managed with the same level of attention as process safety and worker safety ones are managed»; «The operational procedures and instructions to act pro-environmentally during job duties are shared, clear, easygoing, and updated»	Ad hoc *	14	0.94
	Environmentally-specific servant leadership	«My manager acts as an environmental role model»	Adapted from Robertson et al. [26]	4	0.93
3: Job-related individual characteristics	Motivation toward acting pro-environmentally at work	«I try to make innovative environmental suggestions to improve the organization»	Adapted from Francouer et al. [3]	6	0.87
	Attitudes toward acting pro-environmentally at work	«Acting pro-environmentally in the workplace is important to me»	Adapted from Blok et al. [27]	4	0.82
4: General individual characteristics	Conscientiousness	«I consider myself a person who does things efficiently»	Taken from Guido et al. [28]	4	0.86
	Openness	«I consider myself a person who is inventive»	Taken from Guido et al. [28]	4	0.75
	Curiosity	«I view challenging situations as opportunities to grow and learn»	Taken from Kashdan et al. [29]	4	0.83
	Connectedness to nature	«I feel very connected to all living things and the Earth»	Adapted from Nisbet and Zelenski [30]	4	0.82
	Environmental awareness and concerns	«I can see with my own eyes that the environment is deteriorating»	Adapted from Diekmann and Preisendorfer [31] and Blok et al. [27]	6	0.83

Note. * The items for the management of environmental anomalies, environmental culture, and organizational support subscales were taken from a previous internal survey for employees on environmental awareness promoted by the organization.

The BE-GREEN Survey subscales were divided into four sections. Section 1 measured employees' adoption of green workplace behaviors toward avoiding harm, working sustainably, and managing environmental anomalies (near misses, unsafe conditions, and weak signals) which could anticipate the occurrence of incidents with harmful environmental impacts. Section 2 examined employees' perceived organizational commitment and support toward environmental protection. Section 3 assessed employees' motivation and attitudes toward acting pro-environmentally at work, while Section 4 examined broader individual characteristics linked to personality dispositions (openness, conscientiousness, and curiosity), connectedness to nature, as well as environmental awareness and concerns.

For each item, the employees were asked to express the level of agreement on a 6 point Likert scale (from 1 "completely disagree" to 6 "completely agree").

A final section contained 8 items for which to collect sociodemographic (age range, gender, and educational attainment) and job-related (organizational tenure; percentage of time working in the energy plant, and seniority in the company) information.

2.4. Procedure

Data were collected in October 2022 and April 2023. Employees were sent an e-mail explaining the nature and significance of the research and including a Qualtrics link to the BE-GREEN Survey. Participants were asked to complete the survey individually and anonymously during working hours. After giving their informed consent, they completed all survey sections, which were presented in a fixed order. Instructions were given at the beginning of each section to guide participants in completing it. Weekly messages were sent to employees to remind them to complete the survey.

2.5. Statistical Analyses

All analyses were run using R (R Core Team, 2020 version 4.3.1). A structural equation model was fitted to examine the relations between employees' green workplace behaviors and organizational and individual determinants.

The subscales of the BE-GREEN Survey were therefore aggregated to create the following latent factors: (1) green workplace behaviors, comprising subscales of green workplace behaviors toward avoiding harm and working sustainably and the management of environmental anomalies with potential harmful environmental impacts [3]; (2) perceived organizational support, represented by the two contextual antecedents of employees' perceived organizational commitment and support of environmental protection and environmentally specific servant leadership of the manager [6–8]; (3) proneness to act pro-environmentally at work, consisting of the two subscales of motivation and attitudes toward acting pro-environmentally at work [3,27]; (4) personality dispositions, comprising openness, conscientiousness, and curiosity [8,11,15–17]; and (5) human-nature connectedness dispositions, represented by the two subscales of employees' connectedness to nature and environmental awareness and concern [32,33]. For each factor, a latent score was calculated within the model, using the total scores of each corresponding subscale as indicators.

Regarding the structural part, in line with well-established conceptual frameworks [8,13], the model (see Figure 1 for a graphical representation) assumed that employees' proneness toward behaving pro-environmentally at work would mediate the effects of organizational determinants as well as broader individual characteristics related to personality dispositions and human-nature connectedness on employees' adoption of green behaviors at work. Therefore, the model considered the direct effects of the four latent scores of employees' proneness toward behaving pro-environmentally, personality, human-nature connectedness, and perceived organizational support on the latent score of green workplace behaviors, along with the direct effects of personality, human-nature connectedness, and perceived organizational support, on employees' proneness toward behaving pro-environmentally. The indirect effects of personality, human-nature connectedness, and perceived organizational support—mediated by employees' proneness toward behaving pro-environmentally—on green workplace behaviors were also estimated.

The same model was rerun while controlling for employees' seniority in the company, organizational tenure, and percentage of time working in the energy plant, due to their potential influence on the considered variables [9].

The goodness of the models' fit to the data was assessed using classical cutoffs for multiple indexes: the comparative fit index (CFI; acceptable if >0.90), the normed fit index (NFI; acceptable if >0.90), and the standardized root mean square residuals (SRMR; acceptable if >0.08).
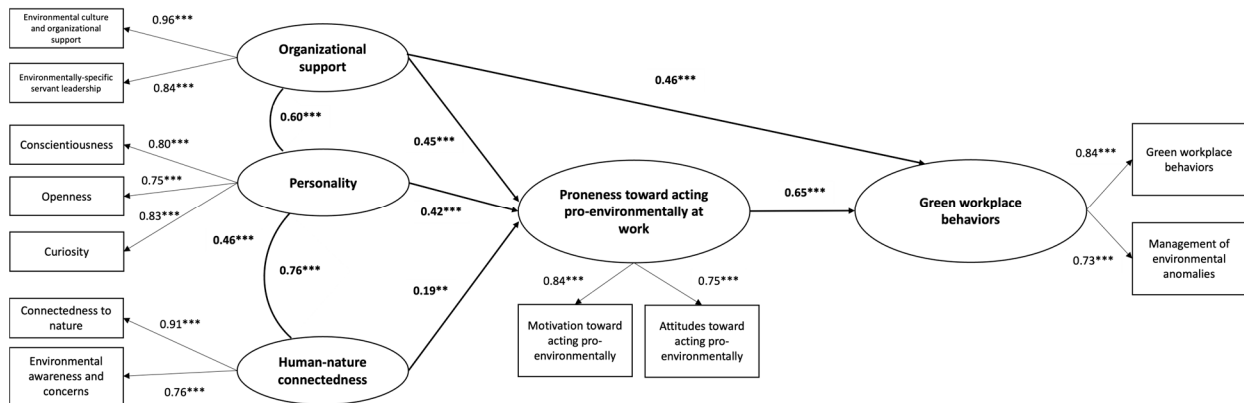
Figure 1. Results (standardized solutions) of the structural equation model testing the associations between green workplace behaviors and employees' proneness toward acting pro-environmentally at work as well as personality, human-nature connectedness, and perceived organizational support. ** $p < 0.01$; *** $p < 0.001$.

3. Results

Tables S1 and S2 (see the Supplementary Materials) report the descriptive statistics and matrix of correlations between the variables of interest and detailed values for the direct and indirect relations.

The model tested (see Figure 1) showed acceptable fit indices (CFI: 0.949; NFI: 0.940; SRMR: 0.037). The direct relations concerned employees' proneness toward behaving pro-environmentally at work and green workplace behaviors (B = 0.65, $p < 0.001$), with those employees reporting greater motivation and more pro-active attitudes toward behaving pro-environmentally at work engaging in more green workplace behaviors, as well as perceived organizational support and green workplace behaviors (B = 0.46, $p < 0.001$), with a higher perception of organizational support and commitment toward environmental sustainability being related to greater engagement in green workplace behaviors. Significant direct relations between perceived organizational support (B = 0.45, $p < 0.001$), personality (B = 0.42, $p < 0.001$), and human-nature connectedness characteristics (B = 0.19, $p = 0.002$) and employees' proneness toward behaving pro-environmentally at work also emerged. No significant direct effects from personality and human-nature connectedness dispositions on green workplace behaviors were found. The indirect relations concerned green workplace behaviors and perceived organizational support (B = 0.29, $p < 0.001$), personality (B = 0.28, $p = 0.002$), and human-nature connectedness (B = 0.12, $p = 0.015$) through the mediation of employees' proneness toward behaving pro-environmentally at work.

When controlling for employees' seniority in the company, organizational tenure, and percentage of time working in the energy plant (see Table S3), the model's fit was acceptable but slightly worse than the model without covariates (CFI: 0.931; NFI: 0.917; SRMR: 0.045). The results were confirmed, apart from the indirect effect of human-nature connectedness on green workplace behaviors, through the mediation of employees' proneness toward behaving pro-environmentally at work, which was no longer significant. The percentage of time working in the energy plant was associated with green workplace behaviors, suggesting that the more employees work in the energy plant, the more they reported engaging in green workplace behaviors. Finally, seniority in the company was associated with proneness toward behaving pro-environmentally at work, suggesting that senior employees reported greater motivation and pro-active attitudes toward environmental sustainability.

4. Discussion

Encouraging green workplace behaviors toward environmental sustainability is becoming a priority, especially for organizations with harmful environmental impacts. The present study aimed to further elucidate to what extent contextual (organizational) determi-

nants and employees' internal, individual characteristics jointly prompt green workplace behaviors in the energy industry.

The results of the tested structural equation model showed, consistent with our expectations, a direct relation between organizational determinants (perceived organizational support and the environment-related involvement of superiors or supervisors) and green workplace behaviors. These findings align with previous evidence mainly focused on "green office" behaviors [8,9] and further expanded them to behaviors meant to engaging in work duties in the context of harmful environmental impact, acting pro-environmentally to avoid negative environmental consequences, and preventing potential major environmental disasters as well. Such a pattern of results further confirms that perceived organizational support, green climate, and the involvement of superiors or supervisors enacts employees' green workplace behaviors [8,9]. Thus, the key role of green human resource management practices and initiatives aimed at sensitizing, instructing, and training employees to act pro-environmentally at work to contribute to the organization's environmental sustainability seems paramount [34].

Furthermore, a direct relation between employees' proneness toward acting pro-environmentally at work and green workplace behaviors emerged. Of greater interest is that both the effect of perceived organizational support and personality and human-nature connectedness prompted green workplace behaviors through the mediation of employees' proneness toward behaving pro-environmentally at work. These findings, in line with well-established conceptual frameworks [8,13] and our expectations, expand previous evidence collected in the working context of harmful environmental impacts, mainly focusing on the role of organizational determinants, and they suggest that employees' individual characteristics could supplement contextual factors and concur in influencing attitudes and motivations related to environmental sustainability, which in turn prompts them to endorse green workplace behaviors [5,8,13]. In particular, attitudes and motivations related to environmental sustainability seem to represent important drivers of green workplace behaviors, as further investigated by our model [8,10]. Moreover, personality and human-nature connectedness dispositions are confirmed to impact individuals' pro-environmental attitudes and behaviors [9,10,15,17]. The extent to which individuals feel like part of nature as well as experience and are aware of the current environmental issues and how much human welfare and nature conservation are interconnected has indeed been consistently found to be related to everyday pro-environmental attitudes and behaviors [32,33] and green workplace behaviors as well [9]. At the same time, a tendency to be responsible, organized, hard-working, and goal-directed, as well as a propensity for intellectual curiosity and the desire to acquire new knowledge and master new behavioral strategies, characteristics of individuals high in conscientiousness, openness, and curiosity, have already been found to influence pro-environmental attitudes and behaviors in everyday life [15,35] and in the workplace [9,15–17]. Our findings confirm that such sources of individual difference also explain pro-environmental attitudes and behaviors toward avoiding negative environmental consequences and preventing potential major environmental disasters among employees enrolled in the context of harmful environmental impacts, such as in the energy industry. Interestingly, personality and human-nature connectedness, as addressed here, were also found to be positively associated with perceived organizational support. Such a pattern of findings, which merits further exploration, suggests how such tendencies might predispose employees to be particularly sensitive to the pro-environmental culture prompted by an organization, thereby influencing the implementation of organizations' policies and initiatives toward achieving environmental sustainability goals [34].

It is worth mentioning that, when controlling for employees' seniority in the company, job role, and percentage of time working in the energy plant, the indirect effect of human-nature connectedness on green workplace behaviors through employees' proneness toward behaving pro-environmentally at work was no longer significant. Higher seniority in the company was then associated with a greater proneness to behaving pro-environmentally at work. Such a result calls upon the need to account for cohort effects and for the tendency

of senior workers to report stronger green workplace attitudes and behaviors, as shown in previous research [12,32,33,36]. The association between the percentage of time working in the energy plant and pro-environmental behaviors might instead be due to how green workplace behaviors were operationalized in our survey. They did indeed purposely capture sector-specific green workplace behaviors, but they were more likely to apply to employees managing operational processes and products.

These interesting findings notwithstanding, some limitations should, however, be acknowledged. The cross-sectional nature of our study did not allow causal or bidirectional inference. Therefore, future research is needed in order to strengthen the robustness of our results and gain a more comprehensive understanding of the interplay between external and internal antecedents of employees' green workplace attitudes and behaviors. Another limitation lies in that, despite the large sample size, this was a convenience sample of employees from the energy industry, therefore involving a sample more likely representative of the general population. This as well as comparing representative samples of employees from different industry sectors remain issues which deserve to be further explored in future research. Furthermore, we attempted to balance our aim of examining different organizational and individual determinants with the time constraints of the survey administration required by the working context. Since participants needed to fill in the survey, interrupting their activities during their working hours, the available time to complete the study without interfering with job duties required using a self-constructed survey and prevented employing more comprehensive instruments to assess both green workplace behaviors and their organizational and individual determinants. Future studies should therefore replicate and expand our results by including more comprehensive, well-proven instruments or, for instance, by planning for different assessment sessions compatible with the organizational and time constraints dictated by work duties. Future studies should also attempt to use objective measures of pro-environmental behaviors alongside a self-reporting approach (as used here), which is more likely to be susceptible to bias [37]. Nevertheless, this study takes an additional step toward a new understanding of the simultaneous role of external (organizational support) and internal individual (personality and human-nature connectedness) factors in relation to employees' proneness toward behaving pro-environmentally at work and green workplace behaviors in an underexplored context, such as in the oil energy industry.

5. Conclusions

To conclude, our study further highlights that contextual-organizational determinants foster employees' green workplace behaviors. They also suggest how, alongside organizational determinants, individual dispositions as far as personality and human-nature connectedness prompt employees' attitudes and motivations toward acting pro-environmentally at work as well, thereby driving them to adopt green workplace behaviors.

Our results provide useful experimental and practical implications for addressing environmental issues in the workplace:

- Green workplace behaviors represent active, goal-directed behaviors through which employees can "make the difference" for organizations to achieve their environmental sustainability goals. Therefore, examining (from an experimental viewpoint) and accounting for (in the workplace) the simultaneous role and interplay between not only contextual but also individual antecedents, which are related to employees' personality dispositions, knowledge, attitudes, and beliefs as well as motivation is paramount to understanding further how to drive employees to act in environmentally sustainable ways at work, especially in industry sectors with higher ostensive environmental impacts [8,9].
- Understanding the factors and processes underlying environmental attitudes and behaviors at work through the lens of environmental, organizational and social psychology as well [38] could, in turn, allow organizations to select appropriate human resource management practices and initiatives [8,9] or drive the development and

implementation of intervention strategies capable of creating opportunities and counteracting barriers to employees engaging in green workplace behaviors. Psychoeducational interventions aimed at increasing environmental awareness, addressing the pro-environmental aspects of core and discretionary job-related tasks, and guiding employees to understand which individual skills could allow them to engage in virtuous sustainability behaviors and avoid counterproductive sustainability behaviors could be a valuable approach to motivating employees to act pro-environmentally at work, thereby favoring organizational environmental sustainability.

Supplementary Materials: The following supporting information can be downloaded at https://www.mdpi.com/article/10.3390/su162411188/s1. Table S1. Descriptive statistics and matrix of correlations of the BE-GREEN Survey subscales. Table S2. Results (standardized solutions) of the structural equation model testing the associations between green workplace behaviors and employees' proneness toward acting pro-environmentally at work, personality, human-nature connectedness characteristics, and perceived organizational support. Table S3. Results (standardized solutions) of the structural equation model testing the associations between green workplace behaviors and employees' proneness toward acting pro-environmentally at work, personality, human-nature connectedness characteristics, and perceived organizational support, controlling for seniority in the company, organizational tenure, and percentage of time working in the energy plant.

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