Social Behavior and Personality
an international journal

Social Behavior and Personality, Volume 53, Issue 1, e14009
https://doi.org/10.2224/sbp.14009
www.sbp-journal.com

Linking green transformational leadership to employee green behavior: The moderating role of green psychological climate

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How to cite: Shi, C., & Liang, H. (2025). Linking green transformational leadership to employee green behavior: The moderating role of green psychological climate. *Social Behavior and Personality: An international journal, 53*(1), e14009

There has been significant scholarly interest in the phenomenon of employee green behavior, largely due to its perceived impact on organizational ecological performance. In this research we examined the impact of green transformational leadership on employee green behavior, with a particular focus on the moderating effect of green psychological climate. We administered a survey to 425 part-time Master of Business Administration students, and the results demonstrated that both green transformational leadership and green psychological climate were significant predictors of employee green behavior. Furthermore, green psychological climate moderated the relationship between green transformational leadership and employee green behavior. These findings make a valuable contribution to the existing research by shedding light on the interplay among green transformational leadership, green psychological climate, and employee green behavior.

Keywords
green transformational leadership, green psychological climate, employee green behavior, environmental sustainability

Article Highlights

- Green transformational leadership was found to predict employee green behavior.
- Green psychological climate promoted employee green behavior.
- Green psychological climate moderated the connection between green transformational leadership and employee green behavior.

The swift and accelerating depletion of the Earth's natural resources, alongside increases in pollution and biodiversity loss resulting from human activities—notably economic endeavors like industrial production, electricity generation, transport, and agriculture—increasingly pose a profound threat to the enduring existence of biological life (R. L. Singh & Singh, 2017). In response to these challenges, governments worldwide have committed to ambitious objectives, such as substantial reductions in carbon emissions and achieving net-zero status by the year 2050 (Lau & Tsai, 2023). Consequently, organizations have incorporated environmental performance objectives into their *triple bottom line strategy*, an approach to business that considers three crucial dimensions of performance: social, environmental, and financial (Bohlmann et al., 2018).

Evidence suggests that enhancing an organization's environmental performance is intricately linked to the behaviors of individual employees (Gill et al., 2021). Hence, there has been a burgeoning interest among organizational scholars in investigating the facilitators of *employee green behavior*, which generally encompasses activities aimed at conserving natural resources, preserving the ecological environment, and mitigating environmental degradation to enhance

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environmental quality (Norton et al., 2015). Unsworth et al. (2021) pointed out that current scholarly research has predominantly concentrated on individual traits, leadership traits, and organizational factors. In particular, green transformational leadership (Agrawal & Pradhan, 2023; Chen & Wu, 2022) and green psychological climate (Norton et al., 2017; Sabokro et al., 2021) have emerged as focal points of interest comprising effective tools in green management.

Green transformational leadership seeks to incentivize subordinates toward the attainment of environmentally conscious objectives while fostering an inclination for environmentally friendly behaviors surpassing conventional expectations (Chen & Wu, 2022). Researchers have suggested that green transformational leadership plays a crucial role in achieving environmental sustainability (Çop et al., 2021), and it can effectively facilitate green human resource management and environmentally proactive strategies in organizations (Farrukh et al., 2022; Huang et al., 2021). *Green psychological climate* represents a collection of contextual factors implemented within companies to facilitate the realization of their environmental sustainability objectives by implementing effective environmental protection policies (Sabokro et al., 2021). Nonetheless, prior research has predominantly addressed the impacts of green transformational leadership and green psychological climate in a compartmentalized manner, neglecting the synergistic mechanism between the two in affecting employee green behavior (Agrawal & Pradhan, 2023; Chen & Wu, 2022; Sabokro et al., 2021).

Evidently, green transformational leadership and green psychological climate share a common objective of fostering and endorsing ecologically responsible behaviors. Grounded in this shared purpose, these variables can concurrently coexist within an organization, collaboratively shaping employees' environmentally conscious conduct. Within the organizational behavior domain, the organizational climate typically functions as a moderator between organizational leadership and employee behaviors (see, e.g., Zehir et al., 2014). Further, green psychological climate holds the capacity to influence environmental outcomes while moderating the cascading impact of such outcomes (Zientara & Zamojska, 2018).

Against this backdrop, we amalgamated green transformational leadership and green psychological climate to examine their collective impact on employee green behavior. In particular, we aimed to elucidate the moderating role of green psychological climate in the link between green transformational leadership and employee green behavior.

The Current Study

Transformational leaders are characterized by their ability to craft inspiring visions that motivate their subordinates to proactively complete tasks and achieve objectives (Rafferty & Griffin, 2004). Within the realm of environmental sustainability, green transformational leaders offer employees a distinct vision, inspiration, and motivation while also addressing their developmental requirements to facilitate the attainment of the organization's environmental objectives (S. K. Singh et al., 2020). Moreover, green transformational leaders dedicate themselves to sustainability via personal activities and behaviors, functioning as role models by engaging in green initiatives and making environmentally conscious decisions (Kura, 2016). This demonstration effect exerts a significant influence on employees, encouraging them to mirror their leaders' behaviors (Kura, 2016). Central to green transformational leadership is the promotion of green values, which shape the values of subordinates, foster alignment with those of their leaders, and culminate in the manifestation of green behaviors (Wang et al., 2018). Prior research has suggested that green transformational leadership plays a pivotal role in fostering green practices among employees (Agrawal & Pradhan, 2023; Chen & Wu, 2022). Hence, we proposed the following hypothesis:
Hypothesis 1: Green transformational leadership will predict employee green behavior.

Organizational climate determines the effectiveness of leadership and has been examined as a moderating factor in the link between leadership and its effectiveness (Akıncı et al., 2022; Khattak et al., 2017; Zehir et al., 2014). Organizational psychological climate is influenced by employees' social interactions, which shape their understanding of the values embedded in the organization's policies, practices, and procedures (Kuenzi & Schminke, 2009). Employees internalize and explain the management practices and policies of the organization, leading to the acceptance of the organization's values and the subsequent alignment of their behaviors with these values (Nishii et al., 2008). Thus, when

leaders exhibit green transformational leadership behaviors, such as articulating a clear vision for sustainability and exemplifying environmentally friendly practices, employees working in a high-level green psychological climate tend to resonate with these behaviors and feel empowered to engage in sustainable practices themselves (Norton et al., 2017; Wang et al., 2018). In addition, drawing on social cognitive theory (Bandura, 1988), individuals operating in a high-level green psychological climate are expected to experience cognitive consistency and congruence when exposed to green transformational leadership behaviors. Consequently, the combination of a supportive green climate and transformational leadership practices is posited to foster coherence and alignment in individuals' perceptions and behaviors, resulting in a stronger relationship of green leadership to employee green behavior. Furthermore, green psychological climate serves to facilitate the intention to comply with environmental sustainability regulations and guidelines among employees, leading to a higher manifestation of green behaviors (Norton et al., 2017; Sabokro et al., 2021). Hence, we proposed the following hypotheses:

Hypothesis 2: Green psychological climate will predict employee green behavior.

Hypothesis 3: Green psychological climate will moderate the relationship between green transformational leadership and employee green behavior, such that the relationship will be stronger (vs. weaker) when green psychological climate is high (vs. low).

The research model of the current study is shown in Figure 1.

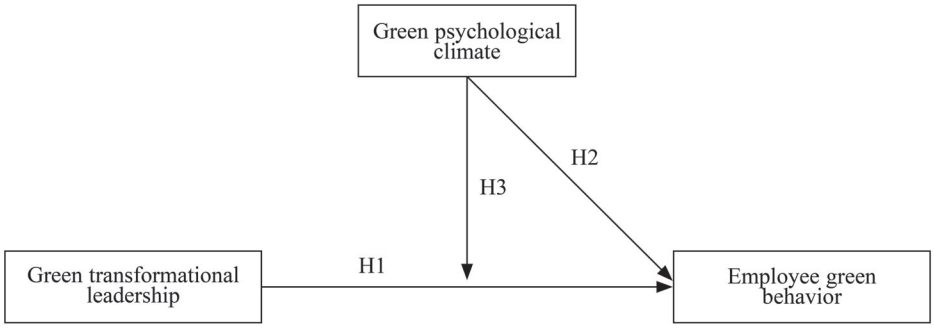

Figure 1. *Hypothesized Model*

Method

Participants and Procedure

Owing to the challenges encountered in obtaining clearance from workplace managers for data collection, we opted to gather data from part-time Master of Business Administration students enrolled at Shanghai University and Zhejiang University in China. The study was granted approval by the Academic Committee at Huzhou College. During designated class hours, we distributed the paper-based questionnaire to the participants and collected it from them after completion. No reward was offered for participation. We assured anonymity and confidentiality, and participants gave their informed consent. We disseminated 600 surveys, yielding 425 usable responses (response rate = 70.83%), with 175 forms discarded due to incomplete answers. Table 1 presents the participants' demographic characteristics.

Table 1. *Respondents' Demographic Characteristics*

Item	Category	*n*	%	*M*	*SD*
Age (years)				33.28	12.57
Sex	Women	208	48.94		
	Men	217	51.06		
Position	Marketing and sales	139	32.71		
	Technical	75	17.65		
	Administrative	157	36.94		
	Other	54	12.70		

Note. $N = 425$.

Measures

Two bilingual scholars proficient in both languages undertook translation of the questionnaire from English into Chinese, then performed a back-translation into English. They addressed any ambiguities encountered during this process in subsequent deliberations. Furthermore, we conducted focus-group consultations to systematically investigate the suitability and relevance of the employed measures.

Green Transformational Leadership

We adopted Chen and Wu's (2022) three-item measure of green transformational leadership. A sample item is "My leader motivates me to work in an environmentally friendly way." Items are rated on a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*).

Green Psychological Climate

We adopted Sabokro et al.'s (2021) five-item measure of green psychological climate. A sample item is "The company has announced general environmental policies at the workplace." Items are rated on a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*).

Employee Green Behavior

We adopted Norton et al.'s (2017) five-item measure of employee green behavior. A sample item is "Thinking about your work today, to what extent did you avoid waste?" Items are rated on a 5-point Likert scale ranging from 1 (*never*) to 5 (*a great deal*).

Results

Preliminary Tests

Utilizing Amos 22.0 software, we conducted a confirmatory factor analysis to assess the measurement model. As presented in Table 2, composite reliability and Cronbach's alpha values exceeded .70, signifying satisfactory internal consistency and reliability within the study constructs. Furthermore, factor loadings were greater than .70, indicating strong factor representation. The average variance extracted (AVE) for each construct surpassed the criterion of .50, confirming convergent validity. The square root of the AVE for each construct exceeded its correlation with any other construct, supporting the measures' discriminant validity. Square roots of AVE are shown in parentheses in Table 2. In addition, the three-factor measurement model demonstrated adequate fit indices, normed fit index = .96, comparative fit index = .99, root-mean-square residual = .05, root-mean-square error of approximation = .03.

Table 2. *Means, Standard Deviations, and Correlations for Study Variables*

Variable	1	2	3	*M*	*SD*	α	CR
1. Green transformational leadership	(.73)			4.03	0.96	.82	.78
2. Green psychological climate	.48**	(.72)		4.12	1.16	.88	.84
3. Employee green behavior	.44**	.53**	(.73)	3.95	0.76	.90	.85

Note. $N = 425$. Square roots of average variance extracted are shown in parentheses on the diagonal. CR = composite reliability.
** $p < .01$.

Hypothesis Testing

To examine our hypotheses, we conducted a hierarchical multiple regression analysis using SPSS 20.0. At Step 1 we entered age and gender; at Step 2 we included green transformational leadership and green psychological climate. The interaction between green transformational leadership and green psychological climate was assessed at Step 3. Table 3 presents the regression analysis results.

The significant path from green transformational leadership to employee green behavior supported Hypothesis 1. Further, green psychological climate predicted employee green behavior; thus, Hypothesis 2 was supported. The combined impact of green transformational leadership and green psychological climate was also significant, indicating that the latter variable moderated the link between green transformational leadership and employee green behavior. Therefore, Hypothesis 3 was supported.

Table 3. *Results of Regression Analysis*

	Model 1			Model 2			Model 3		
	SE	*t*	β	*SE*	*t*	β	*SE*	*t*	β
Step 1: Control variables									
Age	0.16	1.15	.12	0.13	1.48	.12	0.12	1.77	.14
Sex	0.18	1.09	.11	0.14	0.10	.01	0.14	0.36	.03
Step 2: Main effects									
Green transformational leadership				0.08	2.76	.23**	0.08	2.38	.20*
Green psychological climate				0.11	6.24	.53**	0.11	6.49	.54**
Step 3: Interaction effect									
Green transformational leadership × Green psychological climate							0.12	2.37	.19*
R^2	.03			.44			.47		
F	1.45			17.63**			15.94**		

Note. $N = 425$.
* $p < .05$. ** $p < .01$.

We conducted a simple slope test to further investigate the moderating effect of green psychological climate. The results in Figure 2 suggest the relationship of green transformational leadership to employee green behavior was stronger when green psychological climate was high, $\beta = .37$, $p < .01$, than when it was low, $\beta = .06$, *ns*. Therefore, Hypothesis 3 was further supported.

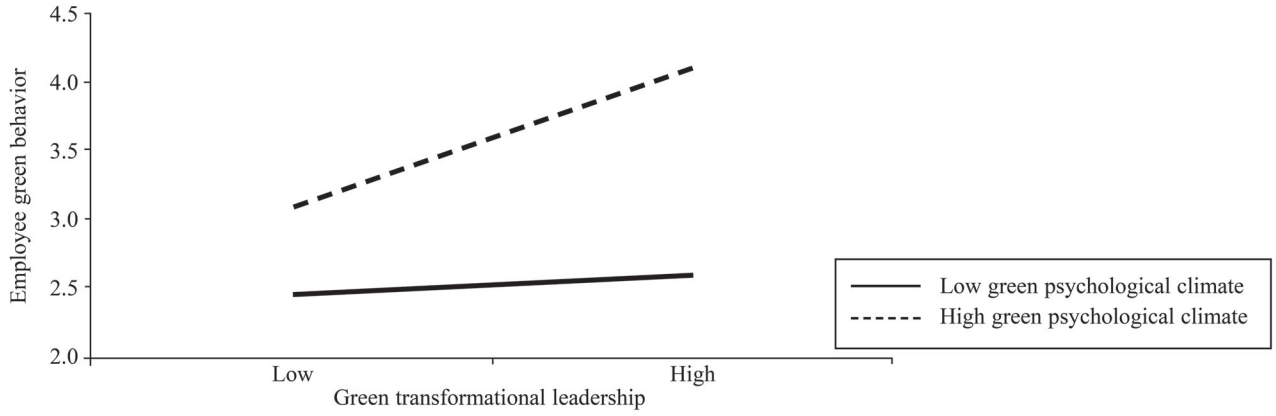

Figure 2. *Moderating Effect of Green Psychological Climate*

Discussion

In light of escalating environmental challenges, the enhancement of employee green behavior has emerged as a critical issue across various societal domains. We posited that green transformational leadership and green psychological climate would serve as two situational variables for anticipating employee green behavior, introducing their combined effect as a predictive factor for such behavior. Our results demonstrate that green transformational leadership and green psychological climate had independent predictive capabilities for employee green behavior. Furthermore, our investigation revealed the moderating role of green psychological climate in the link between green transformational leadership and employee green behavior. These findings carry significant theoretical and practical implications.

Theoretical Implications

First, our finding that green transformational leadership was a predictor of employee green behavior aligns with prior scholarly works (Agrawal & Pradhan, 2023; Chen & Wu, 2022). This discovery holds significance, as green transformational leaders are dedicated to persuading and energizing employees to comprehend organizational environmental sustainability goals by offering clear objectives, inspiration, vision, and enthusiasm, while also addressing their requirements to promote green performance. Our result underscores the idea that the role modeling of green transformational leaders induces green behaviors among subordinates.

Second, our results indicate the predictive utility of green psychological climate in promoting employee green behavior, which coincides with the findings of Norton et al. (2017) and Sabokro et al. (2021). The presence of a green psychological climate in work environments fosters comprehension and conviction among individuals regarding the organization's policies, procedures, and optimal practices related to the environment, thereby mirroring the green values upheld by the organization.

Third, our findings indicate that green psychological climate enhanced the association between green transformational leadership and employee green behavior. Organizational climate typically functions as a moderator in the link of organizational leadership to employee behaviors (Zehir et al., 2014). Similarly, our research supported the moderating role of green psychological climate in the link between green transformational leadership and employee green behavior. This discovery implies that green psychological climate is useful in promoting green behaviors only when it coincides with greater green transformational leadership. Historically, researchers have investigated the effects of green transformational leadership on employee green behavior, as well as the influence of green psychological climate on such behavior (Agrawal & Pradhan, 2023; Chen & Wu, 2022; Sabokro et al., 2021). However, the combined impact of these

two significant contextual factors has been overlooked. Our study has addressed this gap by elucidating the moderating role of green psychological climate, thus enhancing the integration of green leadership and green climate domains, and advancing comprehension of mechanisms fostering environmentally responsible behavior in workplace settings.

Practical Implications

Our findings hold considerable practical significance in the context of promoting employee green behavior. Organizations pursuing the stimulation of such behavior should not focus solely on training green transformational leaders or cultivating a green organizational climate; rather, it is crucial to emphasize the integration of both aspects to effectively enhance employee green behavior. Specifically, organizations should allocate resources toward training and development programs for leaders, targeting the enhancement of their green leadership skills. This encompasses the encouragement of behaviors such as inspiring vision, fostering innovation, and promoting employee involvement in environmental initiatives. Simultaneously, organizations should strive to formulate a comprehensive organizational environmental strategy and communicate it persuasively and consistently. These efforts will facilitate the creation and sustenance of a favorable green psychological climate.

Limitations and Directions for Future Research

First, our use of a cross-sectional research design constrains the capacity to establish causal inferences. Subsequent investigations could leverage longitudinal designs to substantiate causal relationships. Second, we gauged green behavior through participants' self-reports, rather than utilizing more objective measures such as observations or archival data. As self-report measures may be susceptible to social desirability bias, future inquiries could incorporate alternative assessment methods, such as soliciting evaluations of employee green behavior from others or integrating objective data alongside self-reports. Third, we examined only green psychological climate as a moderator of the link between green transformational leadership and employee green behavior. Future researchers could explore alternative mechanisms influencing this relationship, such as organizational support.

Acknowledgments

This study was supported by the Zhejiang Provincial Philosophy and Social Science Planning Project (24NDJC033YB).

The data that support the findings of this study are available on request from the corresponding author.

References

Agrawal, S., & Pradhan, S. (2023). Employee green behavior in hotels: The role of green human resource management, green transformational leadership and value congruence. *Consumer Behavior in Tourism and Hospitality, 18*(2), 241–255.
https://doi.org/10.1108/CBTH-11-2022-0191

Akıncı, G., Alpkan, L., Yıldız, B., & Karacay, G. (2022). The link between ambidextrous leadership and innovative work behavior in a military organization: The moderating role of climate for innovation. *Sustainability, 14*(22), Article 15315.
https://doi.org/10.3390/su142215315

Bandura, A. (1988). Organisational applications of social cognitive theory. *Australian Journal of Management, 13*(2), 275–302.
https://doi.org/10.1177/031289628801300210

Bohlmann, C., Krumbholz, L., & Zacher, H. (2018). The triple bottom line and organizational attractiveness ratings: The role of pro-environmental attitude. *Corporate Social Responsibility and Environmental Management, 25*(5), 912–919.
https://doi.org/10.1002/csr.1507

Chen, T., & Wu, Z. (2022). How to facilitate employees' green behavior? The joint role of green human resource management practice and green transformational leadership. *Frontiers in Psychology, 13*, Article 906869. https://doi.org/10.3389/fpsyg.2022.906869

Çop, S., Olorunsola, V. O., & Alola, U. V. (2021). Achieving environmental sustainability through green transformational leadership policy: Can green team resilience help? *Business Strategy and the Environment, 30*(1), 671–682. https://doi.org/10.1002/bse.2646

Farrukh, M., Ansari, N., Raza, A., Wu, Y., & Wang, H. (2022). Fostering employee's pro-environmental behavior through green transformational leadership, green human resource management and environmental knowledge. *Technological Forecasting and Social Change, 179*, Article 121643. https://doi.org/10.1016/j.techfore.2022.121643

Gill, A. A., Ahmad, B., & Kazmi, S. (2021). The effect of green human resource management on environmental performance: The mediating role of employee eco-friendly behavior. *Management Science Letters, 11*(6), 1725–1736. https://doi.org/10.5267/j.msl.2021.2.010

Huang, S. Y. B., Ting, C.-W., & Li, M.-W. (2021). The effects of green transformational leadership on adoption of environmentally proactive strategies: The mediating role of green engagement. *Sustainability, 13*(6), Article 3366. https://doi.org/10.3390/su13063366

Khattak, S. R., Batool, S., & Haider, M. (2017). Relationship of leadership styles and employee creativity: A mediating role of creative self-efficacy and moderating role of organizational climate. *Pakistan Journal of Commerce and Social Sciences , 11*(2), 698–719. https://www.econstor.eu/handle/10419/188312

Kuenzi, M., & Schminke, M. (2009). Assembling fragments into a lens: A review, critique, and proposed research agenda for the organizational work climate literature. *Journal of Management, 35*(3), 634–717. https://doi.org/10.1177/0149206308330559

Kura, K. M. (2016). Linking environmentally specific transformational leadership and environmental concern to green behaviour at work. *Global Business Review, 17*(Suppl. 3.), 1S–14S. https://doi.org/10.1177/0972150916631069

Lau, H. C., & Tsai, S. C. (2023). Global decarbonization: Current status and what it will take to achieve net zero by 2050. *Energies, 16*(23), Article 7800. https://doi.org/10.3390/en16237800

Nishii, L. H., Lepak, D. P., & Schneider, B. (2008). Employee attributions of the "why" of HR practices: Their effects on employee attitudes and behaviors, and customer satisfaction. *Personnel Psychology, 61*(3), 503–545. https://doi.org/10.1111/j.1744-6570.2008.00121.x

Norton, T. A., Parker, S. L., Zacher, H., & Ashkanasy, N. M. (2015). Employee green behavior: A theoretical framework, multilevel review, and future research agenda. *Organization & Environment, 28*(1), 103–125. https://doi.org/10.1177/1086026615575773

Norton, T. A., Zacher, H., Parker, S. L., & Ashkanasy, N. M. (2017). Bridging the gap between green behavioral intentions and employee green behavior: The role of green psychological climate. *Journal of Organizational Behavior, 38*(7), 996–1015. https://doi.org/10.1002/job.2178

Rafferty, A. E., & Griffin, M. A. (2004). Dimensions of transformational leadership: Conceptual and empirical extensions. *The Leadership Quarterly, 15*(3), 329–354. https://doi.org/10.1016/j.leaqua.2004.02.009

Sabokro, M., Masud, M. M., & Kayedian, A. (2021). The effect of green human resources management on corporate social responsibility, green psychological climate and employees' green behavior. *Journal of Cleaner Production, 313,* Article 127963. https://doi.org/10.1016/j.jclepro.2021.127963

Singh, R. L., & Singh, P. K. (2017). Global environmental problems. In R. Singh (Ed.), *Principles and applications of environmental biotechnology for a sustainable future* (pp. 13–41). Springer.
https://doi.org/10.1007/978-981-10-1866-4_2

Singh, S. K., Del Giudice, M., Chierici, R., & Graziano, D. (2020). Green innovation and environmental performance: The role of green transformational leadership and green human resource management. *Technological Forecasting & Social Change, 150*, Article 119762.
https://doi.org/10.1016/j.techfore.2019.119762

Unsworth, K. L., Davis, M. C., Russell, S. V., & Bretter, C. (2021). Employee green behaviour: How organizations can help the environment. *Current Opinion in Psychology, 42*, 1–6.
https://doi.org/10.1016/j.copsyc.2020.12.006

Wang, X., Zhou, K., & Liu, W. (2018). Value congruence: A study of green transformational leadership and employee green behavior. *Frontiers in Psychology, 9*, Article 317025.
https://doi.org/10.3389/fpsyg.2018.01946

Zehir, C., Müceldili, B., Altindağ, E., Şehitoğlu, Y., & Zehir, S. (2014). Charismatic leadership and organizational citizenship behavior: The mediating role of ethical climate. *Social Behavior and Personality: An international journal, 42*(8), 1365–1376.
https://doi.org/10.2224/sbp.2014.42.8.1365

Zientara, P., & Zamojska, A. (2018). Green organizational climates and employee pro-environmental behaviour in the hotel industry. *Journal of Sustainable Tourism, 26*(7), 1142–1159.
https://doi.org/10.1080/09669582.2016.1206554