2026 Volume: 02 Issue: 03 www.ijrpa.com ISSN 2456-9995 Research Article

International Journal Research Publication Analysis

Page: 01-34

IMPACT OF GREEN HUMAN RESOURCE MANAGEMENT PRACTICES ON UNIVERSITY SUSTAINABILITY: THE MEDIATING ROLE OF GREEN PSYCHOLOGICAL CLIMATE AMONG ACADEMIC STAFF

[*1]Diyani Balthazaar, [2]Feroshiya Delima

[1]PhD Research Scholar, Woxsen University, Hyderabad, India.

[2]Undergraduate, University of Moratuwa, Sri lanka.

Article Received: 31 January 2026
Article Revised: 20 February 2026
Published on: 13 March 2026

***Corresponding Author: Diyani Balthazaar**
PhD Research Scholar, Woxsen University, Hyderabad, India.

DOI: https://doi-doi.org/101555/ijrpa.5182

ABSTRACT

This research aimed to understand and examine the effect of green human resource management (GHRM) practices on sustainable university (SU) performance in the ten largest private universities in Indonesia. The implemented sustainable performance was mediated by green psychological climate (GPC) of academic and non-academic staff (lecturers and educational staff). This research used quantitative method, with data collected through questionnaires distributed to 382 respondents. Partial Least Square Structural Equation Modleling (PLS-SEM) was adopted for data analysis and hypothesis testing. Meanwhile, the data analysis tool used SmartPLS version 4. The results showed that all hypotheses proposed statistically lead to a positive and significant effect between GHRM, GPC, and SU. Practical implications This research assisted university stakeholders in understanding that the implementation of GHRM practices, accompanied by building GPC, could effectively drive the realization of SU performance. Originality/value References were also added regarding the identification of GPC as a mediator in the relationship between GHRM and SU. GPC, as a mediator was incorporated, affecting the relationship between the effectiveness of GHRM practices and the achievement of SU performance.

KEYWORDS: Green human resource management; green psychological climate; sustainable university; environmental performance

INTRODUCTION

Sustainable organizational performance is a widely recognized concept with easily accessible information and broad consensus. This idea is grounded in the preservation and maintenance of future generations, with the foundation being environmental concern, societal values, as well as performance responsibility and accountability (Alghamdi et al., 2017). In the early 1970s, higher education institutions developed awareness of concerns stemming from sustainable performance (Finlay & Massey, 2012). Sustainability issues have become a separate agenda in the 21st century across various government, private, and educational sectors (Hussain et al., 2019), where the understanding has garnered significant attention from universities on a global basis. Subsequently, higher education institutions have translated this concept into various activities and actions, including declaring sustainable university (SU), frameworks, standards, policies, and agreed-upon assessment systems (Shriberg, 2002). This poses a dilemma, specifically for higher education institutions worldwide, in implementing sustainable performance considering the triple bottom-line aspects of environmental, social, and economic factors (Velazquez et al., 2006; Zaptcioglu Celikdemir et al., 2017). The study of "sustainable universities" should be approached from various perspectives (Schneider & Meins, 2012) to produce future generations capable of establishing environmental

sustainability (Conway et al., 2008; Gómez, 2005; Sauvé et al., 2005). This allows the university to lay a foundation by raising awareness among the academic community on the importance of implementing environmental responsibility. Currently, there are numerous studies on the topic of SU, with the majority of the main points related to green campuses that have prioritized ecological sustainability awareness through learning, research, and community service activities (Conway et al., 2008; Filho & Wright, 2002; Savage et al., 2015).

The primary factor for the success of achieving sustainable performance is human resource management. This aspect plays in implementing environmentally friendly and sustainable approaches, specifically when environmental sustainability becomes a significant agenda in various green human resource management (GHRM) research (Chiappetta Jabbour et al., 2019; Jabbour & De Sousa Jabbour, 2016; Jabbour & Santos, 2008). GHRM is based on continuous HRM practices to improve employees' green performance in the workplace, both internally and externally. The implementation objectives, such as increased environmental awareness or green behavior, differ from HRM practices, which prioritize employee

development and well-being as well as cost efficiency and productivity improvement (Renwick et al., 2013). According to Shen et al. (2018), GHRM develops employees' green competence and awareness, as well as increases motivation to participate in other important aspects such as social responsibility and environmental care. Another important objective of GHRM practice is addressing the interests of the wider community. Recent research show the crucial role of GHRM practices that affect employees' behavior, to increase the realization of sustainable performance (Dumont et al., 2017; Paillé et al., 2014; Setyadi et al., 2023). Other related research found that the success of most environmental programs established by organization relies on employees' sustainable behavior (Robertson & Barling, 2013; Vicente-Molina et al., 2013). Therefore, behavior is a contributing factor to organizational sustainability achievement (Blok et al., 2015), with consequences on environmental aspects, business, and organization members.

The sample comprised academic and non-academic staff, including lecturers and educational staff directly part of the activities in higher education, covering teaching, research, partnerships, and community service to ensure SU performance. This differs from the research conducted by Ercantan and Eyupoglu (2022), which used prospective employees (students) as samples in universities to measure the perceptions of organization implementing GHRM and the future impact. Furthermore, Akbar et al. (2020) used academic staff (lecturers) as samples to identify the effect of intellectual capital on SU through the role of organizational citizenship behavior for the environment (OCBE). Grabara et al. (2020) used educational staff samples in Polish universities to measure the effect of GHRM practices on SU through a sustainable work environment. Several literature related to SU asserted that obstacles encountered when realizing sustainable performance included the perception and awareness of employees regarding environmental concerns (Phramesti & Yuliastuti, 2013). Subsequently, SU can be achieved through human resource management practices using employees' green behavior regarding sustainable performance (Akbar et al., 2020). Hamidah et al. (2023) found the importance of university enhancing knowledge and environmental awareness behavior for students to achieve sustainability. Recent research results show that perceptions of GHRM practices in universities and students' perceptions and roles impact sustainable performance (Alghamdi et al., 2017; Dumont et al., 2017; Grabara et al., 2020; Li et al., 2011; Paillé et al., 2014; Robertson & Barling, 2013).

This research aimed to provide an understanding of GHRM practices in enhancing the awareness of academic and non-academic staff to achieve SU performance. However, there is

a need for comprehensive identification of the processes and mechanisms of the practices that can affect the perception of the entire academic community. Important discussions have been stated regarding the issue that dis- cusses how GHRM practices can enhance the environmentally friendly behavior of organizational members to achieve sustainability (Dumont et al., 2017). Additionally, there is another phenomenon, namely psychological and personal aspects because this phenomenon explains the effect of the practices related to SU performance. The lack of integration of values from pro-environment policies that can shape green behavior in the workplace is a common challenge in achieving sustainable performance. This integration is critical for shaping lecturers' and education staff perceptions and awareness, resulting in improved performance for SU. Several research identified the role of GPC, defined as the result of the social inter- action of individuals to shape perceptions and sustainability values as reflected in policies, practices, and procedures (Dumont et al., 2017; Kuenzi & Schminke, 2009). The gap stimulates this research to include
green psychological climate (GPC) as a mediation between the effect of GHRM practices on SU. GPC is the individual perception required to evaluate sustainability values in terms of green behavior (Burke et al., 2002; Schneider et al., 2013; Wright et al., 2001). GHRM practices, according to GPC research, can contribute to shaping green perceptions in employees to enhance sustainable performance (Kaya et al., 2010; Nishii et al., 2008; Paillé et al., 2014; Patterson et al., 2005). Even though the research on SU is increasing and evolving, referring to issues about several factors that can determine the perceptions of academic and non-academic staff needs further identification. This research intended to focus on the need for higher education institutions in Indonesia to understand GHRM practices mediated by GPC in realizing SU.

2. Theoretical basis and research hypothesis

2.1. Green human resource management and green psychological climate

The implementation of GHRM in organization affects the attitudes and behaviors of employees in terms of responsibility for preserving the environment, thereby generating sustainable performance (Becker & Huselid, 2006; Cherian & Jacob, 2012). Furthermore, the practices facilitate employees through environ- mentally friendly activities to cultivate awareness, shaping and refining the pro-environmental behavior in the workplace and personal lives (Cincera & Krajhanzl, 2013). According to several findings (Dumont et al., 2017; Kuenzi & Schminke, 2009), GPC has a definition of how organizational policies, procedures, practices, and values regarding environmental concerns can create social

interactions to shape employ- ees' perceptions of the green working environment. The existence of GHRM practices in organization has a significant relationship with green behavior, shaping GPC (Burke et al., 2002; Schneider et al., 2013; Wesley Schultz, 2001). Another definition introduced by Norton et al. (2014) is that GPC is the right of employees to perceive and interpret organizational policies, procedures, and practices related to environ- mental concerns. In this study, GHRM practices are expected to have a positive effect on GPC.

Literature on the identification of GHRM practices on employees' green behavior mediated by GPC has been extensively conducted (Chou, 2014; DuBois & Dubois, 2012; Nishii et al., 2008; Norton et al., 2014; Renwick et al., 2013; Tseng et al., 2013). The results showed that the role created better relationships among employees, and organizational programs related to environmental management could provide opportunities to engage more in environmentally friendly initiatives. This helps organization operate based on sustainable performance. Other research investigating the effect of the practices, in the form of trans- formational leadership, affects GPC. Consequently, employees have perceptions and insights into how organizational policies and procedures can be translated into guidelines and practices for performance (Kranabetter & Niessen, 2017; Nohe & Hertel, 2017). This is supported by the result of the research where GHRM practices, manifested through the availability of formal policies, target achievements, values, and the work environment, can shape the perceptions of sustainable performance (Kang et al., 2016; Li et al., 2011; Norton et al., 2014). Several studies on the relationship between GHRM practices and the impact on GPC report that GHRM can shape employees' green psychological awareness, resulting in green workplace behaviour. Based on these arguments, the hypothesis proposed is as follows:

Hypothesis 1 (H1): Green human resource management has a positive effect on green psychological climate.

2.2. Green human resource management and sustainable university

Currently, the need for improvement in ecological, social, and environmental sustainability has become a significant issue (Ardito & Dangelico, 2018). The implementation of environmental management is directly correlated with human resources, practically proving that the concepts are the main driver of organization (Jabbour et al., 2013). The solution is to implement GHRM, defined as a tool to enhance pro-environmental behavior in the workplace (Renwick et al., 2013). According to Amrutha and Geetha (2020), the practices and policies within organisations have relevance in the form of instruments consistent with aspects of

sustainable performance. These instruments include social justice, health and well-being, behaviour, and organisational performance.

Evidence that GHRM has a positive effect on employee behavior in terms of environmental, financial, and innovative performance has been supported by (Kim et al., 2019; O'Donohue & Torugsa, 2016; Pham et al., 2020; Singh et al., 2020; Xuecheng & Iqbal, 2022). Despite various results, practical evidence is needed regarding the effect of the practice in different conditions and contexts. From a theoretical perspective, HRM divisions have a responsibility for the implementation of environmentally friendly principles, policies, and practices (Chreif & Farmanesh, 2022; Huang et al., 2016; Shah, 2019). In terms of innovation and environmental-friendly perceptions, employees in the higher education sector enhance sustainable performance and knowledge development (Amrutha & Geetha, 2020; Mehta & Chugan, 2015).

The benefits of the practice acquired include the availability of interconnected activities through the internalization of organizational culture or values towards sustainability and green practices (Ahmad, 2015). The practices have been incorporated into strategic plans implemented by universities, and the significant role can enhance performance by stimulating innovation and perceptions of university policies. The poli- cies include environmental care values and other supporting factors such as leadership, job description, recruitment and selection, training and development, as well as employee empowerment and inclusion (Shah, 2019; Singh et al., 2020). This study expects a positive impact from the relationship between GHRM practice and SU. Based on the arguments presented above, the following hypothesis is proposed:

Hypothesis 2 (H2): Green human resource management has a positive effect on sustainable university.

2.3. Green psychological climate and sustainable university

GPC shows the relationship between employees' perceptions and organizational potential to enhance sustainability performance (Dumont et al., 2017). This adds value beyond economic aspects but rather considers the importance of ecological aspects (Chatelain et al., 2018). The results are also supported by Saeed et al. (2019) that green and pro-environmental psychological awareness among employees can drive organization to achieve sustainable performance. The concept of sustainability has evolved over the years, and the foundation is known as the triple bottom line, which includes ecological, economic, and social dimensions (Borys, 2015; Dyllick & Hockerts, 2002). Recently, sustainable performance has also become

a crucial issue in higher education (Hussain et al., 2019) and this has led university stakeholders to make various efforts in translating SU concept.

SU concept is delineated as the earnest effort of higher education institutions to mitigate the adverse effects on environmental, economic, social, and health facets. This commitment extends to the judicious use of institutional resources including teaching, research, partnerships, and community service, all directed towards enhancing sustainable lifestyle transition in the community (Velazquez et al., 2006). The role of GPC in achieving SU performance has also been proven through employees' actions and percep- tions related to environmental concerns (Whitmarsh & O'Neill, 2010). GPC also creates individual behavior to take risks in the form of personal sacrifices in realizing sustainability aspects in organization (Mustafa et al., 2015; Pierce et al., 2003; Van Dyne & Pierce, 2004). From the explanations, research addressing the effect of GPC on organizational sustainability performance has been widely conducted. However, specific research on the role of GPC is still scarce, specifically in Indonesia. Based on these arguments, the hypothesis proposed is as follows:

Hypothesis 3 (H3): Green psychological climate has a positive effect on sustainable university.

2.4. Role of green psychological climate as a mediator

GHRM practices in organization function as part of the established strategy through policies to promote stakeholders to have the same foundation and values (Saeed et al., 2019). Additionally, the practices enforce policies through reward and punishment systems, instilling priorities regarding ecological culture among stakeholders. These priorities do not solely arise from the internal organization but also develop from external influences (Chatelain et al., 2018). The goal of implementing GHRM practices is to achieve sustainable performance, meaning considerations beyond economic and social aspects. Organization makes serious efforts for the effective implementation of the practices and to cultivate environmental awareness among employees (Dumont et al., 2017; Kuenzi & Schminke, 2009).

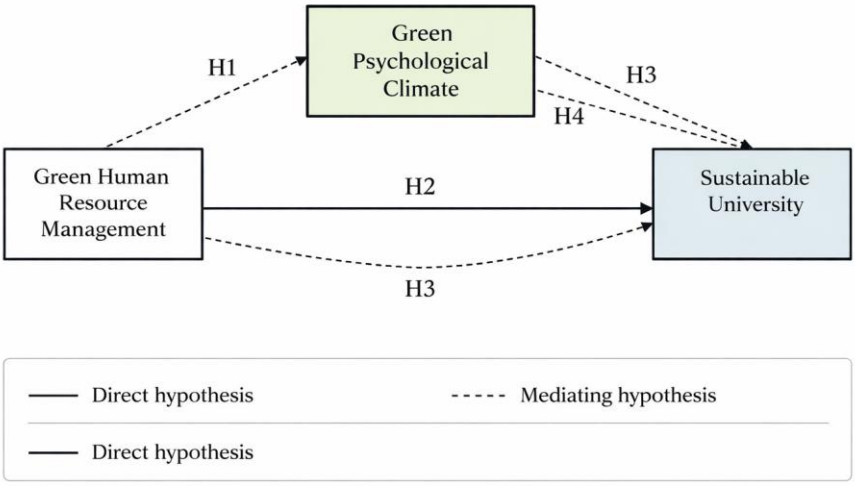

Figure 1. Research framework.

The work environment from a psychological perspective, which can be interpreted as what employees feel about the workplace conditions is generated and shaped using HR policies and guidelines through GHRM practices in organization (Burke et al., 2002; Schneider et al., 2013). Meanwhile, the practices can enhance sustainable performance in organization (Ari et al., 2020; Mukherji & Bhatnagar, 2022; Setyadi et al., 2023). Most existing literature focuses on various supportive factors for achieving sustainable performance, such as GHRM practices and Employee Green Behavior (EGB). In this research, an assumption was made that the direct effect of GHRM practices on SU performance might not be effective without the presence of GPC. This was understood as the psychological perception of employees arising from green practices. Research on SU can be realized through leadership factors capable of providing under- standing to the academic community in promoting the inclusion in achieving sustainable performance (Boswell et al., 2019; Taddei-Bringas et al., 2008). GPC also plays a role in shaping green perceptions among employees to enhance sustainable performance (Kaya et al., 2010; Nishii et al., 2008; Paillé et al., 2014; Patterson et al., 2005). Referring to several literature related to the partial effect of the practices and GPC on sustainable performance, this research integrates the initiative of GHRM mediated in achieving sustainability, specifically in higher education institutions (Figure 1). Based on these arguments, the hypothesis proposed is as follows:

Hypothesis 4 (H4): Green human resource management has a positive effect on sustainable university through green psychological climate.

3. METHODS

This research used a survey method through questionnaire data collection distributed to academic and non-academic staff in the 10 largest private universities in Indonesia, with a total initial population of 7,288 (initial data). Additionally, it was focused on universities in Indonesia since the number implementing sustainability was 16.91%, or 126 out of a total of 745 (UI Green Metrics, 2022). The selection was based on the superior national reputation of the universities as evidenced by accreditation ratings and green management. This quantitative research applied random sampling to determine the sample size. After calculation using the Slovin formula, the determined sample size was 379 (Susanti et al., 2019). A total of 400 questionnaires were distributed electronically to respondents, consisting of lecturers and education staff with a working age of ≥5 years to understand the implementation of sustainable performance. This study was approved by the Ethical Review Board of Esa Unggul University, number: 0623-10.021 DPKE-KEP/FINAL-EA/UEU/VI/2023, informed consent was obtained from each respondents who was willing to participate in this study. In addition, a cover letter was included with the questionnaire, providing information on the research and stating that the completion was voluntary. Respondents were assured of the confidentiality of the responses, and there was no time limit imposed on filling out
and returning the questionnaires. Data collection took place from July to September 2023, and from the 400 questionnaires distributed, 389 were filled out. Subsequently, the questionnaires were returned or interpreted at a response rate of 97.25%. Only 382 or 95.5% could be used because each question item was answered completely by respondents, hence the results were processed.

3.1. Respondents' profile

The final data collection received responses and could be used as a research sample for 382 respondents, consisting of lecturers and educational staff. The demographic information of the respondents is presented in Table 1.

3.2. Measurement

The measurement for all items in each construct used a Likert scale of 1—5, where 1 = strongly disagree; 2 = disagree; 3 = uncertain; 4 = agree; and 5 = strongly agree. The indicators were derived from various rel- evant literature sources and adjusted to the research needs. A total of 15 items were used to assess GHRM variable, sourced from several previous research (Cherian & Jacob, 2012; Jabbour & Santos, 2008; Mishra et al., 2014; Opatha &

Arulrajah, 2014; Renwick et al., 2013, 2016; Shah, 2019). In addition, 12 and 11 items were used to assess GPC and SU variables, respectively (Alghamdi et al., 2017; Dawodu et al., 2022; Velazquez et al., 2006). These items are explained through the operational variable definition for- mat presented in Table 2.

3.3. Data analysis

This research used Partial Least Squares Structural Equation Modeling (PLS-SEM) as the method for data analysis and hypothesis testing. The measurement tool for data analysis adopted SmartPLS application version 4.0.9.6. PLS-SEM is a method for testing convergent and discriminant validity based on the scale used in measuring theoretical constructs, commonly known as the measurement model. The proposed nomological relationships among theoretical constructs are known as the structural model (Gefen & Straub, 2005; Leguina, 2015). The main purpose of PLS-SEM is to explain the relationships among con- structs and emphasize the interpretation of the values (Hair et al., 2019). The procedure for conducting the analysis includes evaluating both the outer and inner models (Ringle et al., 2020).

The outer model evaluation was used to assess the relationships among constructs and their indica- tors through validity and reliability tests. The validity test was carried out in two stages, including the convergent test, which measured the loading factor values for each construct, and the discriminant test

Table 1. Respondent profile.

No.	Variable	Category	Frequency (People)	Percentage (%)
1	**Age**	21–30 years	34	8.90
		31–40 years	46	12.04
		41–50 years	229	59.95
		> 50 years	73	19.11
2	**Gender**	Male	180	47.12
		Female	202	52.88
3	**Education Level**	Diploma	15	3.93
		Bachelor’s	80	20.94
		Master’s	153	40.05
		Doctorate	134	35.08
4	**Length of Work Experience**	5–10 years	107	28.01
		11–15 years	111	29.06
		16–20 years	118	30.89
		> 20 years	46	12.04

5	**Employment Status**	Lecturer	218	57.07
		Educational staff	164	42.93

Table 2. Operational variable definition.

Variable	Code	Item	Source
Green Human Resource Management (GHRM)	GHRM1	University has integrated environmental protection responsibilities into each academic and administrative division.	Shah (2019); Cherian & Jacob (2012); Jabbour & Santos (2008); Mishra et al. (2014); Opatha & Arulrajah (2014); Renwick et al. (2013, 2016)
	GHRM2	University has incorporated environmentally friendly elements and social responsibilities into job descriptions and specifications.	
	GHRM3	University has included environmental aspects as tasks in job descriptions.	
	GHRM4	University has designed and implemented innovative activities to emphasize environmental protection aspects.	
	GHRM5	University has conducted training to develop emotional relationships between employees and environmental management.	
	GHRM6	University provides environmental management training to enhance employee awareness, skills, and knowledge.	
	GHRM7	Lecturers and educational staff are included in environmentally friendly events and provided with related learning opportunities.	
	GHRM8	University has developed an understanding of green issues in the organization through policies and procedures.	
	GHRM9	University has set environmentally friendly targets, goals, and tasks for each employee in all divisions.	
	GHRM10	University uses environmental performance standards as a	

		benchmark in evaluating employee performance.	
	GHRM11	University strengthens compliance with environmental goals through reward and punishment rules.	
	GHRM12	University recognizes employees as key stakeholders in environmental management.	
	GHRM13	There are environmentally friendly information channels and assistance mechanisms available.	
	GHRM14	Employees are given opportunities to participate in green suggestion schemes and joint consultations for environmental problem resolution.	
	GHRM15	Lecturers and educational staff are involved in formulating environmental strategies.	
Green Psychological Climate (GPC)	GPC1	University has a clear development vision to guide my actions in environmental management.	Zhou et al. (2018); Paillé et al. (2014); Chou (2014); Akbar et al. (2020); Norton et al. (2014)
	GPC2	I support initiatives crucial for university performance, namely green and sustainable initiatives.	
	GPC3	Reducing the use of disposable products is very important.	
	GPC4	Reducing waste and controlling hazardous materials are top priorities for the university.	
	GPC5	I motivate colleagues to reduce paper usage in the office.	
	GPC6	Employees are motivated to save energy in the workplace.	
	GPC7	I explain and encourage new employees to be environmentally friendly.	
	GPC8	University leaders socialize general environmental policies in the workplace.	
	GPC9	I feel that university management systems and policies lead toward environmental preservation.	

	GPC10	University promotes the use of public transportation (e.g., shuttle services or transportation support).	
	GPC11	Digital media is used for intra-organizational communication instead of paper-based communication.	
	GPC12	Promotional activities use internet or electronic-based materials rather than paper brochures.	
Sustainable University (SU)	SU1	Sustainability-related courses are available in the curriculum.	Dawodu et al. (2022); Velazquez et al. (2006); Alghamdi et al. (2017)
	SU2	There is innovative research supporting sustainability topics (multidisciplinary and interdisciplinary).	
	SU3	University contributes to economic development through community service activities.	
	SU4	University has implemented policies promoting environmental care activities.	
	SU5	Facilities and infrastructure follow internationally recognized Healthy, Safe, and Environment (HSE) standards.	
	SU6	Sustainability commitment is reflected in policies, planning, and annual reports.	
	SU7	University provides scholarship programs for students.	
	SU8	University engages in partnerships supporting social and environmental sustainability.	
	SU9	University implements consumption of recycled products (e.g., waste segregation bins).	
	SU10	Internal environmental and sustainability audits are conducted.	
	SU11	Students are encouraged to consider sustainability issues in career selection.	

for calculating values based on comparisons through the average variance extracted (AVE) (Hair et al., 2019). Another method related to the outer model evaluation is the reliability test performed by examining the latent variable constructs measured by composite reliability (CR) and Cronbach's alpha (CA) (Chin et al., 2003; Hair et al., 2019).

The next step in PLS-SEM process is the evaluation to assess the structural model through several means, including R2, Q2, goodness of fit index (GFI), and examining the significance values among con- structs through the path coefficient in the hypothesis testing (Hair et al., 2019). R2 value is used to explain the effect of exogenous latent variables on endogenous and to determine the substantive effect (Henseler et al., 2016). Furthermore, Q2 value functions to validate the predictive ability of the model and show whether the exogenous latent variables are suitable as explanatory variables (Ghozali & Latan, 2015; Islam, 2019). The goodness of fit index (GFI) value shows the possibility of considering the structural model to be fit or unfit (Ghozali & Latan, 2015). The next step was the bootstrapping procedure, which evaluated the model by conducting hypothesis tests to examine significance values. This deter- mines the effect of exogenous variables on endogenous and assesses the level of significance, observed through the P-value (Kwak, 2023). Meanwhile, to determine the positive or negative effect, the original sample (O) values can be examined (Hair et al., 2019; Ringle et al., 2020).

4. RESULTS

4.1. MEASUREMENT AND STRUCTURAL MODEL

This research used questionnaire data that met the criteria for subsequent processing and analysis, gathered from 382 respondents who were academic and non-academic staff in the best private universities. Based on demographic data, respondents can be divided into five categories. The age category was dominated by respondents aged 41–50 years, accounting for 59.95%, followed by 19.11% aged >50 years, 12.04% aged 31–40 years, and 8.90% aged 21–30 years. The second category, based on gender, was dominated by females at 52.88%, with males at 47.12%. The third category related to education level, was dominated by respondents with a Master's degree at 40.05%, 35.08% Doctorate, 20.94% Bachelor's degree, and 3.93% Diploma. The fourth category, based on work experience, was dominated by respondents who have worked for 16–20 years, 11–15 years, 5–10 years, and >20 years, accounting for 30.89%, 29.06%, 28.01%, and 12.04%, respectively. The final category was employment status, divided into two, with 57.07% and 42.93% of respondents being lecturer members and educational staff. Respondent pro- file data is presented in Table 1.

The outer model was used to test the validity and reliability of each item and to evaluate the relationships between constructs and the indicators. The validity test was performed through loading factor values considered valid when >0.50 (Hair, 2017). For the reliability test, values of CA and CR were considered reliable when >0.70 (Chin et al., 2003; Hair et al., 2019). Furthermore, Average Variance Extracted (AVE) values were considered met when >0.5 for all variables, and greater than cross-loading values showing Convergent Validity (CV) (Hair, 2017; Hock & Ringle, 2010).

The results of the validity and reliability measurements have all met the criteria. The validity values shown by the loading factor were >0.50. Meanwhile, the reliability values shown by CA and CR values were all >0.70. The results showed that the model was valid and reliable. AVE values showed that all variables also met the set criteria of >0.50. Each variable had an AVE, GHRM, GPC, and SU values of 0.534, 0.620, and 0.599. Based on the discriminant and convergent validity tests, the model is valid and the results of the measurements are shown in Table 3 and Figure 2.

The next step was the evaluation of the inner model, after determining R2 value, which aimed to explain the effect of specific exogenous latent variables on endogenous to assess the substantive effects. R2 value is divided into three categories according to Henseler et al. (2016): the model is considered weak, moderate, and strong when the values are 0.25, 0.50, and 0.75. Referring to the statistical data processing results shown in Table 4, R2 value for the direct and indirect effect is 0.649 and 0.972. This shows that the direct impact of the research model, specifically the influence of GHRM on GPC, is measured at 64.9%. Meanwhile, the indirect impact of GHRM on SU is calculated to be 97.2%.

Table 3. Validity and reliability tests.

Variable	Code	Outer Loading	Cronbach's Alpha (CA)	Composite Reliability (CR)	AVE
Green Human Resource Management (GHRM)	GHRM1	0.642	0.937	0.943	0.534
	GHRM2	0.750			
	GHRM3	0.694			
	GHRM4	0.681			
	GHRM5	0.746			
	GHRM6	0.803			
	GHRM7	0.771			
	GHRM8	0.682			

	GHRM9	0.700			
	GHRM10	0.794			
	GHRM11	0.741			
	GHRM12	0.651			
	GHRM13	0.776			
	GHRM14	0.738			
	GHRM15	0.764			
Green Psychological Climate (GPC)	GPC1	0.796	0.944	0.945	0.620
	GPC2	0.822			
	GPC3	0.820			
	GPC4	0.833			
	GPC5	0.800			
	GPC6	0.811			
	GPC7	0.719			
	GPC8	0.790			
	GPC9	0.743			
	GPC10	0.753			
	GPC11	0.769			
	GPC12	0.787			
Sustainable University (SU)	SU1	0.801	0.933	0.934	0.599
	SU2	0.817			
	SU3	0.692			
	SU4	0.794			
	SU5	0.768			
	SU6	0.761			
	SU7	0.792			
	SU8	0.803			
	SU9	0.694			
	SU10	0.782			
	SU11	0.797			

The interpretation of R2 values above can be understood as follows: GHRM variable affects GPC at 64.9%, which falls into the category of moderate/strong effect with a range of values >0.50 but <0.75, following R2 value criteria. Furthermore, the remaining 35.1% can be affected by other variables outside this research. The next explanation is that SU variable is indirectly affected by GHRM mediated by GPC, with a significant effect of 97.2%. Therefore, the result falls into the strong effect category, referring to R2 value criteria >0.75. The remaining 2.8% can be affected by other variables outside the research. This explanation results in an understanding that the implementation of GHRM as an exogenous variable in the research applied to the object has a moderate/strong direct effect on SU performance. However, the implementation mediated by GPC can have a strong effect on SU performance. The results also prove that the structural model of the research has a strong relationship.

The second step in the inner model evaluation is to calculate Q2 value. The value is intended to determine whether the research model has predictive relevance, with the condition set for good relevance being Q2 >0 (Hair, 2017). The formula for calculating Q2 value using the Stone-Geisser Q2 test (Chin et al., 2003) is outlined as follows:

The calculated Q2 value is 0.968 or 96.8%, concluding that this model has relevant/good predictive relevance. Therefore, the model used can explain the information in the data by 96.8%.

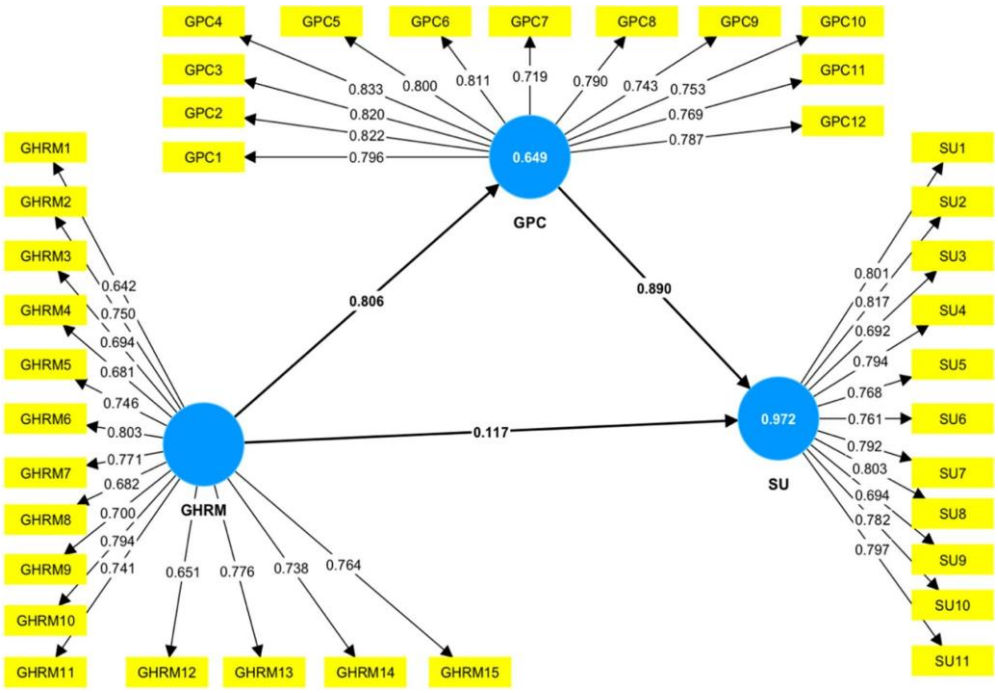

Figure 2. Outer model.

The final step in the inner model evaluation is to determine GFI value, aiming to determine whether the model can be considered fit/appropriate with the condition set for the GFI value ranging from 0 to 1 (Ho, 2006). The formula for calculating GFI value is outlined as follows:

$$GoFIndex = \sqrt{AVExR2}$$

$$= \sqrt{((0.534 + 0.620 + 0.599)/3) x ((0.649 + 0.972)/2)}$$

$$= 0.752$$

GFI value is 0.752, showing that this model is considered fit/appropriate with a high level of feasibility, in line with the criteria.

4.1.1. Hypothesis test

Hypothesis test aimed to determine and prove the effect of the exogenous variable GHRM on GPC and SU through direct and indirect effect methods. The results are presented in Tables 5 and 6, and the inner model is shown in Figure 3.

Referring to the test in Table 5 related to direct effect, all three hypotheses are accepted, with the following explanations, GHRM has a positive and significant effect on GPC (O = 0.806 (positive) and P-values <0.5), GHRM has a positive and significant effect on SU (O = 0.117 (positive) and P-values <0.5), and GPC has a positive and significant effect on SU (O = 0.890 (positive) and P-values <0.5). For testing the hypotheses of indirect effect, as shown in Table 6, the fourth hypothesis is accepted, meaning that GHRM has a positive effect on SU through a mediation of GPC (O = 0.717 (positive) and P-values <0.5).

5. DISCUSSION

This research was conducted to explore the effect of GHRM practices on SU performance through a mediation of GPC. Higher education was required to adapt and contribute to environmental awareness and green performance (Hussain et al., 2019). Meanwhile, academic and non-academic staff at university were

Table 4. R-Square (R^2) Values.

Construct	R^2
Green Psychological Climate (GPC)	0.649
Sustainable University (SU)	0.972

Table 5. Direct Effect Hypothesis Test Results.

Hypothesis	Relationship	Original Sample (O)	t-Statistics (|O/STDEV|)	P-values	Acceptance
H1	GHRM → GPC	0.806	22.403	0.000	Accepted
H2	GHRM → SU	0.117	3.248	0.001	Accepted
H3	GPC → SU	0.890	28.055	0.000	Accepted

Note:

t-table = 1.966 (α = 0.05, two-tailed).

Table 6. Indirect Effect Hypothesis Test Results.

Hypothesis	Relationship	Original Sample (O)	t-Statistics (|O/STDEV|)	P-values	Acceptance
H4	GHRM → GPC → SU	0.717	17.815	0.000	Accepted

Note:

t-table = 1.966 (α = 0.05, two-tailed).

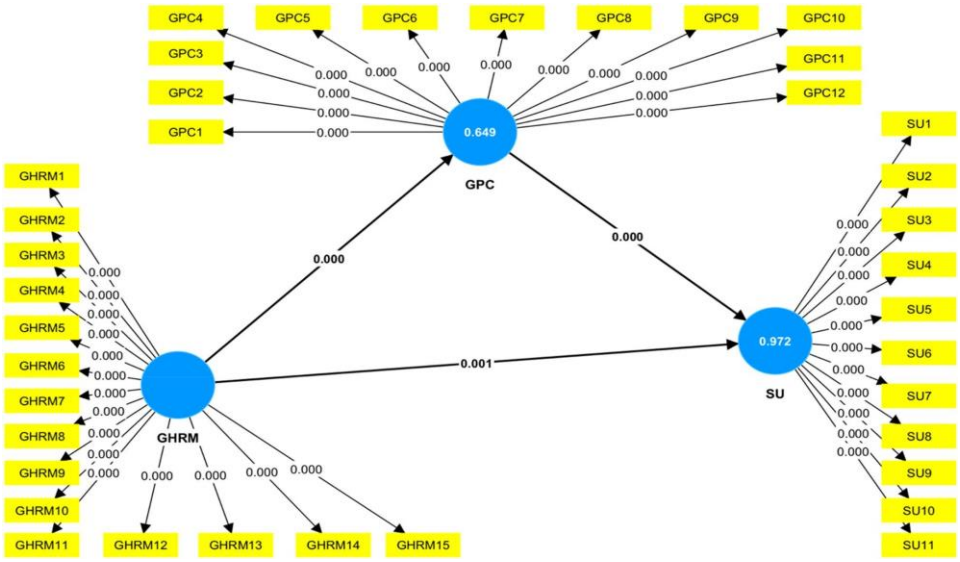

Figure 3. Inner model.

At the forefront of achieving sustainable performance. The sample consisted of 382 respondents from the top 10 private universities in Indonesia. The test used PLS, and the results showed that all hypotheses were accepted. Subsequently, the results contributed to expanding insights and essential knowledge related to references or literature relevant to SU performance, specifically in developing countries.

The first result stated that GHRM had a positive and significant effect on GPC. The statistical strength of this construct had a significance of 22.403 with a positive effect value of 0.806 since the hypothesis was accepted. Literature relevant to the result suggested that employee participation originated from policy establishment in companies related to green performance (Mishra, 2017). The relationship increased psychological awareness, promoting voluntary actions related to environmentally friendly performance (Sabokro et al., 2021; Yong et al., 2019). In the higher education sector, GHRM practices affected the perception of lecturers and educational staff regarding a green working environment, enabling innovtion in the workplace (Dumont et al., 2017; Kuenzi & Schminke, 2009; Velazquez et al., 2006).

The second finding stated that GHRM had a positive and significant direct effect on SU. The statistical strength possessed a significance of 3.248 with a positive effect value of 0.117, while the second was also accepted. Several previous literature supporting the result showed that GHRM had a positive effect on the environmental, financial, and innovative performance of organization (Kim et al., 2019; Pham et al., 2020; Singh et al., 2020; Xuecheng & Iqbal,

2022). In the implementation, the practices in university were manifested in the form of strategic planning documents containing values and policies related to environmental concerns. This enhanced SU performance through lecturers and educational staff (Shah, 2019; Singh et al., 2020).

The third result reported that GPC positively and significantly affected SU directly. This result was shown through the statistical strength of the construct with a significance of 28.005 and a positive effect value of 0.890 since the hypothesis was accepted. GPC contributed to improving sustainability performance by giving more consideration to ecological aspects (Chatelain et al., 2018; Dumont et al., 2017). Additionally, the proven psychological green awareness supported organization in efforts to achieve sustainable performance (Saeed et al., 2019; Whitmarsh & O'Neill, 2010).

Finally, the fourth result stated that GHRM had a positive and significant effect on SU through GPC as a mediator. This result was shown in Table 6, proving that the hypothesis was accepted. The indirect effect of the practice on SU through a mediation of GPC had the greatest effect compared to the direct effect. This result addressed the importance of GPC as a mediator between GHRM and the effect on SU performance. University efforts to achieve sustainable performance through the implementation of green strategies became more effective and had a significant effect when accompanied by the development of green perceptions. The role of GHRM referred to previous research that proved the ability to drive sustainable performance (Chatelain et al., 2018; Dumont et al., 2017; Kuenzi & Schminke, 2009; Saeed et al., 2019).

6. CONCLUSION

Based on the results, the implementation of university leadership policies related to organizing training programs consistently built perceptions and affected the behavior toward achieving waste reduction. The implementation of innovative activities focused on environmental protection topics could also improve the innovation output of lecturers collaborating across interdisciplinary fields (multidisciplinary). The results showed that the inclusion and support of lecturers and educational staff generated and enhanced collaboration activities with partner organization in the form of socially and environmentally sustainable activities. The role of GPC functioned as a bridge to understand the implementation of GHRM practices and cultivate awareness among employees. Therefore, universities oriented towards green performance, considering GPC among lecturers and educational staff,

supported the effectiveness of GHRM practices in realizing SU performance. This research also contributed to the literature related to GHRM practices and SU in university.

6.1. Theoretical implications

According to a theoretical perspective, the contribution generated is to add and expand knowledge regarding the concept of green management. This is a global issue in various sectors, specifically in higher education. Referring to the results of experts who advocate for the implementation of policies and values of practices, the majority are in the scope of the industrial and governmental sectors (Kim et al., 2019; Pham et al., 2020; Sabokro et al., 2021; Singh et al., 2020; Xuecheng & Iqbal, 2022; Yong et al., 2019). Meanwhile, the implementation of GHRM in the higher education sector has not been widely explored. This research contributes to the conceptualization of GHRM practices and provides solutions related to the internalization of practices through GPC to drive SU performance. Additionally, sup- ported by the results and statistical evidence related to the implementation of GHRM, this can significantly contribute to the improvement of the successful realization of SU performance. The results are supported by several relevant literature evidence related to the realization of SU performance in other countries.

Regarding the current scholarly foundation, this result can identify a direct positive relationship between GPC and SU. Therefore, the establishment of GPC perceptions drives the achievement of SU performance. This has a significant effect on assisting universities in developing countries because the concept of green management and similar research models still have gaps. The result also contributes to adding references by creating a model that incorporates GPC into the relationship between GHRM practices and SU. Most current research focuses on the partial effect between GHRM and GPC or between GPC and SU (Chatelain et al., 2018; Dumont et al., 2017; Kuenzi & Schminke, 2009; Saeed et al., 2019; Shah, 2019; Singh et al., 2020). Meanwhile, GPC significantly and positively affects the relationship between GHRM practices and the achievement of SU performance. The interpretation suggests that universities equipped with comprehensive policies, guidelines, procedures, and values related to green management can significantly enhance SU. This effectiveness is particularly pronounced with a conducive working environment that Molds GPC of lecturers and educational staff. The combination signifies the commitment to actively pursuing sustain- able practices and performance. The lack of previous literature incorporating GPC as a mediator between GHRM practices and SU makes this research result essential in expanding relevant literature.

6.2. Practical implications

This research aims to understand and provide empirical evidence regarding the relationship and impact of GHRM practices on SU performance mediated by GPC. Referring to the results, GHRM practices on SU through GPC have a positive and significant effect. The results also state that the effectiveness of implementing the practices at universities, accompanied by GPC in the form of understanding can support the realization of SU performance. Additionally, empirical implications are provided for university stakeholders in terms of declaring and implementing policies to build GPC among academic and non-academic staff. The results can also be used by policymakers at various levels of management in universities to increase employee perceptions and awareness of sustainability performance. This is shown by implementing policies centered on environmental awareness training programs, organizing innovative environmental protection activities, and collaborating with partners to support conservation. This acts as a catalyst, motivating lecturers and education staff to produce environmentally friendly performances. The impact on the university is seen in the increased awareness of lecturers and education staff to conserve energy, recycle waste, conduct sustainability research, and participate in community service activities. Furthermore, participation in policy formulation and implementation provides an opportunity to enhance green perceptions and address environmental issues on campus.

Another contribution is related to empirical implications for the larger community, where lecturers are increasingly contributing to community service activities related to hygiene and environmental health management. Counselling and training activities about recycling, waste processing, and environ- mental greening are also the result of lecturers' psychological perceptions leading to green performance. Finally, the practical contribution to public or government stakeholders, especially in Indonesia, can promote the implementation of environment-based performance regulated in government regulations. The numerous findings on environmentally friendly activities have the potential to make a significant contribution to green environmental management in urban areas, assisting local governments in developing pro-environmental policies.

6.3. Limitations and future research directions

This research has methodological and theoretical limitations, providing opportunities for future directions. First, data collection was obtained at one point in time in the cross-sectional analysis. Implementing GHRM practices to understand the optimal impact on employees' GPC perceptions may require time. To gain a deeper understanding, future research should

use longitudinal methods to identify changes in the work environment and GPC perceptions over time affected by GHRM practices. Second, the efforts made

for the implementation of sustainable performance in relation to future research can also consider these universities to increase the sample, resulting in more general results. Third, future analyses should replicate this research on a broader scale, such as cross-country or cross-cultural contribution to developing GHRM practices with global correlations for the higher education sector. Finally, a mixed-methods data collection approach can be used to analyze the relationship between GHRM practices and GPC that affect SU performance. Meanwhile, the use of quantitative data obtained through closed-ended questionnaires limits the information obtained.

Ethical statement

This study was conducted in accordance with ethical research principles. All procedures involving human participants were performed in compliance with the institutional ethical standards of Woxsen University, Hyderabad, India, and with the 1964 Helsinki Declaration and its later amendments. Informed consent was obtained from all individual participants involved in the study. The data collected were anonymized and kept strictly confidential, used solely for academic research purposes.

Authors' contributions

Diyani Balthazaar: Conceptualization, methodology, data collection, formal analysis, writing – original draft preparation, and project administration.

Feroshiya Delima: Literature review, data curation, writing – review and editing, and formatting.

Both authors have read and approved the final version of the manuscript and agree to be accountable for all aspects of the work.

Disclosure statement

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper. No funding was received for conducting this study.

REFERENCES

1. Ahmad, S. (2015). Green human resource management: Policies and practices. Cogent Business & Management, 2(1), 1030817. https://doi.org/10.1080/23311975.2015.1030817

2. Akbar, Y. K., Megawati, M., & Heryani, R. A. (2020). The effect of intellectual capital on sustainable university through organizational citizenship behavior for the environment at university. PalArch's Journal of Archaeology of Egypt/ Egyptology, 17(5), 968–983.
3. Alghamdi, N., Den Heijer, A., & De Jonge, H. (2017). Assessment tools' indicators for sustainability in universities: An analytical overview. International Journal of Sustainability in Higher Education, 18(1), 84–115. https://doi.org/10.1108/ IJSHE-04-2015-0071
4. Amrutha, V. N., & Geetha, S. N. (2020). A systematic review on green human resource management: Implications for social sustainability. Journal of Cleaner Production, 247, 119131. https://doi.org/10.1016/j.jclepro.2019.119131
5. Ardito, L., & Dangelico, R. M. (2018). Firm environmental performance under scrutiny: The role of strategic and orga- nizational orientations. Corporate Social Responsibility and Environmental Management, 25(4), 426–440. https://doi. org/10.1002/csr.1470
6. Ari, E., Karatepe, O. M., Rezapouraghdam, H., & Avci, T. (2020). A conceptual model for green human resource man- agement: Indicators, differential pathways, and multiple pro-environmental outcomes. Sustainability, 12(17), 7089. https://doi.org/10.3390/su12177089
7. Becker, B. E., & Huselid, M. A. (2006). Strategic human resources management: Where do we go from here? Journal of Management, 32(6), 898–925. https://doi.org/10.1177/0149206306293668
8. Blok, V., Wesselink, R., Studynka, O., & Kemp, R. (2015). Encouraging sustainability in the workplace: A survey on the pro-environmental behaviour of university employees. Journal of Cleaner Production, 106, 55–67. https://doi. org/10.1016/j.jclepro.2014.07.063
9. Borys, T. (2015). Zrównoważony rozwój organizacji – co chcemy lub powinniśmy równoważyć? Prace Naukowe Uniwersytetu Ekonomicznego we Wrocławiu, (376). https://doi.org/10.15611/pn.2015.376.01
10. Boswell, M. R., Greve, A. I., & Seale, T. L. (2019). Climate action planning: A guide to creating low-carbon, resilient com- munities. Island Press/Center for Resource Economics. https://doi.org/10.5822/978-1-61091-964-7

11. Burke, M. J., Borucki, C. C., & Kaufman, J. D. (2002). Contemporary perspectives on the study of psychological climate: A commentary. European Journal of Work and Organizational Psychology, 11(3), 325–340. https://doi.org/10.1080/13594320244000210
12. Chatelain, G., Hille, S. L., Sander, D., Patel, M., Hahnel, U. J. J., & Brosch, T. (2018). Feel good, stay green: Positive affect promotes pro-environmental behaviors and mitigates compensatory 'mental bookkeeping' effects. Journal of Environmental Psychology, 56, 3–11. https://doi.org/10.1016/j.jenvp.2018.02.002
13. Cherian, J., & Jacob, J. (2012). Green marketing: A study of consumers' attitude towards environment friendly prod- ucts. Asian Social Science, 8(12), 117. https://doi.org/10.5539/ass.v8n12p117
14. Chiappetta Jabbour, C. J., Sarkis, J., Lopes de Sousa Jabbour, A. B., Scott Renwick, D. W., Singh, S. K., Grebinevych, O., Kruglianskas, I., & Filho, M. G. (2019). Who is in charge? A review and a research agenda on the 'human side' of the circular economy. Journal of Cleaner Production, 222, 793–801. https://doi.org/10.1016/j.jclepro.2019.03.038
15. Chin, W. W., Marcolin, B. L., & Newsted, P. R. (2003). A partial least squares latent variable modeling approach for measuring interaction effects: Results from a Monte Carlo simulation study and an electronic-mail emotion/adop- tion study. Information Systems Research, 14(2), 189–217. https://doi.org/10.1287/isre.14.2.189.16018
16. Chou, C.-J. (2014). Hotels' environmental policies and employee personal environmental beliefs: Interactions and out- comes. Tourism Management, 40, 436–446. https://doi.org/10.1016/j.tourman.2013.08.001
17. Chreif, M., & Farmanesh, P. (2022). Applying green human resource practices toward sustainable workplace: A mod- erated mediation analysis. Sustainability, 14(15), 9250. https://doi.org/10.3390/su14159250
18. Cincera, J., & Krajhanzl, J. (2013). Eco-schools: What factors influence pupils' action competence for pro-environmental behaviour? Journal of Cleaner Production, 61, 117–121. https://doi.org/10.1016/j.jclepro.2013.06.030
19. Conway, T. M., Dalton, C., Loo, J., & Benakoun, L. (2008). Developing ecological footprint scenarios on university campuses: A case study of the University of Toronto at Mississauga. International Journal of Sustainability in Higher Education, 9(1), 4–20. https://doi.org/10.1108/14676370810842157

20. Dawodu, A., Dai, H., Zou, T., Zhou, H., Lian, W., Oladejo, J., & Osebor, F. (2022). Campus sustainability research: Indicators and dimensions to consider for the design and assessment of a sustainable campus. Heliyon, 8(12), e11864. https://doi.org/10.1016/j.heliyon.2022.e11864
21. DuBois, C. L. Z., & Dubois, D. A. (2012). Strategic HRM as social design for environmental sustainability in organiza- tion. Human Resource Management, 51(6), 799–826. https://doi.org/10.1002/hrm.21504
22. Dumont, J., Shen, J., & Deng, X. (2017). Effects of green HRM practices on employee workplace green behavior: The role of psychological green climate and employee green values. Human Resource Management, 56(4), 613–627. https://doi.org/10.1002/hrm.21792
23. Dyllick, T., & Hockerts, K. (2002). Beyond the business case for corporate sustainability. Business Strategy and the Environment, 11(2), 130–141. https://doi.org/10.1002/bse.323
24. Ercantan, O., & Eyupoglu, S. (2022). How do green human resource management practices encourage employees to engage in green behavior? Perceptions of university students as prospective employees. Sustainability, 14(3), 1718. https://doi.org/10.3390/su14031718
25. Filho, W. L., & Wright, T. (2002). Barriers on the path to sustainability: European and Canadian perspectives in higher education. International Journal of Sustainable Development & World Ecology, 9(2), 179–186.
26. Finlay, J., & Massey, J. (2012). Eco-campus: Applying the ecocity model to develop green university and college cam- puses. International Journal of Sustainability in Higher Education, 13(2), 150–165. https://doi.org/10.1108/ 14676371211211836
27. Gefen, D., & Straub, D. (2005). A practical guide to factorial validity using PLS-graph: Tutorial and annotated example.
28. Communications of the Association for Information Systems, 16. https://doi.org/10.17705/1CAIS.01605
29. Ghozali, I., & Latan, H. (2015). Partial Least Squares Konsep, Teknik Dan Aplikasi Menggunakan Program Smartpls 3.0 Untuk Penelitian Empiris (2nd ed.). Badan Penerbit Undip.

30. Gómez, J. A. C. (2005). In the name of environmental education: Words and things in the complex territory of edu- cation—environment—development relations. Policy Futures in Education, 3(3), 260–270. https://doi.org/10.2304/ pfie.2005.3.3.4
31. Grabara, J., Hussain, H. I., & Szajt, M, CzĪstochowa University of Technology, CzĪstochowa, Poland. (2020). Sustainable university development through sustainable human resources and corporate entrepreneurship: The role of sustain- able innovation and work environment. Amfiteatru Economic, 22(54), 480. https://doi.org/10.24818/EA/2020/54/480 Hair, J. F., Ringle, C. M., Gudergan, S. P., Fischer, A., Nitzl, C., & Menictas, C. (2019). Partial least squares structural equation modeling-based discrete choice modeling: An illustration in modeling retailer choice. Business Research,
32. 12(1), 115–142. https://doi.org/10.1007/s40685-018-0072-4
33. Hair, J. F. (Ed.). (2017). A primer on partial least squares structural equation modeling (PLS-SEM) (2nd ed.).
34. Hamidah, N., Surtikanti, H. K., & Riandi. (2023). Implementasi education for sustainable development (ESD) pada universitas lintas negara terhadap tingkat pengetahuan dan perilaku kesadaran lingkungan mahasiswa, Asian Journal Collaboration of Social Environmental and Education, 1(1). https://doi.org/10.61511/ajcsee.v1i1.2023.247
35. Henseler, J., Ringle, C. M., & Sarstedt, M. (2016). “Testing measurement invariance of composites using partial least squares”, edited by R. Sinkovics, Ruey-Jer “Bryan” Jean And Daekwan Kim, R. International Marketing Review, 33(3), 405–431. https://doi.org/10.1108/IMR-09-2014-0304
36. Ho, R. (2006). Handbook of univariate and multivariate data analysis and interpretation with SPSS. Chapman and Hall/ CRC. https://doi.org/10.1201/9781420011111
37. Hock, M., & Ringle, C. M. (2010). Local strategic networks in the software industry: An empirical analysis of the value continuum. International Journal of Knowledge Management Studies, 4(2), 132. https://doi.org/10.1504/IJKMS.2010.030789 Huang, X., Hu, Z., Liu, C., Yu, D., & Yu, L. (2016). The relationships between regulatory and customer pressure, green organizational responses, and green innovation performance. Journal of Cleaner Production, 112, 3423–3433.
38. https://doi.org/10.1016/j.jclepro.2015.10.106

39. Hussain, T., Eskildsen, J., Edgeman, R., Ismail, M., Shoukry, A. M., & Gani, S. (2019). Imperatives of sustainable univer- sity excellence: A conceptual framework. Sustainability, 11(19), 5242. https://doi.org/10.3390/su11195242
40. Islam, N. (2019). The measurement of employee turnover intentions in telecom industry of Bangladesh. Journal of Business Management and Economics, 07(06), 01–07. https://doi.org/10.15520/jbme.v7i06.2600
41. Jabbour, C., & J., C., De Sousa Jabbour, A. B. L. (2016). Green human resource management and green supply chain management: Linking two emerging agendas. Journal of Cleaner Production, 112, 1824–1833. https://doi. org/10.1016/j.jclepro.2015.01.052
42. Jabbour, C. J. C., Jabbour, A., Govindan, K., Teixeira, A. A., & Freitas, W. R. D. S. (2013). Environmental management and operational performance in automotive companies in Brazil: The role of human resource management and lean manufacturing. Journal of Cleaner Production, 47, 129–140. https://doi.org/10.1016/j.jclepro.2012.07.010
43. Jabbour, C. J. C., & Santos, F. C. A. (2008). The central role of human resource management in the search for sustain- able organizations. International Journal of Human Resource Management, 19(12), 2133–2154. https://doi. org/10.1080/09585190802479389
44. Kang, J. H., Matusik, J. G., Kim, T.-Y., & Phillips, J. M. (2016). Interactive effects of multiple organizational climates on employee innovative behavior in entrepreneurial firms: A cross-level investigation. Journal of Business Venturing, 31(6), 628–642. https://doi.org/10.1016/j.jbusvent.2016.08.002
45. Kaya, N., Koc, E., & Topcu, D. (2010). An exploratory analysis of the influence of human resource management activ- ities and organizational climate on job satisfaction in Turkish banks. International Journal of Human Resource Management, 21(11), 2031–2051. https://doi.org/10.1080/09585192.2010.505104
46. Kim, Y. J., Kim, W. G., Choi, H.-M., & Phetvaroon, K. (2019). The effect of green human resource management on hotel employees' eco-friendly behavior and environmental performance. International Journal of Hospitality Management, 76, 83–93. https://doi.org/10.1016/j.ijhm.2018.04.007
47. Kranabetter, C., & Niessen, C. (2017). Managers as role models for health: Moderators of the relationship of transfor- mational leadership with employee exhaustion and

cynicism. Journal of Occupational Health Psychology, 22(4), 492–502. https://doi.org/10.1037/ocp0000044

48. 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
49. Kwak, S. (2023). Are only p-values less than 0.05 significant? A p-value greater than 0.05 is also significant! Journal of Lipid and Atherosclerosis, 12(2), 89–95. https://doi.org/10.12997/jla.2023.12.2.89
50. Leguina, A. (2015). A primer on partial least squares structural equation modeling (PLS-SEM). International Journal of Research & Method in Education, 38(2), 220–221. https://doi.org/10.1080/1743727X.2015.1005806
51. Li, X., Frenkel, S. J., & Sanders, K. (2011). Strategic HRM as process: How HR system and organizational climate strength influence Chinese employee attitudes. International Journal of Human Resource Management, 22(9), 1825– 1842. https://doi.org/10.1080/09585192.2011.573965
52. Mehta, K., & Chugan, P. K. (2015). Green HRM in pursuit of environmentally sustainable business. Universal Journal of Industrial and Business Management, 3(3), 74–81. https://doi.org/10.13189/ujibm.2015.030302
53. Mishra, P. (2017). Green human resource management: A framework for sustainable organizational development in an emerging economy. International Journal of Organizational Analysis, 25(5), 762–788. https://doi.org/10.1108/ IJOA-11-2016-1079
54. Mishra, R. K., Sarkar, S., & Kiranmai, J. (2014). Green HRM: Innovative approach in Indian public enterprises. World Review of Science, Technology and Sustainable Development, 11(1), 26. https://doi.org/10.1504/WRSTSD.2014.062374 Mukherji, A., & Bhatnagar, J. (2022). Conceptualizing and theorizing green human resource management: A narrative
55. review. International Journal of Manpower, 43(3), 862–888. https://doi.org/10.1108/IJM-06-2021-0376
56. Mustafa, M., Ramos, H. M., & Man, T. W. Y. (2015). Linking psychological ownership to employee extra-role behaviours in small overseas Chinese family businesses: Does family status matter? Journal of Entrepreneurship in Emerging Economies, 7(2), 129–147. https://doi.org/10.1108/JEEE-11-2014-0041

57. 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
58. Nohe, C., & Hertel, G. (2017). Transformational leadership and organizational citizenship behavior: A meta-analytic test of underlying mechanisms. Frontiers in Psychology, 8, 1364. https://doi.org/10.3389/fpsyg.2017.01364
59. Norton, T. A., Zacher, H., & Ashkanasy, N. M. (2014). Organisational sustainability policies and employee green be- haviour: The mediating role of work climate perceptions. Journal of Environmental Psychology, 38, 49–54. https:// doi.org/10.1016/j.jenvp.2013.12.008
60. O'Donohue, W., & Torugsa, N. (2016). The moderating effect of 'Green' HRM on the association between proactive environmental management and financial performance in small firms. International Journal of Human Resource Management, 27(2), 239–261. https://doi.org/10.1080/09585192.2015.1063078
61. Opatha, H., & Arulrajah, A. A. (2014). Green human resource management: Simplified general reflections. International Business Research, 7(8), 101. https://doi.org/10.5539/ibr.v7n8p101
62. Paillé, P., Chen, Y., Boiral, O., & Jin, J. (2014). The impact of human resource management on environmental perfor- mance: An employee-level study. Journal of Business Ethics, 121(3), 451–466. https://doi.org/10.1007/s10551-013-1732-0 Patterson, M. G., West, M. A., Shackleton, V. J., Dawson, J. F., Lawthom, R., Maitlis, S., Robinson, D. L., & Wallace, A. M. (2005). Validating the organizational climate measure: Links to managerial practices, productivity and innovation.
63. Journal of Organizational Behavior, 26(4), 379–408. https://doi.org/10.1002/job.312
64. Pham, N. T., Vo Thanh, T., Tučková, Z., & Thuy, V. T. N. (2020). The role of green human resource management in driving hotel's environmental performance: Interaction and mediation analysis. International Journal of Hospitality Management, 88, 102392. https://doi.org/10.1016/j.ijhm.2019.102392
65. Phramesti, R., & Yuliastuti, N. (2013). Kajian Keberlanjutan Universitas Negeri Semarang (UNNES) Sebagai Kampus Konservasi (Studi Kasus: UNNES Sekaran, Semarang). Jurnal Teknik PWK, 2(1), 183–190.

https://doi.org/10.14710/tpwk.2013.1451 Pierce, J. L., Kostova, T., & Dirks, K. T. (2003). The state of psychological ownership: Integrating and extending a cen-

66. tury of research. Review of General Psychology, 7(1), 84–107. https://doi.org/10.1037/1089-2680.7.1.84
67. Renwick, D. W. S., Jabbour, C., J. C., Muller-Camen, M., Redman, T., & Wilkinson, A. (2016). Contemporary develop- ments in Green (environmental) HRM scholarship. International Journal of Human Resource Management, 27(2), 114–128. https://doi.org/10.1080/09585192.2015.1105844
68. Renwick, D. W. S., Redman, T., & Maguire, S. (2013). Green human resource management: A review and research agenda*: Green human resource management. International Journal of Management Reviews, 15(1), 1–14. https:// doi.org/10.1111/j.1468-2370.2011.00328.x
69. Ringle, C. M., Sarstedt, M., Mitchell, R., & Gudergan, S. P. (2020). Partial least squares structural equation modeling in HRM research. International Journal of Human Resource Management, 31(12), 1617–1643. https://doi.org/10.1080/09 585192.2017.1416655
70. Robertson, J. L., & Barling, J. (2013). Greening organizations through leaders' influence on employees' pro-environmental behaviors. Journal of Organizational Behavior, 34(2), 176–194. https://doi.org/10.1002/job.1820
71. Sabokro, M., Masud, M. M., & Kayedian, A. (2021). The effect of green human resources management on corporate social responsibility, green psychological climate and employees' green behavior. Journal of Cleaner Production, 313, 127963. https://doi.org/10.1016/j.jclepro.2021.127963
72. Saeed, B. B., Afsar, B., Hafeez, S., Khan, I., Tahir, M., & Afridi, M. A. (2019). Promoting employee's proenvironmental behavior through green human resource management practices. Corporate Social Responsibility and Environmental Management, 26(2), 424–438. https://doi.org/10.1002/csr.1694
73. Sauvé, L., Brunelle, R., & Berryman, T. (2005). Influence of the globalized and globalizing sustainable development framework on national policies related to environmental education. Policy Futures in Education, 3(3), 271–283. https://doi.org/10.2304/pfie.2005.3.3.5

74. Savage, E., Tapics, T., Evarts, J., Wilson, J., & Tirone, S. (2015). Experiential learning for sustainability leadership in higher education. International Journal of Sustainability in Higher Education, 16(5), 692–705. https://doi.org/10.1108/ IJSHE-10-2013-0132
75. Schneider, B., Ehrhart, M. G., & Macey, W. H. (2013). Organizational climate and culture. Annual Review of Psychology, 64(1), 361–388. https://doi.org/10.1146/annurev-psych-113011-143809
76. Schneider, A., & Meins, E. (2012). Two dimensions of corporate sustainability assessment: Towards a comprehensive framework. Business Strategy and the Environment, 21(4), 211–222. https://doi.org/10.1002/bse.726
77. Setyadi, A., Akbar, Y. K., Ariana, S., & Pawirosumarto, S. (2023). Examining the effect of green logistics and green human resource management on sustainable development organizations: The mediating role of sustainable pro- duction. Sustainability, 15(13), 10667. https://doi.org/10.3390/su151310667
78. Shah, M. (2019). Green human resource management: Development of a valid measurement scale. Business Strategy and the Environment, 28(5), 771–785. https://doi.org/10.1002/bse.2279
79. Shen, J., Dumont, J., & Deng, X. (2018). Employees' perceptions of green HRM and non-green employee work out- comes: The social identity and stakeholder perspectives. Group & Organization Management, 43(4), 594–622. https:// doi.org/10.1002/bse.2279
80. Shriberg, M. (2002). Institutional assessment tools for sustainability in higher education: Strengths, weaknesses, and implications for practice and theory. International Journal of Sustainability in Higher Education, 3(3), 254–270. https:// doi.org/10.1108/14676370210434714
81. Singh, S. K., Giudice, M. D., Chierici, R., & Graziano, D. (2020). Green innovation and environmental performance: The role of green transformational leadership and green human resource management. Technological Forecasting and Social Change, 150, 119762. https://doi.org/10.1016/j.techfore.2019.119762
82. Susanti, A., Soemitro, R., A., A., Suprayitno, H., & Ratnasari, V. (2019). Searching the appropriate minimum sample size calculation method for commuter train passenger travel behavior survey. Journal of Infrastructure & Facility Asset Management, 1(1). https://doi.org/10.12962/jifam.v1i1.5232
83. Taddei-Bringas, J. L., Esquer-Peralta, J., & Platt-Carrillo, A. (2008). ISO 14001 and sustainability at universities: A Mexican case study. Management of Environmental

Quality: An International Journal, 19(5), 613–626. https://doi.org/10.1108/14777830810894274

84. Tseng, M.-L., Chiu, S. F., Tan, R. R., & Siriban-Manalang, A. B. (2013). Sustainable consumption and production for Asia: Sustainability through green design and practice. Journal of Cleaner Production, 40, 1–5. https://doi.org/10.1016/j. jclepro.2012.07.015
85. UI Green Metrics. (2022). UI Green Metric World University rankings overall rankings in 2022. Universitas Indonesia.
86. Van Dyne, L., & Pierce, J. L. (2004). Psychological ownership and feelings of possession: Three field studies predicting employee attitudes and organizational citizenship behavior: Psychological ownership. Journal of Organizational Behavior, 25(4), 439–459. https://doi.org/10.1002/job.249
87. Velazquez, L., Munguia, N., Platt, A., & Taddei, J. (2006). Sustainable university: What can be the matter? Journal of Cleaner Production, 14(9–11), 810–819. https://doi.org/10.1016/j.jclepro.2005.12.008
88. Vicente-Molina, M. A., Fernández-Sáinz, A., & Izagirre-Olaizola, J. (2013). Environmental knowledge and other variables affecting pro-environmental behaviour: Comparison of university students from emerging and advanced countries. Journal of Cleaner Production, 61, 130–138. https://doi.org/10.1016/j.jclepro.2013.05.015
89. Wesley Schultz, P. (2001). The structure of environmental concern: concern for self, other people, and the biosphere.
90. Journal of Environmental Psychology, 21(4), 327–339. https://doi.org/10.1006/jevp.2001.0227
91. Whitmarsh, L., & O'Neill, S. (2010). Green identity, green living? The role of pro-environmental self-identity in deter- mining consistency across diverse pro-environmental behaviours. Journal of Environmental Psychology, 30(3), 305–
92. 314. https://doi.org/10.1016/j.jenvp.2010.01.003
93. Wright, P. M., Dunford, B. B., & Snell, S. A. (2001). Human resources and the resource based view of the firm. Journal of Management, 27(6), 701–721. https://doi.org/10.1177/014920630102700607
94. Xuecheng, W., & Iqbal, Q. (2022). Managerial networking and frugal innovation: Situational leadership perspective.
95. Frontiers in Psychology, 13, 948530. https://doi.org/10.3389/fpsyg.2022.948530

96. Yong, J. Y., Yusliza, M.-Y., Ramayah, T., & Fawehinmi, O. (2019). Nexus between green intellectual capital and green human resource management. Journal of Cleaner Production, 215, 364–374. https://doi.org/10.1016/j.jcle- pro.2018.12.306

97. Zaptcioglu Celikdemir, D., Gunay, G., Katrinli, A., & Penbek Alpbaz, S. (2017). Defining sustainable universities follow- ing public opinion formation process. International Journal of Sustainability in Higher Education, 18(3), 294–306. https://doi.org/10.1108/IJSHE-06-2015-0105

98. Zhou, S., Zhang, D., Lyu, C., & Zhang, H. (2018). Does seeing 'mind acts upon mind' affect green psychological climate and green product development performance? The role of matching between green transformational leadership and individual green values. Sustainability, 10(9), 3206. https://doi.org/10.3390/su10093206