An-Najah National University

Faculty of Graduate Studies

EFFECT OF GREEN HUMAN RESOURCES MANAGEMENT PRACTICES ON ENVIRONMENTAL SUSTAINABILITY PERFORMANCE OF PALESTINIAN UNIVERSITIES: THE MEDIATING ROLES OF MANAGEMENT SUPPORT AND ORGANIZATIONAL CULTURE

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Dedication

I detected my thesis to my parents, my daughter, brothers, and sisters

With all respect

Raghad

Acknowledgments

First, thanks to almighty God for giving me the strength throughout this work. Many thanks to my supervisors, Dr. Mohammed Othman and Dr. Ahmed Zaid, for their hard work and support throughout this work. I want to thank all people who helped to complete this thesis.

Declaration

I, the undersigned, declare that I submitted the thesis entitled:

EFFECT OF GREEN HUMAN RESOURCES MANAGEMENT PRACTICES ON ENVIRONMENTAL SUSTAINABILITY PERFORMANCE OF PALESTINIAN UNIVERSITIES: THE MEDIATING ROLES OF MANAGEMENT SUPPORT AND ORGANIZATIONAL CULTURE

I declare that the work provided in this thesis, unless otherwise referenced, is the researcher's own work and has not been submitted elsewhere for any other degree or qualification.

Student's Name: _____

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ABSTRACT

Background: Changes toward green with more focus on human resources and the environment have resulted in the emergence of new types of management, one of them being Green Human Resource Management (GHRM). GHRM can achieve sustainability by protecting "natural resources" and reducing practices that harm the environment.

Objective: This study has investigated the linkage between Green Human Resources Management (GHRM) practices as a bundle with Organizational Culture (OC) and Management Support (MS) as mediation factors and their impact on Palestinian universities' sustainable environmental performance.

Method: The researcher proposed seven hypotheses, using the theoretical lens of Ability-Motivation-Opportunity (AMO) theory. She also conducted a review of relevant literature to serve the methodology of the study on GHRM and Environmental Human Resources Management (EHRM). Then, she used a quantitative method to collect data from 10 participant universities in Palestine; she administered a questionnaire to 351 administrative employees. The data analysis was conducted using Smart PLS.

Results: The findings indicated that GHRM positively affected Environmental Sustainability Performance (ESP). Moreover, OC and MS positively mediated between GHRM practices and ESP. This study has added value to existing literature by giving practical evidence that can help practitioners in issues related to GHRM practices and ESP with universities' MS and OC.

Conclusion: The researcher recommends that universities ensure that senior managements and OC support environmental initiatives. She also recommends raising staff awareness about environmental issues through GHRM practices. The researcher caps her thesis with the limitations of the study and recommendations for future studies.

Keywords: Green Human Resource Management; Environmental Performance; Organizational Culture; green hiring; green training and involvement; green Performance Management; and compensation.

Chapter One

Introduction

1.1 Overview

This chapter introduces a study overview with general background, problem statement, research gaps, research questions, research hypotheses, conceptual research framework, research objectives, and research methodology.

1.2 Background

Changes toward green with more focus on human resources and the environment have resulted in new management types; one of these is Green Human Resource Management (GHRM) (Jabbour, 2015). GHRM practices have focused on converting regular staff into distinguished staff to realize corporate environmental objectives that contribute significantly to environmental sustainability (Opatha, 2013; Opatha & Arulrajah, 2014). GHRM practices have many advantages for institutions. More specifically, they could achieve superior environmental performance through staff motivation, which may generate competitive advantages (Chiappetta & Jabbour, 2017). Moreover, designing these practices is essential for enhancing employees' behaviors to support organizational change for long-term sustainable development (Pellegrini et al., 2018). These practices, called the GHRM bundle, contribute to environmental sustainability by enhancing green employee "Ability": (A) by attracting, selecting, and training high-performance employees; green employees. "Motivation": (M) through enhancing loyalty toward green initiatives and providing "Opportunities": (O) for more contributing opportunities (Renwick et al., 2013). A mediation process through GHRM needs to be studied due to its role in long-term performance outcomes (Harvey et al., 2013). According to Singh and El- Kassar (2019), the crucial role of the top management is critical to influencing the firm's environmental performance. Other researchers have emphasized the importance of organizational culture (OC) in various aspects related to adopting environmental management (Baird, Su & Tung, 2018).

GHRM as a concept is popularly used and practiced in western countries, unlike the Asian countries that pay less attention to environmental issues, even though these countries are more likely to have pollution and ecological degradation. More studies

should be developed (Renwick et al., 2013), especially in Palestine (Zaid et al., 2018). In addition, GHRM has been studied in many sectors, such as multinational companies (Haddock-Millar et al., 2016) and the manufacturing industry (Nejati et al., 2017; Yong et al., 2019a; Yusliza et al., 2017). However, less attention has been paid to GHRM research in sustainable higher education institutions, so a research gap has existed (Dyer & Dyer, 2017). Employee behavior is essential for developing the environment in the higher education sector by reducing environmental degradation and implementing environmental initiatives (Mohamed et al., 2020).

In the Palestinian context, few studies have been conducted on this field, so ongoing studies encourage the literature on this issue (Masri & Jaaron, 2017). Consequently, this study is conducted in Palestine, targeting the higher education sector according to its responsible role in environmental awareness, research, and raising current and next generations' awareness about environmental issues (Rayner & Morgan, 2017). Another reason for this study is the slow progress of universities toward sustainability (Lozano et al., 2013). This study examines the impact of GHRM bundle practices on environmental sustainability performance (EP) in the Palestinian higher education sector. It is done through the mediating role of organizational culture and management support through the lens of ability-motivation-opportunity (AMO) theory. It is the most prevalent theory used to understand HRM's effects on organizational performance (Appelbaum, 2000; Boselie et al., 2005). Finally, a conceptual model that guides managers to implement green practices in higher education institutions is developed.

1.3 Problem Statement

According to Mtutu and Thondhlana (2016), the environmental deterioration of deep-rooted human behavior; led to GHRM and its role in influencing employee behaviors in the workplace as a study topic (Dumont et al., 2017). Employees' green behavior became an essential issue regardless of the organization's sector (Rayner & Morgan, 2017). A research gap was identified in the higher education sector (Dyer & Dyer, 2017). Universities have multiplier effects on sustainability through their role in raising awareness for current and future generations on environmental issues and incredibly environmentally-friendly practices (Rayner & Morgan, 2017).

In Palestine, few studies have been conducted on the GHRM field (Masri & Jaaron, 2017). This study is the first of its kind conducted in higher education in Palestine, even though universities have become significant consumers of resources due to their diversification of academic activities (Altan, 2010). In Palestine, there are 53 licensed higher education institutes, divided into 18 universities, 11 of them are in the West Bank, 19 university colleges, 18 community colleges, and two open universities (Sida, 2019). They consume resources heavily, with the increased budget allocated to this sector by Palestinian National Authority from 20 million USD in 2009 to 89,4915,530 USD in 2017 (Sida, 2019). These show the importance of this sector and its vast effects. Ministry of education and higher education (MOEHE) in Palestine led the effort of the national strategic planning process for the educational industry for 2017-2022 in line with sustainable development goals (SDGs) (Educational Sector Strategic Plan 2017-2022). Universities, in general, are moving towards a "Green Campus." According to Mohammed et al. (2020), higher education sector employees' behaviors are critical to reducing environmental dangers and successfully ensuring environmental performance. Tairu (2018) points out that reaching environmentally-friendly universities campus requires environmentally-friendly HRM practices, but environmental initiatives in universities still pay less attention to the behavioral aspects (Levy & Marans, 2012). This study examines how implementing HRM practices with OC and MS affects sustainable environmental performance.

1.4 Research Gaps

This study has distinctive features, which are the following:

- According to Geng et al. (2017), empirical research on environmental sustainability is still recent in developing countries, with few studies exploring the GHRM practices in higher education institutions (Dyer & Dyer, 2017). In the Palestinian context, which has a complex and unique political situation, there are different levels of willingness and commitment to implement environmentally-friendly practices in the various sectors (Masri & Jaaron, 2017). According to Mousa & Othman (2020), few numbers of research take into account the service sector while studying the impacts of GHRM practices on sustainable performance. To the best of the researcher's knowledge, this study is the first of its kind in Palestine, so it adds a

piece of substantial evidence from Palestine to the existing GHRM practices in the higher education sector.

- As set by Eccles et al. (2013), while a significant number of researchers study environmental sustainability performance in the corporate sector, a research gap is found in GHRM research conducted in the higher education sector (Dyer & Dyer, 2017).

- There is a need to study the mediation processes through GHRM for long-term performance outcomes (Harvey et al., 2013). Literature found a gap in research that examines the relationship between organizational culture and environmental performance (Renwick et al., 2013). Without consideration of organizational culture, research about employees' green initiatives is incomplete, so the recent studies highlighted the lack of research on the relationship between organizational culture and environmental performance (Dubey et al., 2017; Jackson et al., 2011; Jackson et al., 2014).

- Top management commitment toward environmental issues is one of three intangible assets that need environmental improvement (Ahmad & Mohamed Zabri, 2015). Top management commitment is critical for any organization that wants to be environment-friendly (Brown, 2015; Cheng & Zhou, 2019). Prior literature focused on this factor as a direct enabler of environmental performance (Massuod et al., 2011). But few studies have empirically tested how some organizational factors affect continuous environmental improvements (Paille et al., 2013).

- Although there is an increasing interest in the literature on GHRM in developed countries, as set by O'Donohue & Torugsa (2016), which have shifted toward green practices (Vazquez et al., 2016). Developing countries such as Palestine lack it due to high initial costs, a lack of technology, and a lack of experts (Masri & Jaaron, 2017). In both developed and developing nations, there is still confusion regarding what human resource practices are required for effective GHRM implementation and how these practices might be linked and included in the workplace to assist the business in maximizing environmental performance (Ahmad, 2015; Haddock-Miller et al., 2016).

1.5 Research Questions

The following significant questions are answered after conducting this research:

Q.1: What is the relationship between the GHRM bundle practices and environmental sustainability performance in Palestinian universities?

Q.2: What is the relationship between organizational culture and environmental sustainability performance in Palestinian universities?

Q.3: Does organizational culture mediate the relationship between GHRM bundle practices and environmental sustainability performance in Palestinian universities?

Q.4: What is the relationship between management support and environmental sustainability performance in Palestinian universities?

Q.5: Does management support mediate the relationship between GHRM bundle practices and environmental sustainability performance in Palestinian universities?

Q.6: What GHRM framework can boost organizational culture and management support in Palestinian universities?

1.6 Research Hypotheses

According to the research questions, the following hypotheses have been identified to use:

H_1: The GHRM bundle practices positively affect environmental sustainability performance in Palestinian universities.

H_2: The GHRM bundle practices positively affect organizational culture in Palestinian universities.

H_3: The organizational culture positively affects environmental sustainability performance in the Palestinian universities

H_4: The organizational culture mediates the relation between the GHRM bundle practices and environmental sustainability performance in Palestinian universities.

H_5: The GHRM bundle practices positively affect management support in Palestinian universities.

H_6: Management support positively affects environmental sustainability performance in Palestinian universities.

H_7: The management support mediates the relation between the GHRM bundle practices and environmental sustainability performance in Palestinian universities.

1.7 Research Objectives

The main objectives of this study are:

- To investigate the relationships between GHRM bundle practices and environmental sustainability performance in Palestinian universities.
- To investigate the relationship between GHRM bundle practices and organizational culture in Palestinian universities.
- To investigate the relationships between organizational culture and environmental sustainability performance in Palestinian universities.
- To verify if organizational culture mediates the relationship between GHRM bundle practices and environmental sustainability performance in Palestinian universities.
- To investigate the relationship between GHRM bundle practices and management support in Palestinian universities.
- To investigate the relationships between management support and environmental sustainability performance in Palestinian universities.
- To verify if management support is mediating the relationship between GHRM bundle practices and environmental sustainability performance in Palestinian universities.
- To develop a framework that helps implement GHRM in Palestinian universities.

1.8 Significance of the Study

This empirical research demonstrates the value of GHRM implementation in conjunction with OC and MS in achieving environmentally sustainable performance. This research also sheds information on the GHRM, which has not been well-investigated in developing countries, particularly in Palestine, where few studies have been undertaken in this sector (Masri & Jaaron, 2017). As a result, continuous research promotes the literature on this subject (Zaid et al., 2018, Masri & Jaaron, 2017). Particularly in institutions still in the early stages of green management and GHRM. This study examines the GHRM bundle practices with OC and MS as mediation factors, potentially creating environmental sustainability. By having a suitable design for theoretical GHRM with OC and MS, the means of a sustainable performance enhancement can be discovered. At the end of this study, some recommendations for further research on GHRM in Palestine are given.

1.9 Research Scope

This study focuses on Palestinian universities in the West Bank that use green practices at varying levels. The main reason for selecting universities is the critical role of universities in building environmental sustainability, sharing best environmentally-friendly practices and solutions, educating current and future community members, focusing on the leaders, and enhancing sustainability (Ferrer-Balas et al., 2008; Fisher & Bonn, 2011). Furthermore, they play a significant role in environmental awareness (Rayner & Morgan, 2017). Studying the field of higher education enabled us to answer the considerable objective of this study, which is to determine the impacts of GHRM implementation on sustainable environmental performance.

1.10 Thesis Structure

This thesis has five chapters: The first introduces the theory by providing general background information, discussing the problem statement, research questions, research hypotheses, research objectives, the significance of this research, scope, and research methodology. The next chapter offers an overview of the literature on the GHRM and EP, as well as the core GHRM practices from green hiring, green training and development, and green performance and reward based on AMO theory. The impact on organizational culture and managerial support was also explored. The second portion of

this chapter explores how grounded theories in GHRM and EP, with OC and management support as mediators, led to establishing a theoretical framework and hypotheses. The third chapter then describes the methodology employed in this thesis, including the research design, data collection procedure, statistical tools, sampling process, and data analysis strategy. Furthermore, chapter four presents the results and findings of the hypotheses testing. The final chapter discusses the general conclusions, implications, contributions of the thesis, limitations, and future research suggestions and recommendations.

Chapter Two

Literature Review

2.1 Overview

This chapter introduced a review and analysis of existing evidence from previous literature to highlight the relevance of GHRM practices on sustainable environmental performance with organizational culture and management support as mediating factors, in addition to AMO theory. Also, it discusses the literature gaps. Finally, a conceptual model based on the literature is presented to create the hypotheses of this study.

2.2 Sustainability Development

In 1969 the idea of sustainability emerged through World Conservation Union (IUCN), through adopting it as a new scope that focuses on "the perpetuation and enhancement of the living world – man's natural environment – and the natural resources on which all living things depend". It indicates the management of "air, water, soils, minerals and living species including people, to achieve the highest sustainable quality of life" (Adams, 2006). After that, the idea of Sustainability was spread. So, and through United Nations Conference on the human environment in Stockholm (Sweden) in 1972, Sustainability was the central issue. The United Nations Environment Program (UNEP) mainstreamed the sustainable development concept.

The World Wildlife Fund (WWF) through the World Conservation Strategy (1980), also the Brundtland report included the possibility and the need for economic growth without environmental damage (Brundtland, 1987), and in 1992 United Nations Conference on Environment and Development that adopted Agenda 21 (United Nations, 1992). After that, in 2000, the United Nations Millennium Summit the Millennium Declaration with the development plan for the next 15-20 years in the form of eight Millennium Development Goals (MDG), among which was Sustainability. (United Nations, 2000). And the 2002 World Summit on Sustainable Development in Johannesburg. In 2012, United Nations Conference on Sustainable Development (UNCSD) focused on two sustainable development issues: a green economy and an institutional framework (Allen et al., 2018). This generation and the future demand sustainable development from management (Marcus & Kaiser, 2006).

There are many definitions for sustainability development (SD); according to the different angles examined, one of the most famous definitions for SD is to remain natural resources for the next generations even if used (Mohieldin, 2017). Evers (2018) further focus on the linkage between organizing principle to achieve development goals while maintaining the natural systems' capacity to sustain natural resources and environmental services. Similarly, sustainable development has three spheres: environmental, social, and economic, referred to as the "triple bottom line" (Elkington, 1997). So, SD aims to achieve social and economic development and environmental equilibrium. (Gossling-Goidsmiths, 2018; Zhai & Chang, 2019).

2.3 Environmental Sustainability

According to Mohieldin (2017), sustainable development is the approach that allows resources to existing for a future generation, even with the usage of it by the existing generation. Sustainable development has three pillars which are social, economic, and environmental. Environmental sustainability concerns the environmental system protection and carrying capacity of the natural environment (Brodhag & Taliere, 2006). Environmental performance shows organizations' capacity and ability to save the environment for current and next generations (Ricardo de Souza Freitas et al., 2011). It emphasizes reducing dangerous material consumption, lessening the environmental incident frequency, minimizing air emission, wastewater, and solid wastes, and enhancing organizational environmental conditions (Diab et al., 2015).

Environmental performances lead to quantifiable benefits (Almeida et al., 2019). According to Wanger (2014), an environmental management system (EMS) defines assets of green practices to improve EP. Integrating EMS into decision-making became the most effective tool for sustainable development (Wagner, 2014).

Sustainability and environmental performance became critical factors for organizational survival and competitiveness (Lee, 2009). However, the environmental management system (EMS) sometimes can't work sufficiently to address some complex environmental problems because this system depends mainly on voluntary initiatives, which are informal and difficult to control (Boiral, 2009). According to Renwick et al. (2011), HRM is essentially important for EMS success. Muller- Camen et al. (2012) called to conduct new research to study the relationship between GHRM and EP. Other

researchers also called to conduct research connecting GHRM practices and environmental sustainability (Jackson et al., 2011). Muller- Camen et al. (2012) called to conduct new research to study the relationship between GHRM and EP.

Also, organizational culture is considered an element of environmental excellence (Štok et al., 2010), where research set that organizational culture, structure, leadership, and strategy are among the essential indicators of GHRM (DuBois & Dubois, 2012). Hadjri et al. (2019) found that green organizational culture positively relates to EP.

2.4 Green Human Resource Management (GHRM) Practices

Protecting the environment has emerged as an important issue for both developed and developing countries since there is a growing desire to meet the massive demand for sustainability. As a result, firms must implement environmental practices, such as activities that may help companies become “green and competitive” (Jabbour et al., 2012). Organizations play a role in environmental protection through various departments, particularly the HR department, which is essential in green practices (Ricardo de Souza Freitas et al., 2012; Jackson et al., 2011; Renwick et al., 2016). Individuals can make significant changes in corporations “from within” (Fetzer & Aaron, 2014)—by involving them in environmental projects (Mishra et al., 2014).

Furthermore, the strategic function of human resources in any organization is to build and implement business strategies sustainably (Cohen et al., 2012). HRM can be defined an any activity link with people management (Boxall & Purcell, 2003). Also, “the process of achieving organizational objectives through the management of people, tasks associated with HRM including recruiting, hiring, developing, and terminating employees” (Holdford, 2004). According to the new change toward "Green," a global attitude, a new type of management emerged, called Green HRM, which came from environmental management and HRM integration (Dutta, 2012). Hence, human resources have a role in initiating and involving individuals in green initiatives and creating changes in existing processes (Mishra et al., 2014).

In the modern era ‘being green’ is considered a “norm” (Margaretha & Saragih, 2013). GHRM has many different definitions, such as transforming employees into environmentally-friendly employees through policies, procedures, practices, and

systems to benefit the community, community members, businesses and organizations, and the natural environment (Opatha & Arulrajah, 2014). Another definition for GHRM is ‘using Human Resource Management (HRM) practices to reinforce environmentally sustainable practices and increase employee’s commitment towards environmental sustainability issues’ (Masri & Jaaron, 2017, p. 474).

Encouraging and involving employees in GHRM initiatives and practices implementation aligns with environmental protection (Bangwal & Tiwari, 2015). GHRM is connected with HRM issues with environmental management to achieve sustainable performance (Renwick et al., 2013). Implementing “green principles” needs three essential factors: hiring by choosing the best environmentally-friendly candidates, training by focusing on "green practices" program, and compensation.

These factors can guide any organization to reach its outcomes and sustainable performance that protect the environment (Cherian & Jacob, 2012). So, HRM practices such as selection and hiring, training, performance evaluation, rewards, engagement, empowerment, etc. (Renwick et al., 2016) have to be connected with environmental management (Haddock-Millar et al., 2016). Research realized the strategic roles of GHRM (Haddocket al., 2016; Jabbour & de Sousa Jabbour, 2016). These results were realized by investigating the relationship between green management and negative environmental impacts, and this relation was an inverse relationship (Chen & Chen, 2012). And positive public relations and better sales are gained from implementing green management for companies (Sawant et al., 2013).

2.5 GHRM Importance

According to Bangwal and Tiwari (2015), GHRM implementation had positive effects by increasing “productivity” because green practices increase production levels to achieve corporate sustainability. Also, it can increase profit and decrease costs in the long- term by using green technologies. Moreover, it can achieve sustainability by encouraging employees to be responsible for protecting “natural resources” and reducing practices that harm the environment. Finally, it helps to develop the corporate image (Bangwal & Tiwari, 2015).

In the same vein, GHRM is an excellent way to achieve high environmental performance, according to its role in creating ‘green employees’ by focusing on Green Hiring (GH), Green Training and Involvement (GTI), and Green Performance Management and Compensation (GPMC) (Dutta, 2012). Employees' green practices improve the organization’s environmental performance in aggregate because they are the building blocks of any organization (Kim et al., 2019). GHRM practices facilitate environmental performance and increase sustainability management engagement (Nejati et al., 2017; Teixeira et al., 2016).

2.6 GHRM Rules

According to Fetzer and Aaron (2010), organizations can green their human resources by following six green guidelines. First, "get the mindset” for the people's beliefs and practices, which may modify in various ways. It is also regarded as every activity prepared to be environmentally friendly by the brain. Second, “make the business case” by applying green strategies to achieve “good” results by creating a real business case. Third, “get your colleagues on the side,” which is linked to the importance of staff “engagement” in green practices and initiatives by employees directly connecting with these initiatives until they have the “interested” feeling at work. Forth, “have two-way conversations” to persuade all people to be environmentally friendly; companies could use several techniques for better communication. Fifth, “work together” reflects the importance of “combined efforts” in environmental issues that governments, organizations, and individuals should take. Finally, “make it part of the culture” by making staff with management "green" under any condition.

2.7 GHRM Bundle Practices

A previous study suggested testing the relationships between GHRM practices as a bundle with environmental and organizational performance (Renwick et al., 2013). This helps an organization connect GHRM practices with its strategy to ensure continuous improvement of environmental performance and sustainability (Anusingh & Shikha, 2015). Researchers reached several dimensions concerned about the relationships between HRM practices and organizational performance, based on the assumption that a company’s performance will be more remarkable if the influence of human resource practices is observed as a “bundle” instead of relying on a single and isolated variable

(Tadić & Pivac, 2014). These “bundles” should represent the combinations of integrated, interrelated, and internally consistent human resource practices (Zaid et al., 2018). The GHRM bundle concept suggests that the integrated elements within GHRM practices are internally reliable and compatible with various contextual factors and a firm's strategic direction (Alfes et al., 2013; Zaid et al., 2018).

Hence, the GHRM bundle practices involve the human/organizational aspects, which are the following (Chiappetta Jabbour et al., 2017; Mousa & Othman, 2020)

- Green Hiring (GH).
- Green Training and Involvement (GTI).
- Green Performance Management and Compensation (GPMC)

The following sub-sections for this chapter clarify these GHRM practices individually, considering their effects on greening organizations.

2.7.1 Green Hiring

Green hiring (GH) is adopting environmental criteria, such as environmental competencies and attitudes, in the hiring process (Longoni et al., 2016). organizations need green hiring to build and maintain a green workplace by choosing employees who support environmental issues (Renwick et al., 2013). GHRM efforts begin with hiring ‘green’ candidates (Yusoff & Othman, 2015).

Green hiring starts with job applications, the interviewing process that could include questions about environmental issues to show the candidate’s ability and desire to adopt and implement green activities and how to help organizations reach their goals concerning protecting the environment (Stringer, 2010). Grolleau et al. (2012) highlighted recruiting environmentally- friendly candidates positively affected quality, financial resources, organizational structure, reputation, and other vital issues. So, organizations should emphasize that the hiring process depends on candidates' environmental attitudes (Masri, 2016; Renwick et al., 2016).

2.7.2 Green Training and Involvement

Green training and involvement (GTI) are activities that help employees develop their social responsibility towered natural resources usage (Zoogah, 2011). For effective implementation of green management, training and developing employees was considered an essential element (Daily et al., 2011). Mandip (2012) highlighted that any organization s to implement training programs that focus on environmental issues, and this training should target employees at the top, middle, and low management levels. "Environmental training" is affected by many factors, such as senior management commitment and the "life-cycle analysis" (Unnikrishnan & Hegde, 2007). Green training is "the need of the hour" due to its role in learning people and building socially responsible people (Ahmad, 2015).

2.7.3 Green Performance Management and Compensation (GPMC)

Performance management "is a critical and necessary component for individual and organizational effectiveness"(Cardy & Leonard, 2014). Green performance measures played an important role in sustainability achievement through attaining the required development; on the other hand, this role is exposed to various pressures like standards and "vagueness of qualitative and quantitative" (Tseng et al., 2011). HR managers can link the overall environmental performance with green performance management, starting from environmental objectives, monitoring behaviors, and evaluating achievement using green key indicators to prevent environmental harm (Sharma & Gupta, 2015). These practices guarantee realistic, environmentally sustainable performance (Arulraja et al., 2015). Organizations have to set green goals, and responsibilities for Managers and staff also should include them in their appraisals (Renwick et al., 2013). On the other hand, managers should help staff improve their skills, ability, and understanding of environmental problems by providing regular feedback about their green performance (Arulraja et al., 2015).

2.8 Organizational Culture

Researchers have highlighted the impact of organizational culture (OC) on different aspects related to organizations' performance, such as job satisfaction, productivity, and environmental sustainability (Baird et al., 2018; Uzkurt et al., 2013), also on performance measurement systems (Dubey et al., 2017). If the organization wants to be

ethical, it must balance its financial, social, and environmental performance (Florea et al., 2013).

Organizational culture (OC) is the set of values, norms, and beliefs that create the employees' behaviors in any organization (Calciolari et al., 2017; Elsbach & Stigliani, 2018; Maldonado et al., 2018; Srivastava et al., 2017). A comprehensive method used in literature to define organizational culture (OC) is conceptualizing and operationalizing organizational culture in several dimensions and disciplines (Upadhaya et al., 2018). Norton et al. (2015) recommended that Schein's (1990, 2010) organizational culture definitions can be used for defining green organizational culture as criteria to develop an understanding of the concept, where Schein defined organizational culture as the values, beliefs, and behaviors of the employees. Green Organizational Culture is "the pattern of shared basic assumptions about environmental issues and management (Marshall et al., 2015). Green organizational culture has all shared beliefs, values, norms, and social stereotypes about organizational environment management and shapes the standard behaviors expected from the individuals (Chang, 2015).

Organizational culture is connected with employees' practices, which could be "green" if the staff work on minimizing the bad and maximizing the remarkable impact of their activities on the environment (Sroufe et al., 2010). The HR department can play this role by designing HR practices that are important for enhancing employees' behaviors to support organizational change and achieve long-term sustainable development (Pellegrini et al., 2018). Such as training and incentivizing employees to engage in environmental practices to develop and promote a green culture (Attains, 2012). Despite that, researcher who believes in the resource-based view (RBV) theory consider organizational culture a strategic source of competitive advantage (Nason & Wiklund, 2015). But there is one weakness and lack in the literature investigating the relationships between organizational culture and its impacts on environmental performance (Swanson & Orlitzky, 2018; Renwick et al., 2013).

2.9 Management Support

Managers faced increased pressure to give more attention to environmental issues, which came from stakeholders who also focus on evaluating environmental performance (Rodrigue et al., 2013). So, managers have a responsibility for the

environment. If management takes this responsibility, a proactive environmental strategy could be established (Hart & Dowell, 2011). Top management commitment toward environmental issues is one of three intangible assets that need environmental improvement, with the planning of environmental strategies and environmental management accounting (Ahmad & Mohamed Zabri, 2015). So, top management commitment is critical for any organization that wants to be environment-friendly; this commitment enhances the competitive advantage (Brown, 2015; Cheng & Zhou, 2019). Top management commitment enhances EP (Rodrigue et al., 2013). Top managers have a critical role in implementing strategies concerned with sustainability issues through resource commitment and organizational changes (González-Benito, 2010). Top management's responsibility is considered one of the critical indicators in determining the implementation of sustainability strategies (Wijethilake et al., 2017).

The literature highlighted that the commitment of the top management toward the environment is a critical factor in developing environmental management practices (Chang & Deegan, 2010). So, there is a significant relationship between top management commitment and continuous improvement of environmental performance (Perez et al., 2007; Spencer et al., 2013).

Top management's boundary-spanning role has significantly affected environmental projects by gaining employees' commitment (Gattiker & Carter, 2010). However, Derchi et al. (2015) clarified that there is a gap in the literature that focuses on the effects of integrated organizational resources such as top management support in developing environmentally- friendly practices (Hart & Dowell, 2011).

2.10 Ability-Motivation- Opportunity (AMO) Theory

AMO theory integrated three main GHRM factors. Some previous research studied only one aspect rather than the three factors, so there are substantial differentiations within these researches (Jabbour, 2015; Teixeira et al., 2016). From the lens of AMO theory, GHRM practices need to measure on a measurement scale with three integrated factors: ability, motivation, and opportunity. These factors should be together because taking one of them will lead to inaccurate explanations of their impacts on employees' involvement in environmental initiatives and practices (Renwick et al., 2013, 2016).

Appelbaum (2000) proposed the framework of Ability-Motivation- Opportunity (AMO); this framework can explain HRM practices that increase the ability of employees, motivation for implementing work, and involvement in opportunities that will improve organizational performance. AMO theory explains that High-Performance Work Practices (HPWS) are a collection of especial and HR practices that are interrelated; these practices are combined and based on ability, motivation, and opportunity aspects (Appelbaum, 2000). Ability is employees' required knowledge and qualification to do tasks based on a set of practices, from recruitment to training and development programs. Motivation enhances employees' efforts to accomplish targeted performance, such as performance appraisal and financial and non-financial incentives. Finally, the opportunity is defined as a set of practices, including involvement, sharing of knowledge, and autonomy-enhancing practices, which enhance employee participation in several tasks and activities (Marin & Tomas, 2016).

Green training could improve employees' capacity, sometimes better than natural green competence (Subramanian et al., 2016). Even though exercise cannot automatically translate into motivation and participation in environmental issues, it has a role in enhancing the level of employee commitment (Haddock-Millar et al., 2016; Yu et al., 2017). Performance appraisal and encouragement are motivation methods for trained employees (Martinez-del-Rio et al., 2012).

According to Greener (2010), two factors are set for the AMO model; front-line managers' role in human resource policies implementations and the organizational culture. Organizational culture greatly influences ability and opportunity through beliefs, norms, and assumptions that guide employees' behavior and can significantly affect their learning and development (Greener, 2010). In addition, abilities and capabilities will be automatically enhanced if the organizational culture supports knowledge sharing and learning. They enhanced individual talents by supporting team performance by learning from their co-workers.

2.11 Research Framework

Several factors affect HR practices, such as the three main components of the AMO theory. This theory can explain the HR practices consumption by employees. After all, its components determine people's behavior in a workplace context (Cox et al., 2009).

These components are HR practices grouped into ability, motivation, and opportunity (Appelbaum, 2000). As mentioned above, abilities include recruitment, training, and development programs. Motivation includes performance evaluation followed by financial and non-financial rewards.

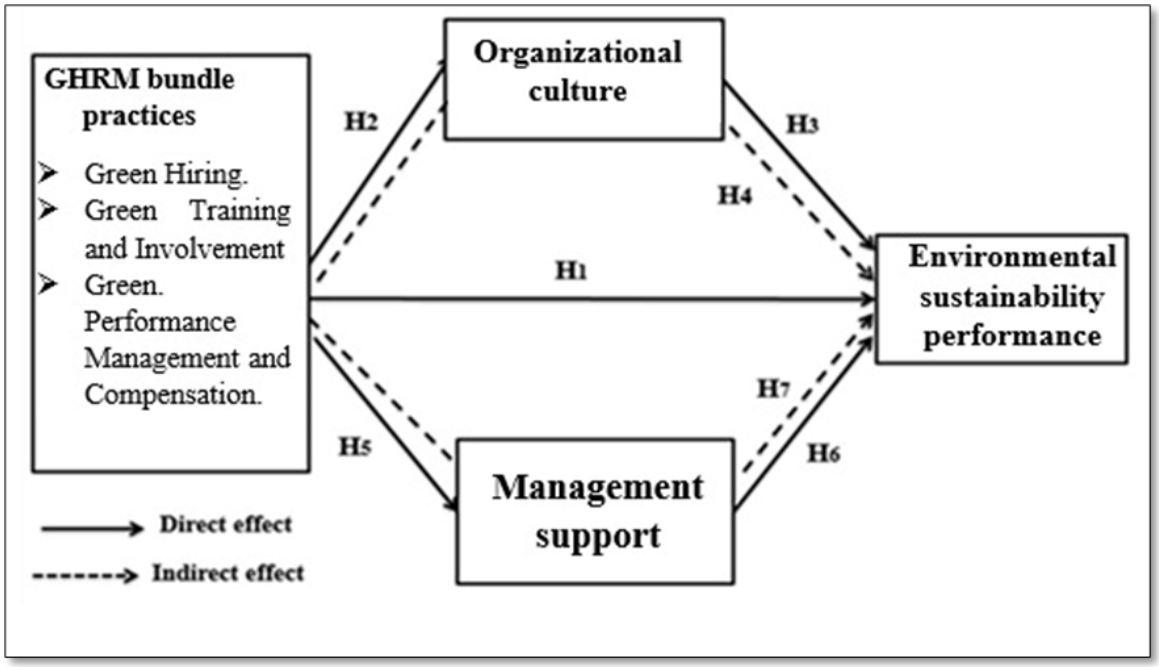
Finally, opportunity includes involvement, knowledge-sharing, and autonomy-enhancing practices (Marin-Garcia and Tomas, 2016). On the other hand, and based on the AMO framework, Lepak et al. (2006) highlighted that even if employees have the required skills and knowledge, they will work with limited potential and little willingness and effort if the company has a lack of organizational support or opportunities. Dumont et al. (2017) confirmed that GHRM practices roles in enhancing the effect on employees when their company tries to create a green climate at the workplace. This will motivate employees to participate voluntarily in green tasks (Chou, 2014). The main reason for using this theory is its ability to explain GHRM and its environmental outcomes. It discusses the HRM practices and their effects on organizational performance (Boselie et al., 2005). Also, it can explain the relation between OC and organizational support and EP.

AMO theory answers the impacts of GHRM practices on environmental performance sustainability (Renwick et al., 2013, 2016). So, according to the finding from the literature, this study provides a conceptual framework that tries to investigate the relationship between GHRM practices and EP with organizational culture and management support as mediation factors.

Figure 1 illustrates the conceptual model guiding this research. This research investigates three significant hypotheses. The first set of hypotheses is to test the direct effect of GHRM bundle practices on sustainable environmental performance. The second set of hypotheses tests the immediate effect of management support and organizational culture as independent variables on components' sustainable performance. The third set of hypotheses tests the mediating of management support and organizational culture on the relationship between GHRM bundle practices and sustainable environmental performance.

Figure 1

Conceptual framework



This framework was empirically tested. It includes the direct effects of GHRM bundle practices on environmentally sustainable performance and the mediating effect of organizational culture and management support on the relationship between the GHRM bundle and environmentally sustainable performance.

2.12 Previous Studies

The GHRM bundle contains HR activities such as hiring, training, performance, and compensation, which are green practices (Guerci et al., 2016). A deeper understanding of the GHRM practices will help firms sustain environmental performances (Arulrajah et al., 2015). Firms have used GHRM due to its benefits in creating green firms and green employees with better morale (Firdaus & Udin, 2014). Show Table 1 in Appendix A shows a GHRM study conducted on different sectors and industries from various countries.

Based on the above table, several studies were conducted in developing countries such as Palestine (Masri & Jaaron, 2017). Especially in the service sector, as mentioned in a study conducted by Mousa and Othman (2020). Also, most of the previous studies focused on the manufacturing sector, with limited attention on the higher education sector, which is in line with the study conducted by Dyer and Dyer (2017). This result encourages the scope of this work which is conducted in universities in Palestine.

According to the literature review summarized in the Appendix A, limited literature focuses on studying the effect of mediation factors, such as organizational culture (Renwick et al., 2013). Also, as management support (Paille et al., 2013). So, this research aims to fill this gap by examining the effect of GHRM on EP, with organizational culture and management support as mediation variables.

2.13 Environmental Management in Palestinian Universities

In the Palestinian context, Palestinian National Authority founded the Ministry of Environmental Affairs (MENA) in 1996, and now it's called The Palestinian Environmental National Authority (PEnA), with the mission of "Protecting the environment and it's all elements". It seeks to promote environmental development sustainability, also preventing environmental hazards. It has roles in multidisciplinary sectors, not a few. It has a role in strategic and policy planning, research and reports, legislative and legal environmental issues, environmental awareness program promotion, capacity building, and human resource development (MEnA, 2020). The Ministry circulates the environmental awareness concept and goals incorporated with schools, universities, and different entities and encourages various initiatives that aim at environmental protection.

Higher education institutions are governed by the Palestinian higher educational system in Palestine. Fifty-two is the number of accredited institutions; 16 are traditional universities, 2 are open universities, 17 are university colleges, and 17 are community colleges. In the West Bank, there are 33 HE institutions; 10 of them are traditional universities (2 governmental, six public, two private), 12 are university colleges (5 gov., five private, one public, 1 UNRWA), and 11 community colleges (6 public, four private, 1 UNRWA). Two universities are open education universities (MoHE, 2020). With 61,251 students enrolled for 2019-2020 (MoHE, 2020).

Even though environmental sustainability is still a new concept for Palestinian universities, the universities made notable achievements in this field. In 2016, and according to UI Green Metrics of World University ranking that measures the commitment of universities toward the environment and environmental sustainability standards; An Najah National University achieved first place in Palestine, 7th in the Arab World, and 117th in the world compared to 144th in 2015. In 2018, Birzeit University was ranked first among the Palestinian universities (UGM, 2018).

2.14 Research Hypotheses

This study argues that the investigation of a combination of GHRM and organizational culture with management support will help to realize more environmentally sustainable performance. This research builds on previous literature that links GHRM practices and sustainable performance; this study was conducted through the lens of AMO theory. As mentioned above, this theory integrated GHRM practices that help develop human capital, reflecting on organizational performance through higher productivity, waste reduction, quality improvement, and higher profits (Appelbaum et al., 2000). The study hypotheses have been designed based on previous literature focused on GHRM effects on sustainable performance, with organizational culture and management support as mediating factors. Seven hypotheses have been formulated to test the relationships between these constructs.

2.14.1 Impact of GHRM Practices on Environmental Performance

According to Ren et al. (2018), extant research about the effects of GHRM on organizational outcomes is still undefined. However, GHRM is an integral part of HRM that focuses on green activities and initiatives (Mandip, 2012). It is formulated from several factors, such as policy and procedures of green management (Patel, 2014). New GHRM literature is concerned about the impact of the GHRM bundle on the organization's performance (Renwik et al., 2013). According to Wagner (2013) and GHRM perspective, employee participation is required to get greener. This led to the result that HRM has the most critical role, which can also be considered the key to achieving sustainable development (Mandip, 2012). Employees have to participate in green activities, including recruitment, training, and compensation, these combinations of activities are called the GHRM Bundle (Wood, 2014). This bundle develops GHRM

(Rami & Mishra, 2014). Integration of these practices significantly affects organizational and performance development (Tadić & Pivac., 2014).

Green hiring firmly directs organizations to prefer and hire potential candidates with higher environmental commitment. (Yong et al., 2019). This comes from that employing qualified environmental competency is more important and less costly than conducting training about environmental issues (Masri & Jaaron, 2017). On the other hand, despite the advantages of green training, it needs investments that could be expensive for many organizations (Jabbour et al., 2019). Due to financial needs and economic restraints (Jabbour et al., 2019). in the same vein, it's not easy to adopt a reward system that successfully covers all staff because employees can be motivated in several ways (Fernandez et al., 2003).

According to Haddock-Millar et al. (2016), greening activities are the main factor for environmental performance development. Organizations could improve their environmental performance by understanding green human resource practices (Arulrajah et al., 2016). GHRM has an essential role in improving environmental performance and enriching the well-being of workers (Renwick et al., 2016). Also, GHRM helps organizations with issues related to the environment, such as decreasing carbon emissions and workforces like performance, supervision, training and development, compensation, and reward management (Opatha & Arulrajah, 2014). GHRM affects staff motivation, leading to high environmental performance and achieving the basics for competitive advantage (Chiappetta et al., 2017; Paillé et al., 2014). This discussion leads to the first hypothesis:

H_1: The GHRM bundle practices positively affect EP in Palestinian universities.

According to Amini et al. (2018), different factors play a role in formulating organizational cultures, such as HRM departments. This department forms employees' norms, beliefs, and behaviors through hiring, training, appraisal, and incentivization processes, and one of HRM's functions is GHRM which encourages an organization to adopt green initiatives (Mandip, 2012). GHRM practices support sustainable organizational development and enhance employee commitment and behavior (Pellegrini et al., 2018). Trained employees engaged in environmental activities and initiatives have a role in developing and promoting a green culture for the organization

(Attaianese, 2012). HR departments can promote environmental messages to employees through training, workshops, meetings, and performance evaluation (Renwick et al., 2013). Also, the HR department implements green initiatives such as training and assessment. Thus managers and employees become empowered (Daily et al., 2012).

Moreover, through unique systems and programs, the HR department can help employees think and find solutions to environmental problems (Daily et al., 2012). As a result, GHRM considers one of the organizational strategic keys where HR departments have a sufficient role in the organizational sustainability culture development (Harmon et al., 2010). This discussion leads to the second hypothesis:

H2: The GHRM bundle practices positively affect organizational culture in Palestinian universities.

Any organization is considered ethical if it balances financial, social, and environmental performance (Florea et al., 2013). Many factors have a role in environmental impacts, such as organizational culture (OC). Still, few types of research were conducted to assess the impacts of organizational culture on environmental performance, even though organizational culture has effects on successfully implementing environmental practices (Durach & Wiengarten, 2017). This result is in line with the research conducted by Wang (2019) among manufacturers in Taiwan, who found that green organizational culture has a significant effect on environmental performance. Also, other studies assure that the organizational culture positively affects environmental sustainability performance (Hadjri et al., 2019). Green organizational culture is “the pattern of shared basic assumptions about environmental issues and management" (Marshall et al., 2015; Schein, 2010). It is also the integration of beliefs, values, norms, and social stereotypes shared between employees about environmental management; it is responsible for shaping the behaviors expected from the employees in the towered environmental issues (Chang, 2015). Organizations that work through organizational culture to improve their environmental performance must involve their employees and incorporate green initiatives into their mission statements to orient employees to raise their capacity to solve environmental issues and improve environmental performance (Dangelico, 2015). Organizations with a green culture always try to affect employees’ behavior to participate in organizational initiatives; also, this green culture pressure manufacturer to

stay committed to environmental values (Chang, 2015). In line with top management support, green organizational culture works as a strategic lens that develops organizations' ability to improve environmental performance (Burk et al., 2018). Organizations that support green culture have better situations in engaging, proactive eco-oriented practices, so they have higher environmental performance (Bakhsh Magsi et al., 2018). These considerations lead to the following hypothesis:

H3: The organizational culture positively affects EP in Palestinian universities.

For institutional contexts, several effects on the culture of organizations and the environment, that's why organizational culture is one of the critical antecedents of GHRM, especially on HRM practices and programs that lead to better environmental performance through minimizing negative and maximizing positive environmental effects (Arulrajah et al., 2016). Researchers found many key indicators for GHRM, such as organizational culture, strategy, and leadership (DuBois & Dubois, 2012). These indicators are contextual signs of green HRM practice's need, value, and urgency. Also, GHRM needs several factors that encourage pro-environmental activities, one of which is the organizational conditions (Ren et al., 2018), where organizations can promote GHRM and green practices through their culture if organizations appreciate green practices and activities.

Moreover, organizations seek to minimize the worst and maximize the best sides of their tasks on the environment (Sroufe et al., 2010). An organizational culture supports environmental performance by giving value to green initiatives and activities that will encourage green hiring, training, evaluation, appraisal, and incentivization (Amini et al., 2018). These considerations lead to the following hypothesis:

H4: The organizational culture mediates the relation between the GHRM bundle practices EP in the Palestinian universities.

Environmental practices are the set of activities that enhance environmental management issues by reducing the footprint of activities on the environment and moving the strategic organizational position from reactive to proactive (Vilchez et al., 2017). These practices help managers develop their environmental performance (Vilchez et al., 2017). GHRM can also enhance organizational support (Jyoti, 2019).

This relationship results from an individual's general commitment to environmental sustainability (Sharma et al., 2016). Employees will commit more and more toward the environment if they realize that the organization's operations are dedicated to sustaining the environment; from this view, it can be said that green human resource management practices impact organizational commitment development (Yusliza et al., 2019). Obeidat et al. (2020) noticed that GHRM could transform into an HR strategy if the top management supports the environment. Organizational commitment includes the overall level of employee participation and loyalty (Devananda & Onahring, 2019). Also, Liebowitz (2010) stated that the department of human resources could help management to develop their soft skills and behavioral qualifications in teamwork, diversity, managing change, and collaboration, through several workshops. Daily and Huang (2001) suggested that the HRM practices of top management support, environmental training, employee empowerment, teamwork, and rewards are the critical enablers of EM. This discussion found the following hypothesis:

H5: The GHRM bundle practices positively affect management support in Palestinian universities.

Top management commitment indicates the level of interest in the capability development of any organization (Gavronski et al., 2011). For any organization, top management commitment is required to reach its goals successfully (Williams et al., 2014). Top management's commitment to the environment is critical in assessing and improving environmental management practices (Chang & Deegan, 2010). According to Perez et al. (2007), top management commitment is one of the three critical assets in environmental improvement. Similarly, top management is considered an intangible asset in continuous environmental development (Teixeira et al., 2016). It was founded that there is a direct impact between top management commitment and environmental performance improvement (Spencer et al., 2013). Because effective environmental development needs top management's commitment to act as a framework (Digalwar et al., 2013), such a green initiatives implementation requires participation from all employees; this can't be achieved without top management's support (Yusliza et al., 2019). if the top management toward environmental issues commitment is high, then the adaption of environmental practices will be high (Colwell &Joshi, 2013). The success of green practices and initiatives lies in managers' commitment to these issues, which

managers realize (Spencer et al., 2013). These considerations lead to the following hypothesis:

H6: Management support positively affects EP in Palestinian universities.

Top management's commitment and support can develop employees' awareness, motivation, and attitudes toward environmental issues (Savely et al., 2007). Senior managers are most important in encouraging pro-environmental practices through internal awareness-raising campaigns. (Zibarras & Ballinger, 2011). The environmental policies and a sure that the members work to achieve the environmental goals, hence firms such as manufacturing firms have a broad tendency to adopt a green culture if there is support and commitment from top management. (Fergusson & Langford 2006; Yung et al., 2011). Top management can translate the green message to the employees, developing their awareness of green issues and increasing their focus on environmental protection (Chan et al., 2017). As a result, employees will pay more attention to green activities, yielding more active eco-behavior (Zientara & Zamojska, 2016). Many empirical studies were implemented with management support as a mediation factor (Karatep & Kilic, 2015; Prieto-Pastor & Martin-Perez, 2015). These considerations lead to the final hypothesis:

H7: The management support mediates the relation between the GHRM bundle practices and EP in Palestinian universities.

Chapter Three

Methodology

3.1 Overview

The methodology adopted is highlighted in this chapter by describing the research design, questionnaire measurement, population, sample size, pilot study, and data collection.

3.2 Sampling plan

3.2.1 Research population

To obtain the number of universities in Palestine, the Palestinian central bureau of statistics (PCBS) 2021 conducted a study; based on their database, the total number of universities is 13. This study should only select the universities that implement green practices and environmental initiatives to reach the study objectives. As a result, each university was contacted by phone by the focal person responsible for green practices to determine whether or not it conducts green projects; the questions asked to universities were clarified in Appendix B. The criterion for choosing a university is because they are environmentally conscious, as evidenced by the fact that they have implemented various environmental programs. In the end, 10 of the 13 universities consented to participate, after three universities refused to participate. The participant universities are implementing green initiatives. So, the study population is 10 Palestinian universities in the West Bank, as mentioned in the next table:

Table 1

The participant universities

#	The name of participating universities
1	AL-Quds Open University
2	Palestinian Technical University- Khadoorie
3	An-Najah National University
4	Birzeit University
5	Arab Open University
6	AL-Quds University
7	Bethlehem University.
8	Palestine Ahliya University
9	Palestine Polytechnic University
10	Hebron University

3.2.2 Research sample size

According to Blankenship (2010), a population is a “group” of all items, either persons or institutions or objects, that the researcher could study and consider as part of the research problem." According to Woolson and Clarke (2011), “a sample is s a subset of a population”. The study population consists of 10 universities on the West Bank.

The survey was designed to obtain the participant's perceptions of HR managers, administrative managers, and staff. They best understand GHRM practices, organizational culture, and management support. HR managers and staff are eligible to implement GHRM practices; on the other hand, they are familiar with monitoring daily green activities (Guerci et al., 2016; Longoni et al., 2016). Also, they are responsible for GHRM practices in Palestinian universities, as denoted by the phone interviews conducted with the focal person to the green practices in each university. Top and middle managers also have a critical role in supporting green practices in any organization (Phan et al., 2017). They have a good understanding of the variables. Also, administrative employees who are frequently involved in environmental activities participate in this survey. They can voluntarily participate in green initiatives when they notice the advantages of green practices (Alt & Spitzeck, 2016; Paillé & Mejía-Morelos,

2014). Also, according to Roos et al. (2020), future research should consider administrative, technical, and operational staff because of the variations in the perceptions of different employees. Also, their complex activities can influence the environmental performance of the campus. Finally, according to the Ministry of Higher Education & Scientific Research (2020), the administrative staff at West Bank universities is 1348.

According to Saunders et al. (2009), there is a need to calculate the minimum sample size to generalize the results to the population. The sample size can be calculated using the Thompson formula to obtain the statistically representative population sample size. (Thompson, 2012):

$$n = \frac{N * P(1-P)}{\left[\left(N-1\right) * \left(\frac{d^2}{z^2}\right)\right] + P(1-P)} \quad (3.1)$$

Where:

n: Sample size.

N: The population is 1348 administrative officers, including HR managers and staff (MoHE, 2020).

d: The percentage error (0.5).

p: Proportion of property offers and neutral (0.5).

z: The upper α/2 of the normal distribution (1.96 for 95% confidence level).

$$n = \frac{1348 * 0.5(1-0.5)}{[(1348-1) * (0.2^2 / 1.6^2)] + 0.5(1-0.5)} \quad (3.2)$$

Based on the above formula, the required minimum sample size is 308 respondents of administrative officers, including HR managers and staff.

3.3. Development of the Questionnaire Measurement

This part covers six major assessment categories: GHRM bundle practices, organizational culture, management support, and environmental performance.

3.3.1 Questionnaire Design and Procedure

The survey was designed to test the research hypotheses. For this purpose, an online survey was developed to obtain the participant's perceptions of HR managers, staff, administrative managers, and staff. This survey was designed in two languages which are Arabic and English. The Arabic survey was distributed since it is the respondents' mother language, with a brief description of GHRM and research aims presented on the cover letter provided with the survey. It was distributed randomly. This survey includes three sections as follows:

- Section One contains nine general personal questions related to the respondent's university, such as experience years, job title, etc.

- Section Two: the degree of green management practices for human resources has three parts, the first part is about organizational culture with six questions, the second part is about administrative support application with six questions, and the last part about GHRM practices is divided into six questions about green recruitment, five questions about green training, seven questions about green performance management and compensation.

- Section three: sustainability environmental performance, which has five questions about the environment.

The following sections show in detail each item on the survey.

3.3.1.1 GHRM Bundle Practices

GHRM practices are known as "a bundle" since they comprise a coherent collection of green HR practices that improve sustainability (Renwick et al., 2013). This bundle had three dimensions: GH, GTI, and GPMC, with a total of 18 items. Each item was designed with a score based on a 5-point Likert scale ranging from 1 (very low extent) to 5 (very high extent). These items were developed after reviewing previous literature

(Mahdi, 2018; Guerci et al., 2016; Longoni et al., 2016; Masri & Jaroun, 2017). These items are illustrated in Appendix C.

3.3.1.2 Organizational Culture

A critical impact of organizational culture on sustainability in general, and environmental performances especially (Barney et al., 2001) and practices need embedding of OC to implement them successfully (Bertels et al., 2010). Organizational culture was measured using six items adapted from Gürlek & Tuna (2018) and Wang (2019). These items are represented in Appendix D.

3.3.1.3 Management Support

The successful application of any organization's mission depends on top management support (Mullane, 2002); top management commitment is required for the successful realization of any goal of an organization (Williams et al., 2014). Top management commitment is needed in several issues; one important is environmental issues, which can lead to more competitive advantage (Spencer et al., 2013). Top management's commitment to environmental issues is essential in evaluating, adapting, and enhancing environmental management activities (Chang & Deegan, 2010). Management support was measured using six items adapted from Mahdi (2018). These items are represented in Appendix E.

3.3.1.4 Environmental Sustainability

According to Dubey et al. (2015), environmental performance is the connection between the organization’s operations and the environment. It's the ability of an organization to decrease the following: harmful emissions, waste, emission of carbon dioxide, energy consumption, and minimize the overall environmental impact of operational activities (Laari et al., 2018; Esfahbodi et al., 2016; Centobelli et al., 2019). Other literature agreed with this definition, such as Zhu et al. (2013). They describe it as the organization's ability to minimize air emissions, reduce dangerous material utilization, and reduce the percentage of environmental accidents (Zhu et al., 2013). Environmental performance was measured by five questions, three of them adapted from Masri and Jaaron (2017), one item from Yong et al. (2019), and the last item from Zhu et al. (2008), as shown in Appendix F.

3.4 Pilot Study

An important issue for any research to conduct a pilot study is essential to enhance particular instrumentation (Bhattacharjee, 2012). Even though hypothesis testing is not the primary purpose of pilot studies, the pilot study aims to identify the potential problems that may face the respondents through the answering process. On the other hand, it helps to determine the assessment of validity and suitability before final distribution (Saunders et al., 2009; Bhattacharjee, 2012). For the pilot sample size, some studies suggested over 30 samples per group (Browne, 1995). In contrast, others told approximately 10 participants (Nieswiadomy, 2002), or 10% of the final sample size (Lackey & Wingate, 1998). According to Crano et al. (2014), a sample size of 25 to 100 will be adequate for pilot study objectives. The sample size of the pilot study in this investigation is 31 questionnaires. According to Sekaran and Bougie (2016), researchers employed a variety of measures to assess constructs' reliability, including Cronbach's alpha, to determine the survey's internal consistency. According to previous research, it is acceptable if the coefficient alpha is equal to or greater than 0.70. It will also be approved if it is 0.60 or higher if the investigation is in the exploratory stage (Hair et al., 2010). Table 2 shows Cronbach's alpha for this survey.

Table 2
Cronbach alpha for pilot study

Reliability Statistics/ Scale: Organizational culture	
Cronbach's Alpha	N of Items
0.923	6
Reliability Statistics/ Scale: Management support	
Cronbach's Alpha	N of Items
0.860	6
Reliability Statistics/ Scale: Green hiring	
Cronbach's Alpha	N of Items
0.852	6
Reliability Statistics/ Scale: Green training	
Cronbach's Alpha	N of Items
0.895	5
Reliability Statistics/ Scale: Green rewarding	
Cronbach's Alpha	N of Items
0.960	7
Reliability Statistics/ Scale: Environmental performance	
Cronbach's Alpha	N of Items
0.944	5

3.5 Data Collection

Once the survey was ready to be filled by respondents, emails and field visits were conducted to ask about some or all green practices' availability and if they would participate in this study. The sample of this study includes 10 out of 13 Palestinian universities after three universities refused to participate in this study. The data was gathered from the start of September 2021 to the mid of January 2021.

Then the data were collected by distributing the survey online and manually, targeting HR managers and employees and other managers and staff in West Bank universities because they have a good understanding of HRM in their universities (Gómez-Cedeño et al., 2015).

Several steps were taken to collect data. First, phone calls were conducted with each responsible university to provide them with the aim of this study and the survey and to distribute the survey. The online survey was emailed and attached with a cover letter including the study objectives and confirmation about the high confidentiality treated way of the information provided by the study. After three weeks of survey distribution, the researcher emailed all universities to remind them of the importance of their participation. Nevertheless, only 33 surveys were retained. So, the researcher personally visited each university and filled out the survey with targeted responses. After four months, 351 questionnaires had been completed, 23 of which were filled out online. The rest of the questionnaires were filled directly with the respondent. All the questionnaire was filled out without missing data, except two with missing data.

3.6 Data Analysis

Statistical Package for the Social Sciences (SPSS), Structural Equation Model, and Partial Least Square were employed to meet the study's goal of data analysis. The study's principal analytical approach was structural equation modeling, a reliable predictive-criterion analytical tool that works well with complicated predictive models (Bodoff & Ho, 2016; Hair et al., 2017). PLS-SEM can also evaluate the suggested structural models with high power, and using a small sample size isn't a problem; as a result, the application can provide outstanding multivariate data analysis (Hair et al., 2014). As a result, Smart PLS was utilized to evaluate the conceptual model's research hypotheses, and SPSS was used to summarize the sample characteristics of the data obtained.

Chapter Four

Data Analysis and Results

4.1 Overview

This chapter presents study findings, including demographics statistics, reliability and validity, and hypothesis test outcomes. This chapter offers the study's findings based on data from respondents from HR managers, other department managers, and staff of ten universities in Palestine, totaling 351 surveys (West Bank), and includes these sections. Firstly, the response rate and the demographic distribution of the respondents. Secondly, data screening, preliminary analysis, and specifics about the sample's characteristics. Thirdly, the test results for reliability and validity and measurement model. The final section includes hypothesis tests' outcomes, determination coefficients, effect size, and predictive relevance.

4.2 Response Rate

The study data were collected from HR managers, other department managers, and administrative staff at ten universities in Palestine, with a total of 351 questionnaires distributed. First, an official letter from An-Najah National University was obtained, introducing the researcher and highlighting the study's objectives. This letter was utilized to elicit cooperation from responders.

The questionnaires were delivered via the internet. Although attempts were made to increase response rates by reminding respondents by phone calls, Email according to their job title, and personal visits (Sekaran & Bougie, 2009), the response rate remained low. As a result, in this study, questionnaires were self-administered. Finally, the number of returned surveys is 351 out of 1347, which equals 26% of the total population. And 100% is the response rate of this study.

4.3 Testing of Non-Respondent Bias

This study offers a chance to evaluate whether there are differences between HR and non-HR respondents by using a t-test to compare the similarities between the mean, standard deviation, and standard error mean—Levene’s test of HR and non-HR

responses in the study variables. The sample was categorized into two groups, namely, HR responses and non-HR responses.

Hence, 48 were grouped into HR responses, and 305 were grouped into non-HR responses. Descriptive and Levene's tests were conducted for the equality of variance on the main variables of the study. The table in appendix G and H shows all values in the significance column exceeded the cut-off value of 0.05, implying that the variances were assumed to be approximately equal for all variables, which had no significant differences between HR and Non-HR respondents for the 2-tailed test. HR and Non-HR respondents had no significant differences for the main variables ($p < 0.05$). Therefore, the two groups were found to have come from the same population because no significant differences existed between early and late respondents for the main variables ($p < 0.05$).

4.4 Demographic Distribution of the Respondents

The study questionnaire was collected from September 2021 to mid-January 2022. The collected 351 completed surveys, the participants, and their position in the universities are shown in table.3. Appendix I shows that 36.8% of the respondents were working at Al-Quds Open University, and 23.6% of the respondents were working at An-Najah National University. The rest is in other universities; these two universities have more administrative staff than the other universities (MoEH, 2020). For university employee's number, more than 89% of the respondents working at universities with several employees above 250, 7% of the respondents working at universities with several employees 100-249, and 2% of the respondents working at universities with several 50-99, and 3% working at universities with a number from 20-49 as shown in Appendix J.

Table 3 shows that more than 50% of the employees have bachelor's degrees, 29.6% have master's degrees, and 56.7% have ten years of experience. The information obtained from the participants who have a good level of awareness and skills in GHRM practices within their universities supports the quality of the knowledge gained from the questionnaire.

Table 3

Participant Demographic Information

Demographic Variable	Category	Frequency	Percentage (%)
Current position	Human Resource Manager	10	2.9%
	Human Resource Staff	38	10.8%
	Quality staff (manager and officer	9	2.6%
	Planning and Development staff (manager and officer)	13	3.7%
	Head of Department	44	12.5%
	Administrative staff	237	67.5%
Education	Diploma or below	50	14.2%
	Bachelor	177	50.4%
	Master degree	104	29.6%
	Ph.D. degree or higher	20	5.8%
Work experience	Less than two years	11	3.1%
	2-5 years	42	12%
	6-10 years	99	28.2%
	More than ten years	199	56.7%

According to Appendix K, the percentage of staff who believe that their universities incorporate environmental management into business operations is 62.1%. More than 57% percent believe that their universities have a formal environmental management system (EMS) (such as ISO 14001).

4.4.1 Summary of Demographic Analysis

More than 36 percent of respondents work at Al-Quds Open University, more than 23% work at An-Najah National University, and the remainder work at other universities. More than 89% of respondents work at institutions with staff above 250. Furthermore, 50% of the employees have a bachelor's degree, and more than a quarter have a master's degree.

4.5 Data Screening and Preliminary Analysis

Data screening was required to perform the necessary data analysis techniques. It's crucial since data distribution directly impacts data analysis choices and test procedures (Byrne, 2010). Data screening was done to assess the nature of the data distribution, even though this study employed PLS to evaluate the model quality (measurement and structural model) and hypothesis testing, which has no respect for data distribution. This

method included missing data detection and treatment, outliers, normalcy, linear connection, and multi-collinearity testing.

4.5.1 Why PLS-SEM

PLS-SEM is a critical method in marketing and business research; however, PLS regression is also used in natural science areas like chemometrics. If the study's goal is hypothesis testing, the PLS-SEM is a suitable approach. CB-SEM also is the approach to use if the study goal is hypothesis testing and confirmation (Hair et al., 2011).

From Vinzi et al. (2010)'s point of view, PLS-SEM is a path modeling and statistical approach for modeling complicated multivariate analysis of correlations between observable and latent factors. When it comes to exploring the causality relationships with latent variables, SEM has become an essential technique (Hair et al., 2011). Furthermore, PLS-SEM route modeling yields accurate and reliable confirmatory factor analysis (Asyraf & Afthanorhan, 2013). PLS-SEM has been utilized as a statistical tool by multiple social in the academic sciences, including business studies (Hair et al., 2014). Management information system (Marcoulides et al., 2009; Chin et al., 2003); marketing (Hair et al., 2012); family business (Sarstedt et al., 2014; Becker et al., 2012).

PLS-SEM is substantially more resilient in dealing with non-normal data because it makes assumptions about the normality of variable distributions more flexible (Henseler et al., 2009). In addition, PLS-SEM can look at latent variables and their relationships with items (outer model) as well as assess the link between latent variables (inner model) (Hair et al., 2012; Henseler et al., 2009). PLS-SEM, for instance, produces routes with large sample sizes in normal conditions, giving it a better probability of finding variances between groups than the covariance-based SEM technique (Marcoulides et al., 2009).

There are numerous advantages to using PLS-SEM, mainly when the sample size is small, the data are non-normal, and the capacity to predict is needed (Sarstedt et al., 2014). Furthermore, the PLS-SEM technique is a better strategy in non-normality scenarios with smaller samples. Even though the method is less sensitive to sample and normal distribution, large sample size is required even with significantly non-normal data (Marcoulides & Saunders, 2009). PLS-SEM, like covariance-based SEM,

addresses the problem of statistical power in analyses using comparable data (Haenlein & Kaplan, 2011; Reinartz et al., 2009).

These are consistent with the findings of (Haenlein & Kaplan, 2004) that PLS-SEM is better suited for models with many external latent variables describing a small number of endogenous latent variables. PLS-SEM is the most suitable model for examining mediation and moderation that outperforms first-generation and covariance-based regression models in estimation. PLS-SEM is chosen for this study based on the considerations for selecting an appropriate approach to assess structural equation models. In particular, PLS-SEM may be used as a multivariate analytic tool in marketing, strategic management, and other social sciences studies.

In addition, unlike other covariance-based methodologies, PLS-SEM has no restrictions on the interaction strategy used in moderation testing, making it a feasible option for assessing the moderation impact (Chin et al., 2003; Vinzi et al., 2010). Finally, PLS-SEM allows sophisticated models with effect chains, such as mediation and other more complex interactions, to be created (Lowry & Gaskin, 2014). As a result, the inner and outer models were calculated using Smart PLS 3.0 (Ringle et al., 2015).

4.5.2 Treatment of Missing Data

In quantitative studies, one of the most complicated issues for many researchers is the missing data that could negatively affect the results (Cavana et al., 2001). This issue will also negatively impact PLS-SEM; it will not run at a reasonable level without any missing values. There were two returned surveys (2.2 percent) with a small number of missing data in this study. Each poll had two missing values, ranging from one to two. The missing data is replaced via mean replacement in SPSS (Hair et al., 2010). In addition, the mean of neighboring values was used to replace the two missing data points, which strengthened the correlations.

4.5.3 Removing Outliers

The observations that are quantitatively separated from the remainder of the dataset are outliers (Byrne, 2010). Several methods for spotting outliers within a particular study, including categorizing data points based on the observation (Mahalanobis) distance from the research predicted values (Hair et al., 2010). The measure of Mahalanobis

distance is almost the most suitable because of its equal control for all variables correlations and weights, according to one of the constructive reasons in favor of outlier treatments based on Mahalanobis distance (Hair et al., 2010).

The empirical ideal values were determined using Chi-square statistics as the threshold value. This study chose 18.266 as a threshold value since it was linked to the four assessment items (at level 0.001). SPSS may create a new variable called "response," representing all variables (Hair et al., 2010). The Mahalanobis distance can be estimated using a simple linear regression with the newly-generated response number as the dependent variable and all measurement items other than demographic characteristics as the independent variables. This study generated a new Mahalanobis output designated MAH 1, and the Chi-square was compared to the new Mahalanobis output. Because all MAH 1 values were less than the cutoff value (18.467), zero cases were identified as outliers based on MAH 1 output; the final analysis of this study included all 351 samples.

4.5.4 Multi-Collinearity Test

It is a significant step to calculate the multi-collinearity among independent variables before putting the suggested model to the test (Hair et al., 2010). There is a setback situation in the matrix when there is a high connection independent variable with another independent variable. A multi-collinearity problem will occur if the correlation value exceeds 0.90 (Hair et al., 2010).

According to Hair et al. (2010), the tolerance value is the amount of variability in the chosen independent variable that other independent variables cannot explain. The variance inflation factor (VIF), on the other hand, is the inverse of tolerance. The tolerance value and the VIF have cut-off values of 0.10 and 10, indicating that the VIF value should be closer to 1.00 to show little or no multi-collinearity.

Furthermore, when there is a large degree of multi-collinearity across variables, the standard error of the regression coefficient rises, leading to a bit of dependency on statistical significance for these coefficients. As a result, multi-collinearity was examined in this study by studying the correlation matrix.

Appendix L summarizes the collinearity statistics for all of the research model's independent variables. The correlations between the variables were less than 0.90, indicating no concern with multi-collinearity. VIF values varied from 3.167 to 3.568. Consequently, the data showed no violation of the multi-collinearity condition.

A correlation matrix can be used for the independent variables to assess if there is any evidence of strong correlations between the variables. Multi-collinearity happens if the correlation between independent variables equals or exceeds 0.9 (Hair et al., 2010; Pallant, 2016). Pallant (2016), on the other hand, proposes a correlation value greater than 0.7 as the threshold for multi-collinearity among independent variables. Furthermore, Henseler et al. (2015) stated that discriminant validity was validated using the heterotrait- monotrait ratio (HTMT). Each HTMT ratio in Appendix J was less than the most restricting criterion of 0.9. The findings revealed that none of the exogenous factors was substantially associated. Appendix M reveals that the correlation values were considerably below the 0.9 cutoffs. As a result, there was no difficulty with a strong correlation among the variables, indicating a robust discriminant validity quality.

4.6 Evaluation of PLS-SEM Results

The results of the factor analysis are presented in this section. This study investigates the reliability and validity of the concept measurements. The structural models analyzed the relationships between the latent variables after confirming the construct's reliability and validity.

Following the data verification and screening described in the preceding section, we evaluate the outer and inner models (Hair et al., 2013; Vinzi et al., 2010). This work used PLS-SEM to analyze the outside model (measurement model) and the inner model (structural model). The outside model (measurement model) and the inner model were analyzed using PLS-SEM in this study (structural model). PLS-SEM was utilized to examine the study's mediation and direct and indirect outcomes. According to Ringle et al. (2015), Smart PLS 3.3 is a relevant tool for detecting causal links between the components in these theoretical models. The model has to be easy to understand before doing the PLS-SEM analysis. It is critical to highlight that model configuration is crucial since the technique used to test the reflecting measurement model differs

significantly from the approach used to test the formative measurement model (Hair et al., 2013; Lowry & Gaskin, 2014).

Latent (unobserved) and indicator (observed) variables are less reflective than formative variables. The study also evaluates second-order systems with two layers of components. In other words, the research components of the inner model were considered second-order constructs.

The study comprises three exogenous latent variables, one independent variable (GHRM), and two mediator variables, Organizational Culture (OC) and Management Support (MS), in terms of the sequence and connection between the components (MS). The dependent variable in this study is Environmental Sustainability Performance, an endogenous variable (EP). The original study model has 35 reflecting assessment items (manifest variables or indicators) for six variables (latent variables), with seven connections between them based on the study hypothesis. It includes one independent variable, one dependent variable, and two mediator variables (see Figure 2).

4.6.1 The Measurement Model

Validity and reliability are the primary criteria for assessing the measurement model. Reliability is “the consistency with which a measuring equipment measures whatever idea it is measuring”. “Validity assesses how well a produced instrument measures the specific notion it is meant to evaluate" (Sekaran, 2003). In general, this study followed the criteria proposed by Hair et al. (2011) and Gotz et al. (2010) while assessing the reflective measuring items. This study measured all the validity, convergent, and discriminant validity. In the final stage, this study evaluated the reliability analysis.

4.6.2 Construct Validity

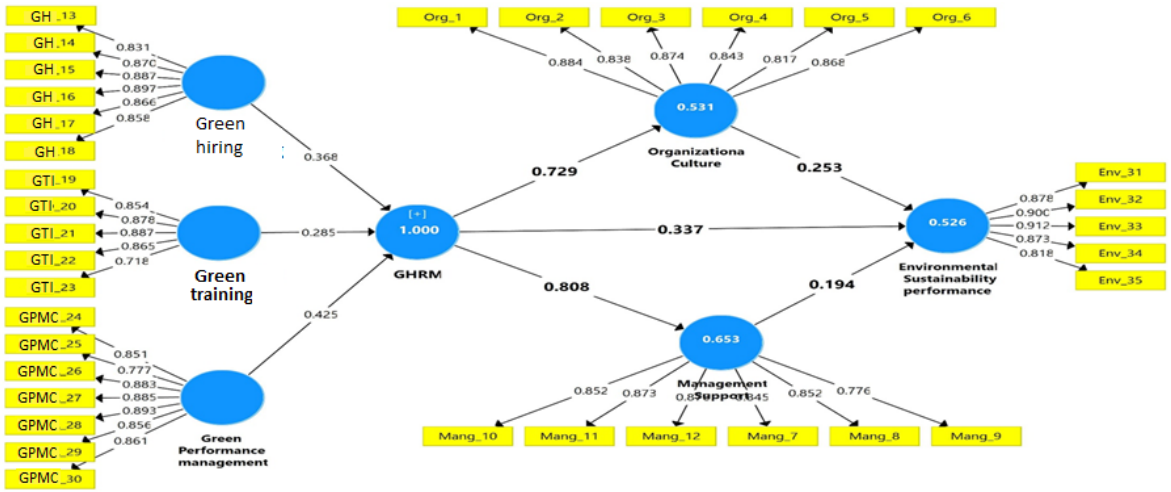
As Sekaran and Bougie (2009) set, construct validity can be used to test whether the outcomes of using the measure are suitable for the ideas presented in the created test. The instrument should use the theoretical notion (Ramayah et al., 2011).

It may be accomplished by examining the various loadings and cross-loadings to determine convergent and discriminant validity. As Hair et al. (2011) set, indicator

loadings (factor loadings) have to exceed 0.70. Likewise, Valérie (2012) observed the following:

Figure 2

Organizational study model



The correlation coefficient (or loadings) is an informal rule that academics frequently apply; it must exceed 0.70, implying that the variance shared between the construct and its measure is more significant than the variance error. As a result, the construct accounts for more than half of the variation in the observed variable. If the correlation doesn't exceed 0.70, then the findings should be regarded carefully since the low correlation might be attributable to a weakly-constructed item which means low reliability. This wrong item means low content validity or an incorrect transformation between a context for the item.

According to Hair et al. (2017), "generally, indicators with outer loadings between 0.40 and 0.70 should be considered for removal from the scale only when eliminating the indicator leads to an improvement in composite reliability (or the average variance extracted (AVE))." According to the previous discussion, the cut-off value of 0.60 is suitable for factor loadings for this research. As a result, no loadings were eliminated because none of them was less than 0.70. They were depicted in Figure 2 and Table 4 without being deleted. All items that tested a specific construct loaded highly on that construct and poorly on the others, indicating construct validity.

Table 4

Loading and Cross- Loading

	GTI	EP	GPMC	GH	MS	OC
EP_31	0.572	0.878	0.592	0.553	0.594	0.592
EP_32	0.553	0.900	0.616	0.548	0.613	0.601
EP_33	0.552	0.912	0.601	0.511	0.623	0.601
EP_34	0.51	0.873	0.555	0.458	0.559	0.557
EP_35	0.531	0.818	0.580	0.455	0.571	0.537
GPMC_24	0.71	0.641	0.851	0.681	0.708	0.645
GPMC_25	0.626	0.619	0.777	0.583	0.603	0.58
GPMC_26	0.693	0.563	0.883	0.644	0.597	0.573
GPMC_27	0.688	0.560	0.885	0.637	0.603	0.539
GPMC_28	0.724	0.614	0.893	0.702	0.684	0.6
GPMC_29	0.661	0.510	0.856	0.685	0.638	0.532
GPMC_30	0.686	0.537	0.861	0.687	0.614	0.551
GH_13	0.701	0.533	0.643	0.831	0.696	0.644
GH_14	0.681	0.460	0.667	0.87	0.701	0.64
GH_15	0.667	0.523	0.681	0.887	0.711	0.626
GH_16	0.687	0.468	0.687	0.897	0.683	0.571
GH_17	0.673	0.421	0.667	0.866	0.606	0.520
GH_18	0.755	0.603	0.665	0.858	0.686	0.636
GTI_19	0.854	0.539	0.683	0.754	0.636	0.559
GTI_20	0.878	0.528	0.662	0.713	0.604	0.532
GTI_21	0.887	0.533	0.716	0.706	0.625	0.573
GTI_22	0.865	0.501	0.702	0.663	0.600	0.587
GTI_23	0.718	0.521	0.59	0.507	0.533	0.493
Mang_10	0.645	0.553	0.681	0.712	0.852	0.663
Mang_11	0.637	0.533	0.614	0.714	0.873	0.698
Mang_12	0.588	0.606	0.611	0.672	0.876	0.728
Mang_7	0.602	0.620	0.639	0.650	0.845	0.786
Mang_8	0.584	0.59	0.609	0.617	0.852	0.720
Mang_9	0.561	0.526	0.6	0.609	0.776	0.624
Org_1	0.602	0.628	0.615	0.63	0.755	0.884
Org_2	0.539	0.501	0.551	0.6	0.704	0.838
Org_3	0.573	0.584	0.552	0.58	0.713	0.874
Org_4	0.540	0.556	0.541	0.570	0.689	0.843
Org_5	0.498	0.518	0.565	0.60	0.689	0.817
Org_6	0.584	0.581	0.598	0.596	0.712	0.868

4.6.2.1 Convergent Validity

This section presents the analysis of the item of convergent validity, which was identified as a level of agreement for items that measure and assess one concept (Rmayah et al., 2011). Convergent validity depends on the linkage of responses received by several techniques of testing a particular construct (Peter, 1981). Studies can evaluate convergence validity by using the following tests: factor loadings, composite reliability (CR), and average variance extracted (AVE) (Hair et al., 2010).

These loading items have to exceed 0.70, the suggested value (Hair et al., 2011; Valérie, 2012). Furthermore, composite reliability shows the extent to which the construct indicators disclose the hidden variable; it has to exceed 0.70 (Hair et al., 2011; Valérie, 2012). As indicated in Table 6, the composite reliability for all values in this study lies between 0.924 to 0.952, demonstrating high convergent validity. Finally, to evaluate the variation encompassed by the indicators connected to measurement error, average variance extracted (AVE) can be used; this value should be more than 0.50 to support the concept usage (Hair et al., 2011; Valérie, 2012). The AVEs for this research varied from 0.73 to 0.769, which was accepted (except for the AVE of two constructs). Even though the EVE is less than 0.50 in some circumstances, (Lam, 2012) states that if the composite reliability is more than the permissible threshold of 0.60, the internal reliability of the measurement items is acceptable (see Table 5). As a result, the complete set of latent variables met the threshold value and was deemed to have met the convergent validity criteria.

Table 5

Result of measurement model

Model Construct	Measurement Item	Loading	CR	AVE
Environmental Sustainability performance	EP_31	0.878	0.943	0.769
	EP_32	0.9		
	EP_33	0.912		
	EP_34	0.873		
	Ep_35	0.818		
Green Performance management	GPMC_24	0.851	0.952	0.738
	GPMC_25	0.777		
	GPMC_26	0.883		
	GPMC_27	0.885		
	GPMC_28	0.893		
	GPMC_29	0.856		
	GPMC_30	0.861		
Green hiring	GH_13	0.831	0.949	0.755
	GH_14	0.87		
	GH_15	0.887		
	GH_16	0.897		
	GH_17	0.866		
	GH_18	0.858		
Green Training and involvement	GTI_19	0.854	0.924	0.71
	GTI_20	0.878		
	GTI_21	0.887		
	GTI_22	0.865		
	GTI_23	0.718		
Management Support	Mang_10	0.852	0.938	0.716
	Mang_11	0.873		
	Mang_12	0.876		
	Mang_7	0.845		
	Mang_8	0.852		
	Mang_9	0.776		
Organizational Culture	Org_1	0.884	0.942	0.73
	Org_2	0.838		
	Org_3	0.874		
	Org_4	0.843		
	Org_5	0.817		
	Org_6	0.868		

4.6.2.2 Discriminant Validity

Discriminant validity evaluates how well items differentiate between different concepts or how well they measure different ideas. According to Hair et al. (2011), discriminant validity requires that each AVE latent construct's indicator loadings surpass its cross-

loadings and the construct's maximum squared correlation with other latent constructs (Fornell & Larcker, 1981) criterion be met.

The Fornell and Larcker (1981) criteria were used to assess discriminant validity in this study. The average variance square root is derived from the latent components, the same as the correlation matrix in Table 6. Discriminant validity occurs when the diagonal items in the rows and columns are more significant than the off-diagonal elements. Also, the correlation matrix confirms discriminant validity.

Table 6

Correlation through construct and discriminant validity

Variable	GTI	EP	GPMC	GH	MS	OC
GTI	0.843					
EP	0.62	0.877				
GPMC	0.797	0.672	0.859			
GH	0.799	0.577	0.77	0.869		
MS	0.713	0.676	0.74	0.783	0.846	
OC	0.652	0.659	0.668	0.698	0.832	0.854

Note: GTI = Green Training and involvement, EP = Environmental Sustainability performance, GPMC = Green Performance management, GH = Green hiring, MS = Management Support, OC = Organizational Culture.

4.6.2.3 Reliability Analysis

Cronbach's alpha with composite reliability ratings was used to analyze the measuring items' inter-item consistency. To accept Cronbach's alpha and composite reliability (CR), they should be more than 0.70 (Hair et al., 2011; Valérie, 2012). Appendix N displays both Cronbach's alpha and composite reliability for this study construction; these values exceed 0.70, which is acceptable. Both Cronbach's Alpha and Composite Reliabilities of Constructs for GH are 0.935 and 0.949. For GTI are 0.896 and 0.942. For GPMC are 0.94 and 0.952. For OC are 0.926 and 0.942. For MS 0.92 and 0.983 and for EP are 0.925 and 0.943. Its evidence that the construct's dependability was proven.

4.6.2.4 Validity and Reliability of Second-Order Constructs-Two Stage Approach

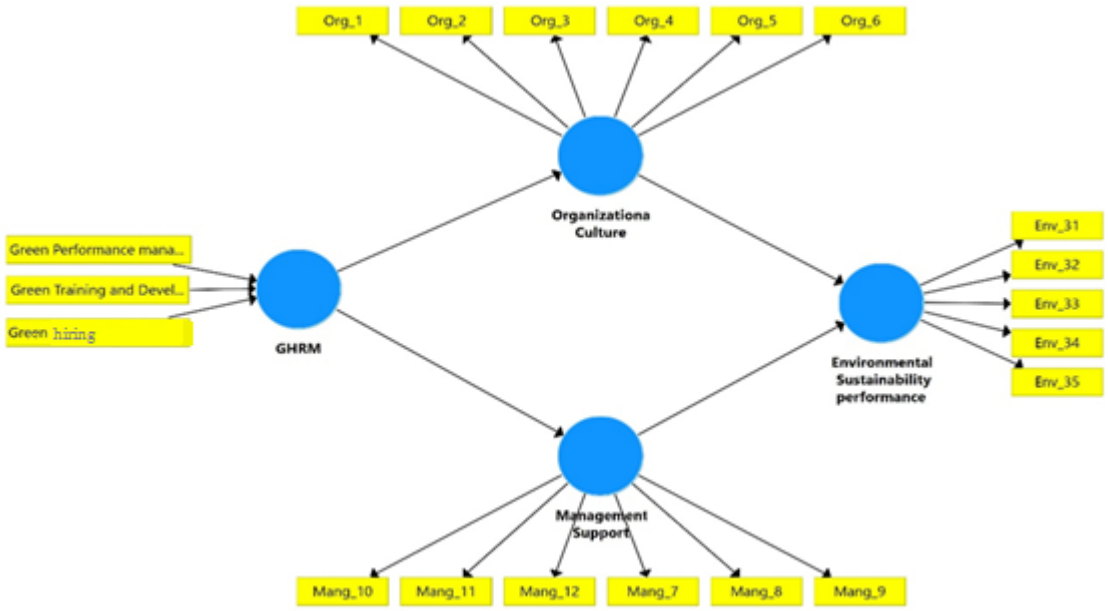
Higher-order models, also called hierarchical component models (HCMs), have many different parts, such as second-order constructs. The PLS route modeling helps in hierarchical model conceptualization by repeating the usage of the manifest variables

(Tenenhaus et al., 2005). It is possible to create a higher-order latent variable by recognizing a latent variable representing the manifest variables of the fundamental lower-order latent variables.

The GHRM bundle is a second-order latent variable made up of three first-order latent variables in this study. As a result, we use the eighteen manifest variables of the GHRM bundle essential first-order latent variable to specify the second-order latent variable. As a result, the manifest variables are used twice: once for primary loadings (first-order latent variables) and again for secondary loadings (second-order latent variables). Alternatively, the reflective model's first-order construct is modeled to the second-order construct. The second order is used in GH, GTI, and GPMC models, especially GHRM. The second-order overall model of this is shown in Figure 3.

Figure 3

Second-order construct



In SEM applications, four forms of HCMS are used (Ringle et al., 2013). The reflecting-formative is the second-order construct model employed in this research to determine the link between the reflective low and the reflective-formative. Also, the higher order concept is used to mediate variables precisely. As a result, it is proposed that the two-stage PLS measurement be used to satisfy the demands of this HCM model to estimate mediating effects (Cheah et al., 2019). The two-stage technique manipulates the benefits

of PLS path modeling by explicitly allowing it to calculate the scores of latent variables. The two-stage approach is also relevant to models with interactions between the components evaluated by the reflective indicators. The merits of Ringle et al. (2012)'s and Becker et al. (2012)'s two-stage techniques include the consistency in their findings.

On the other hand, having an equal number of indicators for the Lower Order Constructs (LOCs) is not necessary. Compared to different ways where R^2 is similar to one, the coefficient of determination (R^2) result obtained by the methodology is exact (Ringle et al., 2012). As a result, this technique is suitable and recommended by researchers if the HOC is endogenous or a mediator (Cheah et al., 2019).

Two-stage strategy can be used to build the hierarchical component reflective-formative type. This method depends on bending the first-order construct to the second-order construct. The sequential latent variable score method represents the hierarchy (Ringle et al., 2012). This method was used in this study. GH, GTI, and GPMC are second-order constructs, especially the GHRM bundle. The PLS-SEM used the two-stage technique to obtain the Lower Order Latent Variables' latent variable scores. It approximates the construct score of the first-order constructs in a first-stage model without the existence of the second-order construct. It then uses these first-stage construct scores to signal higher-order latent variables independently in a second-stage analysis.

4.6.2.5 Two Stage Approach (Reflective –Formative Measurement Model)

The two-stage procedure is accomplished before analyzing the structural model and the mediator interaction. As a result, the second-order construct must be assessed using reflective and formative measurement indicators. Tables 8 and Appendix M summarize and display the second-order PLS algorithm findings.

Table 7 and appendix O is an extension of the two-stage procedure of the second-order reflective model that demonstrates that the criterion for the reflective measurement is satisfied. Internal and external GSCM processes satisfied measuring requirements like CR, Indicator Loading, and AVE. Appendix P, Q, and R show similar Cross-Loading, Fornell-Larcker's, and HTMT criteria results when the constructs satisfied the measurement conditions.

Table 7

Summary of measurement two-stage process second order

Construct	Item	Loadings	CR	AVE
Environmental performance	EP_31	0.877		
	EP_32	0.900		
	EP_33	0.913	0.943	0.769
	EP_34	0.874		
	EP_35	0.819		
Management Support	Mang_10	0.852		
	Mang_11	0.874		
	Mang_12	0.877		
	Mang_7	0.844	0.938	0.716
	Mang_8	0.851		
	Mang_9	0.776		
Organizational Culture	Org_1	0.884		
	Org_2	0.838		
	Org_3	0.873	0.942	0.73
	Org_4	0.843		
	Org_5	0.817		
	Org_6	0.868		

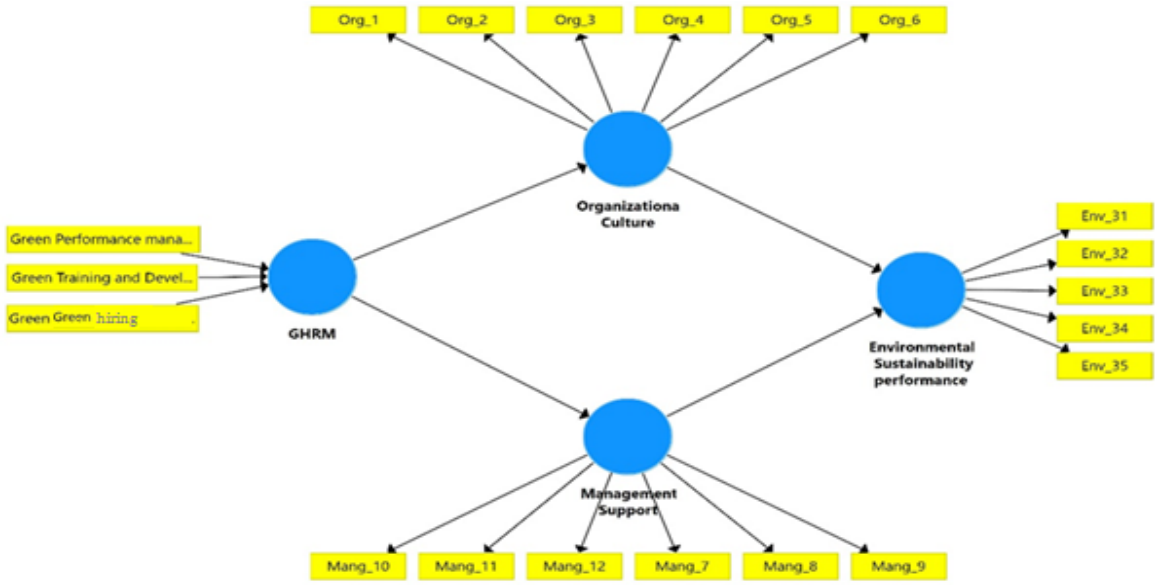
The convergent validity results are the starting point for the second-order measurement of the formative concept. For this study, convergent validity is tested by adding particular items to the questionnaires as they are being built and before data collection (Ramayah et al., 2018). The questions in the questionnaires are universal indicators to examine the formative measures' convergent validity. Exogenous latent variables are used to aid in predicting endogenous latent variables. They are operationalized through one or more reflectively appraised indicators (Wong, 2013b). The statement: Do you believe GHRM practices directly impact the university's environmental performance? It was the global reflective measure - convergent validity of the GHRM bundle, as seen in Appendix S.

Because it incorporates the requested components, this study suggests that the model illustrated in Figure 4 is the final hierarchical component analysis model. The second-order items from Smart PLS were also omitted from the latent variable scores, as shown in this diagram. The first-order elements are represented by yellow rectangles, whereas blue circles represent the second-order variables. On the other hand, the first-order parts are transformed into second-order construct items, and the final model considers the second-order construct to be the first. The researcher assessed the developed model to

verify the hypotheses study, as indicated in the next part because the tests verified the data's dependability and validity.

Figure 4

Final research model



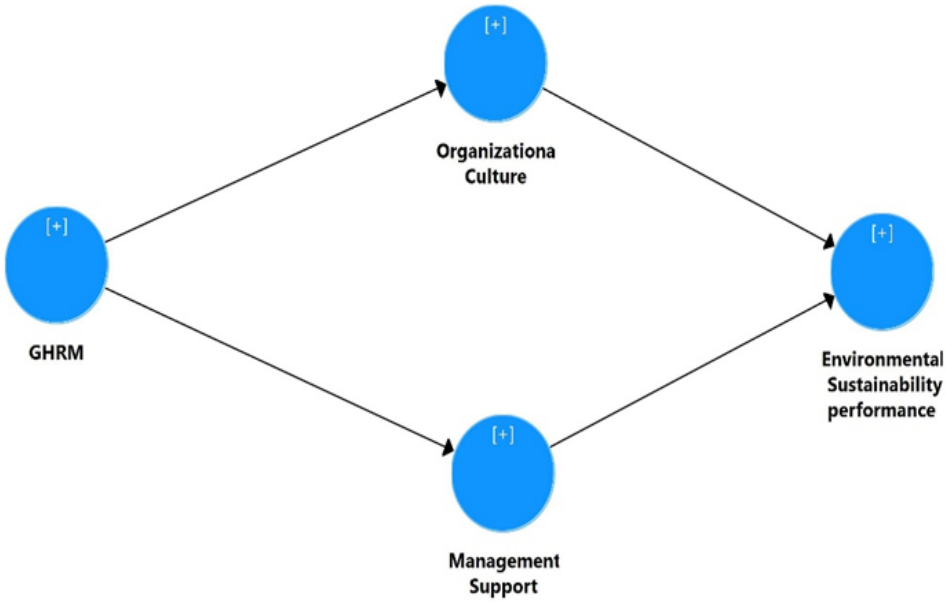
4.7 Structural Model Results (Inner Model)

Following the measurement model analysis, the PLS Analysis evaluated the structural model or the inner model. To do so, the researcher used the criteria established by Chin (2010, p. 656), Hair et al. (2013, p. 7), Hair et al. (2011, p. 145), and Valérie (2012, p. 109) by considering R2 values, effect size (f2), model predictive significance, and goodness of fit (GoF). The route coefficient level, significance, and bootstrapping were utilized to evaluate the study's hypotheses.

The following step, as shown in Figure 5 and the consequence of the two-stage process, is to evaluate the structural model depicted in Figure 5 or the inner model.

Figure 5

Structural model



Reflective and formative constructions make up the structural model. First, and for collinearity, this model was checked (Ramayah et al., 2018). Because the structural models' path coefficient estimations are based on each endogenous latent variable's OLS regressions on its conforming predecessor constructs, the path coefficients may be biased the same way they are in conventional multiple regression. Similar metrics to formative measurements, like tolerance and VIF values model evaluation, are utilized to examine collinearity. As a result, tolerance values less than 0.20 and VIF values greater than 5 in predictor constructs are crucial levels of collinearity in this evaluation (Hair et al., 2016).

4.7.1 R-Square (R^2)

As set by Hair et al. (2011), who noted in their PLS-SEM evaluation of the structural model that:

The coefficients of determination (R^2 values), the size, and significance of the path coefficients come from the PLS-SEM primary evaluation criteria results. To estimate the PLS path model with a high level of quality and accuracy, f^2 effect sizes, predictive relevance (Q^2), and the Q^2 effect sizes are used. Given that the construct R^2 cannot be at a low level, judging on the R^2 level, which must be high, is distinct from judging on the

R^2 level according to the study discipline. Regarding consumer behavior discipline, an R^2 of 0.20 is considered high, whereas R^2 values of 0.75 are considered high in success driver studies. In marketing research, R^2 values of 0.75, 0.50, or 0.25 for endogenous latent variables in the structural model are regarded as substantial, moderate, or weak, respectively (p. 147). As a result, the R^2 value, which represents the variance in the endogenous variable that exogenous variables explain, can be used to assess the structural model's robustness. Based on the data in Figure 6 and Appendix T, the points are shown as follows:

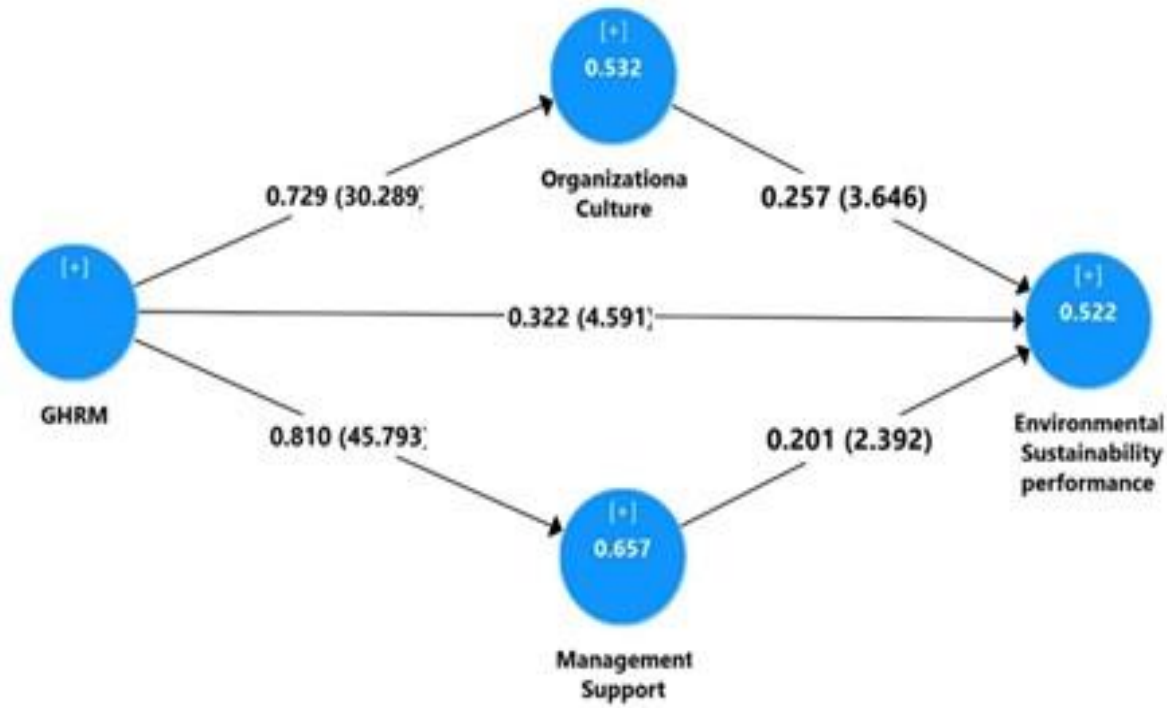
1. First, the R^2 value of Environmental Sustainability performance was 0.522, suggesting that GHRM, Management Support, and Organizational Culture can explain 52.2 percent of the variation in Environmental Sustainability performance, which was in the suitable range.

2. The R^2 of Management Support was 0.657, meaning that GHRM can illustrate 657 percent of the variation in Management Support extent. Because the R^2 score was greater than 25%, it was in the moderate range.

3. Finally, The R^2 of Organizational Culture was 0.532, indicating that GHRM can explain 53.2 percent of the variation in the degree of Organizational Culture. Because the R^2 score was greater than 25%, it was in the moderate range.

Figure 6

R- Square for Endogenous Latent Variables



4.7.2 Effect Size (f2)

Using f^2 analysis has many advantages and is complementary to R^2 to estimate the effect sizes of individual latent variables' effects on the dependent variables (Chin, 2010). The f^2 was estimated because it is not given by PLS automatically. The size was estimated manually using the formula: f^2 = (R^2 included - R^2 excluded) / (1 - R^2 included) represented by:

$$\text{Effect size}: f^2 = \frac{R^2_{incl} - R^2_{excl}}{1 - R^2_{incl}} \quad (4.1)$$

The impact sizes of the predictive variables were interpreted using f^2 values of 0.02, 0.15, and 0.35, according to Cohen (1988). The impact sizes of various latent variables, as well as the role of moderators, can be analyzed using Cohen's technique, which is based on the study's proposed model (1988). In PLS analysis, some academics have employed comparable ratings (Landau & Bock, 2013; Lew & Sinkovics, 2013). According to Cohen, the impact size f^2 is calculated using the approach described below

(1988, p. 412, as quoted in Henseler & Fassott, 2010, p.732). Hair et al. (2013) and Henseler and Fassott (2010) proposed that the main effects be changed to simple/single effects when examining the moderator model.

$$f^2 = \frac{R^2_{included} - R^2_{excluded}}{1 - R^2_{included}} \quad (4.2)$$

Appendix U reveals that GHRM has a minor effect size (f^2 = 0.072) on Environmental Sustainability performance, while Management Support has a negligible effect size (f^2=0.019) on Environmental Sustainability performance. Furthermore, organizational culture has a minor impact on environmental sustainability performance (f^2 = 0.041).

4.7.3 Predictive Relevance of the Model

A blindfolding technique can be utilized to achieve cross-validate communality and cross-validated redundancy; this technique, along with R^2 values and effect sizes, is used to measure structural model quality. PLS-SEM estimates of both the structural and measurement models were used to anticipate data to verify cross-validated redundancy, which perfectly suits the PLS-SEM technique, according to Hair et al. (2011). When a latent variable has a value more than zero, an endogenous construct's cross-validated redundancy measure value (i.e., Q^2) for that endogenous is more significant than zero; its latent explanatory constructs are predictive.

The Q^2 criteria were used to evaluate the effectively level of capacity model to predict data from excluded examples (Hair et al., 2013). The calculated results from the Stone-Geisser test, the researcher can use the following formula, according to Valérie (2012, p. 109): $Q^2 = 1-\{SSE/SSO\}$

To produce Q^2, according to Hair et al. (2011) recommendations, for the data collected, the number of instances is not multiple integer numbers of the omission distanced "; the blindfolding technique provides erroneous findings." That d be between 5 and 10. As a result, in this investigation, d was set to 9 to generate cross-validated redundancy measures for each dependent variable. If the cross-redundancy value is more significant

than zero, then the quality of the model can be considered predictive. Still, if it does not exceed the value of zero, then the predictive significance of the model will not be determined. (Hair et al., 2011).

The resultant cross-verified redundancy values for Environmental Performance (EP), Management Support (MS), and Organizational Culture (OC) were 0.396, 0.465, and 0.383; respectively, as shown in Appendix V.; these findings corroborate the model's assertion of appropriate prediction quality.

4.7.4 Goodness of Fit (GoF) of the Model

Tenenhaus et al. (2005, p. 176) described GoF in PLS Structural Equation Modeling as the global fit measure, a geometric mean of the average variance extracted, and the endogenous variables' average R^2. GOF can be determined by using a unique formula, which is:

$$GoF=\sqrt{(Avg(R^2) \text{ X } Avg(AVE))} \quad (4.3)$$

$$GOF = \sqrt{0.570 \text{ X } 0.738} \quad (4.4)$$

$$GOF = \sqrt{0.421} = 0.648 \quad (4.5)$$

The GoF value of 0.648 was compared to Watzels et al. (2009)'s baseline values (small = 0.1, medium = 0.25, and large >= 0.36). The results indicated that the model's goodness of fit was higher than the global PLS model's adequate validity.

4.8 Hypotheses Testing

Finally, the PLS algorithm was run, and the bootstrapping to evaluate postulated associations. Despite the importance of route coefficients in PLS. The tested hypothesis should not be neglected if the pathways are significant or exhibit indicators that align with the expected direction (Hair et al., 2011). On the other hand, significant routes pointing in the hypothesized direction experimentally support the postulated causal link. They also noted that the importance of each route coefficient and the weights and loadings of the indicators might be determined using a bootstrapping approach. In this study, Figure 6 clearly shows the item loadings, path coefficient, and R2.

To estimate route coefficients using the bootstrapping method, you'll need at least 5000 bootstrap samples, with the number of instances equaling the number of observations in the original sample (Hair et al., 2011). Furthermore, for a two-tailed test, the critical t-values are 1.65 (with a 10% significance level), 1.96 (with a 5% significance level), and 2.58. (with a significance level of 1 percent). To calculate standard errors and t-statistics, the researcher utilized a 5000 re-sampling with a replacement number from the bootstrap cases equal to the original number of samples (88). Figure 7, Figure 8, and Table 8 illustrate the route coefficient and bootstrapping results for the assumed correlations, and table 9 illustrate the hypotheses testing below:

Table 8

The route coefficient and bootstrapping findings for the postulated correlations

H1:	The finding support H1 (β = 0.073, t = 4.382, p = 0.000). This means that the GHRM bundle impacts environmental performance (EP). Hence, the hypothesis is supported.
H2:	The study finding support H3 (β = 0.069, t = 3.729, p =0.000). Organizational Culture (OC) strongly impacts environmental performance (EP). Hence the hypothesis is supported.
H3:	The study finding is in line with H3 (β = 0.069, t = 3.729, p =0.000). This means that the Environmental performance (EP) was influenced by Organizational Culture (OC). Hence, the hypothesis is supported.
H4:	The study finding is in line with H4 (β = 0.051, t = 3.698, p =0.000). This means that the OC has a mediation relation between GHRM bundle practices and EP. Hence, the hypothesis is supported.
H5:	The study finding clarified that the suggested relationship between the GHRM bundle and Management Support (MS) was strongly significant (β = 0.018, t = 44.65, p = 0.000); hence, the hypothesis is supported.
H6:	The study finding is in line with H6 (β = 0.08, t = 2.508, p =0.012). Management Support (MS) strongly impacts environmental performance (EP). Hence, the hypothesis is supported.
H7:	The study finding is in line with H7 (β = 0.066, t = 2.471, p = 0.014). This means that the MS practices mediate the relation between the GHRM bundle practices and EP, and the hypothesis is supported.

Figure 7

PLS bootstrapping (t- value) for the study model A

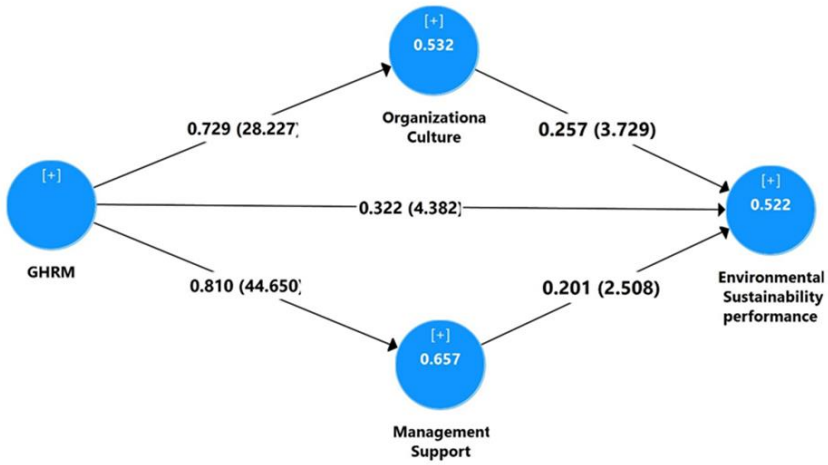


Figure 8

PLS bootstrapping (t- value) for study model B- direct effect

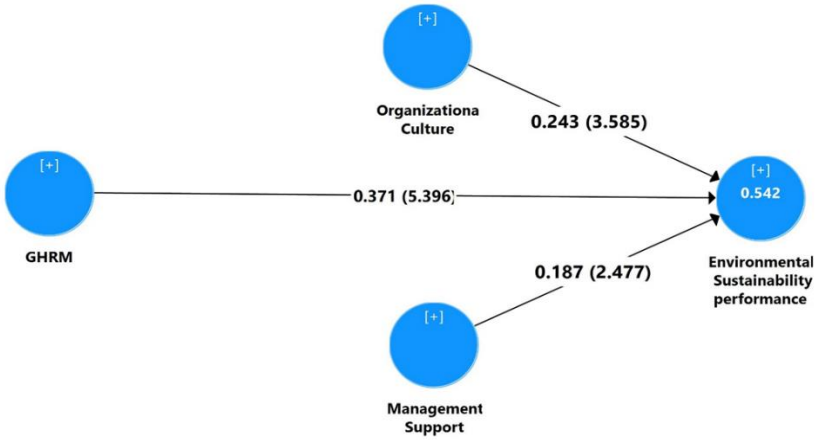


Table 9

Results of hypotheses testing

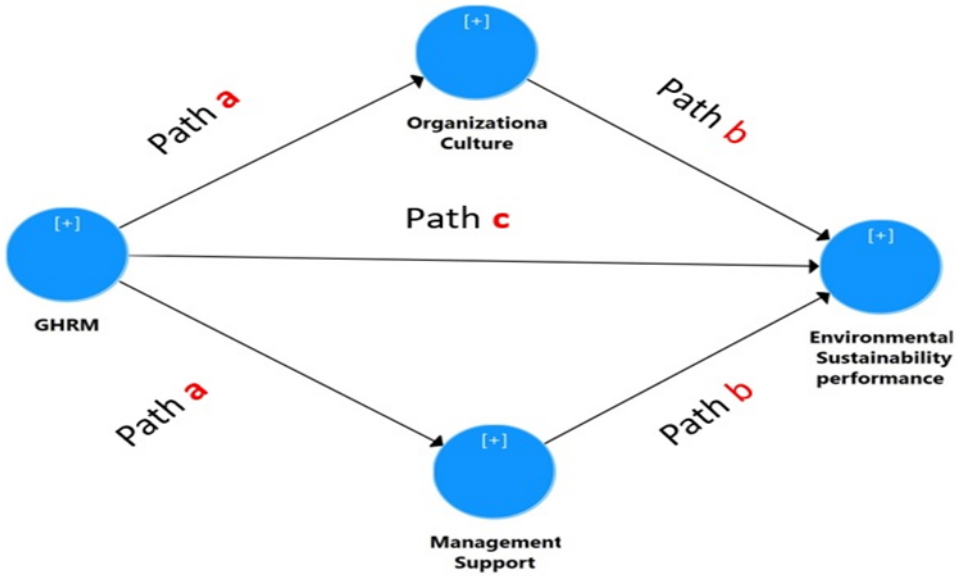
Hypothesis		Path coefficient	β – Value	t-value	P- value
H1	GHRM → EP	0.322	0.073	4.382	0.000
H2	GHRM → OC	0.729	0.026	28.22	0.000
H3	OC →EP	0.257	0.069	3.729	0.000
H5	GHRM →MS	0.81	0.018	44.65	0.000
H6	MS →EP	0.201	0.08	2.508	0.012

4.9 Testing Mediation Relationship (Indirect Effects)

The study's theoretical approach offers a unique chance to evaluate whether OC and MS mediate the association between GHRM bundle practices and EP. The mediator is a variable that accounts for all or part of the link between a predictor and an outcome. (Baron & Kenny, 1986). In this study, GHRM bundle practices represent the predictor, whereas EP represents the outcome. Figure 10 depicts the suggested function of OC and MS in mediating the relationship between GHRM bundle practices and Environmental Sustainability performance (EP) through the path (a), representing the relationship between the independent and mediation variables. Path (b) illustrates the relationship between the mediation and dependent variables. Path (c) represents the relationship between the dependent and independent variables.

Figure 9

Mediation role of both OC and MS.



According to the quantitative research analysis, there are two techniques for analyzing a mediating variable. There are two types of tests: the first is Sobel test, and the other is bootstrapping test; the first one includes various prerequisites that have to be considered before deciding to apply the procedure. Which are as follows: first, the distribution assumption does not apply to the indirect impact; second) an unstandardized path

coefficient is necessary. The sample size should not be too small to prevent a lack of statistical power.

As a result, Sobel's test necessitates a normal data distribution with a sufficiently large sample size. On the other hand, a bootstrapping technique does not require regular data distribution (Chin, 2010). On the other hand, the bootstrapping method works well with both large and small sample sizes. As a result, the significance of the mediating link was evaluated utilizing the bootstrapping approach because PLS-SEM is a soft distributional assumption, and the sample size is small in this work. Bootstrapping, a nonparametric resampling procedure, has been acknowledged as a more rigorous and reliable method of evaluating the mediating impact.

Furthermore, Hair et al. (2013) recently advocated the use of bootstrapping for mediating analysis, noting that "when testing mediating effects, researchers should rather follow Preacher and Hayes (2008), and bootstrap the sampling distribution of the indicator effect, which works for simple and multiple mediator models." In the bootstrapping method, there is no need to make assumptions about the form of the variable or sampling distribution of the statistics, so it is considered the ideal technique for PLS-SEM. Also, it can be regarded as a perfect method because it may also use small sample sizes (Hair et al., 2013; Preacher & Hayes, 2008). Furthermore, in the absence of the mediator, it is not essential also not required to find a connection between the exogenous variables and endogenous variables (Preacher & Hayes, 2008). Other studies have contrasting results.

As in the absence of the mediator factors, the exogenous variables should affect the endogenous variables (Baron & Kenny, 1986). In this study, and in the absence of the mediator factors, which are OC and MS, there is no need for a significant effect of GHRM bundle practices on Environmental performance for mediation to occur. On the other hand, there are some limitations of CB-variance statistics packages such as AMOUS; one is that they don’t specify the distinctive mediation effects (Hair et al., 2017c).

In this study's model, EP was predicted by GHRM bundle practices. Nevertheless, the impacts manifested separately via multiple mediators such as OC and MS. The total and indirect effects are often estimated using SEM programs. However, the indirect effects

represent the "total indirect impact" for both mediators. Memon et al. (2018) recommended that when studying models with numerous mediators, academics should estimate individual indirect effects rather than overall indirect effects. This feature provides measurements of a specific indirect impact for each mediator mediating through OC and MS or any number of mediators. As a result, evaluating models with many mediators is simplified (Memon et al., 2018).

As a result, one of the contributions of this work is the exploration of mediated interactions. The findings of the indirect impact on the mediating variable are shown in Table 10. According to Preacher and Hayes (2008), there are two prerequisites for mediator analysis: 1- the association between IV and DV via mediator must be significant, and 2- Bootstrap the Confidence interval (Total effect), i.e., zero between LL and UL. The mediation outcome report is shown in Appendix W.

The data in Appendix W reveal that both mediators OC and MS satisfy the second requirement. According to Preacher and Hayes (2008), the indirect effect 0.163, 95 percent Boot, CI: [LL = 0.063, UL = 0.263] does not straddle a 0, suggesting that the first mediator is mediated (MS). And the indirect effect 0.187, 95 percent Boot CI: [LL = 0.058, UL = 0.317] does not straddle a 0, suggesting that the second mediator is mediated (CSR), as shown in the table below. The findings of the mediation test revealed that OC mediated the link between the GHRM bundle and the EP, therefore confirming H4 (= 0.187, p = 0.000), implying that the GHRM bundle enhances OC practices and assures superior long-term performance. Furthermore, the MS mediates the link between the GHRM bundle and the EP, confirming H7 (= 0.163, p = 0.014), as shown in Appendix W.

Table 10

Mediation results

						Bootstrapped Confidence Interval		
Hyp.	Std. Beta Path	Std. Beta Path b	Indirect Effect	Std. Error	t-value	95% LL	95% UL	Result
H4	0.729	0.257	0.187	0.066	2.839	0.058	0.317	Mediation
H7	0.810	0.201	0.163	0.051	3.192	0.063	0.263	Mediation

4.10 Summary of the Findings

The conclusions of this investigation are published in this chapter. Also, it prints the data on the response rate and features, measurement refinement procedures, and the implemented tests to analyze the survey validity and reliability with other tests. Generally, the finding revealed substantial impacts of GHRM bundle practices and OC, GHRM bundle practices and MS, OC and EP, GHRM bundle practices, and EP. The OC and MS significantly mediate the relationship between GHRM bundle practices and EP. Furthermore, both OC and MS significantly mediate the relationship between GHRM bundle practices and EP. This chapter included PLS analysis findings from evaluating the measurement model, structural model, and hypothesis testing. As noticed from the implemented tests, all suggested hypotheses were supported (i.e., H1, H2, H3, H4, H5, H6, and H7).

Chapter Five

Discussion

5.1 Overview

This chapter includes a study summary, a discussion of results and findings, a study that contributes to the existing literature study limitations, and highlighting suggestions for future studies.

5.2 Summary of the Study

As mentioned in the first chapter, this study aims to investigate the relationships between the GHRM practices as a bundle and environmental performance, with organizational culture and management support as mediation factors in Palestinian universities. This study was conducted with the universities that adopt green practices at different levels. This study set the variables according to the literature review; these variables are; GHRM practices as “bundle”, EP, and OC with MS as mediation factors. The study framework was elucidated through AMO theory.

Three hundred fifty-three questionnaires were received for the survey, and the response rate was 100%; this rate is suitable for the statistical power requirement (Hair et al., 2014). All recommended processes were implemented to ensure the reliability and validity of the study model were acceptable, and the model passed reliability and validity tests successfully, according to the findings. So, the hypotheses were tested. The following sections discuss the results of the study.

5.3 Discussion of the Findings

This study answers seven research questions by investigating their corresponding seven hypotheses to accomplish the research objectives. This section presents the results, discusses each hypothesis according to the existing literature, and introduces the expected reasons for each finding.

- Objective one: To investigate the relationships between GHRM bundle practices and environmental sustainability performance in Palestinian universities.

The findings and results of this study found that GHRM affects environmental performance; due to its vital role in achieving organizational goals and improving environmental sustainability by increasing the participation level of the employee (Deniz et al., 2003; Domínguez-Falcón et al., 2016). GHRM literature supports this finding (Lopez- Gamero et al., 2009; Arda et al., 2019; Daily et al., 2012; Roscoe et al., 2019). Other literature supports the part of green training and its positive effects on EP (namely, Lather & Goyal, 2015; Rawasdeh, 2018). GHRM is a helpful strategy to develop human resources and increase environmental sustainability (Alvarez Jaramillo et al., 2019). It is considered a source of competitive advantage (Touboulic & Walker, 2015). Also, it lets the chance for employees to incorporate their performance with environmental problems issues (Teixeira et al., 2016). Also, it spreads beliefs and values connected with the environment and principles through involvement in prioritizing sustainability issues (Jabbour, 2013). While other support the positive effects of Green Performance Management and Compensation on EP (Jabbar &Abid, 2014; Bangwal et al., 2017), according to its role in achieving greening the organization's goals through compensating employees for their environmental practice's commitment (Jabbour & Jabbour, 2016).

GHRM is still new management in Palestine, especially in higher education. Different reasons for this include limited human resources specialized in green management systems and environmental development and the lack of actions and activities that prevent pollution (Huang et al., 2015). Moreover, the lack of knowledge and management expertise for handling environmental challenges (Kumar et al., 2018).

- Objective Two: To investigate the relationship between GHRM practices and organizational culture in Palestinian universities.

The findings support that GHRM practices affect organizational culture (OC). This finding aligns with a study by Pellegrini et al. (2018). It clarifies that HR practices have a role in enhancing the green organizational culture by improving employee commitment and behaviors. They can also improve organizational change for

sustainability development if trained and compensated for their participation in pro-environment activities. Furthermore, for the organization that tries to create a green climate, GHRM practices are essential for employees because they develop their behavioral effects on the environment (Dumont et al., 2017).

GHRM practices also affect OC, especially training, a GHRM method to support environmental sustainability (Daily et al., 2007; Jabbour, 2013). According to Opatha & Arulrajah (2014), training is responsible for employees' awareness of the environment, so it helps to create a green organizational culture.

- Objective Three: To investigate the relationships between organizational culture and environmental sustainability performance in Palestinian universities.

According to the finding of this study, OC positively affects EP. These findings align with Hadjri et al. (2019), which emphasized that green organizational culture positively affects environmental performance. A green organizational culture is one of the different tools that can help organizations to translate their ecologically proactive objectives into performance (Glisson, 2015; Pham et al., 2018). Also, green organizational culture is vital in changing and developing organizational thinking (Roscoe et al., 2019). Furthermore, employees have a vital role in an amendment in this development (Roscoe et al., 2019). Additionally, according to Pham et al. (2018), organizational performance and customer well-being will improve through waste and pollution reduction, energy-conserving, and reducing water usage and pollution consumption. Concerning many environmentally-friendly products and based on environmental principles, green organizational culture helps integrate and ease activities (Wang, 2019; Qu et al., 2021).

Therefore, a solid culture is needed to enhance innovative setups, which can be guaranteed by a green organizational culture and green innovations implemented in the right ways, that affect the organization and the staff (Gürlek & Tuna, 2018). Green culture can be implemented in organizations with solid management values and expressed environmental protection issues (Chen et al., 2015; Leonidou et al., 2015).

- Objective Four: To verify if organizational culture mediates the relationship between GHRM bundle practices and environmental sustainability performance in Palestinian universities.

According to the findings, organizational culture has a crucial role in enhancing and developing GHRM, which leads to enhanced EP. So, a mediation relation between GHRM and organizational support was founded. Different studies supported moderators in the middle of green organizational culture and organizational performance (Gürlek & Tuna, 2018; Chandra et al., 2021). Furthermore, organizational culture is one of the critical antecedents of GHRM (DuBois and Dubois, 2012). Also, there is a positive effect of GHRM consisting of GH, GTI, and GPMC on OC, also, OC on EP (Roscoe et al., 2019).

Furthermore, the finding of this study supported by Roscoe et al. (2019) clarified that there is a positive effect of GHRM consisting of GRS, GTR, and GCO on GOC and GOC on EP. Employees could have opportunities to acquire needed skills through green training and activities involvement. If organizations have green culture, this will lead employees to voluntarily participate in green initiatives, especially for employees with higher personal environmental norms (Chou, 2014). As a result, organizations focus on developing organizational culture, which leads to enhancing the effect of green training.

Limitations will appear on the employee's potential, a. Also, willingness and discretionary effort will decrease if the organization lacks organizational support, even if the employees have the skills needed to implement what the organization requires (Lepak et al., 2006).

- Objective Five: To investigate the relationship between GHRM bundle practices and management support in Palestinian universities

According to the findings, GHRM positively affects management support. Different studies supported this finding, where organizational support can be enhanced through GHRM, according to Jyoti (2019). Employees will show more commitment toward the environment if they realize that the organization's operations are dedicated to sustaining the environment. From this view, it could be said that GHRM practices impact organizational commitment development (Yusliza et al., 2019). Also, Liebowitz (2010)

sets that the HR department can help the leadership and management develop their soft skills and behavioral competencies in teamwork, diversity, managing change, and collaboration, through several workshops.

- Objective Six: To investigate the relationships between management support and environmental sustainability performance in Palestinian universities.

According to the findings, management support affects environmental sustainability performance. The conclusion of this research matches with the results of previous literature that clarified that there is a strong impact of top management's support on the environmental sustainability performance of companies (Perez et al., 2007; Spencer et al., 2013). Also, Colwell and Joshi's (2013) study clarified the positive relation between top management commitment and environmental performance (Colwell & Joshi, 2013). The organizational commitment toward the environmental goals is in coherence with the attainment of efficiency and effectiveness (Otley, 2016). Achievement of organizational goals depends on top management support and commitment (Williams et al., 2014). Organizations can reach new business prospects through environmental performance if dealing with environmental cases as strategic issues (Bansal & Roth, 2000). Hence, for organizations that want to transform into green organizations, top management commitment is a very crucial issue because this commitment will enhance performance toward the environment (Colwell & Joshi, 2013). Top management could also help implement an environmental management system through the role played in changing (Daily et al., 2007). So, top management concerned with environmental issues is considered intangible assets in a continuous environmental improvement context (Teixeira et al., 2016). The participation of top management in sustainability management is the main success factor for developing sustainability. The top management has the authority to provide employees with the resources needed; they are considered role models for implementing sustainability practices. Also, they can create green OC by providing their support and leadership (Kiesnere & Baumgartner, 2019).

- Objective seven: To verify if management support is mediating the relationship between GHRM bundle practices and environmental sustainability performance in Palestinian universities.

According to the findings, management support is mediating in the relationship between GHRM bundle practices and environmental performance. This could be because organizations need top management commitment and help successfully achieve strategic goals (Williams et al., 2014). Also, top management teams are responsible for resource usage, so there is a need for their support to accomplish those goals (Chadwick et al., 2015). Furthermore, top management plays a role in convincing and disseminating environmental practices, including GHRM, at all organizational levels (Paillé et al., 2014). Such green initiative implementation needs all employees' participation, which can't be achieved without top management's commitment and support (Yusliza et al., 2019). Thus, top management commitment reaches more internal environmental orientations (Paillé et al., 2014). According to Yusliza et al. (2019), top management commitment and support are related to GHRM practices, including "green recruitment and green selection," "green training," and "green performance and rewards". Finally, Bansal and Roth (2000) noticed that top management recognized the importance of the link between both environmental management and human resource management.

5.4 Framework Development

GHRM is still a new kind of management in Palestine, especially in the higher education sector, which needs more guidance to enhance environmental performance. So, this management needs decision-maker support, especially from the government, due to its power to impose environmental policy in the different sectors, as sustainability is adopted by governments, communities, business leaders, and consumers (Rayner & Morgan, 2017). Government has a role in exerting pressure on firms, such as manufacturing, which will implement reactive environmental practices (Zhu et al., 2016). GHRM needs a framework and an approach to enhance the environmental effects; this framework is related to GHRM practices.

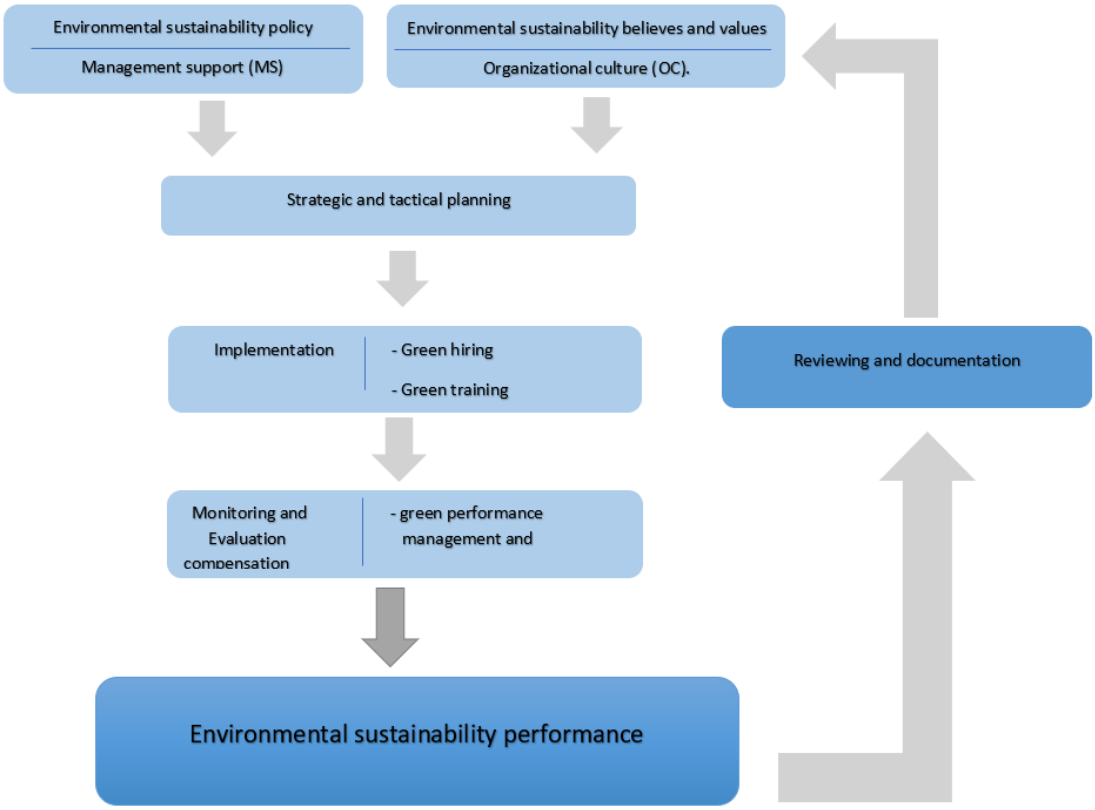
The GHRM framework has five stages which are: policies and procedures which reflect the organizational culture and needs support and are adopted from top management, planning, implementation, monitoring and evaluation, and review and documentation. The GHRM framework starts with adopting environmentally-friendly policies through decision-makers and top management support. They have the needed authority for that. Adopting an environmentally-friendly policy will reflect on the organizational culture, and positively on strategic and tactical levels, so strategic and annual plans will contain specific environmental aims and objectives. These plans will be relevant to all departments and employees, and there is a vital role for the HR department through its green practices from hiring, training, and motivating employees.

GHRM practices have a role in creating, publishing, and supporting green culture in organizations. Implementing GHRM practices start with green hiring by selecting environmentally-friendly candidates. They should have knowledge and skills about methods to protect the environment, starting from job applications and interviewing processes that could include questions about environmental issues, to show the extent of the candidate's ability and desire to adopt and implement green activities. Next, the universities have to develop and enhance employees and raise their social responsibility regarding the use of resources through training that focuses on protecting the environment. Green training also spreads environmental values and principles through involvement in prioritizing sustainability issues (Jabbour, 2013). Finally, universities should have a system for appraisal and reward concerned with green practices; this system may contain key performance indicators with financial and non-financial rewards to compensate and encourage staff to be more committed to environmental practices.

After planning and implementing green practices, organizations should monitor and evaluate environmental performance through many criteria, such as toxic emissions reduction, waste reduction, electrical energy consumption reduction, increase in the use of renewable energy, and replacing paper with an online platform. Finally, universities should document this process. Figure 10 illustrates the steps in the developed framework.

Figure 10

GHRM framework to support environmental sustainability



5.5 Contribution of this Study

As discussed in the literature review, few studies explore GHRM practices in higher education institutions (Dyer & Dyer, 2017). Other literature suggested focusing on the mediating relationship between GHRM and environmental performance (Ren et al., 2017). Also, study the connection between OC and environmental outcomes due to the lack of research about it (Renwick et al., 2013). Top management commitment toward environmental performance is a critical key intangible asset for continuous environmental development, but few researchers focus on this field (Perez et al., 2007). So, less attention to this issue increases the interest in implementing more research targeting this critical issue and increases the need to promote GHRM practices with green culture and management support. This study affirms that GHRM positively affects EP. Secondly, this study confirms that organizational culture and management support positively influence sustainable environmental performance. For organizational culture, mediation relation describes the linkage between GHRM and EP. Moreover,

the current study assures the mediation impact of management between GHRM and EP. Lastly, the following sub-sections describe in more detail the study's contributions to recent research and theoretical contributions.

5.5.1 Theoretical Contributions

This research supports the findings from the previous literature. In addition, this research provides clear evidence that GHRM is a valuable method used by universities to enhance organizational culture and management support, which, in turn, positively affects EP. It offers empirical evidence that the implementation of GHRM develops environmental outcomes. Therefore, this research is considered an extension of the existing literature highlighting the essential role of GHRM in environmental performance development (Renwick et al., 2016 b). This study is viewed as an extension of the research that considered GHRM practices in higher education in Palestine, by applying the AMO Theoretical framework in the universities, unlike the previous studies that used the AMO theoretical framework in a manufacturing context (Alnajdawi et al., 2017). And healthcare context (Pinzone et al., 2016). On the other hand, Anwar et al. (2020) studied GHRM in universities in Malaysia. Still, this study took only organizational citizenship behavior as a mediation factor and its effect on EP in universities, as compared to this study that clarifies the relations between GHRM and organizational culture with management support as mediation factors and their impact on the environmental framework in Palestinian universities.

Furthermore, this research extends the study of GHRM practices based on AMO theory and discusses how GHRM affects environmental performance via organizational culture and management support. The study results align with the current literature highlighting the importance of greening AMO items (green ability, green motivation, and green opportunity) to maximize the EP on university campuses. This study was implemented in response to literature encouraging the study of the mediation processes through GHRM for long-term performance outcomes (Harvey et al., 2013). Also, this study was implemented in response to the research that asked to focus more on the mediation roles between GHRM and EP (Ren et al., 2017). It adds value to the existing literature by highlighting the mediation relationship between organizational culture and management support connecting the GHRM bundle and EP. This issue is less-researched, such as

organizational culture and its effect on environmental outcomes (Renwick et al., 2013). Therefore, this research provides empirical evidence that OC positively impacts EP.

This theoretical finding aligns with some previous literature, such as Hadjri et al. (2019). Also, it suggests that when organizational culture supports environmental issues through vision and mission. Top management helps employees by spreading values and beliefs related to environmental issues through meetings, workshops, etc., so raising employees' awareness of the environmental issue will encourage staff participation in environmental outcomes and voluntary environmental behavior.

Finally, this study clarifies a relationship between GHRM practices with management support and organizational culture to enhance EP. This relationship has not yet been considered in developing countries' universities, given that empirical studies of green practices are rare in developing countries (Geng et al., 2017).

Also, studies exploring the GHRM in higher education institutions are still rare (Dyer & Dyer, 2017). Therefore, this research has evidence from Palestine, considered a developing country, to integrate with the evidence from developed countries with an increasing interest in GHRM literature (O'Donohue & Torugsa, 2016).

5.5.2 Methodological Contributions

The current study contributes to the methodological aspects besides the theoretical contribution. First, the questionnaire was developed on the information adopted from the previous literature applied in the GHRM field in several contexts and countries. So, the study verifies the measurements' validity in a different context. The measures of universities' environmental sustainability in Palestine are also considered a significant methodological contribution to the present literature. That's because green management in Palestine is still new, with little research targeting this issue.

This study analyzes the reflective-formative, second-order constructs assessment in PLS rather than second-order constructs with a reflective measurement only as in many previous kinds of literature (Duarte & Amaro, 2018).

Finally, the study offers a chance to evaluate whether there are differences between HR and non-HR respondents by using a t-test to compare the similarities between the mean, standard deviation, and standard error mean.

5.5.3 Managerial and Practical Contributions

This study contributes to practical and managerial aspects by supporting GHRM as one of the strategic methods to enhance university environmental sustainability performance. GHRM practices can be effectively implemented by focusing on the organizational culture due to its role in helping organizations to translate their ecologically proactive objectives into performance (Glisson, 2015; Pham et al., 2018). Organizational culture affects the top and middle managers. Also, HR managers o will lead to support green practices for employees, achieving a high level of environmental sustainability. On the other hand, the staff is the main item for any organization and one of the essential resources for competitive advantage. They have a critical role in helping organizations reach high environmental goals (Jiang et al., 2012). Green principles should be implemented: recruitment by selecting the best candidates, increasing their environmental level through "green principles" training, and rewarding their environmental performance.

At the organizational level, top managers should support environmental initiatives and show their commitment to the environment. Also, they should show their concern about the ecological footprint. Managers also have to encourage green environmental management practices with policies and procedures. Moreover, they should engage employees in formulating strategies related to environmental issues. Also, top managers can work on spreading values and beliefs related to environmental issues through meetings, workshops, etc., on raising employees' awareness of the environmental problems and adopting ideas and proposals related to improving and developing the environmental performance at the university. On the other hand, managers could establish a system of penalties for non-compliance with environmental practices.

5.6 Limitations and Suggestions for Future Research

The limitations of this research started with the limited ability to generalize the findings and results because the data collection process was with a corporation with universities within the same country. And other countries' regulatory environments and cultures

could influence GHRM practices. Nevertheless, it's suitable for the following researchers to conduct a replicate study from a broader geographical area to facilitate the generalizability of the finding. In addition, and for this study, a limited measurement approach; because GHRM practices implementation, organizational culture, and management support were evaluated from the view of managers and administrative employees without academic staff or even students. So, future research could examine the academic staff and students opinions about these practices. This research was also conducted in a developing country, where ten universities participated, but this study could not involve the Gaza strip. So, it would be necessary to reply to the survey with the Gaza strip or even in other developing countries to compare the results.

Given that this research investigated the GHRM practices, future studies could include other practices, such as the green balance between work and life (Muster & Schrader, 2011). This research investigated organizational culture and management support as mediating variables. However, these factors are not the only mediating ones. So, future research could focus on other mediating factors like the attitude of the staff (Harvey et al., 2013).

5.7 Conclusions

Saving the environment has become one of the most critical issues for developed and developing countries. Therefore, different sectors must adopt environmental practices through the methods used to achieve the environmental goals starting from strategic operations to daily operations conducted by organizations. These organizations have an essential role in environmental issues through their departments, such as the HR department, which plays a fundamental role in green practices. Environmentally-friendly behavior became a vital issue no matter the organization's sector, but existing literature focused on the manufacturing sector compared than the educational sector (Tairu, 2018). So, research and studies conducted to help universities implement environmental measures and initiatives through human behaviors are limited. Even after the higher education sector has known the importance of human behavior and its impact on the environment.

This study joins the GHRM literature with universities focusing on organizational culture and management support by concentrating on GHRM practices as a bundle, from hiring to capacity building through training, motivation, and rewards. The fundamental assumption of this study is the GHRM effect on EP. In more detail, this study assessed the impact of GHRM on EP. It examined the mediating role of organizational culture and management support in the relationships between GHRM and EP. So, it can be considered an empirical study that confirms the advantages of GHRM implementation with OC and MS in creating environmentally EP. Based on the discussion, the study results fill the existing gap in the current literature by clarifying how organizations can apply GHRM practices with organizational culture and management support. In addition, this study provides empirical evidence of the effects of GHRM on sustainable environmental performance.

Study results align with the studies that confirm the positive effects of GHRM on EP and affirm that there is a strong relationship between GHRM bundle practices and OC, GHRM bundle practices, MS, OC, EP, GHRM bundle practices, and EP. Moreover, OC and MS significantly mediate the GHRM bundle and EP relationship. In short, this study was carried out to contribute to the existing GHRM literature and support Palestinian universities in enhancing their environmental sustainability performance.

5.8 Recommendations

Based on the findings, the following recommendations are presented for Palestinian universities that would be considered environmentally friendly:

- Develop their own EMS, such as ISO 14001, to track their environmental performance, improve resource efficiency, reduce waste, and reduce costs.

- Ensure that top management supports environmental initiatives. For instance, managers should encourage and supports green environmental management practices with policies and procedures. Also, management should have leadership skills and values that enable green practices and promote green culture. Furthermore, managers should engage employees in formulating strategies related to environmental issues and other practices that enhance environmental performance.

- Build a green organizational culture that supports environmental issues through the vision, mission, and values that should include environmental management aspects. Also, ensure that the top management is interested in adopting and modifying norms and beliefs connected to environmental issues and natural resources protection.

- Choose the best candidates with attitudes toward the environment, starting from recruitment that should be green via Job description and requirements that should reflect responsibility for environmental issues.

- Raise staff awareness about environmental issues and green training via providing the necessary training programs about environmental issues.

- Follow up staff practices using environmental aspects in the performance appraisal system, and keep motivating employees by rewards and compensations.

- Involve employees in the decision-making process that is concerned with environmental issues. And adapt their environmental initiatives to raise their commitment.

List of Abbreviations

Abbreviation	Meaning
HRM	Human Resource Management
EP	Environmental Performance
GHRM	Green Human Resource Management
EM	Environmental Management
WB	West Bank
OC	Organizational Culture
EMS	Environmental Management System
GH	Green Hiring
GTI	Green Training and Involvement
GPMC	Green Performance Management and Compensation
IV	Independent Variables
DV	Dependent Variables
PLS	Partial Least Square

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Appendices

Appendix A

Previous studies

No.	Authors	Title	Industry	Country	Study Variable	Major findings
1	Anwar et al. (2020)	Green Human Resource Management for organizational citizenship behavior towards the environment and environmental performance on a university campus.	Higher education	Malaysia	GHRM practices. Organizational citizenship behavior. EP.	There is a significant impact of GHRM practices on OCBE. This study was conducted through the lens of AMO theory.
2	Mousa and Othman (2020)	"The impact of green human resource management practices on sustainable performance in healthcare organizations: a conceptual framework"	Health care	Palestine	GHRM practices. Sustainable performance.	Tests the relationship between GHRM practices and sustainable performance after assessing the implementation of GHRM practices in Palestine in the context of healthcare.
3	Masri and Jaaron (2017)	"Assessing green human resources management practices in Palestinian manufacturing context: An empirical study."	Manufacturing sector	Palestine	Environmental performance. GHRM practices	Investigate the relationship between "environmental performance" and Green HRM practices
4	Cheema and Javed (2017)	"The Effects of Corporate Social Responsibility Toward Green Human Resource Management: The Mediating Role of Sustainable Environment"	Textile	Pakistan	GHRM. CSR. Sustainability.	Investigated the link between GHRM and CSR with sustainability as a mediation factor and points to a "green environment."
5	Pallavi and Bhanu (2016)	"Green HRM: A Way for Corporate Sustainability."	Green Companies in various sectors		GHRM. Sustainability.	Explain the concept of Green HRM and the role of green HR in corporate
6	Dumont et al. (2016)	"Employees' Perceptions of Green HRM and Non-Green Employee Work Outcomes: The Social Identity and Stakeholder Perspectives."	Food packaging Australian multinational company.	China	GHRM. Organizational identification. Perceived organizational support.	Investigate the impacts of GHRM on organizational identification, with organizational support as a mediation factor. Also, investigate the effects of perceptible GHRM on employees' non-green performance, organization citizenship behavior, and employees' desire to resign.

7	Haddock-Millar, Sanyal, and Müller-Camen (2016)	"Green Human Resource Management: A Comparative Qualitative Case Study of a United States Multinational Corporation."	Foodservice multinational company	United state	GHRM	Investigate GHRM adaptation approaches for US foodservice multinational companies in its three subsidiaries.
8	Aggarwal and Sharma (2015)	"Green HRM: Need of the Hour."	previous studies revision		GHRM	This study conducted a previous studies revision to identify the GHRM importance, its advantages, and its challenges.
9	Ahmad (2015)	"Green Human Resource Management: Policies and practices."	Organizations		GHRM. Green practices and initiatives.	Shed light on the GHRM concept and general green practices and initiatives by organizations worldwide. They discussed the future direction of some GHRM functions. Also, it helps HR managers to become greener by providing them with green initiatives.

Appendix B

The questions in the interview

Q.1	Does the university have a green policy and procedure?
Q.2	Does the university have environmental management system?
Q.3	Does the university have green projects such as solar systems? Or green initiatives?
Q.4	Does the university take into account environmental issues when it designs different projects? Or activities?
Q.5	Does the vision and mission of the university include some aspect of environmental management?
Q.6	Does the culture spread among employees encourages the adoption of environmental behaviors?
Q.7	Does the management have values that encourage environmental issues?
Q.8	Which department is responsible for green management
Q.9	Does the university implement GHRM practices, such as: In the hiring process: is the job description reflect responsibility for environmental issues? In the training process: does the university provides environmental training? Does the university evaluation form consider the environmental performance of green issues in the evaluation process?
Q.10	Which department is responsible for GHRM
Q.11	Does the university accept to participate in this study?

Appendix C

Green hiring items

Green Hiring		
1	Job description and requirements at the university reflect responsibility for environmental issues	Longoni et al. (2016)
2	The process of attracting employees to the university when hiring includes standards of attention and commitment to environmental performance	Guerci et al. (2016)
3	Job advertisements are concerned with the environmental aspect of applicants and try to attract applicants who are more aware of environmental issues.	Masri and Jaaron, (2017).
4	Priority is given to job applicants who have sufficient knowledge and awareness of environmental performance	
5	Staff are hired based on environmental criteria	
6	The university's interest in the environment attracts competencies and experiences	
Green Training and Involvement		
1	When conducting a training needs analysis, environmental issues are taken into consideration	
2	The university provides the necessary training programs on environmental issues	
3	The university gives priorities training related to environmental issues	
4	The university has programs and training on environmental issues for staff and managers	
5	The management provides online training materials for employees to reduce paper usage	
Green performance management and compensation		
1	The objectives and responsibilities of employees towards the environment are clear and defined	
2	Employees have knowledge and awareness of their role in environmental issues	
3	The university evaluation form considers the environmental performance of employees	
4	The university evaluates the behavior of employees towards environmental issues and includes them in performance indicators	
5	The university administration provides feedback to employees to improve their performance and behavior towards the environment	
6	Employee achievements towards environmental issues are valued.	
7	The university links the suggestions system with incentives to encourage green environmental initiatives and practices	

Appendix D

Organizational culture items

Organizational Culture		
1	Top-Level Management explains data and values related to environmental management at the university	Gürlek and Tuna, (2018).
2	The vision and mission of the university include some aspects of environmental management	Wang (2019)
3	Top-level management is interested in adopting and modifying values and ideas that are related to environmental protection issues and natural resources sustainability	
4	The culture spread among employees encourages the adoption of environmentally friendly behaviors and attempts to reduce environmental pollution and the depletion of natural resources	
5	Employees have sufficient information about the green organizational culture, which focuses on creating a desire among employees to work towards achieving environmental sustainability.	
6	Values, beliefs, and managerial behaviors prevalent among employees reflect a great desire to achieve environmental sustainability	

Appendix E

Management support items

Management Support		
1	Managers encourage and support green environmental management practices with policies and procedures.	Yusliza et al., (2019).
2	Management has values and leadership skills that encourage environmental protection and promote green culture	Spencer et al.,
3	Management has a system of penalties for non-compliance with environmental practices	(2013).
4	Management engages employees in formulating strategies related to environmental issues	
5	The management works on spreading values and beliefs related to environmental issues through meetings, workshops, etc., on raising employee awareness of environmental issues.	
6	The management works on adopting ideas and proposals that are related to improving and developing the environmental performance at the university	

Appendix F

Environmental sustainability items

Environmental sustainability		
1	Improving university performance and costs reduction	Zhu et al. (2008)
2	Toxic emissions reduction in water and air	Yong et al. (2019)
3	Contribute to waste reduction in general	
4	Electrical energy consumption reduction	
5	Increase the use of renewable energy	

Appendix G

Group statics

Variable	HR/ Non-HR	N	Mean	Std. deviation	Std. Error mean
GRRM	HR	48	54.3750	10.70312	1.55930
	Non- HR	305	53.7082	14.49939	0.77297
OC	HR	48	20.6042	3.65967	0.52823
	Non- HR	305	20.2820	4.88949	0.27997
MS	HR	48	20.0208	4.01852	0.58002
	Non- HR	305	19.5377	5.07439	0.29056
EP	HR	48	18.2083	4.41447	0.63717
	Non- HR	305	18.24120	4.24120	0.24285

Appendix H

Independent sample test

Variable		Levene's test for equality of variances		t-test for equality of means					
		F	Sig.	T	df	Sig(2-tailed)	Mean Difference	Std. Error Difference	95% Confidence interval of the Difference
									Lower Upper
GRRM	Equal variance assumed	5.388	0.21	0.326	351	0.745	0.66680	2.04511	-3.35540- 4.68901
	Equal variance not assumed			0.383	72.263	0.703	0.66680	1.74037	-2.80235- 4.13595
OC	Equal variance assumed	2.848	0.092	0.437	351	0.662	0.32220	0.73655	-1.12640- 1.77080
	Equal variance not assumed			0.539	76.186	0.591	0.32220	0.59784	-0.86845 1.51295
MS	Equal variance assumed	3.024	0.083	0.629	351	0.530	0.48313	0.76803	-1.0.2749- 1.99365
	Equal variance not assumed			0.745	72.839	0.459	0.48313	0.64873	-0.80994- 1.77609
EP	Equal variance assumed	0.090	0.765	0.017	351	0.986	-0.01134-	0.66224	-1.31380- 1.29112
	Equal variance not assumed			0.017	61.446	0.987	-0.01134-	0.68189	-1.37465- 1.35199

Appendix I

Respondents' demographic distribution

Respondents Category	Frequency	Percentage (%)
An-Najah National University	83	23.6
AL-Quds Open University	129	36.8
Birzeit University	27	7.7
Hebron University	17	4.8
Palestine Polytechnic University	27	7.7
Bethlehem University	2	0.6
AL-Quds University	27	7.7
Palestinian Technical University- Khadoorie	25	7.1
Arab Open University	2	0.6
Palestine Ahliya University	12	3.4
Total	351	100

Appendix J

Respondents category according to university employee number

Respondents Category	Frequency	Percentage (%)
20-49	9	3%
50-99	6	2%
100- 249	23	7%
250-above	313	89%
Total	351	100

Appendix K

Independent sample test

Variable	Category	Frequency	Percentage (%)
Incorporating Env. Mang	Currently, Exist	218	62.1%
	Within 12 Months	32	9.1%
	After 12 Months	83	23.7%
	Not sure	18	5.1%
Having_EMS	Currently, Exist	200	57%
	Within 12 Months	25	7.1%
	After 12 Months	126	35.9%

Appendix L

Multi-collinearity Test

Model		Collinearity Statistics
		VIF
Green Training and Involvement	GHRM	3.568
Green Performance management and compensation		3.167
Green Hiring		3.189

Note: The dependent variable is EP.

Appendix M

Correlation among the Exogenous Variable

Variable	GTD	EP	GPMA	GRS	MS	OC
GTD						
EP	0.684					
GPMA	0.869	0.722				
GRS	0.868	0.62	0.82			
MS	0.776	0.707	0.794	0.86		
OC	0.715	0.71	0.717	0.75	0.911	

Note: GTD = Green Training and Development, EP = Environmental Sustainability performance, GPMA = Green Performance management, GRS = Green recruitment and selection, MS = Management Support, OC = Organizational Culture.

Appendix N

Cronbach's Alpha and Composite Reliabilities of Constructs

	Number of items	Cronbach's alpha	Composite Reliabilities
Green Training and Involvement	5	0.896	0.924
Environmental Sustainability performance	5	0.925	0.943
Green Performance management and compensation	7	0.94	0.952
Green Hiring	6	0.935	0.949
Management Support	6	0.92	0.938
Organizational Culture	6	0.926	0.942

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Appendix O

Summary of measurement two-stage process second order

(reflective formative type)

Construct	Item	Loadings	CR	AVE	Weight	VIF	Redundancy	t-value	p-value
	GPMC	0.912				3.167		4.681	0.000
	GTI	0.883				3.568		1.792	0.074
	GH	0.96				3.188		8.891	0.000

Appendix P

Cross loading measurement results in a second-order reflective model

Construct	Environmental Sustainability performance	GHRM	Management Support	Organizational Culture
EP_31	0.877	0.609	0.594	0.592
EP_32	0.9	0.612	0.613	0.601
EP_33	0.913	0.586	0.623	0.601
EP_34	0.874	0.533	0.559	0.557
EP_35	0.819	0.543	0.571	0.536
GPMC	0.672	0.912	0.740	0.668
GTI	0.620	0.883	0.713	0.652
GH	0.577	0.960	0.784	0.698
Mang_10	0.553	0.742	0.852	0.663
Mang_11	0.533	0.718	0.874	0.698
Mang_12	0.606	0.686	0.877	0.728
Mang_7	0.620	0.686	0.844	0.786
Mang_8	0.590	0.654	0.851	0.720
Mang_9	0.526	0.643	0.776	0.624
Org_1	0.628	0.666	0.755	0.884
Org_2	0.501	0.616	0.704	0.838
Org_3	0.584	0.610	0.713	0.873
Org_4	0.555	0.596	0.689	0.843
Org_5	0.518	0.616	0.689	0.817
Org_6	0.581	0.637	0.712	0.868

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Appendix Q

Fornell and Larcker's result for the second order reflective model

	Environmental performance	GHRM	Management Support	Organizational Culture
Environmental performance	0.877			
GHRM	0.659	Formative		
Management Support	0.676	0.814	0.846	
Organizational Culture	0.659	0.730	0.832	0.854

Appendix R

HTMT measurement result reflective second order

	Environmental performance	Management Support	Organizational Culture
Environmental performance			
Management Support	0.732		
Organizational Culture	0.71	0.901	

Appendix S

Global reflective measure

Global Reflective Measures – Convergence Validity	
Indicator	Statement
GHRM bundle	Do green human resource management practices directly affect the university's environmental performance?

Appendix T

The outputs of R^2 values for endogenous variables

Variable	R^2 value
Environmental performance	0.522
Management Support	0.657
Organizational Culture	0.532

Appendix U

The Effect Size of the Exogenous Constructs

Variables	F^2	Effect size rating
GHRM → Environmental Sustainability performance	0.072	small Effect size
Management Support → Environmental Sustainability performance	0.019	small Effect size
Organizational Culture → Environmental Sustainability performance	0.041	small Effect size

Appendix V

Prediction Relevance of the Model

Total	SSO	SSE	1-SSE/SSO
Environmental Sustainability Performance	1765	1065.826	0.396
Management Support	2118	1133.581	0.465
Organizational Culture	2118	1306.651	0.383

Appendix W
Results of hypotheses testing

Hypotheses	Relationship	B	Standard Deviation	t-value	P-value	Supported
H4	GHRM → OC → EP	0.187	0.051	3.698	0.000	Yes
H7	GHRM → MS → EP	0.163	0.066	2.471	0.014	Yes

Notes: t-values > 1.65* ($p < 0.10$); t-values > 1.96** ($p < 0.05$); t-values > 2.58*** ($p < 0.01$).

Appendix X

Thesis survey

Questioner about Effect of green human resource management practices on environmental sustainability performance in Palestinian universities: the mediating roles for management support and organizational culture

Dear Respondent,

Thank you for filling out this questionnaire designed to complete the requirements for obtaining a master's degree in engineering management. The main aim of this research is to assess the Green Human Resource Management practices on environmental sustainability performance with mediating roles of management support and organizational culture in Palestinian universities on the West Bank. This questionnaire is divided into three sections, which are:

- First section: general information about the respondent, university, and the current status of environmental management at the university.
- Second section: Assess the green human resource management practices, organizational culture, and management support level.
- Third section: Assess the impact of these practices on environmental performance.

❖ Your participation in this questionnaire is appreciated; it needs less than 10 minutes to fill out; please read all the paragraphs and answer them carefully.

❖ All information in this survey will be used only for academic issues, so all information will be confidential.

Researcher: Raghad Alawneh

Part one: General Information

Please answer the following question by signal (X) in the answer that suits you.

Number of employees in the university 20-49 ( ) 50-99 ( ) 100-249 ( ) + 250 ( )
Your university ☐ Arab American University ☐ AL-Quds Open University ☐ Palestinian Technical University- Khadoorie ☐ Al-Zaytoonah University of Science and Technology. ☐ An-Najah National University. ☐ Birzeit University. ☐ Arab Open University. ☐ AL-Quds University. ☐ AL-Istiqlql University. ☐ Bethlehem University. ☐ Palestine Ahliya University. ☐ Palestine Polytechnic University. ☐ Hebron University.

Your position in the university Human Resource Manager ( ) Quality Manager ( ) Other:……..
Educational level Diploma or below ( ) Bachelor ( ) Master's degree ( ) Ph.D. degree or higher ( )
Years of Experience: Less than 2 years ( ) 2-5 Years ( ) 6- 10 Years ( ) More than 10 Years ( )
Does your university incorporate environmental management into business operations? Currently exists ( ) Plan to implement within 12 months ( ) Plan to implement in more than 12 months ( ) No( )
Does your university have a formal environmental management system (EMS) (such as ISO 14001) Yes ( ) No ( ) Not sure ( )

Part Two: Implementation of GHRM practices:

2.1: Organizational culture:

	Very Low	Low	Moderate	High	Very High
Top-Level Management explains data and values related to environmental management at the university					
The vision and mission of the university include some aspects of environmental management					
Top-level management is interested in adopting and modifying values and ideas that are related to environmental protection issues and natural resources sustainability					
The culture spread among employees encourages the adoption of environmentally friendly behaviors and attempts to reduce environmental pollution and the depletion of natural resources					
Employees have sufficient information about the green organizational culture, which focuses on creating a desire among employees to work towards achieving environmental sustainability.					
Values, beliefs, and managerial behaviors prevalent among employees reflect a great desire to achieve environmental sustainability					

2.2: Management Support:

	Very Low	Low	Moderate	High	Very High
Managers encourage and support green environmental management practices with policies and procedures.					
Management has values and leadership skills that encourage environmental protection and promote green culture					
Management has a system of penalties for non-compliance with environmental practices					
Management engages employees in formulating strategies related to environmental issues					

The management works on spreading values and beliefs related to environmental issues through meetings, workshops, etc., on raising employee awareness of environmental issues.					
The management works on adopting ideas and proposals that are related to improving and developing the environmental performance at the university					

GHRM Practices:

First: Green Recruitment

	Very Low	Low	Moderate	High	Very High
Job description and requirements at the university reflect responsibility for environmental issues					
The process of attracting employees to the university when hiring includes standards of attention and commitment to environmental performance					
Job advertisements are concerned with the environmental aspect of applicants and try to attract applicants who are more aware of environmental issues.					
Priority is given to job applicants who have sufficient knowledge and awareness of environmental performance					
Staff are hired based on environmental criteria					
The university's interest in the environment attracts competencies and experiences					

Second: Green Training

	Very Low	Low	Moderate	High	Very High
When conducting a training needs analysis, environmental issues are taken into consideration					
The university provides the necessary training programs on environmental issues					
The university gives priorities training related to environmental issues					
The university has programs and training on environmental issues for staff and managers					
The management provides online training materials for employees to reduce paper usage					

Third: Green Performance Management and Compensation

	Very Low	Low	Moderate	High	Very High
The objectives and responsibilities of employees towards the environment are clear and defined					
Employees have knowledge and awareness of their role in environmental issues					
The university evaluation form takes into account the environmental performance of employees					
The university evaluates the behavior of employees towards environmental issues and includes them in performance indicators					
The university administration provides feedback to employees to improve their performance and behavior towards the environment					
Employee achievements towards environmental issues are valued.					
The university links the suggestions system with incentives to encourage green environmental initiatives and practices					

Final Part: Environmental Performance Sustainability

Improving university performance and costs reduction					
Toxic emissions reduction in water and air					
Contribute to waste reduction in general					
Electrical energy consumption reduction					
Increase the use of renewable energy					

تأثير ممارسات إدارة الموارد البشرية الخضراء على الأداء البيئي المستدام في الجامعات الفلسطينية: الثقافة التنظيمية والدعم الإداري كمتغيرات وسيطة

عزيزي القارئ/ القارئة:

أشكرك على تخصيص جزء من وقتك لتعبئة الاستبانة المصممة لاستكمال متطلبات الحصول على درجة الماجستير في الإدارة الهندسية، والمخصصة لتقييم مدى تأثير ممارسات إدارة الموارد البشرية الخضراء والثقافة التنظيمية والدعم الإداري كعوامل وسيطة على الأداء البيئي المستدام في الجامعات الفلسطينية، وتحديدا جامعات الضفة الغربية، وتقسم هذه الاستبانة الى ثلاث أقسام، هما:

- أولا: معلومات عامة حول القارئ/ة للاستبانة، ووضع الإدارة البيئية حاليا في الجامعة.
- ثانيا: تقييم مستوى تطبيق ممارسات الإدارة الخضراء للموارد البشرية والثقافة التنظيمية والدعم الإداري في الجامعات الفلسطينية.
- ثالثا: تقييم أثر هذه الممارسات على الأداء البيئي على الجامعات الفلسطينية.

- هذه الاستبانة مخصصة فقط للأغراض العلمية وبالتالي فإن جميع المعلومات ستكون سرية.
- سيستغرق منك تعبئة الاستبانة أقل من 10 دقائق، الرجاء التفضل بقراءة جميع فقرات الاستبانة بدقة والإجابة بكل حيادية وموضوعية.

الباحثة: رغد العلاونة

القسم الأول: معلومات عامة

عدد العاملين في الجامعة:

20- 49 ( ) 50- 99 ( )

100- 249( ) 250 فما فوق ( )

الجامعة التي تعمل/ تعملين فيها:

☐ الجامعة العربية الأمريكية.

☐ جامعة القدس المفتوحة.

☐ جامعة فلسطين التقنية- خضوري.

☐ جامعة الزيتونة للعلوم والتكنولوجيا.

☐ جامعة النجاح الوطنية.

☐ جامعة بير زيت.

☐ الجامعة العربية المفتوحة.

☐ جامعة القدس.

☐ جامعة الاستقلال.

☐ جامعة بيت لحم.

☐ جامعة فلسطين الأهلية.

☐ جامعة بولتيكنك فلسطين.

☐ جامعة الخليل.

المسمى الوظيفي:

مدير الموارد البشرية( ) مدير الجودة( )

أخرى.....

المستوى التعليمي:

دبلوم أو أقل ( ) بكالوريس( )

ماجستر( ) دكتوراه ( )

عدد سنوات الخبرة:

أقل من 2 سنة ( ) 2 الى 5 سنوات ( )

6 الى 10 سنوات( ) أكثر من 10 سنوات ( )

هل تقوم الجامعة بتنفيذ بعض الممارسات\المبادرات البيئية داخل وخارج الحرم الجامعي

موجود حاليا( ) لا توجد حاليا خطط للتنفيذ ( )

يوجد خطط للتنفيذ خلال 12 شهر( ) يوجد خطط للتنفيذ في أكثر من 12 شهر ( ) غير متأكد( )

هل حصلت الجامعة على شهادات مختصة بالقضايا البيئية مثل ISO 14001

نعم( ) لا( ) غير متأكد ( )

القسم الثاني: درجة تطبيق ممارسات الإدارة الخضراء للموارد البشرية والثقافة التنظيمية والدعم الإداري:

أولا: الثقافة التنظيمية:

الفقرة	درجة كبيرة جدا	درجة كبيرة	درجة متوسطة	درجة ضعيفة	درجة ضعيفة جدا
توضح الإدارة العليا المعلومات والقيم المتعلقة في الإدارة البيئية داخل الجامعة					
تشمل رؤية ورسالة الجامعة بعض الجوانب من الإدارة البيئية					
تهتم الإدارة العليا بتبني وتعديل القيم والأفكار التي لها علاقة بقضايا حماية البيئة واستدامة الموارد الطبيعية					
تشجع الثقافة المنتشرة بين الموظفين على تبني السلوكيات الصديقة للبيئة ومحاولة الحد من التلوث البيئي واستنزاف الموارد الطبيعية					
يمتلك الموظفين معلومات كافية عن الثقافة التنظيمية الخضراء والتي تعني خلق رغبة لدى الموظفين للعمل على تحقيق التقدم البيئي المستدام					
تعكس القيم والمعتقدات والسلوكيات الإدارية المنتشرة بين الموظفين رغبة كبيرة في تحقيق الاستدامة البيئية					

ثانيا: الدعم الإداري:

الفقرة	درجة كبيرة جدا	درجة كبيرة	درجة متوسطة	درجة ضعيفة	درجة ضعيفة جدا
تشجع وتدعم الإدارة ممارسات الإدارة البيئية الخضراء وتدعمها وفق سياسات مدروسة وموضوعة مسبقا.					
تمتلك الإدارة قيم وأنماط قيادة تشجع على حماية البيئة وتعزز الثقافة الخضراء					
تفرض الإدارة نظام عقوبات عند عدم الالتزام بالممارسات البيئية					
تقوم الإدارة باشراك الموظفين في صياغة استراتيجيات المتعلقة في القضايا البيئية					
تعمل الإدارة على نشر القيم المتعلقة بالقضايا البيئية خلال الندوات، ورشات العمل وغيرها حتى يكون لدى الموظفين الوعي الكافي تجاه القضايا البيئية					
تعمل الإدارة على تبني الأفكار والمقترحات التي لها علاقة بتحسين وتطوير الأداء البيئي في الجامعة					

ممارسات أدارة الموارد البشرية الخضراء:

أولا: التوظيف الأخضر

الفقرة	درجة كبيرة جدا	درجة كبيرة	درجة متوسطة	درجة ضعيفة	درجة ضعيفة جدا
يعكس وصف ومتطلبات الوظائف في الجامعة المسؤولية تجاه القضايا البيئية					
تشمل عملية استقطاب الموظفين لدى الجامعة عند التوظيف معايير الاهتمام والالتزام بالأداء البيئي					
تهتم إعلانات الوظائف بالجانب البيئي للمتقدمين، بالإضافة إلى محاولة جذب المتقدمين الأكثر وعياً بالقضايا البيئية.					
يتم إعطاء أولوية للمتقدمين للوظائف الذين هم على معرفة ووعي كافي بالأداء البيئي					
يتم تعيين الموظفين بناءً على معايير بيئية					
يجذب اهتمام الجامعة بالبيئة الكفاءات والخبرات					

ثانيا: التدريب الأخضر

الفقرة	درجة كبيرة جدا	درجة كبيرة	درجة متوسطة	درجة ضعيفة	درجة ضعيفة جدا
عند إجراء تحليل الاحتياجات التدريبية، يتم الأخذ بعين الاعتبار القضايا البيئية					
توفر الجامعة البرامج التدريبية اللازمة حول القضايا البيئية					
تعطي الجامعة الأولوية للتدريبات المتعلقة بالقضايا البيئية					
لدى الجامعة برامج وتدريبات حول القضايا البيئية للموظفين والمدراء					
توفر الإدارة المواد التدريبية للموظفين على الإنترنت وذلك لتقليل استخدام الورق					

ثالثا: تقييم الأداء البيئي والحوافز والمكافئات

الفقرة	درجة كبيرة جدا	درجة كبيرة	درجة متوسطة	درجة ضعيفة	درجة ضعيفة جدا
تعتبر أهداف ومسؤوليات الموظفين تجاه البيئة واضحة ومحددة					
لدى الموظفين المعرفة والوعي التام بدورهم تجاه القضايا البيئية					
يراعي نموذج التقييم للجامعة الأداء البيئي للموظفين					
تقييم الجامعة سلوك الموظفين تجاه القضايا البيئية وتدرجها في مؤشرات الأداء					
تقوم إدارة الجامعة بتوفير التغذية الراجعة للموظفين لتحسين أدائهم وسلوكهم تجاه البيئة					

يتم تقدير إنجازات الموظفين تجاه القضايا البيئية (مكافات معنوية، مادية)					
تربط الجامعة نظام الاقتراحات بالحوافز لتشجيع المبادرات والممارسات البيئية الخضراء					

القسم الأخير: الأداء البيئي المستدام

إلى أي مدى تحسن الأداء البيئي بعد التزام الجامعة بالممارسات البيئية الخضراء

الالتزام البيئي:

الفقرة	درجة كبيرة جدا	درجة كبيرة	درجة متوسطة	درجة ضعيفة	درجة ضعيفة جدا
تحسين أداء الجامعة وانخفاض التكاليف					
الحد من الانبعاثات السامة في الماء والهواء					
المساهمة في تقليل النفايات بشكل عام					
تخفيض استهلاك الطاقة الكهربائية					
زيادة استخدام الطاقة المتجددة					

الأداء الاقتصادي:

الفقرة	درجة كبيرة جدا	درجة كبيرة	درجة متوسطة	درجة ضعيفة	درجة ضعيفة جدا
تخفيض تكلفة الموارد المستهلكة					
تخفيض تكلفة استخدام الطاقة					
تخفيض تكلفة المشاكل بيئية					
تخفيض رسوم معالجة النفايات					
تقليل الغرامات الناجمة بسبب الحوادث البيئية					

الأداء الاجتماعي:

الفقرة	درجة كبيرة جدا	درجة كبيرة	درجة متوسطة	درجة ضعيفة	درجة ضعيفة جدا
تحسين سمعة الجامعة					
تحسين صحة المجتمع المحلي وسلامته					
تحسين الوعي البيئي في المجتمع المحلي					
التقليل من الآثار والمخاطر البيئية على المجتمع					
تطوير أنشطة اجتماعية موجه نحو البيئة					

جـامعـــة النجاح الوطنية

كليـــة الدراســـات العليـــا

تأثير إدارة الموارد ال*في بشرية الخضراء على الأداء البيئي الجامعات الفلسطينية: الأدوار الوسيطة للدعم الإداري والثقافة التنظيمية

إعداد

رغد العلاونة

إشراف

د. محمد عثمان

د. أحمد زيد

قدمت هذه الرسالة استكمالا لمتطلبات الحصول علي درجه الماجستير في الإدارة الهندسية، من كلية الدراسات العليا، في جامعة النجاح الوطنية، نابلس– فلسطين.

2022

تأثير إدارة الموارد البشرية الخضراء على الأداء البيئي في الجامعات الفلسطينية: الأدوار الوسيطة للدعم الإداري والثقافة التنظيمية

إعداد

رغد العلاونة

إشراف

د. محمد عثمان

د. أحمد زيد

الملخص

المقدمة: أدت التغييرات نحو السلوكيات صديقة البيئة مع التركيز بشكل أكبر على الموارد البشرية والبيئة إلى ظهور أنواع جديدة من الإدارة، أحدها إدارة الموارد البشرية الخضراء (GHRM). يمكن لـ GHRM تحقيق الاستدامة من خلال حماية "الموارد الطبيعية" وتقليل الممارسات التي تضر بالبيئة.

الأهداف: تهدف هذه الدراسة إلى التحقق من الارتباط بين ممارسات الموارد البشرية الخضراء مع الثقافة التنظيمية والدعم الإداري كعوامل وساطة بالإضافة إلى تأثيرها على الأداء البيئي المستدام بين الجامعات الفلسطينية.

الطريقة: تم تطوير سبع فرضيات باستخدام نظرية AMO، حيث تم إجراء مراجعة الأدبيات السابقة ذات العلاقة في إدارة الموارد البشرية الخضراء لخدمة منهجية الدراسة. تم استخدام المنهج الكمي خلال جمع البيانات المطلوبة من 10 جامعات وافقت على المشاركة في الضفة الغربية في فلسطين، وقد تم جمع 353 استبانة من الموظفين الإداريين والموارد البشرية ومدراء الدوائر والأقسام. تم إجراء تحليل البيانات باستخدام برنامج Smart PLS،

النتائج: أشارت النتائج إلى أن إدارة الموارد البشرية الخضراء تؤثر بشكل إيجابي على أداء الاستدامة البيئية. علاوة على ذلك، تتوسط الثقافة التنظيمية، والدعم الإداري بشكل إيجابي العلاقة بين ممارسات الموارد البشرية الخضراء والاستدامة البيئية.

الخلاصة: تضيف هذه الدراسة قيمة إلى الأدبيات الموجودة من خلال الأدلة العملية التي يمكن أن تساعد الممارسين في القضايا المتعلقة بممارسات الموارد البشرية الخضراء، وأداء الاستدامة البيئية في الجامعات. تسلط هذه الدراسة الضوء أيضًا على القيود التي تمت مواجهتها خلال الدراسة، وأبرز التوصيات للدراسات المستقبلية، مثل ضرورة أن دعم كل من الإدارة العليا والثقافة التنظيمية للمبادرات البيئية في الجامعات. علاوة على ذلك، رفع وعي الموظفين حول القضايا البيئية. أخيرًا، تشجع هذه الدراسة على إجراء المزيد من الدراسات في هذا المجال، لا سيما في الدول الناشئة.

الكلمات المفتاحية: إدارة الموارد البشرية الخضراء، الأداء البيئي، الثقافة التنظيمية، التوظيف الأخضر، التدريب والمشاركة الخضراء، وإدارة الأداء الأخضر والتعويضات.