

The Role of Electronic Human Resource Management on the Practices of Green Human Resource Management

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Abstract:

Through a theoretical framework, this study aimed to identify definitions of Green Human Resources Management by covering the definitions that were proposed by several researchers and attempt to reach new definition. Many previous studies have identified several benefits that can be achieved by using Green Human Resources Management in organizations. In addition, this study summarized these benefits and identified the most frequently recurring benefits by reviewing the previous studies and adding a table showing the recurrence of these factors.

The study measured the impact of Electronic Human Resources Management on the practices of Green Human Resources Management in the Jordanian Pharmaceutical Companies by serving 180 employees in 15 Jordanian companies for the production of human medicines. The Partial Least Squares (PLS) approach was used as a statistical method to analyze the data. The results of the study showed high effect of Electronic Human Resources Management on the practices of Green Human Resources Management in Jordanian Pharmaceutical Companies and higher level of GHRM practices in Jordanian Pharmaceutical Companies. The most important recommendation of this study was that if organizations want to encourage the adoption of new work methods such as Green HRM, there has to be a link between employee incentives and employee learning of this new technology skill.

Keywords : green Human Resources Management , Electronic Human Resources Management, Green Human Resource Management Practices.

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1.Introduction:

Protecting the environment and preserving the natural ecosystem and its resources for future generations is important for all organizations (Howard-Grenville et al., 2014). This has encouraged business organizations to pay more attention to the development and implementation of Green Human Resources Management (Green HRM) through the adoption of friendly environmental practices and procedures (Prasad, 2013). Accordingly, the Green movement has been trying to achieve sustainable development since the 1990's (Chan, 2011). After the emergence of the green movement, environmental management has been incorporated into some departments in organizations such as operations, finance, marketing, etc. (Mittal & Sangwan, 2014); (Rehman & Shrivastava, 2011). The results were the addition of human resources management (Prathima & Misra, 2013). The emergence of the so-called "(Green Human Resources Management)" would help companies stimulate environmental performance by improving employees' commitment to the environment to conserve environmental resources, which subsequently ensures environmental sustainability. At the same time, it will develop business, and increase productivity and conserve cognitive capital. Human resource management practices thus have become friendly environmental (Schuler & Jackson, 2014); (Mandip, 2012); (Jackson et al., 2011); (Renwick, 2013). Sudin (Sudin ,2011) emphasized that the human resource management practices of organizations can become more important by using a broad approach to achieve cultural sustainability. Green human resources management has become a key strategy for the outstanding organizations, with the aim of changing the implementation of the work mechanism and becoming green. Friendly environmental human resource initiatives have resulted in lower costs and better employee integration thus enhancing the organization's ability to retain staff, reduce employee carbon footprint, reduce the use of paper, recycling, encourage mass transit, and promote alternative energy sources. Organizations have gained a competitive advantage by using friendly environmental human resource management approach which resulted in a number of benefits including attracting and managing the right employees as well as making better human capital decisions for strategic success.

The changes in modern technology and the organization's sense of the importance of modern systems has led to the adoption of different technologies for environmental management, the transformation in the way organizations are operated and the transformation of their systems to systems that are entirely based on information systems.

Electronic management has become a topic of interest where the functions such as human resource management and various processes are being transformed from traditional into electronic ones. There is a need for the existence of an electronic linkage between the organization and its departments and branches and other organizations as well. Consequently, this will create a competitive advantage for the organizations and achieve their objectives through the management of human resources, which will improve the employees' level of performance (Gupta, et. al, 2011). The necessity and importance of electronic human resource management (E-HRM) stems from the anticipated future competition of business organizations and the building and/or the development of competitive advantages that can enable the company to withstand intense competition. Based on the above, it is necessary for organizations to build and develop human resources information systems that are capable to meet the requirements of environmental sustainability. However, there is a gap in the research in this particular area in terms of knowing the role that E-HRM plays in the success of the Green HRM .

This gap in literature necessitates research in this area. Therefore, the aim of this paper is to highlight the concept of green human resources management and the benefits of applying green human resources in addition to the main objective of identifying the impact of E- HRM on green HRM practices. By presenting the intellectual and theoretical framework of green HRM practices(e.g.green recruitment, training & development, green performance evaluation and green rewards and incentives system) application areas and knowledge of the most important procedures are used and related to green human resources management practices in an attempt to reduce the gap and the adoption of this practice. It is also important to determine the level of interest that research organizations have in the field Human Resource Management and Electronic Human Resource Management.

2. Theoretical framework

2.1 Green Human Resources Management

Green Human Resources Management has been a major factor in improving environmental performance since the mid-1990s (Millman and Claire,1996); (Wehrmeyer,2017) and its effects on environmental performance are increasingly noticeable (Fernandez et al., 2003); (Gaboro Santos ,2008);(Jackson and Seo 2010); (Jackson Et al. 2011); (Renwick et al. 2012). Although Green Human Resources Management is still in its early stages (Jabbour, 2013), it plays a significant role in any organization, whereas green initiatives in human resources management have occupied a large part in the organizations' social responsibility programs. The need to develop human resources management practices and integration of these practices into green management functions has emerged from the green (recruitment, selection, training, development, motivation, and performance evaluation) that can be called Green Human Resources management (Dutta, 2012).

The concept of Green Human Resources management is a modern concept that links between the activities of human resources management and environmental management which is referred to as the abbreviation (Green HRM). In this context, the term green human resources is used to refer to the contribution of human resource management policies and practices to broader environmental agenda of companies to protect and conserve their natural resources. Table(1) illustrates the various definitions of the concept of green human resources management based on previous studies:

Table 1: definitions of green human resources management

Authors	Definitions
Mehta and Mehta (2017)	incorporate environment-friendly HR commencement and practices for sustainable use of resources.
Deepika and Karpagam (2016)	the use of HR policies to give confidence the sustainable use of resources within business organizations and more generally promotes the source of environmental sustainability.
Dumont,et al(2016)	Human resources management activities and practices that promote positive environmental outcomes by focusing on spreading the culture of environmental sustainability and committing employees to it.
Ahmad (2015)	The use of human resources management policies that promote the sustainable use of resources within organizations and promote the cause of environmental protection, which plays an important role leading to high morale of staff and satisfaction in general.
Mishra,et al(2014)	practices that promote green initiatives by increasing employee awareness and commitment to environmental sustainability issues.
Opatha&Arulrajah(2014)	As activities, policies, practices, and systems involved the development, implementation and ongoing maintenance of systems aimed at finding employees and the green organization.

Rana and Jain (2014)	A recruitment model designed to help industry professionals retain, and develop the talent needed to ensure future business initiatives and strategies are met.
Prasad (2013)	Contribution of human resources policies and practices to the broader environmental agenda for the sustainable use of natural resources.
Vij,et al (2013)	Green human resources activities that include polarization or video and online interviews to reduce travel requirements.
Marhatta&Adhikari(2013)	Environmentally friendly human resources practices leading to better efficiency, lower cost and higher levels of engagement of staff with their organizations.
Mathapati(2013)	Various HR practices such as recruitment, selection, training, development, compensation, rewards and performance appraisal in a way to provide companies with employees who understand and promote green behavior.
Mandip (2012)	the use of every employee touch point/interface to promote sustainable practices and increase employee awareness and commitments on sustainability issues.
Sudin (2011)	Attract and retain talented individuals with special skills and knowledge of green human resources.
Jabbour(2011)	level of the greening of HRM practices in terms of functional and competitive dimensions of HRM.
Muller-Carmen,et al(2010)	Integrate the environmental management of the organization with the objectives of human resource management practices such as recruitment, selection, training, development, performance management, evaluation, and remuneration.
Renwick et al, (2008)	the integration of corporate environmental management into human resource management. It is the contribution of personnel management policies and activities to the achievement of the Organization's objectives.
Authors	Green Human Resources Management includes activities, practices and policies that deal with the issues of environmental sustainability and adopting these practices to be reflected on the organization, employees and the society as a whole.

Most definitions of Green HRM by different authors are very similar except with slight differences. The main focus of this concept is the "green" reflection as an ecosystem in defining HRM practices. The authors reached out to this definition: Green Human Resources Management includes activities, practices and policies that deal with the issues of environmental sustainability and adopting these practices to be reflected on the organization, employees and the society as a whole.

The importance of Green Human Resource Management

The newly focused concept of Green Human Resource Management has kept up with modern technological developments. (Nijhawan, 2014) noted that there is an increasing need to integrate environmental sustainability with human resource management within the environment of an organization. (Marhatta & Adhikari,2013) (Muller-Carmen, et al, 2010) noted that friendly environmental human resource practices lead to better efficiency, lower costs and higher levels of production (Mishra,et al,2014) (Cherian & Jacob 2012). As a result, Green Human Resource Management plays an important role in the friendly environmental activities through involving the individuals in green initiatives. Green Human Resource Management contributes to green functional areas including Green Operations, Marketing, Supply Chain Management, Accounting, and Green Finance which leads to taking a holistic perspective of aligning employees with environmental strategy. As for the community, Green HRM works to increase environmental awareness and implement laws related to environmental safety in order to reach the strategy of differentiation and creativity in the organization. As a result, these practices reduce costs and increase productivity through the preservation of green intellectual capital (Margareta & Saragih,2013). There are a number of benefits that the organization can achieve as a result of introducing and applying the principles of green human resources management. Those benefits as summarized in Table (2) below:

Table 2: Benefits of Green Human Resources Management:

Bentifts	Authors
Attracting talent	Sharma (2016) Bangwal&Tiwari (2015) Pandey,Viswanathan & Kamboj (2016) Hosain, Rahman (2016) Deshwal (2015) Mehta & chugan (2015) cherian & Jacob (2012) Marhatta& Adhikari (2013) Milliman (2013) Renwick, et al. (2013) Fayyazia,et al (2015)
Ensuring that employees understand the importance of sustainability	Sharma (2016) Bangwal&Tiwari (2015) Pandey,Viswanathan & Kamboj (2016) Hosain, Rahman (2016) Deshwal (2015) Mehta & chugan (2015) cherian & Jacob (2012) Marhatta& Adhikari (2013) Milliman (2013) Renwick, et al. (2013) Fayyazia,et al (2015)
Able to find innovative solutions to environmental problems.	Sharma (2016) Bangwal&Tiwari (2015) Pandey,Viswanathan & Kamboj(2016) Hosain, Rahman (2016) Deshwal (2015) Mehta & chugan (2015) cherian & Jacob (2012) Marhatta& Adhikari (2013) Milliman (2013) Renwick, et al. (2013) Fayyazia,et al (2015)
Improve competitiveness	Pandey,Viswanathan & Kamboj(2016) Hosain, Rahman (2016) Deshwal (2015), Mehta & chugan (2015) cherian & Jacob (2012) Marhatta& Adhikari (2013)
Increase overall performance.	Pandey,Viswanathan & Kamboj(2016) Hosain, Rahman (2016) Deshwal (2015) Mehta & chugan (2015) cherian & Jacob (2012) Marhatta& Adhikari (2013)
Give competitive advantage to organizations	Pandey,Viswanathan & Kamboj(2016) Hosain, Rahman (2016) Deshwal (2015) Mehta & chugan (2015) cherian & Jacob (2012) Marhatta& Adhikari (2013)
Lower turnover and improved retention rates.	Deshwal (2015) Bangwal&Tiwari (2015) Sharma (2016) Mehta & chugan (2015) cherian & Jacob (2012)

	Marhatta& Adhikari (2013)
Reduce costs	Bangwal&Tiwari (2015) Hosain, Rahman (2016) Pandey,Viswanathan & Kamboj(2016) Sharma (2016) Deshwal (2015), Mehta & chugan (2015) cherian & Jacob (2012) Marhatta& Adhikari (2013)
Increased sales	Bangwal&Tiwari (2015) Hosain, Rahman (2016) Pandey,Viswanathan & Kamboj(2016) Sharma (2016) Deshwal (2015), Mehta & chugan (2015) cherian & Jacob (2012) Marhatta& Adhikari (2013)
Ability to improve sustainable productivity	Bangwal&Tiwari (2015) Hosain, Rahman (2016) Pandey,Viswanathan & Kamboj(2016) Sharma (2016) Deshwal (2015), Mehta & chugan (2015) cherian & Jacob (2012) Marhatta& Adhikari (2013)
Improve the image of the organization	Deshwal (2015) Hosain, Rahman (2016) cherian & Jacob (2012) Marhatta& Adhikari (2013)
Meet the needs of customers.	Deshwal (2015) Hosain, Rahman (2016) cherian & Jacob (2012) Marhatta& Adhikari (2013)
Reduce the environmental impact of the organization	Hosain, Rahman (2016) Deshwal (2015), Cherian & Jacob (2012) Marhatta& Adhikari (2013)
Achieve sustainable returns for investors.	Cherian & Jacob (2012) Marhatta& Adhikari(2013)
Responding to societal emergencies	Hosain, Rahman (2016) Deshwal (2015), cherian & Jacob (2012) Marhatta& Adhikari (2013)

The table (2) above summarizes many of the benefits that the previous studies refer to, and therefore the three most important benefits that have been repeated are: Attracting talents, ensuring that employees understand the importance of sustainability and the ability to find innovative solutions to environmental problems.

Green Human Resource Management Practices:

Different human resource practices have been identified to disseminate environmental values throughout the organization(Hoffman,1993),(Rousseau&Fouts,1997),(Fernandez,et al.,2003),(Renwick et al,2012)in an empirical study confirmed that a package of human resource management practices that "strategically target environmental performance", and the so-called Green HRM package, consists of consistent and coherent human resource management practices that aim at improving environmental performance which play a significant role in the greening of the organized environment. The Green HRM package includes the HR practices identified by the studies to assist in greening the organization.(Combs et al,2006),(Mittal&Sangwan,2014),(sayed,2015),(Masri & Jaroon,2017), (Bombiak&Marciniuk-Kluska,2018).

Green Recruitment:

Recruitment and green selection is a human resource management practice that provides the organization with an opportunity to introduce green HR management initiatives to potential job applicants. Organizations that are interested in green human resources management and which focus on polarization practices that support green management and give priority to the selection of knowledgeable and talented candidates use green criteria when applying for jobs in addition to those who have a culture and believe in these environmental concepts with an interest in environmental behavior (Milliman,2013),(Sudin, 2011). In fact, there is a growing awareness among job seekers that there is a desire to work in organizations that conserve the environment (Cherian & Jacob, 2012) and this increases the ability of organizations to attract human resources. These employees prefer companies that are concerned with the protection of the environment and social responsibility (Masri & Jaron, 2017). This fact is demonstrated by attracting potential recruits who are interested in sustainability and conservation by adopting a virtual recruitment approach (Renwick, et al.,2013) and completing recruitment requirements through electronic means of communication (Milliman, 2013). Accordingly, job description should reflect and include environmental aspects within the sustainability agenda as well as access to the company's website and its search engines (Fayyazia, et al,2015); (Renwick, et al,2013). In addition, job description should include statements that clarify and emphasize on the importance of environmental reporting. Furthermore, induction training for newcomers should focus on providing information on environmental protection policies, green values and corporate goals. Interviews should be designed to assess the qualifications of potential applicants in terms of the company's greening plans. (Wehrmeyer, 2017); (Jose Chiappetta Jabbour, 2011). In addition, environmental questions should be a key part of the interview criteria. Designing new environmental functions will link environmental tasks with all duties and responsibilities of the position in order to focus specifically on the environmental management aspects (Arulghah, et al.,2015).

Green training and development:

Green training and development requires the development of knowledge and skills that are required to implement the environmental management programs. Furthermore, Green Training and development also provides the employees with the necessary training in the field of environmental management. Training needs can be analyzed in the light of environmental knowledge and skills of workers in the green aspects. Green training is deemed as one of the most important tools for developing human resources, facilitating the transition to a more sustainable society, building competencies to reduce waste, saving energy and building a green organizational culture (Fayyazia, et al, 2015); (Margaritha & Saragih,2013); (Milliman, 2013); (Jose Chiappetta Jabbour, 2011); (Zoogah, 2011); (Sarkis, et al. ,2010); (Teixeira et al., 2012); (Saturnino Neto, et al., 2014). Similarly, developing relevant green competencies, which enhances organizational capacity and performance and enhances the importance of the organization's commitment to environmental initiatives (Daily et al, 2012); (Teixeira et al, 2012) in-company environmental development debate (Liebowitz, 2010). (Renwick et al., 2013) suggested some practices for green training programs including: energy efficiency, safety training, green workplace analysis, waste management, environmental training and job rotation for potential environment managers within an organization. These programs should be tailored to achieve the best environmental benefits of training (Cherian & Jacob, 2012).

Green performance evaluation:

Is the extent to which businesses engage in environmentally friendly activities considered an indicator of environmental performance that reduces the negative impacts of manufacturing processes on the environment? (Wong ,et al., 2013). This should include the assessment of the employees' performance through the criteria of green performance and by the indicators of green behavior to serve as a measure in assessing the performance of employees and linking the job description with the performance of employees as well as to provide verifiable green ideas. The staff should be assessed and encouraged to ensure that employees' outputs are consistent with environmental orientation (Margaretha & Saraglih,2013); (Renwick, et al., 2013).

Green Rewards and Incentives System:

The green reward system plays a vital role in motivating people and helps to determine the employees' performance towards environmental management (Teixeira et al., 2012). By providing rewards and incentives to support environmental activities, the goals of making the organization's environment green and implementing an incentive system in which the amount of reward and incentive depends on their interest in understanding and developing an environmentally friendly culture (Liebowitz, 2010).The environmental behavior of the worker should be consistent with green behavior and motivates people to perform well and recognizing the importance of environmental protection (Lindström & Vanhala, 2011). A green reward system should be designed to produce environmentally friendly workplace and lifestyle initiatives (Pillai & Sivathanu, 2014).Rewards can be in the form of financial and non-financial incentives such as offering different forms of rewards including, letters of praise and appreciation,

job promotions, career gains, cash incentives, gifts, etc. (Prasad, 2013) ;(Ahmad, 2015); (Arulga et al., 2015); (Renwick et al., 2013); (Opata and Arulrajah , 2014); (Renwick et al., 2013); (Opatha & Arulrajah, 2014).

2.2 Electronic Human Resources Management

With the continued development of technology, human resources management functions have been organized within the concept of E-HRM to keep pace with changes in the business environment. As a result, there has been a change in the of applying human resource management methods. There is an increased coordination and organization with other departments of the organization in order to increase the efficiency of the organization and to reduce costs, effort and time. Accordingly, the objectives of E-HRM stem from their integration with the objectives of e-management, where human resources management is directed towards the service of management and employees in the organization. (Lepak & Snell,2002) pointed to the following aspects: increasing focus on strategic issues and strategic direction of human resources, increasing the flexibility of procedures and practices, facilitating the performance of human resources functions, increasing the efficiency and productivity of human resources, reducing costs, improving labor relations, satisfying employees' flexibility needs and better response to market changes. (Ruel, et. Al, 2007), (Hopkins and Markham,2003).

The application of human resources management technology depends on the organization's needs. It may be limited to spreadsheets or it might extend to include complex systems. This depends on the solutions provided by HRMIS as some of them represent complete solutions for HR functions, including certain functions such as polarization, selection, performance evaluation compensation, wages and other functions (CIPD, 2006).

Certainly, this will lead to a diversity of E-HRM depending on the applications used for HRMIS. The use of electronic human resources management has significant impact in reducing administrative costs for the following: personnel operations, recruitment and recruitment period, increasing the interaction between the employees and HR activities such as the definition of benefits package, compensation, and training through the Internet and many other benefits related to all HR functions. Therefore, the organization, will achieve many benefits from using E-HRM. These benefits range from high-impact benefits to normal-effect benefits. (Parry, et. Al, 2007).

Among the practices of green human resources management are the increasing needs for employees under E-HRM companies to use portals. Portals are used to provide immediate self-services to employees. Furthermore, portals provide manpower planning of the services and link the various sites of the company on the Internet which will enable the employees become aware of the performance data. This also enables managers to make strategic decisions that improve their competitive positions and increase the overall productivity and quality. (Parry, et. Al, 2007).

3. Methodological framework of the study:

This applied study attempted to identify the impact of Electronic Human Resource Management on the practices of Green Human Resource Management in Jordanian Pharmaceutical Companies. This study began with literature review and presented the previous studies in order to extract the concept of Electronic Human Resource Management and Green Human Resource Management. It conducted a survey on the employees of Jordanian Pharmaceutical Companies for the production of human medicines that are registered as members of the Jordanian Union of Pharmaceutical Producers which were a total of 15 companies used for this study. (16) questionnaire were distributed to each company's employees. Therefore, the sample of the study consisted of (180) employees and all were retrieved; all questionnaires were valid for analysis.

The survey consisted of five parts. First: paragraphs that described the characteristics of the sample. The second part contained paragraphs related to the Electronic Human Resource Management. The third part included paragraphs related to the Green Human Resource Management (Green Recruitment, Green training and development, Green performance evaluation, Green Rewards and Incentives System). This was followed by a 5-point Likert scale for the interpretation of participants' responses to the survey questions. The statistical test was used to test the hypothesis of the research. Smart PLS software program (version 3.9.2) was used to test the study hypotheses. Electronic Human Resource Management served as (an independent variable) and was examined against "Green Human Resource Management" (a dependent variable).

4. Data and results:

4.1 Analysis of demographic data:

The demographic data collected from the questionnaires were analyzed and distributed to the sample of the study population.

Table (3) Distribution of the sample by demographic factors:

Demographic Variable	Section	Frequency	Percent
gender	male	110	61.1
	female	70	38.9
	Total	180	100.0
educational level	Bachelor	138	76.7
	Master	22	12.2
	PhD	20	11.1
	Total	180	100.0
years of experience	Less than 10	60	33.3
	10-15	50	27.8
	More than 15	80	44.4
	Total	180	100.0

In order to describe the characteristics of the study sample, gender, educational level and years of experience were analyzed as depicted in Table 3. We note that the percentage of males (61.1%) was much higher than the percentage of females (38.9) which indicates that females were the minority of the sample. The second category (educational level) showed that the majority of the respondents hold a bachelor's degree as well as having long experience. This confirms the efforts of the pharmaceutical companies in Jordan to recruit high qualified and well-educated human resources.

4.2 Reliability analysis:

Table (4) reliability using Cronbach alpha

Dimensions	No. of items	Cronbach alpha
Electronic Human Resources Management	9	0.945
Green Recruitment	10	0.901
Green Training and Development	9	0.880
Green Performance Evaluation	7	0.898
Green Rewards and Incentives Systems	5	0.913

The reliability results were high as the values were close to the maximum value (1.00) that could be reached. As could be figured out most of the values were around 0.90.

4.3 Statistical analysis results.

The results of the selected descriptive statistical analysis, means and standard deviations for the items representing each dimension of electronic human resources management and green HRM practices are included in the following tables.

4.3.1 Electronic Human Resources Management

The results of the selected descriptive statistical analysis, means and standard deviations for the items representing of electronic human resources management are included in the following table.

Table (5): means and standard deviations for the items of Electronic Human Resources Management.

No.	items	mean	sd	level
1	Electronic systems used in the Human Resources Department allows for the recovery of files in case of loss.	4.69	0.50	High
2	There is a staff portal through which staff services are managed	4.67	0.48	High
3	Planning information for human resources is collected electronically	4.56	0.58	High
4	E-mail is used for communication between Company staff	4.52	0.62	High
5	Electronic HR systems are updated periodically	3.80	1.05	High
6	The program used in the Human Resources Department provides different levels of authority for the Company staff	4.43	0.63	High
7	The program used in the Human Resources Department is flexible to accommodate any changes required by the Department of Human resources electronically	4.17	0.61	High
8	The software used in the Human Resources Department provides protection for information security and confidentiality	4.04	.73	High
9	Employee passwords and codes are changed periodically	3.98	0.84	High
	Electronic Human Resources Management	4.32	0.53	High

Mean ranks (2.33 and less: low; 2.34 - 3.67: moderate; 3.68 and more: high)

Table (5) shows the values of means and standard deviations for the items of The Electronic human resources. The mean values ranged between (3.80- 4.69). its noted that item no. (1) which states “Electronic systems used in the Human Resources Department allows for the recovery of files in case of loss” Had a recorded the greatest mean (4.69) and ranked first while item no. (5) Which states “ Electronic HR systems are updated periodically”, had had recorded the least mean (3.80) and ranked the last. The overall degree of Electronic human resources was evaluated by a high degree with a mean of (4.32).

4.3.2 green recruitment

The results of the selected descriptive statistical analysis, means and standard deviations for the items representing of green HRM practices related to the green employment are included in the following table.

Table (6): means and standard deviations for the items of green HRM practices related to the green employment.

No.	items	mean	sd	level
1	Most of the approved recruitment steps are done through the internet	4.20	0.76	High
2	The organization is keen to pay attention to the green issues in the job descriptions of all jobs for new candidates	3.91	1.01	High
3	The green aspects are highlighted when hiring in order for staff to use it	3.88	1.05	High
4	Employees who have a green awareness have become part of the interview process	4.25	0.58	High
5	Candidates for vacancies use green environmental standards to determine the organization in which they will work	4.21	0.62	High
6	The green-label organization has become a favorite in attracting candidates	3.77	0.84	High
7	The Company is keen to attract candidates who have environmental awareness to fill vacancies	4.22	0.88	High
8	Applications are submitted electronically	4.11	0.72	High
9	Electronic procedures are used in the recruitment process	3.74	0.43	High
10	The company adopts flexible work schedules in some jobs by allowing work to be done at home without being present	4.10	0.86	High
	Practices related to green employment	4.04	0.78	High

Mean ranks (2.33 and less: low; 2.34 - 3.67: moderate; 3.68 and more: high)

Table (6) declares the means values and standard deviations for the items of The Practices related to green employment. It's noted that the mean values had ranged between (3.74- 4.25). It's noted that item no. (4) Which states "Employees who have a green awareness have become part of the interview process".Had recorded the greatest mean (4.25) and ranked the first while item no. (9) Which states " Electronic procedures are used in the recruitment process", had registered the least mean (3.74) and ranked the last. The overall degree of Practices related to green employment was evaluated by a high degree with a mean of (4.04).

4.3.3 green training and development

The results of the selected descriptive statistical analysis, means and standard deviations for the items representing of green HRM practices related to the green training and development are included in the following table.

Table (7): means and standard deviations for the items of green HRM practices related to the green training and development.

No.	items	mean	sd	level
1	Company Staff are trained on aspects of environmental management to increase awareness, skills, and experience.	4.22	0.88	High
2	There is training on how to perform green jobs	4.11	0.717	High
3	Training needs are determined electronically at the Company	3.88	0.729	High
4	Training programs include attention to the development of green leadership styles among managers	4.09	0.738	High
5	The training programs adopted by the Company rely on the Internet and do not use paper and do not result in any waste	4.20	0.767	High
6	The management encourages employees to participate in the green training programs by rewarding distinguished employees	3.77	0.738	High
7	Environmental management techniques are used in training processes	4.15	0.632	High
8	Training is integrated with instructions generated from environmental values	4.29	0.66	High
9	Developing staff competencies based on environmental principles	4.19	0.61	High
	Practices related to the green training.	4.10	0.55	High

Mean ranks (2.33 and less: low; 2.34 - 3.67: moderate; 3.68 and more: high)

Table (7) reflects the values of means and standard deviations for the items of The Practices related to green training and development. It's noted that the mean values had ranged between (3.77- 4.29). It's noted that item no. (8) Which states "Training is integrated with instructions generated from environmental values" Had recorded the highest mean (4.29) and ranked the first while item no. (6) Which states "The management encourages employees to participate in the green training programs by rewarding distinguished employees", had recorded the least mean (3.77) and ranked the last. The overall degree of Practices related to green training was evaluated by a high degree with a mean of (4.10).

4.3.4 green performance evaluation

The results of the selected descriptive statistical analysis, means and standard deviations for the items representing of green HRM practices related to the green performance evaluation are included in the following table.

Table (8): means and standard deviations for the items of green HRM practices related to the green performance evaluation.

No.	items	mean	sd	level
1	The Human Resource Department has green performance indicators for environmentally friendly performance management and evaluation	4.24	0.51	High
2	Green performance is included in the annual performance appraisal system for employees	4.11	0.69	High
3	The performance appraisal process includes in-depth dialogues on the environmental problems facing the Company	4.56	0.58	High
4	Green objectives, goals, and responsibilities are assigned to each employee of the Company and is included in their annual assessment	4.52	0.62	High
5	Employees' performance is assessed electronically by their manager	3.91	0.81	High
6	The program used in the Human Resources Department helps in monitoring the performance of human resources	3.96	0.41	High
7	Attendance is recorded electronically	4.60	0.61	High
	Practices related to green performance evaluation	4.27	0.47	High

Mean ranks (2.33 and less: low; 2.34 - 3.67: moderate; 3.68 and more: high)

Table (8) shows the values of means and standard deviations for the items of The Practices related to green performance evaluation. It's noted that the mean values had ranged between (3.91- 4.60). It's noted that item no. (7) Which states "Attendance is recorded electronically" Had recorded the highest mean (4.60) and ranked the first while item no. (5) Which states "Employees' performance is assessed electronically by their manager", had recorded the least mean (3.91) and ranked the last. The overall degree of Practices related to green performance evaluation was evaluated by a high degree with a mean of (4.27).

4.3.5 green Rewards and incentives Systems

The results of the selected descriptive statistical analysis, means and standard deviations for the items representing of green HRM practices related to the green Rewards and incentives Systems are included in the following table.

Table (9): means and standard deviations for the items of green HRM practices related to green Rewards and incentives Systems

No.	items	mean	sd	level
1	The management of the company offers bonuses or monthly bonuses for the best environmental management in the sections and units of the company	4.34	0.77	High
2	Suggestions from employees that promote green efforts and improve the environmental performance of the company are rewarded	4.28	0.78	High
3	The Company remuneration plans relate the skill-based wage to the acquired environmental skill	4.20	0.70	High
4	The management offers incentives to encourage green trends in the Company	4.18	0.72	High
5	The rewards depend on their environmental efforts	3.98	0.84	High
	Practices related to green Rewards and incentives Systems	4.20	0.74	High

Mean ranks (2.33 and less: low; 2.34 - 3.67: moderate; 3.68 and more: high)

Table (9) shows the values of means and standard deviations for the items of The Practices related to green Rewards and incentives Systems . It's noted that the mean values had ranged between (3.98- 4.34). It's noted that item no. (1) Which states "The management of the company offers bonuses or monthly bonuses for the best environmental management in the sections and units of the company" Had registered the highest mean (4.34) and ranked the first while item no. (5) Which states "The rewards depend on their environmental efforts", had recorded

the least mean (3.98) and ranked the last. The overall degree of Practices related to green Rewards and incentives Systems was evaluated by a high degree with a mean of (4.20).

4.4 Hypotheses testing:

4.4.1 Study hypotheses:

Over the course of research, attempts were made to verify the following research hypotheses:

Main hypothesis:

H0: There is no statistically significant effect of e-HRM on the green HRM practices of Jordanian Pharmaceutical Companies at a statistical level of 0.05.

The following sub hypothesis were derived

H0-1: There is no statistically significant effect of e-HRM on the green HRM practices of Jordanian Pharmaceutical Companies at a statistical level of 0.05 related to green training and development.

H0-2 :There is no statistically significant effect of e-HRM on the green HRM practices of Jordanian Pharmaceutical Companies at a statistical level of 0.05 related to green recruitment

H0-3: There is no statistically significant effect of e-HRM on the green HRM practices of Jordanian Pharmaceutical Companies at a statistical level of 0.05 related to green performance evaluation

H0-4 :There is no statistically significant effect of e-HRM on the green HRM practices of Jordanian Pharmaceutical Companies at a statistical level of 0.05 related to green Rewards and incentives Systems.

The researchers apply the logical analysis to test proposed model in order to provide a full explanation of the results related to hypotheses by applying the Bootstrapping analysis in Smart PLS software program (version 3.9.2) .the test finds the rate of (T value) for Influence of EHRM on Green HRM practices was represented in Fig. (2) and The (beta and sig value) for this relation was represented in Fig. (1). Based on figures Table (10) displays the value of these results.

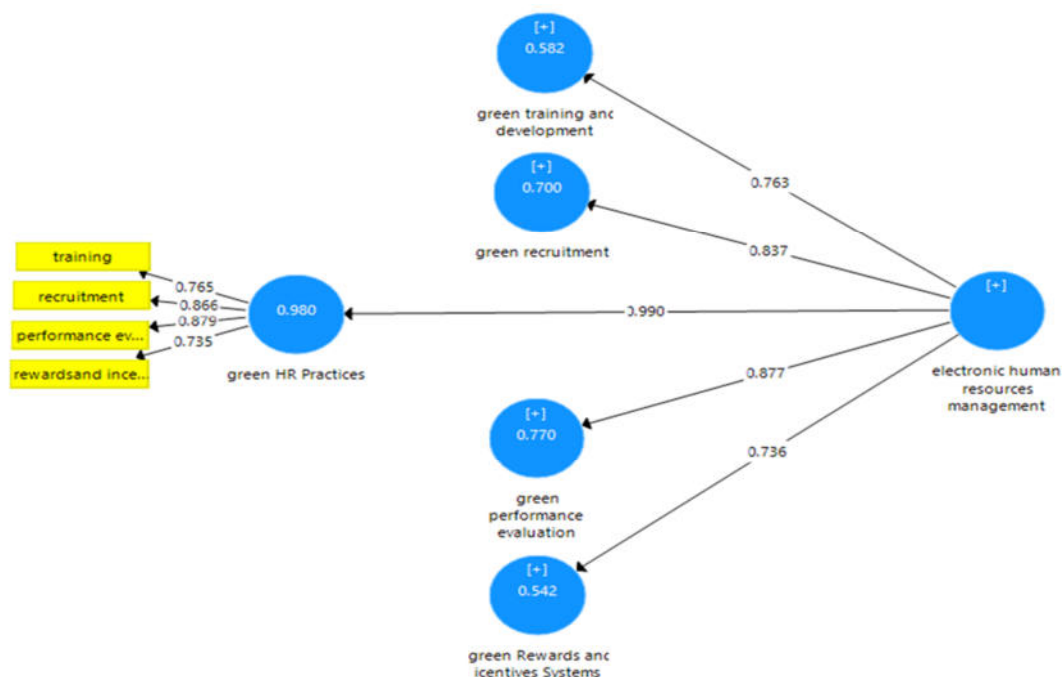


fig (1) standardized effects:

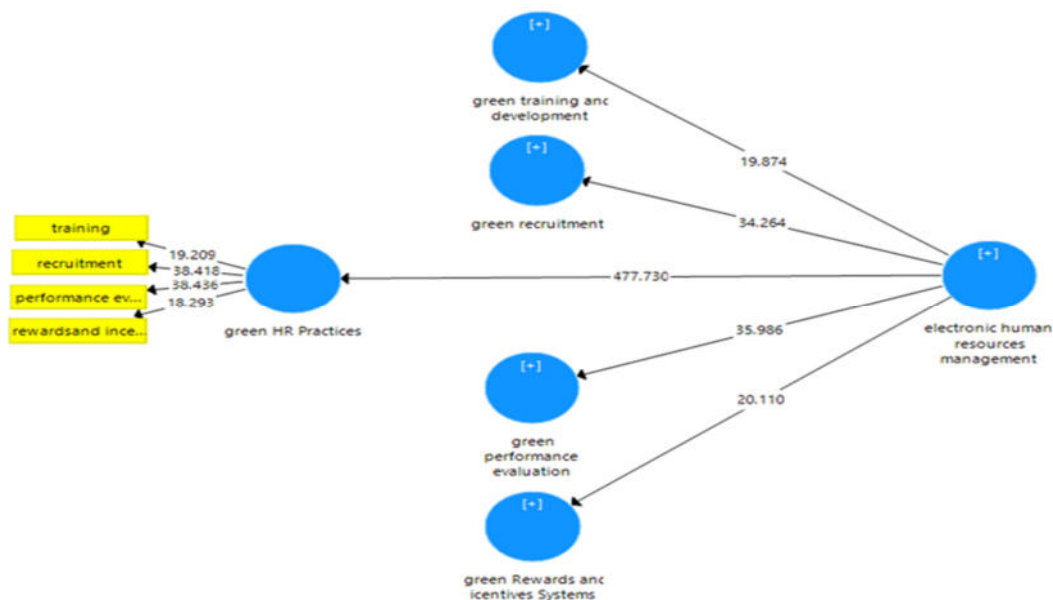


Fig (2) values of t statistics

Table (10) standardized effects

hypothesis	impact direction	β	t	prob	R ²
H0	Electronic human resources Management on green HRM practices	.990	45.73	0.000	0.980
H0-1	Electronic human resources Management on green training and development	0.763	18.74	0.000	0.582
H0-2	Electronic human resources Management on green recruitment	0.837	33.46	0.000	0.700
H0-3	Electronic human resources Management on green performance evaluation	0.877	32.72	0.000	0.770
H0-4	Electronic human resources Management on green Rewards and incentives Systems	0.736	18.99	0.000	0.542

4.4.2 Results of testing the main hypothesis

table (10) provides the impact value of Electronic human resources on green human resources practices which was expressed by the standardized beta coefficient it was found to be (0.990) this impact value was considered to be statistically significant as the related probability value (0.000) was < 0.05. Consequently, the null hypothesis is rejected concluding that Electronic human resources had an effect on green human resources practices.

4.4.3 Results of testing the first sub hypothesis:

According to the results provided by table (10) the impact value of Electronic human resources on green training and development was expressed by the standardized beta coefficient it was found to be (0.763) this impact value was considered to be statistically significant as the related probability value (0.000) was < 0.05. Consequently, the null hypothesis is rejected concluding that Electronic human resources had an effect on green training and development.

4.4.4 Results of testing the second sub hypothesis:

According to the results provided by table (10) the impact value of Electronic human resources on green recruitment was expressed by the standardized beta coefficient it was found to be (0.837) this impact value was

considered to be statistically significant as the related probability value (0.000) was < 0.05 . Consequently, the null hypothesis is rejected concluding that Electronic human resources had an effect on green recruitment.

4.4.5 Results of testing the third sub hypothesis:

According to the results provided by table (10) the impact value of Electronic human resources on green performance evaluation was expressed by the standardized beta coefficient it was found to be (0.877) this impact value was considered to be statistically significant as the related probability value (0.000) was < 0.05 . Consequently, the null hypothesis is rejected concluding that Electronic human resources had an effect on green performance evaluation.

4.4.6 Results of testing the fourth sub hypothesis:

According to the results provided by table (10) the impact value of Electronic human resources on green Rewards and incentives Systems was expressed by the standardized beta coefficient it was found to be (0.736) this impact value was considered to be statistically significant as the related probability value (0.000) was < 0.05 . Consequently, the null hypothesis is rejected concluding that Electronic human resources had an effect on green Rewards and incentives Systems.

5. Result discussion, conclusion and recommendations:

5.1 Result discussion

- The results showed that there is a statistically significant effect of e-HRM on the green HRM practices of Jordanian Pharmaceutical Companies.

- The results showed that there is a statistically significant effect of e-HRM on the green HRM practices of Jordanian Pharmaceutical Companies related to (green training and development, green recruitment, green performance evaluation, green rewards and incentives systems).

- The higher the level of Electronic Human Resources Management, the higher the level of GHRM practices in Jordanian Pharmaceutical Companies. This result is attributed to the high level of awareness of the importance of environmental sustainability and the pursuit of green initiatives by companies through the approach and culture of the organization and its reliance on modern technology to manage its operations through the constant quest to develop information systems. In addition, research organizations have good knowledge of the concept of Green Human Resources and their role in the preservation of the green environment. The results of this study are consistent with those of (Sharma ,2016) (Bangwal&Tiwari ,2015) (Pandey,Viswanathan & Kamboj ,2016), (Hosain, Rahman 2016),(Deshwal ,2015),(Mehta & chugan, 2015),(Renwick, et al.,2013).

- through the average total relative weights of E-HRM related elements, the study showed that Jordanian Pharmaceutical Companies manage their human resources electronically to a high degree and are suitable for administrative levels without overlapping in powers as well as enjoying good protection of information that allows for the recovery of files in case of loss. The system also provides safe and accurate information used in planning and is flexible enough to accommodate any changes required by Electronic Human Resources Management. This has a significant role in assisting the application of GHRM practices. This result may be attributed to the recent technological advances in the development of administrative work methods that are imposed on institutions where the transformation from traditional methods of doing business to electronic methods occurs. The results of this study are consistent with those of (Parry, et. al, 2007).

- The results showed that the level of green recruitment is high in Jordanian Pharmaceutical Companies. The results proved that Jordanian Pharmaceutical Companies have practices to establish the green culture and give priority to the recruitment of those who have awareness, interest and knowledge of the green culture. Further, green employment has become a part of the policy of polarization and acquisition of human resources. The results of this study coincided with the results of other studies. (Sharma, Kanika ,2016),(Bangwal&Tiwari,2015), (Deshwal,2015),(Mehta & chugan, 2015),(Cherian & Jacob, 2012),(Marhatta& Adhikari,2013).

- The results showed that the level of green training and development is high in Jordanian Pharmaceutical Companies. The results proved that the Jordanian Pharmaceutical Companies are developing the knowledge and skills required for everything related to green management programs. The results of this study are consistent with the results of the (Schuler & Jackson , 2014) (Mandip, 2012),(Jackson et al., 2011),(Renwick, 2013).

- The results showed that the level of green performance evaluation is high in Jordanian Pharmaceutical Companies. The results proved that performance management and evaluation included the concept of green management as the green performance standards and indicators of green behavior serve as a measure in evaluating the performance of employees and their outputs in line with achieving the organization's directions towards a Green environment. The results of this study were consistent with the results of a study (Wong et al., 2013) ,(Margaretha & Saraglih,2013),(Renwick, et al.,2013).

- The results showed that the level of green rewards and incentives systems is high in Jordanian Pharmaceutical Companies. The results also proved that Jordanian Pharmaceutical Companies provide incentives to encourage green trends in Jordanian Pharmaceutical Companies and work on building continuous plans to reward employees based on their environmental efforts in order to obtain skills and competencies needed to develop and motivate the green organization. This indicates that senior management has the strength and vision to motivate people to engage in environmentally friendly activities that increase their awareness and commitment to their green job. The results of this study were consistent with the results of (Teixeira et al., 2012),(Liebowitz, 2010),(Lindström & Vanhala, 2011),(Pillai & Sivathanu, 2014),(Prasad, 2013),(Ahmad, 2015) ,(Arulghah et al., 2015) (Renwick et al., 2013) (Opata and Arulrajah, 2014) (Renwick et al., 2013),(Opatha & Arulrajah, 2014).

5.1 Conclusion

The results showed that most definitions of Green HRM are very similar except with slight differences. The main focus of this concept is the "green" reflection as an ecosystem in defining HRM practices. The authors concluded the following definition: Green Human Resources Management includes activities, practices and policies that deal with the issues of environmental sustainability and adopting these practices to be reflected on the organization, employees and the society as a whole. The results showed that the three most important benefits of green HRM are: attracting talents, ensuring that employees understand the importance of sustainability and the ability to find innovative solutions to environmental problems. The results showed that there is a statistically significant effect of e-HRM on the green HRM practices of Jordanian Pharmaceutical Companies related to (green training and development, green recruitment, green performance evaluation, green rewards and incentives systems). The result also showed that the higher the level of Electronic Human Resources Management, the higher the level of GHRM practices in Jordanian Pharmaceutical Companies and this result is attributed to the high level of awareness of the importance of environmental sustainability and the pursuit of green initiatives by companies through the approach and culture of the organization and its reliance on modern technology. Moreover, the results proved that Jordanian Pharmaceutical Companies have practices to establish the green culture and give priority to the recruitment of those who have awareness and interest and knowledge of the green culture and developing the knowledge and skills required for everything related to green management programs. In addition, green performance evaluation, green rewards and incentives systems are high in Jordanian Pharmaceutical Companies.

5.2 Recommendations:

- if organizations want to encourage the adoption of new work methods such as Green HRM, there has to be a link between employee incentives and employee learning of this new technology skill.
- Applying a disciplinary system for employees who violate environmental activities.
- Continuing the green training process by holding training courses to develop employees in environmental fields.
- Conducting competitions between departments and units within companies to stimulate interest and commitment to adopt green practices.

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