

The impact of green human resource management on organizational environmental performance in Jordanian health service organizations

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ABSTRACT

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The purpose of this study is to explore the relationship between green human resource management (HRM) practices, including Green recruitment and selection, Green training and development, and Green rewards, and environmental performance in Jordanian health service organization. The research hypotheses are tested by means of a questionnaire survey carried out among health service organizations in Jordan between April and May 2018. Our design choice to focus on a single sector was because of our intention to diminish the confounding effects of non- controllable factors in our research study, such as legislative, culture, and economical contexts. The results show a moderate implementation of Green HRM in Jordanian hospitals, the strongest correlation was with recruitment and selection while the weakest correlation was with training and development. Statistical positive association also was indicated between the three HRM practices and environmental performance. This study is believed to be the first in Jordan that shed light on how human resource functions could provide environmental performance in health service organizations particularly in hospitals. It supports the literature of Green HRM and environment protection which is not well developed in developing countries like Jordan.

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1. Introduction

In recent decades environmental protection has emerged as one of the most urgent concerns all over the world. Preserving the natural eco-system and its resources for future generations has thus paused as a significant issue on the agenda of policy makers and managers (Howard-Grenville et al., 2014). This issue has produced more pressure and promoted business organizations to develop and apply green management by adopting environmentally friendly practices and procedures (Prasad, 2013). To achieve this development many organizations attempt to create and deploy a formal environment management system. This system has been assured as one of the most valuable keys to achieve sustainable development since 1990s (Chan, 2011). Environmental management has been included in some departments such as operation, finance, marketing and others (Mittal & Sangwan, 2014; Rehman & Shrivastava, 2011). Lately, human resource management has engaged in the green movement (Prathima & Misra, 2013). Human resource management is known as the most significant asset in the firm that can integrate all

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activities together in order to achieve positive performance (Rawashdeh & Al-Adwan, 2012). Since it plays a vital role in achieving sustainable development in the organizations, many scholars have directed their attention towards the relationship between human resources and environmental management, as they have asserted the importance of workers green practices in the firm. This alignment of human resource management with environmental management is called green human resource management that aims to assist firms to stimulate environmental performance through improving employees' commitment towards environment (Schuler & Jackson, 2014; Mandip, 2012; Jackson et al., 2011; Renwick, 2013). Opatha and Arulrajah (2014) defined GHRM as the policies, practices, and systems of a firm that makes its workers green for the interest of people, business, society and natural environment. In GHRM different human resource practices such as recruitment and selection, training and development, compensation and rewards and performance appraisal are adapted in a way to provide firms with employees that understand and promote green behavior (Mathapati, 2013).

Currently, business firms have emphasized on the importance of environmental management and green management and aligned them with their goals and strategies. Because of the reality of globalization of corporate world, the economy has moved from traditional financial and economic system to more up to date, modern and capacity based economic system. This takes into account green management and green economics (Ahmad, 2015). Green human resource management has received substantial importance in corporate firms, as human resource department is working on greening the organizational culture by maintaining green offices and green practices. So as to accomplish business firms' environmental goals of going green, green HRM is a very crucial strategic tool. This can be achieved by attracting and retaining talented green individuals who have a special skill and knowledge of green human resources (Sudin, 2011). In Jordan, GHRM is under researched area, although green organizations are the need of the hour. Hence, it has become important to explore GHRM in Jordan as there is a research gap in this area. This gap in literature necessitates the research to be conducted. So, the objective of this study is to highlight the importance of greening the human resource management and investigate the impact of such green practices named recruitment, training and development, and reward system on organizational environmental performance in Jordanian healthcare sector.

2. Literature Review

In fact, people irresponsible practices in business firms may cause environmental contamination (Ones & Dilchert, 2012). GHRM functions can be adopted to motivate people responsible behavior to become environmentally friendly (Cherian & Jacob, 2012). Human resource professionals is responsible to get the support of the employees to preserve the environment (Sathyapriya et al., 2013). Jabbour et al. (2010) mentioned the significance of human resource management under various stages of environmental management system. Ahmad (2015) concentrated on the role of human resource management including people and performing such practices like conservation of energy, recycling and carpooling. Greening organizations through the association between human resources and environment management had been emerged to work in 1996 by Wehrmeyer who published his book titled *Greening people: human resources and environment management*. He defined GHRM as the use of HRMP to promote the sustainable use of resources within organizations and more generally promotes the causes of environment sustainability (Marhatta & Adhikari, 2013). Sustainability and environmental affairs are becoming the most significant drive of HRM practices, but there is a limited resources in literature and academic work. Organizations may enjoy environmental sustainability and positive performance if human resource practices are linked to environmental and sustainability issues (Marhatta, & Adhikari, 2013). Cherian and Jacob (2012) pointed that firms which pay attention to the greening of human resource functions may be more productive, thus generating positive performance. In contrast, firms that are not involving their employees in greening activities may lack the effectiveness of their environmental performance (Renwick et al., 2013). In response to that, many organizations are pressing effectively on stimulating their employees' behavior towards environmental preservation (Masri & Jaaron, 2017).

Now, several studies in the field of research were concentrating on green management and green HRM practices (Ahmad, 2015; Cherian & Jacob, 2012; Marhatta & Adhikari, 2013; Masri & Jaaron, 2017; Mittal & Sangwan, 2014; Sathyapriya et al., 2013; Prasad, 2013; Opatha & Arulrajah, 2014) and emphasized the association between green human resources practices such as green recruitment and selection, green training and development, green performance management, green reward system, green cordial relations) and positive environmental performance. Further, scholars believe that green human resource practices are very effective tool for developing green human capital that can deliver green sustainable performance and green competitive advantage. Jose Chiappetta Jabbour (2011) confirmed that the aforementioned green human resource practices are more feasible and may guarantee that green issues can be included in people daily routine. The implementation of green HRM in Jordan is under researched area. Hence, this study were excluded on three Green HRM practices named recruitment and selection, training and development, and reward system as they fit its objective. These practices will be discussed in details below in order to build a base on how firms can transform HRM practices into green initiatives which stimulate organizational environmental performance.

Green recruitment and selection is considered as one of the HRM practices that provides a firm with an opportunity to introduce green HRM initiatives to the prospective job applicants. Hiring and sustaining talented employees is known as the most challenge issue that human resource managers faced in global environment (Sudin, 2011). Business organizations are now market themselves as environmental conservatives in order to attract highly smart professionals with fabulous green knowledge, who are also adopting of green practices and sustainability issues. On the other hand, job seekers also preparing themselves as green employees according to international standard of green culture. Green employees also favor firms whose central businesses are providing environmental protection and social responsibility (Masri & Jaroon, 2017). In the job analysis process, job description, and job specification firms should include and press on environmental aspects, and what is expected out of selected candidate should be explained clearly as well (Renwick et al., 2013). According to research findings of Wehrmeyer (1996) job description should include statements that clarify and assure the importance of environmental reporting. Second, induction training for new comers should be centered on providing information about environmental protection policies, values, and green goals of the firm. Third, interviews should be designed to evaluate prospective applicant qualifications with the firm greening plans. Razab et al. (2015) proposed that when interviewing prospective applicant environmental related questions should constitute a leading portion of the interview criteria. Arulrajah et al. (2015) stated that firms can develop the support necessary to succeed in their endeavor to protect the environment through designing environmentally concerned new jobs, or connecting environmental tasks into each position duties and responsibilities in order to concentrate particularly on firms' environmental management aspects. During shortlisting of applicants selection criteria should ensure choosing the best environmentally committed applicants who were concerned with firms greening programs (Jose Chiappetta Jabbour, 2011).

Green training and development stands out as one of the most important GHRM practices needed to the success of green management at firms. Environmental training is also considered as one of the most key tools for developing human resources (Jose Chiappetta Jabbour, 2011). It aims to stimulate people's attention and knowledge towards environmental concerns, create positive attitude, takes a proactive approach on greening initiatives and building competencies to reduce waste and saving energy (Zoogah, 2011). Sarkis et al. (2010) pressed that environmental training is very effective in supporting the environmental management system performance. Further, environmental training is a key aspect for successful implementation of the environmental management system and building of green organizational culture (Teixeira et al., 2012). In their quantitative study, Saturnino Neto et al. (2014) concluded that in order mitigate climate change, environmental training is very crucial for the systematic development of low carbon products. Perron et al. (2006) revealed that it is significant for firms to practice specialized and customized green employee training and also assess the effectiveness of training program with a valid instrument. Renwick et al. (2013) suggested certain practices to be included in the training programs in order to enjoy environmental protection, training on recycling energy efficiency and safety, green

analysis of workplace, waste management, environmental training and programs, and job rotation for potential green managers within the organization. These training programs should be designed based on training needs in order to achieve the best environmental benefits from the training (Cherian & Jacob, 2012).

Green reward system plays a vital role in motivating people and helps in identifying their significant performance towards environmental management (Teixeira et al., 2012). The objective of adopting rewards criteria is to achieve, maintain and motivate people for performing well and realizing the importance of environment protection (Lindström & Vanhala, 2011). Green reward system means to align the system with green policies and practices used by the firm. It should be designed to produce green initiatives in the workplace, lifestyle and reducing carbon footprints (Pillai & Sivathanu, 2014). People should be rewarded with bounces for their interest in understanding and developing eco-friendly culture (Liebowitz, 2010). There are many types of reward practices that firms may use to green skills acquisition. Rewards can be in the form of financial based EM rewards (e.g. premium, cash, bounces), non-financial based EM rewards (e.g. leave, gifts, sabbatical), recognition based EM rewards (e.g. external roles, daily praise, dinners), and positive rewards in EM (e.g. feedback) (Renwick et al., 2013; Opatha & Arulrajah, 2014). All of these forms of reward system value workers who participate in green practices (Renwick et al., 2013) through recognizing and rewarding people that are devoted to enjoying environmental objectives, and those managers who motivate their subordinates to perform eco-initiatives (Arulrajah et al., 2015). Several studies concluded that firms can achieve positive environmental performance through providing different forms of rewards such as praise letter, promotion, career gains, bounces, cash, gifts, etc. (Prasad, 2013; Ahmed, 2015; Arulrajah et al., 2015; Renwick et al., 2013; Opatha & Arulrajah, 2014).

Organizational performance can be described as the final result of all firms' activities and can be evaluated by assessing the current behavior of the firm in respect to its efficiency and effectiveness (Ghosh & Mukherjee, 2006). The resource based theory states that synergy can be achieved by managing firm resources in such a way that enables them to create positive performance and becomes market leader (Ployhart, 2012). The extent to which business firms practice eco-friendly activities is an indicator of eco-performance leading to reduce the negative impacts of manufacturing operations on the environment (Wong et al., 2013). Organizational environmental performance refers to practicing initiatives in such a state that positively influence the environment. Hence, in order to enjoy protecting the environment, firms are strongly invited to adopt effective environmental management practices (Jackson & Seo, 2010). Several studies have been carried out and found a positive and significant effect of different green human resource management practices on organizational performance and environmental performance. Green human resource management practices in the form of green recruitment, green training, and green rewards can improve and support organizational environmental performance and create competitive advantage (Paille et al., 2014; Renwick et al., 2013; Masri & Jaroon, 2017, Ahmad, 2015; Roy & Khastagir, 2016; Mandip, 2012).

Based on the aforementioned discussion, the study proposes the following hypotheses

H1. Green recruitment and selection is more likely to have a positive impact on environmental performance in Jordanian health service organizations

H2. Green training and development is more likely to have a positive impact on environmental performance in Jordanian health service organizations

H3. Green reward and compensation is more likely to have a positive impact on environmental performance in Jordanian health service organizations

3. Method

The research hypotheses were tested by means of a questionnaire survey carried out among health service organizations in Jordan between April and May 2018. Our design choice to focus on a single sector was because of our intention to diminish the confounding effects of non-controllable factors in our research study, such as legislative, culture, and economical contexts.

3.1 Sample

Since healthcare management gives a significant substantial importance to environment protection in the current era, this research was located at the organization level of analysis. The researcher identified the best key respondents for the questionnaire as similar previous works have done (e.g. Pinzone et al., 2016). Hospital managers were selected to fill in the study questionnaire as they were considered as the most skilled respondents in their organizations, and they had a good knowledge of Green HRM practices, Eco-initiatives, and employees' reactions to them. They were in charge of raising and monitoring the level of staff behavior and commitment to Eco-friendly activities. Information about a total of 110 environmentally friendly hospitals was obtained from Jordanian ministry of environment annual report. As many as 108 questionnaires were sent via e-mail address to hospital management. A total of 91 responses were collected until the end of survey, and after deep investigation a number of 4 questionnaires were found unfit for the statistical analysis process. Therefore, a total of 87 questionnaires were used in the statistical analysis process which were considered as the study sample, giving a response rate of 80% which is considered highly satisfactory. The size of the study sample was relatively small. Consequentially, the researcher adjusted the study data analysis strategy by using the best valuable statistical methods such as means, standard deviation, and Cronbach's alphas to deal with such small sample sizes.

3.2 Measure

All the constructs were measured by adapting previously published scales. The questionnaire was in three segments. Segment A captured information about the respondents, such as information regarding, their organizational tenure, education, age, gender, and length of service in healthcare sector. Segment B captured information on independent variable- Green HRM practices (green recruitment and selection that measured by five items namely- Job description specification includes environmental concerns, selecting applicants who are sufficiently aware of greening to fill job vacancies, environmental performance of the company attracts highly qualified employee, Jobs positions designed to focus exclusively on environmental management aspects of the organizations, Recruitment messages include environmental behavior/commitment criteria; Green training and development which measured by five items namely, Providing environmental training to the organizational members to increase environmental awareness, training materials are available online for employee to reduce paper cost, environmental training is apriority when compared to other types of company training, take in to account the needs of environmental issues when training requirement analyzed, following induction programs that emphasize environmental issues concerns; and Green rewards that measured by three items namely, the company offers a non-monetary and monetary rewards based on the environmental achievements, link suggestion schemes into reward system by Introducing rewards for innovative environmental initiative/performance, environmental performance is recognized publically). Segment C tackled questions on dependent variable- environmental performance (reductions in the consumption of electric energy, increased use of renewable energy and sustainable fuel, improvement of organization reputation, improved service quality, help organization develop/design better service, materials recycling and reduce waste). In answering the questionnaire, the respondents were asked to indicate their responses to the questions on a five point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The items used in this study were adapted from different studies (Ahmad, 2015; Mandip, 2012; Masri & Jaron, 2017; Renwick et al., 2013).

3.3. Data analysis

Data was analyzed through descriptive statistical methods with mean, standard deviation, percentage, Pearson correlation coefficient, T-test and regression performed by SPSS. Cronbach's Alpha was used to test the internal consistency of the instrument. It has shown high consistency as values ranged from 0.802-0.968 > 0.50 (Wu, 2005). The reliability of all constructs of the instrument is above 70%, and the total reliability is above 97% > 0.60 (Hair et al., 1998). Thus, it can be concluded that the instrument used in this study was consistent and reliable.

Table 1

Scale determine the relative importance of the mean

| The level of the effect | The mean |
|-------------------------|---------------|
| Low | 2.33 and less |
| Medium | 2.34 – 3.67 |
| High | 3.68 – 5 |

These categories were derived according to the following equation:

$$\text{Interval length} = (\text{highest weight} - \text{lowest weight}) / (\text{three levels}) = (5-1)/3 = 1.33$$

Table 2

The mean and standard deviation for the survey items in Jordanian hospitals

| Category | Mean | Std. Dev. | Level |
|--|-------|-----------|--------|
| Green Recruitment and selection | 3.02 | 1.15 | Medium |
| Green training and development | 2.81 | 0.84 | Medium |
| Green rewards system | 2.86 | 0.92 | Medium |
| Green HRM practices | 2.896 | 0.97 | Medium |
| reductions in the consumption of electric energy | 4.02 | 0.75 | High |
| increased use of renewable energy and sustainable fuel | 3.61 | 0.86 | Medium |
| improvement of organization reputation | 3.94 | 0.71 | High |
| improved service quality | 4.10 | 0.78 | High |
| help organization develop/ design better service | 3.88 | 0.72 | High |
| materials recycling and reduce waste | 3.83 | 0.77 | High |
| Environmental performance | 3.896 | 0.765 | High |

Table 3

The correlation between survey items

| | Recruitment and selection | Training and development | Rewards | Environmental performance |
|---------------------------|---------------------------|--------------------------|---------|---------------------------|
| Recruitment and selection | 1 | 0.78** | 0.65** | 0.61** |
| Training and development | | 1 | 0.72** | 0.53** |
| Rewards | | | 1 | 0.58** |
| Environmental performance | | | | 1 |

** . Correlation is significant at the 0.01 level (2-tailed).

Table 4

Multiple linear regression analysis to test the relationship between Green HRM practices and environmental Performance.

| Variable | β | T | Sig(t) |
|---------------------------|---------|------|---------|
| Recruitment and selection | 0.328 | 4.12 | 0.001 |
| Training and development | 0.336 | 3.90 | 0.000 |
| Rewards | 0.350 | 3.94 | 0.002 |

$R^2 = 0.874$ Adjusted $R^2 = 0.828$ F-value = 89.05(0.000) $\alpha = 0.742$

4. Results

This section shows the results of the empirical analysis. Table 2 reports the means, standard deviations, and the application degree of the study variables. The results of descriptive statistics indicated general agreement of the respondents to Green HRM practices. The total implementation of Green HRM is 2.89, which is considered as a moderate level. The mean values ranged from highest 3.02 to lowest 2.26. The results for Green recruitment and selection indicated highest conformity (Mean = 3.02, Standard Deviation = 1.15); and Green training and development as lower indicator (Mean = 2.81, Standard Deviation = 0.84); environmental performance, improved service quality indicated highest conformity (Mean = 4.10, Standard Deviation = 0.78) increased use of renewable energy and sustainable fuel as lower indicator (Mean = 3.61, Standard Deviation = 0.86). The mean score and standard deviation reflected conformity of respondents' perception about these items. To test the study hypotheses Pearson's correlation coefficient and multiple linear regression analysis were used. Table 3 indicates that there was a positive correlation between environmental performance and the three practices of Green HRM, as the strongest correlation is with Green recruitment and selection practice ($p = 0.61$), while the weakest correlation is with training and development ($p = 0.53$). To test the correlation among Green HRM practices, also Table 3 indicates a significant correlation with each other, as the strongest correlation is between "Green recruitment and selection" and "Green training and development" ($p = 0.78$), while the weakest correlation is between "Green recruitment and selection" and "Green rewards" ($p = 0.65$). These correlations can be considered as positively strong since all of the Pearson's correlation coefficient values are above ($p = 0.50$). Furthermore, Table 4 shows the results of multiple linear regression analysis to test the relationship of green human resource management practices (green recruitment and selection, green training and development, and green rewards) collectively with environmental performance in Jordanian hospitals. The correlation coefficient (0.742) suggests a high positive relationship with environmental performance. The F-value (89.05) indicates that there was a relationship with environmental performance as the value of the significance level (0.000) related to F value was less than 0.05, suggesting the presence of the relationship. To test hypothesis 1, The T value of 4.12 indicates that there was a significant relationship of green recruitment and selection with environmental performance as the value of the significance level (0.001) related to T value was less than 0.05 suggesting the presence of the relationship. To test hypothesis 2, The T value is 3.90, which indicates that there was a significant relationship of green retraining and development with environmental performance as the value of the significance level (0.000) related to T value was less than 0.05 suggesting the presence of the relationship. To test hypothesis 3, The T value is (3.94), which implies that there was a significant relationship of green rewards with environmental performance as the value of the significance level (0.002) related to T value was less than 0.05 suggesting the presence of the relationship. In conclusion, the three developed hypotheses in this study are supported, as the findings of the statistical analysis indicated a positive association of Green HRM practices collectively and individually with environmental performance. The above mentioned results are in congruence with other researchers (e.g. Paille et al., 2014; Renwick et al., 2013; Masri & Jaroon, 2017; Ahmad, 2015; Mousumi & Debabrata, 2016; Pavitra, 2017; Mandip, 2012).

5. Discussion and conclusion

The purpose of this study was to investigate the impact of green HRM practices on environmental performance in Jordanian health service organization. Using intensive literature reviews and field data from hospital managers in Jordanian health service organizations, it was possible to extract three key green HRM practices. Green recruitment and selection, Green training and development, and Green rewards were proposed. The findings revealed that the implementation of the group of Green HRM practices was at a moderate level, also there was a statistical positive association between Green HRM practices individually and environmental performance. The strongest correlation was with Green recruitment and selection practice, while the weakest correlation was with training and development. These results are in congruence with the results of previous studies carried out in developing countries (Marshall et al., 2014; Masri & Jaroon, 2017). This means that hospitals management did not invest enough money in human

resources through green training and development programs, as most of Jordanian organizations adopted cost reduction strategies due to economic crisis affecting the country. Therefore, hospitals management are invited to invest more money in their Green training and development programs in order to improve their implementation level of Green HRM that may produce high level of environmental performance in the medium and long run. Teixeira et al. (2012) confirmed that green training and development is considered as one of the key significant functions that can develop human resources to standard level and achieving better performance. Green recruitment and selection has recorded as the top most used practice at health service organizations. This means that hospitals management regarded environmental performance as a priority in their organizations, and they have applied effective Green recruitment and selection process and the best prepared applicant at protecting environment was selected. Jabbour (2011) stressed that effective Green recruitment and selection criteria is a useful tool for attracting well trained, educated, skilled, and talented Eco-friendly people who prefer to work for environmental organizations. The results also showed that Green reward system was not extensively applied to motivate employees green behavior. Previous studies such as Jackson et al. (2011) pressed that green reward system is a productive tool for practicing Green HRM. Based on this hospitals management should design an effective reward criteria that may fit all people in order to attract and retain green talented employees, as most of them perceived Reward system as a priority to work for organizations. In general, top management have the power and visibility needed to motivate people to engage in eco-friendly activities that may increase their awareness and commitment to their green job.

6. Contribution/ limitation/Future work

As far as the researcher knows this is the first study in Jordan that shed light on how HR functions can provide environmental performance in health service organizations particularly in hospitals. It supports the literature of Green HRM and environment protection that is little in developing countries like Jordan. Also, it provides a clear understanding on how Green HRM practices associate with each other and with environmental performance as well in Jordanian health service organization. The study has investigated the relationship between three Green HRM practices with environmental performance in a single industry, and it was excluded on hospital managers as a respondents. However, future studies recruiting larger sample sizes are needed. Also, it is more valuable to conduct a research in a diversity of participating industries.

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