Impact of Green HRM on Employees Pro-Environmental Behavior: Mediating Role of Women Environmental Knowledge at Higher Education Institutions

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Summary

This study examines the influence of Green HRM Practices (Green Recruitment and Selection (GRS), Green Compensation & Reward (GCR), Green Training & Development (GTD), and Green Performance Appraisal (GPA)) on employees Pro-Environmental Behavior (PB) through mediating role of Environmental Knowledge (EK) in Higher Education Institutions. It also explains the mediation role of Environmental Knowledge between Green Training and Development and Pro-Environmental Behavior. A total of 320 questionnaires were distributed online to the female faculty and other female staff of universities, whereas 240 were received and considered valid response. Data analyzed through structural equation modeling, partial least square method SEM-PLS, and confirmatory factor analysis (CFA) with the using smart PLS software. Findings revealed that Green HRM practices positively influence the employees pro-environmental behavior. Whereas Female environmental knowledge plays mediating role to strengthen the employees pro-environmental behavior and mediate the relationship between recruitment & selection and pro-environmental behavior. The results were significant, and all the hypotheses were accepted.

Key words:
Green HRM, Pro-Environmental Behavior, Environmental Knowledge, Higher Education Institutions.

1. Introduction

Changing climate is the new and challenging issue which mankind is facing [1]. Resource depletion and increasing pollution are main causes which leads firms to effectively use of the resources, it is new global concern because economic development is not possible without taking measures for the wellness of the environment [2]. Many businesses engage in environmental instability due to their business activities (dangerous gas in air, pollution, more waste and plastic usage) but changing climate demands the business to go for Environmentally friendly activities Indirectly environmental issue is forcing firms to search for eco-friendly management activities and practices through optimal usage of resources [1] Firms have moved towards the green practices by supporting the green technologies (recycle, less harmful and less waste) and green process of supply chain management to speed up the environmental sustainability [3] Customers are more interested now to buy eco-friendly products and services which carried new challenge for the firms to use green technology and green innovation practices [4].

Human resource management is one of those departments in the firm which struggle to achieve the sustainability by Green HRM practices [2]However, higher management can face these challenges fairly and is committed and aware of the need of supportive Green HRM practices which will work to achieve competitive edge and improve firm performance [5]It states that technology which is less harmful to the environment is positively linked with the environmental performance of firm. HRM practices has been linked with operations of the firm to increase the firm contribution in the society and achieve sustainability [8].
Educational sector is one of the influential sectors of Pakistan when it comes to the society

2. Literature Review

Environmental pollution was the only issue under consideration from decades but the environmental protection became emerging issue in recent years for the developed and developing industries [3]. This issue has led firms to take measures to achieve the ecological sustainability and take part in environmental sustainability [4]. Previous research have stated that HRM is aligned to the organizational goals and it helps firm in the processes of planning and implementation of rules and activities [5]. Green HRM Practices.

Green Recruitment and selection activities are green hiring-interviews, accept soft form of resume, digital job advertisements, Minimum use of paper while selection process and ask environmental related questions during selection process [6]. Green Recruitment & Selection is the vital factor of Green HRM because firms can hire employees having sense of responsibility towards environment.

Green training & development provide employees information about environmentally friendly activities, importance of green activities and initiatives, waste reduction and efficient use of energy [7]. Also develop the green culture through continues training. Green Training & Development play key role inside the firm to motivate and shape employee behavior towards Greening the Environment and take part in Green Activities [8].

Green compensation and reward system is also used for the monetary and nonmonetary rewards and benefits to appeal, retain and encourage employees to participate in green activities[9]. Incentives and rewards are very strong factors to motivate employees because it can increase the level of employee pro-environmental behavior, linking firm environmental goals with reward and incentives provide better results [10]. Whereas another study also supported the same idea of linking reward & Compensation with the performance appraisal is effective way of motivating employees and achieve the firms environmental stability goals [3].

Performance evaluation is linked with environmental performance because firm aims to achieve the green goals and ensure employee performance at the same time. [10]. Research study stated that firms use employee feedback and balancing matrices to manage the performance evaluation process and make fair appraisals for employee green behavior [11].As green HRM is new emerging field then firms must cluster its activities in a way to maximize its results, as well as design standards to evaluate green performance which justify the whole performance.

Green HRM Practices and employee Pro-environmental Behavior.
[12] researched and stated that Green HRM influence the employee behavior directly as well as indirectly. It means that one's personal values for greening the environment influence the behavior of employees towards environmental performance and this study concluded that green HRM practices affect the workplace behavior of the employees positively.
[13] conducted a research to evaluate the eco-schools' programs in the Czech Republic to analyze the factors which influence their pro-environmental behavior. And researcher conducted a survey from 1219 and result added

in literature that the competency level of students differs with their nature and the most important thing which effect the pro-environmental behavior was the sense of participation in decision making process.

[3] studies the environmental performance and HRM, where it elaborated the role of Green HRM practices and employee management. Using abilities, motivation, opportunity theory and findings stated that by following the proper process of Green HRM firms can achieve the green environmental sustainability, from planning activities and rules to implementing them, continuous employee performance evaluation and feedback will encourage employee pro-environmental behavior and firm will achieve sustainability goals.

[14] stated that adding the green activities as part of employee job leads to employee pro-environmental behavior and will built attitude of greening the environment. Rewards and incentives also motivate employee pro-environmental behavior.

[15] Conducted a research study and stated that the Green HRM practices emerged as the engaging practices for the firms and examined the effect of green HRM Practices on pro-environmental behavior. The results stated that the Green HRM Practices positively affect the employee behavior and psychological climate has mediating impact.

Mediating Influence.
[16] described the influence of environmental knowledge on the employee engagement in the environmental activities, and results stated that having environmental knowledge influence employee engagement in the activities of the firm and having environmental knowledge increase employee emotional attachment and motivates employees to take part in environmental activities. It also states that the Green HRM practices deals with employee concerns and the moderating impact of employee knowledge confirms the chances of more firm relationship between Green HRM Practices and employee pro-environmental behavior.

[17] conducted study on the Environmental knowledge and employee behavior. The results stated that awareness of the issues and solutions to those environmental problems is said to be the environmental Knowledge which employee possess which encourage employee behavior. It means that that when employee have enough knowledge of the environment issues and its solutions then it will motivate employee's pro-environmental behavior, it also states that the environmental awareness increase employee concern to keep up for the environmental problem solutions and encourage employees to take part in the activities.

[18] Conducted a study on the customer knowledge and pro-environmental behavior of the customers. Results of the study stated that customers who have enough knowledge of the environment related issues prefer to buy eco-friendly products to play their role. It also states that when employee have enough education of few issues then he will search for the solutions to the problems.

[1] studied the pro-environmental behavior of employee and awareness of environmental issues. The results suggested that the employee pro-environmental behavior depends on the extent to which employee has environmental knowledge. The more employee knows the issues and future results will be more involved in the green activities. Hence the literature clearly explain that the environmental knowledge moderates the relationship between Green HRM Practices and employee pro-environmental behavior.

3. Research Methodology

The research approach of the study can be defined as quantitative approach. Quantitative methods deal with objective measures of data that are mathematical, statistical, or numerical in nature. With the help of primary data collection from private and public universities of Pakistan from female Faculty and nonfaculty staff by using field surveys.

A research design defines an overall research strategy of a study. It is defined as a framework or agenda for data collection and analysis (Bryman, 2007).

Sampling and Data Collection

Sampling is a potentially efficient method that even while working with limited resource. Pakistan Higher Educational industry comprising of a total 211 public and private universities, amongst which 128 of them are in the public sector and 83of them are in the private Sector. In Sindh There are 34 universities, the expected number of employees in this sector is uncalculatable, So, We choose 6 universities which includes IQRA, IBA, IoBM, and three campuses of SZABIST in different cities of Sindh province.

Data is collected using five-point Likert Scale, where '1' being 'Strongly Disagree' to '5' being 'Strongly Agree' [19], [20].

Data is collected from 320 respondents from which 240 responses received and considered valid. All the respondents were female as this study is totally checks the female environmental knowledge. Questionnaire were adapted from [21]. The cover letter is be attached to the questionnaires explaining the research details. Employees are asked to read the cover letter carefully and then fill the questionnaire.

4. Results

Reliability and Validity Analysis

To measure the scale reliability Cronbach's alpha was used which is also called as reliability coefficient. The Cronbach's alpha for each variable was greater than the acceptable value of 0.7. Cronbach's alpha of each variable is acceptable (Table 1)

Convergent Validity Analysis

To measure the scale reliability, composite reliability was also analyzed which is preferred with CFA, the acceptable results of composite reliability should be greater than 0.7. This means that higher scale, higher consistency. Average variance extracted (AVE) was also tested to check the quantity of variance which was captured by constructs in relation to the amount of variance due to measurement error. AVE describes the convergent validity of the constructs which means that when the test correlates with its expected reference or other theoretical measures. AVE report the validity of the scale we use. We can accept the AVE which is greater than 0.50 whereas, Fornell and Larcker stated that if AVE is less than 0.5, but composite reliability is higher than 0.6, the convergent validity of the construct is still adequate. AVE of all variables is acceptable (Table 1) which means that our scale is valid, and it does not change its context with respect to our sample.

Table 1: Descriptive Results

	Cronbach's Alpha	Rho A	Composite Reliability	Average Variance Extracted (AVE)
Environmental Knowledge (EK)	0.941	0.943	0.951	0.709
Green Compensation & Reward (GCR)	0.921	0.921	0.938	0.717
Green Performance Appraisal (GPA)	0.885	0.889	0.913	0.637
Green Recruitment and Selection (GRS)	0.948	0.949	0.956	0.733
Green Training & Development (GTD)	0.936	0.937	0.947	0.692
Pro-Environmental Behavior (PB)	0.929	0.929	0.94	0.637

Discriminant validity analysis

Discriminant validity analyses the correlation among constructs. It is tested on the basis of three criteria's one is Fornell-Lacker criterion which states that the square root of AVE should be greater than its correlation value in the rows and columns of the table. In this study the Square root of AVE is higher in its all-correlation values in Fornell Lacker Table 2.

Table 2: Fornell Lacker Criterion

	EK	GCR	GPA	GRS	GTD	PB
EK	**0.946**					
GCR	0.898	**0.947**				
GPA	0.846	0.803	**0.938**			
GRS	0.896	0.899	0.838	**0.926**		
GTD	0.852	0.867	0.867	0.852	**0.892**	
PB	0.833	0.823	0.843	0.826	0.823	**0.898**

Structural Model

PLS coefficient model tested and foretell estimated structural model analysis. Model path coefficient test the relationship between the dimensions of research, and it also analyze the significance of path coefficients to the hypothesis test of the study. Bootstrap method is used for the t-value to estimate the significance of developed hypothesis.

Figure 1: Structural Model
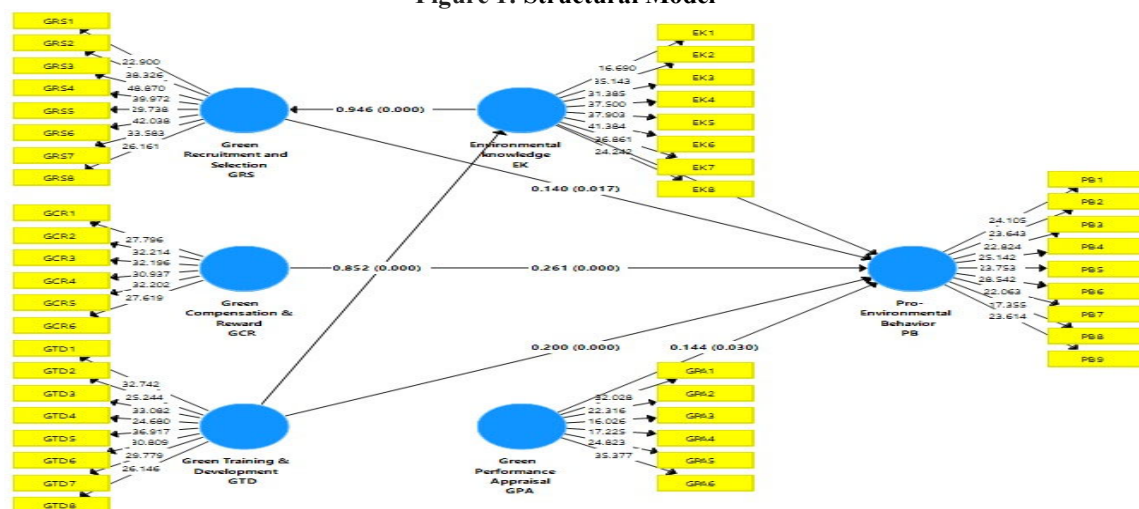
Source: Authors Contribution

Path Coefficient Test
Path coefficients depict the direction and intensity of the relationship between the variables. A path coefficient shows the nature of the relationship between variables. Positive /Negative coefficient value shows the positive/negative relationship between variables. Model (Figure 1) shows the analysis of route path and T-value. On standards T-value of 1.96 shows that the path of independent variable to the dependent variable reaches to the significant level.

Table 3: Direct and Indirect Effects of Hypotheses

Sr. Np	Hypotheses	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values	Supported/Rejected
Direct Effect							
1	EK -> GRS	0.946	0.945	0.011	87.323	0.000	*Supported*
2	EK -> PB	0.26	0.257	0.064	4.085	0.000	*Supported*
3	GCR -> PB	0.261	0.256	0.052	4.992	0.000	*Supported*
4	GPA -> PB	0.144	0.142	0.066	2.167	0.030	*Supported*
5	GRS -> PB	0.14	0.139	0.058	2.423	0.015	*Supported*
6	GTD -> EK	0.852	0.849	0.037	23.143	0.000	*Supported*
7	GTD -> PB	0.2	0.211	0.056	3.6	0.000	*Supported*
Indirect Effect							
8	GTD -> EK -> GRS	0.806	0.803	0.041	19.684	0.000	*Supported*
9	GTD -> EK -> PB	0.222	0.218	0.054	4.122	0.000	*Supported*
10	EK -> GRS -> PB	0.132	0.131	0.055	2.423	0.015	*Supported*
11	GTD -> EK -> GRS -> PB	0.113	0.111	0.046	2.427	0.015	*Supported*

Table 3 explains the path coefficient and t-values of the hypothesis from SmartPLS. It analyzed the model through SEM-PLS.

Model Fit
To check the model fit we used the SRMR and non-normed fit index NFI tests. The results for the testing model were NFI = 0.846 and SRMR = 0.039, which indicated that the model had an acceptable standard.

Table 5: Model Fit Tests (SRMR, VIF)

	Saturated Model	Estimated Model
SRMR	0.039	0.077
d_ULS	1.581	6.159
d_G	1.46	1.831
Chi-Square	1757.819	1981.845
NFI	0.846	0.826

5. Conclusion

This paper concludes that there is positive and significant influence of green HRM practices on employee's pro-environmental behavior. Environmental Knowledge positively mediates the relationship between GTD and PB, whereas GRS positively mediate the relationship of EK and PB. Data was analyzed through structural equation modeling, partial least square method, and confirmatory factor analysis with the help of smart PLS. Findings revealed that Green HRM practices positively influence the employees pro-environmental behavior. Whereas environmental knowledge play mediating role to strengthen the employee's pro-

environmental behavior and mediate the relationship between recruitment & selection and pro-environmental behavior. The results were significant the entire hypothesis was accepted.

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