Can Green Management Practices Ensure Environmental Sustainability? A Firm-Level Study on Readymade Garments Sector of Bangladesh

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ABSTRACT

Purpose: The present study is an initiative to establish a relationship between green management practices and environmental sustainability in the ready-made garments (RMG) industries of Bangladesh.

Methodology: The data were collected over 404 respondents covering 20 industries using a well-structured questionnaire. To analyze the data and test the formulated hypotheses statistical software SPSS was used. The study was based on a conceptual framework where green management practices, employees' sustainable behavior, and environmental sustainability were considered as independent, mediating, and dependent variables accordingly.

Findings: The study findings reveal that there is a significant positive impact of developing green abilities (DGA), and providing green opportunities (PGO) on employees' intention to green and sustainable behavior. In addition, the employees' green behavior towards sustainability (EBTS) has a significant effect on environmental sustainability (ES). However, motivating green employees (MGE), and maintain green behavior (MGB) has no significant impact on employees' sustainable behavior.

Limitations: The study is based on cross-sectional data collected from the primary source and covering 404 samples. It would be better if the researchers can cover vast areas with more samples and secondary data also.

Practical Implication: The study is considered as a wake-up call for the related parties, decision-makers (managers and owners), government regulatory bodies, of garments manufacturing industries in Bangladesh. The findings of the study can play a significant role in taking decisions regarding any more investment decisions in green management practices in different sectors.

Originality: The study is an original one and it has considered some specific areas of green management practices which make it different from other previous studies.

1. Introduction

From the very beginning of the 21st Century "sustainability" has become a buzzword for the world economy and business arena. Sustainability is often defined as the 'ability to meet the needs of the present without compromising the ability of future generations to meet their need's (Cohen, Taylor, & Muller-Camen, 2012)'. For the last two decades, we have witnessed a unanimous consensus among people all over the world for the need for lifelike environmental management. Growing concern for global environment management has created a need for businesses to adopt 'green practices'. Nowadays, most organizations face significant pressures from government, non-government stakeholders, consumers, environmental activists, and employee unions to operate their business activities in environment-friendly ways (Hossen, Uddin, & Hossain, 2014). Considering these, organizations today

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have become more conscious about green management such as green human resource management, green supply chain management, green marketing, green financing, and more. Green management is the use of managerial policies to promote the sustainable use of resources within business organizations which increase employee awareness and commitments on the issues of environmental sustainability (Mandip, 2012).

In environmental literature, the concept of green management for sustainable development has various definitions; all of which generally, seek to explain the need for balance between industrial growth for wealth creation and safeguarding the natural environment so that the future generations may thrive (Daily & Huang, 2001). As organizations are facing critical environmental challenges (climate change, global warming, and resource conservation) which have a direct influence and impact on business, society, and economy; it is an urgent need to ensure replenish sustainability needs of depleting resources (Kumar, Rahman, & Kazmi, 2013). Though the concept of green management or environment management originated in western countries first; now it is a common matter all over the world (Renwick, Redman, & Maguire, 2013). So, scholars of management from different parts of the globe are now working in a common platform and searching for various managerial practices that can facilitate green activities and environmental competitiveness of the organizations. The purpose of going green is to use products and methods that would not negatively impact the environment through pollution or depleting natural resources (Hossen et al., 2014; Robinson, 2008). The interpolation of green management, employees' green behaviors (EGBs), and environmental sustainability create new ways of performance in organizations with a focus on sustainability. The top management of organizations views sustainability as being crucial to their success so that they have started to disclose their sustainability performance (Apotheker, 2010). Laszlo and Zhexembayeva (2011) emphasized three factors (declining resources, increase in expectations, and fundamental transparency) that force organizations to address sustainability, According to them these three factors have created significant changes in the business climate. These days, it seems that a substantial number of organizations practice green management in the global context which leads them to develop and adopt new methods and processes to mitigate the harmful effects of their operations to maintain the environmental sustainability. However, the issue of how an individual organization or entire society achieves sustainability from the green management movement is still debatable and unclear. Thus, research on how business may structure their facilities to enhance environmental sustainability through green human resource management initiatives seems paramount.

1.1 Research Objectives

Keeping in mind the importance of green management; the researchers have considered the following objectives for the present study:

    i. Provide a basic understanding of green management and environmental sustainability to the readers;
    ii. Identify how green management practices can help employees' to behave for sustainable growth in the organization and environment;
    iii. Assess the impact of green management practices, and employees' green behaviour, on environmental sustainability.

1.2 Research Questions

To reach the targeted objectives the researchers have used the following research questions:
    i. What are green management, green behaviour, and environmental sustainability?
    ii. Can green management change employees' behaviour towards green behaviour?
    iii. Can employees' green behaviour help to ensure environmental sustainability?

1.3 Sustainability and RMG Sector of Bangladesh

The foundation of the RMG sector of Bangladesh was initially established in the '60s of the 19th century and for the very time, it exported shirts (Mercury shirt) to the European market in 1965-66, which was produced from Karachi, over the last 7-decades Bangladesh has got remarkable progress in RMG sector and now it is one of the topmost countries in the world in terms of exporting ready-made garments products. The RMG sector plays a significant role to build the economy of Bangladesh through earning the lion part of foreign currencies from its export items.

The world is changing due to global warming, climate change, loss of natural resources and biodiversity, and different types of pollution resulting from manufacturing activities. Taking into global changing consideration, the UN member in 2015 proposed a set of goals 'Sustainable Development Goals (SDGs)' where industrialization with the sustainability of lives also emphasized. Here it is suggested- 'to protect environment and industrialization trough using specialized and sophisticated means of industrialization which will be helpful to maintain the environmental sustainability. Ultimately the major part of the world is in a dilemma to choose between 'enormous industrialization' and 'ensuring environmental sustainability with the highest priority or make a balance. The RMG sector of Bangladesh is also facing the same challenge to maintain a global manufacturing business process to ensure eco-friendliness on a sustainable basis though it was a long-cherished dream to make an environmentally sustainable business. As there is continuous pressure from government and international communities; the RMG sector of Bangladesh is increasingly adopting the green industrial approach or eco-friendliness in their operations. Although Bangladesh's RMG sector is trying to adjust to a global approach, some challenges still exist in implementing green industrialization and reaching the target. The present study is based on the RMG sector through a factory-level survey about their green management practices and how they can help to make a business operation environment friendly.

2. Literature Review and Research Gap

2.1 Green Management and Environmental Sustainability

Different scholarly writings have given importance to the adoption of environmental management practices as a key to success in the preservation organization environment and sustainability of the greater environment(Chen, Hossen, Muzafary, & Begum, 2018; Cherian & Jacob, 2012). Mesmer-Magnus, Viswesvaran, and Wiernik (2012) argued that to reach environmental sustainability organizations need to get support from all sides (individuals, employers, employees, and government). Daily and Huang (2001) have emphasized that organizations should make the balance between their growth and preservation of the environment. Murari and Bhandari (2011) argued that a company may gain more profit through adopting green management; whereas Harmon, Fairfield, and Wirtenberg (2010) claimed that the Human Resource Department plays an inevitable role in the creation of organizational sustainability culture. Individual's pro-environmental awareness, attitudes, and behaviors have played important organizational sustainability (Hansla, Gamble, Juliusson, & Gärling, 2008; Hossen, Begum, & Sultana, 2018). Hines, Hungerford, and Tomera (1987) represented that environmental knowledge and high-level awareness have an impact on pro-environmental attitudes and behavior which helps employees to set their behavioral priorities based on their effectiveness and environmental values to the organization. Moreover, when employees perceive that organizations are committed to sustainability then employees' commitment to organizations and trust in top management will increase (Das & Kumar Singh, 2016; Grolleau, Mzoughi, & Pekovic, 2012; McWilliams & Siegel, 2001; Mesmer-Magnus et al., 2012).

It was found that organizational environmental environment-friendly strategies have a positive impact on its brand image, and employees' commitment to behave in a greener way (Grolleau et al., 2012). Sustainable development issues must be integrated into the recruitment process; which will provide new employees with information about sustainable development policies and commitments (del Brío, Fernandez, & Junquera, 2007). Phillips (2007) reported that the common sections of job descriptions can be used to specify the number of environmental aspects. Environmental training is considered as one of the most fundamental aspects of green management practices which can play a greater role in developing environment-friendly culture, and green employee who can behave sustainable environmental way (Jabbour, de Sousa Jabbour, Govindan, Teixeira, & de Souza Freitas, 2013; Teixeira, Jabbour, & de Sousa Jabbour, 2012). Green training and development educate employees about the value of environmental sustainability, train them in working methods that conserve energy, reduce waste, and provide an opportunity to engage employees in environmental problem solving (Zoogah, 2011). Effective HR systems such as green HR can motivate management and employees to track their carbon emissions (Beechinor, 2007). When organizations incorporate environmental performance into performance management systems they mainly introduce the protection against any damage in a firm's environmental management systems (Alfred & Adam, 2009; Epstein & Roy, 1997).

Better industrial relations, supportive culture for decision making, employee involvement, and empowerment are vital for making any initiative (sustainable behavior) successful within the organizations. The popular employee involvement programs can be used in environmental management such as newsletters, suggestion schemes, and problem-solving groups (Clarke, 2008); and motivating teams to use telecommuting, videoconferencing, car-sharing, and work from home (Philpott & Davies, 2007). Madsen and Ulhøi (2001) argued that a supportive organizational policy and practices can motivate employees to make propositions possible and the fullest autonomy influence people to work forward. Employee involvement, particularly at the supervisory level plays a significant role 'to prevent pollution from workplaces' (Markey, McIvor, & Wright, 2016; Phillips, 2007); and 'to motivate pro-environmental behavior among employees (Quagraine; Zibarras & Coan, 2015)'. To get optimum results in long-run environmental sustainability it is needed to change prevailing corporate culture as well as changes man, machine, material, and other key elements of organizations (Kitazawa & Sarkis, 2000b). The companies where green health and safety management is practiced; are more conscious to introduce different environment-friendly initiatives to reduce employee stress and occupational disease caused by hazardous work environments (Phillips, 2007; Stringer, 2010).

Reviewing the above literature the authors have found that the concept of green management is not new in the developed countries but in developing countries like Bangladesh is still in the inception stage. Though green management is originated in western countries and now in the mature stage; in Asian countries, it is in the developing stage (Renwick et al., 2013) which is one of the most important research gaps regarding this topic. Despite many studies conducted on green management practices in developed or even developing countries (Madsen & Ulhøi, 2001; Markey et al., 2016; Ramus, 2002), a few initiatives were taken in Bangladesh. As there is little evidence in the literature related to green management and environmental sustainability in Bangladeshi especially in the RMG sector which also advocates that there is a research gap in this field and the study is therefore found ground breaking. So the researchers have attempted to study in this area and considered that the current study is a time-demand initiative that will uncover the prevailing situations of green management practices of the RMG sector of Bangladesh and its impact on environmental sustainability.

2.2 Variables and Hypotheses Development

2.2.1 Employees' Green Abilities and Sustainability Behavior

Recruiting environmentally-conscious employees and developing green abilities is the precondition of effective use of green management in the organization but it is one of the most critical challenges of HR to attract highly-skilled staff in the 'war for talent' (Renwick et al., 2013). Dilchert and Ones (2011) have suggested incorporating individual's personality factors in green recruitment; whereas Subramanian, Abdulrahman, Wu, and Nath (2016) added that an individual's green competencies are vital for pro-environmental performance.

Besides, green training and development help to improve employee's awareness and knowledge on environmental issues, shape affirmative attitude, and proactive belief toward environmental sustainability, and develop competencies to conserve energy and reduce waste (Zoogah, 2011). Ramus (2002) concluded that environmental training and education help employees to feel that they are part of environmental outcomes which facilitates them to achieve environmental goals. Considering the above-mentioned literature it is hypothesized that:

H1: Developing green abilities has a positive effect on employee behavior towards sustainability.

2.2.2 Motivating Green Employees and Sustainable Behavior

An employee can be motivated through providing green compensation, rewards, and benefits, and green performance management towards career growth and advancement. According to Wehrmeyer (2017), performance management in environmental management should cover such topics as environmental incidents, usage of environmental responsibilities, reducing carbon emissions, and the communication of environmental concerns and policy. To motivate green behavior in the workplace employees should be rewarded with bonuses for their efforts in creating an environment-friendly culture and reducing carbon footprints (Liebowitz, 2010; Phillips, 2007; Pillai & Sivathanu, 2014). Green performance appraisal and rewards systems will facilitate organizations and employees in adopting green behavior which will help to ensure environmental sustainability (Gholami, Rezaei, Saman, Sharif, & Zakuan, 2016). Considering these techniques for motivating green employees and their impact on sustainability it is hypothesized that:

H2: Motivating green employees has a positive effect on employee behavior towards sustainability.

2.2.3 Green Opportunities and Employees' Sustainability Behavior

Providing opportunities to take part in a green decision like- employee empowerment plays a key role to enhance an organization's outcome, where employees are feeling encouraged to pursue green targets with fullest efforts (Renwick et al., 2013). However, the traditional culture- reluctant to accept change from organizational level damaging employees' commitment to environmental management initiatives(Forman & Jorgensen, 2001). Many other studies have found that there is a positive relationship between employee empowerment and the environmental performance of the firm (Daily, Bishop, & Massoud, 2012; Paillé, Chen, Boiral, & Jin, 2014). Besides, other alternative ways to improve employees' involvement are by building values regarding green behavior (Guerci, Longoni, & Luzzini, 2016); and providing pro-environmental training (Renwick et al., 2013). However, a good labor-management relation is an intangible asset for any organization which can help to achieve a competitive advantage in the long run. Including employees in the environmental management decision-making process can assist inefficient usage of resources (Florida & Davison, 2001); minimizes waste and workplace pollution(Kitazawa & Sarkis, 2000a). However, it is hypothesized that:

H3: Providing green opportunities has a positive effect on employee behavior towards sustainability.

2.2.4 Maintaining Green Behavior and Sustainability

Basically to maintain green behavior and achieve sustainability the organizations should properly maintain organizational discipline, green health and safety, occupational health, and hygiene management. Green health and safety management includes traditional health and safety management in addition to some aspects of environmental management of an organization. For example, it comprises biodiversity protection and community support initiatives, etc. (Phillips, 2007). Green health and safety management plays a noteworthy role to ensure a green workplace that is environmentally sensitive, resource-efficient, and socially responsible (Quagraine; Zibarras & Coan, 2015)'. To ensure occupational health and safety, many organizations have initiated different strategies (e.g. green factory/ green zone) to maintain an auspicious environment that can prevent many health hazards and in long run, it helps to achieve organizational sustainable environment and image building (Stringer, 2010). Based on the above literature the following hypothesis is formulated:

H4: Maintaining green behavior has a positive effect on employees' behavior towards sustainability.

2.2.5 Employee Sustainable Behavior and Environment Sustainability

Green Behavior (sustainable-environmental behavior) is such type of behavior (car-pooling, teleconferencing, recycling, online training, e-mailing, etc.) that has a significant positive impact on environmental sustainability (Unsworth, Dmitrieva, & Adriasola, 2013). As behavior is culturally shaped and rigid in nature; it is a challenging task to change behavior (Singaiah & Laskar, 2015). But many previous studies evident that employee behavior can change from traditional behavior to green behavior through developing green abilities, providing green opportunities, motivating green employees, and marinating green behavior. According to Stern (2000), intentional behavior plays a significant role in the reduction of negative impacts of peoples' actions on the environment. Many research supports that employee's sustainable (green) behavior is ominously linked with environmental sustainability (Iqbal, Hassan, Akhtar, & Khan, 2018). Bissing-Olson, Iyer, Fielding, and Zacher (2013) proposed a task related to pro-environmental behavior (PEB) which is the 'extent to which individuals complete their tasks to sustain the environment or in environmentally useful ways'. Researchers found that both positive and negative behaviors of employees' have direct or indirect effects on environmental sustainability (Aggarwal & Sharma, 2015; Hossen et al., 2014). Dutta (2012) argued that any type of green management initiative taken by the government or organizations can help to promote green practices which ultimately lead to environmental sustainability. However, it is hypothesized-

H5: Employee green behavior towards sustainability has a positive effect on environmental sustainability.

2.3 Research Model

Observing the importance of green management practices and reviewing the previous literature the researchers have developed thefollowing model to conduct the present study:
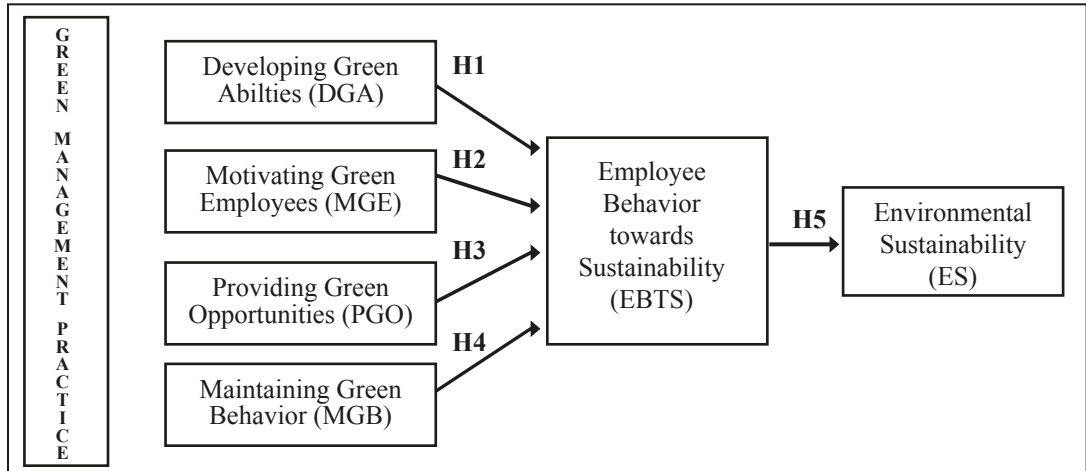

Figure 1. Research model for green management and environmental sustainability
Source: Developed by Authors

3. Research Methodology

3.1 Data Collection and Analysis

The study is mainly descriptive in nature with some quantitative analysis by using primary data. To do this study the researchers have emphasized the descriptive study considering the suggestion of Mugenda (2003), 'descriptive survey design helps the researchers to gather, summarize, present and interpret information for clarification'. At the initial stage, to conceptualize the idea and develop a research model the researchers have reviewed many articles from different databases related to green management (green HRM), peoples' intention to do green behavior, and their impacts on environmental sustainability. Besides, the researchers have collected primary data using a well-structured questionnaire by following both face-to-face interview methods and online surveys using Google forms. The questionnaire (attached in appendix) was divided into two parts namely respondents' biographical information (Part- A), and variable-based questions (Part- B). The questionnaire was developed following a 5-point Likert scale (ranging from 1-strongly disagree to 5-strongly agree) for the considered variables; whereas the biographical questions were customized in different categories considering the nature of questions. Finally, the collected data were analyzed by using IBM-SPSS 23 version and presented in the different tabulations.

3.2 Study Area

The researchers have conducted the current study in the ready-made garments (RMG) sector considering that it is one of the most booming sectors which generate the highest portion of foreign income in Bangladesh. The study mainly covers the garment industries which are located and operated in the capital Dhaka and the districts near to the capital such as Narayanganj, Narsingdhi, and Gazipur. Though a large number of garments industries are located in Chattagram (Chittagong city); due to the location's convenience, the researchers have conducted the study in Dhaka city and near to Dhaka city.

3.3 Sample Size Determination and Used

To determine the sample size the authors have emphasized the suggestions of Cochran (1963) – 'when there is a large population but the variability in the proportion is unknown than at 5%, 7%, and at 10% precision level the sample size should be considered at least as 400, 200, 100 accordingly'. Considering the propositions of Cochran the researchers decided to collect data from a questionnaire survey of five-hundred respondents (choosing randomly) from twenty garments industries (equal number of twenty-five from each of the industries) following the quota sampling and convenience sampling. In reality, the researchers have got 457 questionnaires back from 500 targeted samples and among those 53 questionnaires were found somewhat incomplete or inconsistent and decided to drop those questionnaires. Finally, a 404 set of the questionnaire is used for this study which indicates the response rate is about 91.4% and validity rate is 88.4% respectively. To continue this study, the researchers have considered a 5% percent precision level and used a 404 sample (suggested at least 400 by Cochran in 1963) for the present study. Among the respondents, 78% were from the mid-level and operation level; whereas 22% were from the managerial level or top level.

3.4 Variables and Measures

The researchers have measured the entire considered variable using self-developed questions considering different conventional means. A total of 26-questions were used for six variables; among those six questions for developing green abilities and four questions for each of the other variables- motivating green employees, providing green opportunities, maintaining green behavior, employee behavior towards sustainability, and environmental sustainability. To develop a questionnaire for the four independent variables (developing green abilities, motivation green employees, providing green opportunities, and maintaining green behavior) some other sub-variables were combined. HR planning and job analysis, recruitment-selection and socialization, training and development were considered under developing green abilities variable; performance assessment, rewards and benefits, and career growth and development were considered under motivating green employees variable; labor-management relations, employee empowerment, and participation in decision making were considered under providing green opportunities variable; employee discipline management, occupational health, and safety were considered under maintaining green behavior variable. Besides, employee behavior towards sustainability and environmental sustainability were considered here as mediating variables and dependent variables accordingly. However, the respondents' age, sex, education, job designation, experience, and scale of business operations were considered as control variables for the study. Finally, the following linear regression model was used for the study:

$$y = y_0 + y_1 x_1 + y_2 x_2 + y_3 x_3 + \dots + y_n x_n + e \qquad\qquad (1)$$

Here,

x_1 - Developing Green Abilities x_4 - Maintaining Green Behavior

x_2 - Motivating Green Employees x_5 - Employee Behavior towards Sustainability

x_3 - Providing Green Opportunities y is Environmental Sustainability

e- Error term; and γ_0 is constant whereas γ_1 γ_2 γ_3, and γ_n are coefficient to estimate.

4. Data Analysis and Findings

Considering the suggestions of Dabholkar and Bagozzi (2002)- 'it is obvious to test the quality of data before testing the hypothesis, the researchers have tested the quality of data first and found it is good enough to proceed. The data reliability was confirmed through testing Cronbach's Alpha which was presented in Table-1 along with descriptive statistics of the variables. According to the tested values of Cronbach's Alpha; it is found that the quality of data is reliable as all have produced values more than the minimum standard as suggested by (Price, 1972) the value of Alpha should be at least 0.6, and (Kline, 1999) 0.70 accordingly. The descriptive statistics illustrate that all the average (mean) values are higher than 4.0 (highest point is 5.0) except motivating green employees (MGE) which results in mean= 3.891 with a standard deviation of ± 0.655.

Table1. Descriptive Statistics for Variables

Variable	Mean	Std. Deviation	Cronbach α
DGA	4.843	0.582	0.850
MGE	3.891	0.655	0.771
PGO	4.594	0.683	0.789
MGB	4.832	0.764	0.814
EBTS	4.213	0.476	0.812
ES	4.771	0.845	0.861

Source: Compiled by Authors

Note: Here, DGA- Developing Green Abilities, MGE-Motivating Green Employees, PGO- Providing Green Opportunities, MGB-Maintaining Green Behavior, EBTS- Employee Behavior towards Sustainability, ES- Environmental Sustainability.

In table-2 the relationships among all the considered variables for the study were presented. The calculated values for the correlation coefficient show that all the considered variables are positively correlated with one another at a 1% significant level. More specifically it is found here that a higher degree of correlations (r = 0.963) exist between developing green ability (DGA) and providing green opportunities (PGO) however motivating green employees (MGE) and maintaining green behavior (MGB) has the lower level of correlation (r = 0.54).

Table 2. Correlation Coefficient (the value of r) for Variables

Variables	DGA	MGE	PGO	MGB	EBTS	ES
DGA	**1**					
MGE	0.651**	**1**				
PGO	**0.968****	0.565**	**1**			
MGB	0.786**	**0.549****	0.869**	**1**		
EBTS	0.927**	0.579**	0.963**	0.775**	**1**	
ES	0.882**	0.531**	0.977**	0.692**	0.978**	**1**

Source: Compiled by Authors

** Correlation coefficients are significant at 0.01 levels (two-tailed).

Note: Here, DGA- Developing Green Abilities, MGE- Motivating Green Employees, PGO- Providing Green Opportunities, MGB- Maintaining Green Behavior, EBTS- Employee Behavior towards Sustainability, ES- Environmental Sustainability.

Table-3 presents the linear regression analysis which indicates the effects of the independent variables on the dependent variable (Environmental Sustainability). The calculated values presented in the table shows that developing green ability (DGA), motivating green employees (MGE), and maintaining green behavior has negative effects; whereas providing green opportunities (PGO), and employee behavior towards sustainability (EBTS) has positive effects on environmental sustainability (ES). It also reveal that except MGE (β = -0.001, P >0.05; not significant) all other variables have significant effects on environmental sustainability (ES) as there are in the acceptance level (P <0.001; P <0.01 or P <0.05).

Table 3. Analysis of Regression Coefficients

Model Variables	Un-standardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for β	
	β	Std. Error	B			Lower Bound	Upper Bound
(Constant)	-0.017	0.036		-0.572	0.582	-0.089	0.063
DGA	-0.591	0.039	-0.627	-13.117	0.000***	-0.679	-0.578
MGE	-0.001	0.008	-0.001	-0.219	0.869	-0.026	0.017
PGO	0.778	0.094	0.739	9.079	0.000***	0.577	0.854
MGB	-0.092	0.055	-0.097	-2.337	0.037*	-0.162	-0.009
EBTS	0.849	0.057	0.927	13.074	0.000***	0.817	0.984

Source: Developed by Authors

Note: a. Dependent Variable: ES (Environmental Sustainability)
*Significant at less than 0.05 level, ***Significant at less than 0.1% level.
Here, DGA- Developing Green Abilities, MGE-Motivating Green Employees, PGO- Providing Green Opportunities, MGB-Maintaining Green Behavior, EBTS- Employee Behavior towards Sustainability.

4.1 Multiple Linear Regression Analysis on Environmental Sustainability (ES)

Table-4 symbolizes the multiple-linear regression analysis on environmental sustainability (ES). In Model-1 two control variables- education and length of service have a positive effect whereas all other variables hurt ES. Among the considered control variables the respondents' gender, the scale of business operations, and lengths of service (experience) have a significant effect on ES at a 5% level of significance.

In Model-2 (table 4), the independent variables are added. The calculated values reveal the variable DGA and MGB have a negative effect; whereas MGE and PGO have positive effects on ES. Here it is also clear that the effect of DGA and PGO on ES are significant at 0.1% level and H1 and H3 are accepted for this study.

In Model 3 (table 4), here the mediating variable EBTS is incorporated and the results show that EBTS has a positive and significant effect on ES. By the way hypothesis H5 is also accepted for this study. On the other hand, the hypotheses related to the impact of variables MGE and MGB on EBTS (H2, H4) are rejected as their due to their p-value is more than the accepted level ($P \geq 0.05$).

Table 4. Multiple Linear Regression Analysis on Environmental Sustainability

Variable / Model	Model 1	Model 2	Model 3
Control Variables			
(Constant)	4.675***	0.045	0.033
Gender/ Sex	-0.167*	-0.019	-0.016
Age	-0.035	-0.003	0.002
Education	0.035	-0.009	-0.011
Designation/ Employee Level	-0.026	-0.0077	0.003
The scale of Business Operations	-0.286*	0.057*	0.033
Length of Service/ Experience	0.137*	-0.056*	-0.019
Independent Variables			
Developing Green Abilities (DGA)		-0.768***	-0.521***
Motivating Green Employees (MGE)		0.011	0.003
Providing Green Opportunities (PGO)		1.785***	0.857***
Maintaining Green Behavior (MGB)		-0.110	-0.081
Mediator			
Employee Behavior towards Sustainability (EBTS)			0.798***

Source: Compiled by Authors
Note: N= 404, Entries are standardized regression coefficients. Dependent variable: Environmental Sustainability (ES). *** $P \leq$ 0.1, ** $P \leq$ 0.01, * $P \leq$ 0.05 (two tailed).

From the table and related discussion and analysis, it can be concluded that green management practices play a vital role to make employees ready to show green behavior and make them aware of environmental sustainability in greater perspectives which is also supported by the finding of some previous studies (Bissing-Olson et al., 2013; Cohen et al., 2012; Daily et al., 2012; Hossen, Begum, et al., 2018; Madsen & Ulhøi, 2001; Ramus, 2002). Many previous studies also have found such type of positive relationships between green initiatives and sustainable environment (Chen et al., 2018; Daily & Huang, 2001; Hossen, Ashadullah, & Islam, 2018; Phillips, 2007). The study results reveal that the considered variables developing green abilities (DGA), motivating green employees (MGE), providing green opportunities (PGO), maintaining green behavior (MGB), and employee behavior towards sustainability (EBTS) have direct effects on the environmental sustainability (ES). However, the study summarizes the outcomes and decisions regarding the hypotheses testing as in the following table:

Table 5. Summary of the Hypothesis Tested Results

Hypotheses	β	P	Accept or reject decisions
H1: DGA has a positive effect on EBTS	-0.768	0.000***	Accepted at 0.1% significance level
H2: MGE has a positive effect on EBTS	0.011	0.451	Hypothesis rejected (as $P \geq 0.05$)
H3: PGO has a positive effect on EBTS	1.785	0.000***	Accepted at 0.1% significance level
H4: MGB has a positive effect on EBTS	-0.110	0.082	Hypothesis rejected (as $P \geq 0.05$)
H5: EBTS has a positive effect on ES	0.798	0.000***	Accepted at 0.1% significance level

Source: Compiled by Authors

5. Conclusion

As RMG sectors are the single topmost sector for Bangladesh to earn foreign currencies through exporting items; it is very important to ensure environmental sustainability and attract foreign buyers towards us. Green management practices are one of the techniques to maintain sustain environment in the organizations. Considering these issues, the researchers found the present study is a very time-demanding issue to discover a natural environment is degraded by manufacturing industries in Bangladesh. The study is considered as a wake-up call for the related parties, decision-makers (managers and owners), government regulatory bodies, of garments manufacturing industries in Bangladesh. The findings of the study will direct a pathway for the decision-makers and managers to guide their staff towards environmental sustainability through initiating and implementing proper policies and guidelines.

Though the study is a unique one, it has some limitations as well. However, the researchers like to sort out some limitations here in the following directions. Firstly, there are so many areas of green management that have effects on the sustainability of the environment but the researchers here only consider five variables for this study. Secondly, the study is conducted on the RMG sector covering Dhaka city and some other districts near to Dhaka city but a large number of RMG industries are operating their business in Chattagram (Chittagong) and other cities which were uncovered here. Thirdly, the study is fully based on primary data but if it could be done by considering secondary data; the result can give more insights regarding the matter. Last but not least, the study is based on a structured questionnaire which limits the freedom of speech or getting diversified patterns of response or more related information regarding green management practices for environmental sustainability.

So, future researchers can use different techniques (such as focus group discussion, interview/ scheduling method) to collect the data from respondents which can give diversified findings. As management is a vast area and this study is emphasized mostly on the green human resource management (GHRM) practices as a part of green management; by the way, other areas of management are still uncovered. So, it would be better to explore new areas such as green supply chain management, green marketing, or environmental HRM practices for sustainability. Moreover, the same study can be done by covering the greater geographical areas including Chattagram (Chittagong) or other cities; or same study in another field such as the banking sector, healthcare industry, or any other else. Along with the above-mentioned future direction another study can be done related to the opportunities and challenges of green management to ensure environmental sustainability.

The current study presented the existing scenario of green management practices (especially GHRM) in the RMG sector of Bangladesh. The findings of the study can play a significant role in taking decisions regarding any more investment decisions in green management practices in different sectors. To the managers, policymakers, researchers, and community leaders it can be a source of information to introduce new green projects in their working areas. The employers, employees, and all other parties' related parties with organizations get a message about- how the green management practices can help to protect lives and the environment which can make them motivated to practice more environmentally friendly activities in their regular activities. Moreover, it can open a new window and insights for those people who are still practicing traditional management style and reluctant to accept green practices.

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Appendix

Sample Questionnaire

Practicing Green HRM (Management): Organizational Commitment to Environmental Sustainability

01. Profile of the Organization(s) and Respondent(s):

01. **Name of Organization**	:_____	
02. **Name of the Respondents**	:_____	
03. **The scale of business operations**	: 1. Small scale 2. Medium-scale 3. Large scale	
04. **Respondents' Age**	: 1. Below 30 years 2. 30-40 years 3. Above 40 years;	
05. **Respondents' Gender**	: 1. Male 2. Female 3. Third gender	
06. **Education Level**	: 1. Below Graduation 2. Graduate 3. Master degree and above	
07. **Designation/ Level**	: 1. First/ operation level 2. Mid-level 3. Top/ Management level	
08. **Length of Service**	: 1. Below 5-years 2. 5-10 years 3. More than 10 years -	

Questions related to Organization's Green Management and Environment:
Measurement Scales: 5= Strongly Agree, 4= Agree 3= Neutral (Neither agree nor disagree), 2= Disagree 1= Strongly Disagree.

A. Developing Green Abilities:

	i. HR planning and Job Analysis:					
1.	The organization uses a green HR plan- to recruit employees and to implement corporate environmental management programs.	5	4	3	2	1
2.	Green issues and environmental dimensions are specified in the organizational job specification and job descriptions.	5	4	3	2	1
	ii. Recruitment/ Selection and Socialization:					
3.	Communicate the employer's concern about greening through a job advertisement, websites, and new employees' orientation session.	5	4	3	2	1
4.	The company prefers to hire those candidates who have minimum environmental knowledge – assessing through the selection steps.	5	4	3	2	1
	iii. Training and Development:					
5.	The organization assesses employees' green training needs and provides environmental awareness training, green management training, and green leadership development training continuously.	5	4	3	2	1
6.	Consider Environmental training is an important investment that ensures the green knowledge management systems for the future.	5	4	3	2	1

B. Motivating Green Employees:

	i. Performance assessment, rewards, and benefits:					
1.	Every employee has specific environmental goals and contributions to environmental management are assessed.	5	4	3	2	1
2.	Individual's green job performance assessment results are recorded & provide feedback regularly and recognized publicly.	5	4	3	2	1
3.	Cash-based rewards/bonuses, as well as recognition-based rewards (awards, paid vacations, time off, gifts, and certificates), are provided (individual/ team) for excellent environmental performance.	5	4	3	2	1
4.	Sometimes organization provides green benefits (transport-bicycle/ give a plant) rather than pay benefits.	5	4	3	2	1

C. Providing Green Opportunities:

	i. Employee Relations and Empowerment					
1.	Providing opportunities to involve & participate in green discussions, to make suggestions for environmental management improvement.	5	4	3	2	1
2.	Increasing employees' psychological empowerment and ensure supportive managerial and supervisor behaviors to develop employee engagement in environmental management.	5	4	3	2	1
3.	Establishing firm-wide dialogue on Green matters, and introduce Environmental Management education programs for staffs/ employees.	5	4	3	2	1
4.	The organization has functional and inter-functional green teams (comprising of top management, employees, and union members) who always monitor and motivate green management activities.	5	4	3	2	1

D. Maintaining Green Behavior (Outcomes):

	i. Discipline Management:					
1.	Have specific rules/ code of conduct relating to environmental management and employees are penalized if they fail to achieve targets.	5	4	3	2	1
2.	If an employee violates environmental rules and regulations, take disciplinary actions (warning, fining, suspension, etc.) against him/her.	5	4	3	2	1
	ii. Health and Safety:					
3.	Organizations ensure a green workplace for all employees and create various initiatives to reduce employee stress and occupational disease caused by the hazardous work environment.	5	4	3	2	1
4.	The organization motivates employees to avoid paperwork and use electronic data management and knowledge sharing to ensure employee health and safety	5	4	3	2	1

E. Employee Behavior towards Environment Sustainability:

1.	I/ We understand GM/ GHRM and enjoy to practices it in our daily official activities to ensure environmental sustainability.	5	4	3	2	1
2.	I/ We try to avoid paperwork & use electronic mode to ensure environmental sustainability. (Paperless training, online leave application, e-pay slip, e-reporting, video-conferencing, e-communication, etc.).	5	4	3	2	1
3.	I/ We pass a great time in our office with clean air, open and green space, and good working environment which motivates us to do green activities.	5	4	3	2	1
4.	I/ We observe World Environment Day, Tree Plantation program… to attract customers and create mass involvement to make the environment sustainable.	5	4	3	2	1

F. Environmental Sustainability:

1.	Our organization's policies, corporate targets, and managerial goals play a good role to make the environment sustainable.	5	4	3	2	1
2.	Our GM/ GHRM practices have a great contribution to environmental sustainability for the greater society.	5	4	3	2	1
3.	Our initiatives of GM/ GHRM are effective and satisfactory for environmental sustainability.	5	4	3	2	1
4.	Our GM/ GHRM efforts are meaningful and it creates much public awareness to build a sustainable environment.	5	4	3	2	1

Thank You for Your Nice Cooperation!