Green HRM, Green Attitude and Green Work Behavior of Employees: An Empirical Study in a Sri Lankan Tiles Manufacturing Company

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1. Introduction

Barbier and Burgess (2017) pointed out that interrelating the goals of the systems of environment, society and economy leads to achieve the overall goal of sustainable development under the system approach. It concluded that organizations have adopted many environmental management systems to increase financial, operational, social and eco logical performance. Among the different areas applying the green concept, HRM plays a significant role to implement and maintain the green culture among the members of the organizations. In general, GHRM is concerned with environmental aspects of managing people or environmental related matters of managing people at work (Jabbour, Santos & Nagano 2010; Opatha & Arulrajah 2014). GHRM plays a greater role in environmental management as it is a component of sustainable HRM and GHRM reflects the level of the greening of HRM practices (Bombiak & Marciniuk-Kluska 2018).

Green attitude and green behavior are too very important concepts coming under green human behavior. Without right green attitude and right green behavior, it is impossible to achieve the primary purpose of GHRM which is to create, enhance and retain greening within each employee of the organization. So that, s/he gives a maximum individual contribution on each of the four roles, i.e., preservationist, conservationist, non-polluter and maker (Opatha 2013; Opatha & Arulrajah 2014).

As an emerging field, GHRM is to be considered by the scholars as well as practitioners for sustainable development of the organizations and the nation. GHRM does not require an essential modification in the structure of HRM functions and does not need complex agenda (Zubair & Khan 2019). However, it brings the long-term positive impacts. Increasing efficiency, reducing cost, retaining employees and improving productivities are the non-tangible benefits of GHRM (Ahmad 2015). Then, different functions of an organization can subsidize towards significant greening goal through repetitive tasks as well as practices (Zubair & Gupta 2019). Among the organizational functions, utilization of human leads to different outcomes of greening. As Daily and Huang (2001), positive relationship remains between GHRM and employee productivity, empowerment, participation and engagement. Several scholars highlight that GHRM influence to green work behavior (Zhang 2018) and green attitudes. However, there is no any single study in Sri Lanka which reveals the impact of GHRM on green attitudes and green work behavior. Therefore, there is a theoretical and empirical knowledge gap regarding the impact of GHRM on green attitudes and green work behavior among the workers. In the other way, the researchers believe that GHRM, green attitude, and green work behavior are selected concepts of contemporary importance. Therefore, the problem of the study is: "*Are there any impacts of GHRM on green attitude and green work behavior; and does green attitude impact on green work behavior among the executives and non-executives in a tile manufacturing organization in Sri Lanka?".*

2. Research Framework

Research framework of this study mainly consists of three major variables which are GHRM, green attitude and green work behavior. GHRM is considered as the independent variable while green attitude and green behaviors are the dependent variables when it comes to finding the impact of GHRM on green attitude, and GHRM on green work behavior. When considering the impact of green attitude on green work behavior, green attitude becomes the independent variable while green work behavior becomes the dependent variable.

Pham et al. (2019) revealed that GHRM practices like green training, green reward and green organizational culture have a significant effect on employee commitment towards the environment. If a person commits to the environmental goals s/he has green attitudes and behaviors towards the green value of the organization (Pham et al. 2019) and a good GHRM strategy may result in positive and significant relations of employee reactions at the workplace as a result of green attitude. According to Dumont, Shen and Deng (2016) there is a significant relationship between GHRM and green values of the people. Considering the previous research findings and ideas of scholars, the first hypothesis is derived.

H_1 – There is a positive impact of GHRM on green attitude of the executives and non-executives in the tiles company.

It has been found that GHRM contributes to the environmental performance of employees directly and indirectly (Bangwal et al. 2017). Saeed et al. (2018) revealed that GHRM practices (green recruitment and selection, green training and development, green performance management and appraisal, green reward and compensation, and green empowerment) positively affected employee's pro-environmental behavior. Further, according to Dumont, Shen and Deng (2016) there is a significant relationship between GHRM and in-role green behavior and extra role green behavior of the people. The second hypothesis is derived based on the previous research findings and the ideas of the scholars.

H_2 – There is a positive impact of GHRM on green work behavior of the executives and non-executives in the tiles company.

Some studies done by Oskamp et al. in 1991, Lansana in 1992 and Gumba and Oskamp in 1994 claim that there is no interrelationship between green attitude and green behavior (Safari et al. 2018). However, surveys done by Hines et al. in 1986 and 1987, Axelrad and Lehman in 1993, Smith et al. in 1994, Aizen and Fishbein in 1980, Ellen et al. in 1991, Mohai in 1992, Weaver in 1996, Pooley and O'connor in 2000 (Safari et al. 2018) suggest that there is a fair relationship between green attitude and green behavior. Further Bissing-Olson et al. in 2013 and Chan et al. in 2014 (Safari et al. 2018) suggest that green attitude has a great impact on green behavior. Based on these arguments and empirical findings the third hypothesis for this study is formulated as follows.

H_3 – There is a positive impact of green attitude on green work behavior of the executives and non-executives in the tiles company.

Considering the above hypotheses, the conceptual framework (Figure 1) is developed.

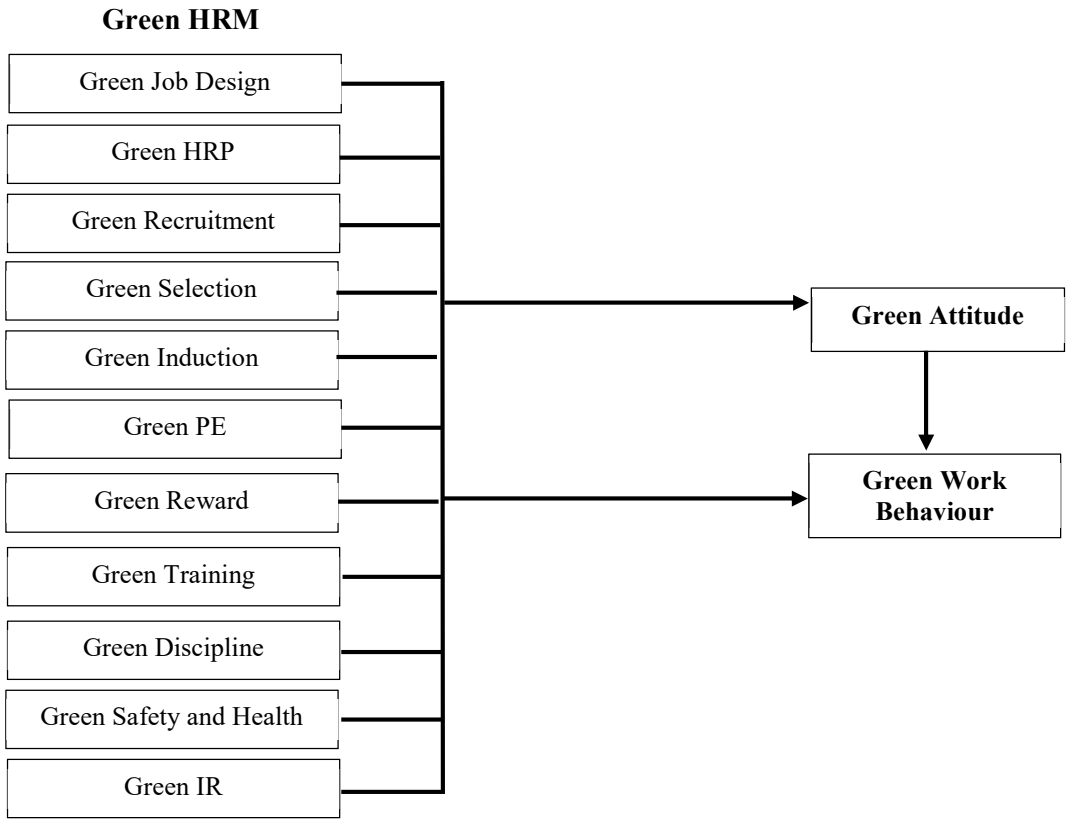
3. Method

100 executive and non-executive employees of the tile manufacturing company in Sri Lanka were randomly chosen as the sample of the study. Questionnaire as the main data collection mechanism was distributed among the 100 sample and responded 81 respondents (46.9% executives and 53.1% non-executives). The questionnaire consisted of 120 questions with the scale of five-point Likert scale; "Strongly Disagree, Disagree, Neutral, Agree and Strongly Agree".

Blending the 12 scales of Environmental Attitude Inventory developed by Milfont and Duckitt (2010) and three-dimensional aspects of green attitudes explained by Opatha and Arulrajha (2014), new instruments was developed by the researchers consisting of 45 questions which were used to measure the green attitudes.

As Opatha (2019), green work behaviour consisted of three dimensions such as organizational citizenship behaviour, green interpersonal citizenship behaviour and Green official behaviour. The instrument used to measure the green work behaviour in this study was developed by the researchers using the dimensions proposed by Opatha (2019) with including sub-indicators as preservationist, conservationist, non-polluter, and maker (for organizational citizenship behaviour), teaching others, motivating others, assisting others and punishing others (for green interpersonal citizenship behaviour) and duty/duties, responsibilities, tools and equipment used, physical surrounding, job process, decision making, and adhere to policies and rules (for green official behaviour). The instrument used to measure the GHRM in this study consisted of job and job analysis, human resource planning, recruitment, selection, induction, training, performance assessment, rewards, corporate culture, corporate learning management, involvement, industrial relations, health and safety and discipline management as the dimensions of measuring green HRM.

Figure 1: Conceptual Framework



Primary data were analyzed using statistical data analysis package, SPSS (version 23.0) in order to test the validity, reliability, relationships and impacts. The Pearson correlation technique and linear regression analysis were used as data analysis techniques.

Reliability and Validity

The inter item reliability of the three instruments was examined with Cronbach's Alpha test. The results of the Cronbach's Alpha test are depicted below (Table 01) and the Cronbach's Alpha coefficient of each instrument is greater than 0.7 which means that internal reliability of each instrument is satisfactory (Kottawatta 2014).

Table 01: Results of Cronbach's Alpha

Instrument	**Cronbach's Alpha**
Green Attitude	0.808
Green Work Behavior	0.883
GHRM	0.974

Content validity of the instrument was ensured by the conceptualization and operationalization of the variables on literature and indirectly by the high internal consistency reliability of the instruments as denoted by Alphas (Kottawatta 2014). As there were 45 items to test the green attitude variable, 32 items to test green behavior variable and 43 items to test the GHRM variable, it ensures that the measures include an adequate and representative set of items that would tap the concepts.

Face validity of the three instruments are also ensured because all the items in the three instruments are look like they are measuring the relevant concepts.

4. Results

The study investigates the existing degrees of green attitude, green work behavior of employees and GHRM of the employees in the tiles manufacturing company, which was ascertained by univariate analysis. Table 02 represents the results of univariate analysis.

Table 02: Descriptive Statistics of Green Attitude, Green Work Behavior and Green HRM

		Mean	**Std. deviation**
GHRM	*Executive*	3.422	.5190
	Non-executive	3.037	.6693
	Total Sample	3.218	.6302
Green Attitude	*Executive*	3.725	.3784
	Non-executive	3.718	.2740
	Total Sample	3.721	.3250
Green Work Behavior	*Executive*	3.651	.4227
	Non-executive	3.663	.3550
	Total Sample	3.657	.3858

Table 02 indicates that majority of the executives and non-executives in the company recorded high level of green attitude and green work behavior. However, the levels of GHRM in both employee categories are in a moderate level. The standard deviation is less than 1 in all three variables indicating that the data dispersion from the mean value is less.

The statistical data reveal that relationship between GHRM with green attitude and green work behavior of executives are positive and significant while non-executive recorded that there is no any significant relationship. The relationship between green attitudes with green work behavior of executives is strongly positive and significant and it is not significant for the non-executives. The total sample indicates that relationships between GHRM with green attitudes, GHRM with green work behavior and green attitude with green work behavior are positive and significant.

Table 03: Pearson Correlation Analysis

		Pearson Correlation	Sig.
GHRM and Green Attitude	*Executive*	.583	.000
	Non-executive	.053	.735
	Total Sample	.287	.009
GHRM and Green Work Behavior	*Executive*	.469	.003
	Non-executive	.186	.233
	Total Sample	.286	.010
Green Attitude and Green Work Behavior	*Executive*	.775	.000
	Non-executive	.190	.223
	Total Sample	.511	.000

The effect of the dependent variable on the independent variable of the research model is found through the leaner regression analysis (Table 04). According to Table 04, 8.2% of the variability of green attitude is explained by GHRM in the total sample and 33.9% of variability of green attitudes among the executives is explained by GHRM. The statistical data revealed that the impact of green attitude on GHRM of non-executives is not significant.

Table 04: Linear Regression Analysis

		R Square	F	Sig.
GHRM on Green Attitude	*Executive*	.339	18.503	.000
	Non-executive	.003	.116	.735
	Total Sample	.082	7.081	.009
GHRM on Green Work Behavior	*Executive*	.220	10.148	.003
	Non-executive	.034	1.463	.233
	Total Sample	.082	7.033	.010
Green Attitude on Green Work Behavior	*Executive*	.541	42.361	.000
	Non-executive	.036	1.530	.223
	Total Sample	.261	27.883	.000

R^2 value of the GHRM on green work behavior is 0.082 (Sig is 0.010). It explains that 8.2% of variance of green work behavior is explained by the GHRM in this study and 22% of variance of green work behavior is explained by GHRM in the executives. However, the impact of GHRM on green work behavior among the non-executives remains as not significant.

According to statistical data depicted in Table 04, 26.1% of variances of green behavior is explained by green attitudes in the total sample and 54.1% of variances of green behavior in executives is explained by green attitudes. However, statistical data regarding green attitudes on green work behavior of non-executives indicates that there is no statistical significance.

5. Findings, Discussion and Conclusion

The statistical data reveals different findings from the selected sample and the findings derived from the sample are given below.

1. The green attitude of the executives and non-executives in the tiles manufacturing company is high (Executives = Mean is 3.725, Sd is 0.3784, Non-executives = Mean is 3.718, Sd is 0.2740).

2. The green work behavior of the executives and non-executives in the tiles manufacturing company is high (Executives = Mean is 3.651, Sd is 0.4227, Non-executives = Mean is 3.663, Sd is 0.3550).

3. The GHRM practice of the tiles manufacturing company is moderate (Executives = Mean is 3.422, Sd is 0.5190, Non-executives = Mean is 3.037, Sd is 0.6693).

4. There is a significant positive relationship between GHRM and green attitude of the total sample as well as in executives (Total sample = R value is 0.287, Sig is 0.009, Executives = R Value is 0.583, Sig is 0.000). The results can be confirmed by the studies done by Dumont, Shen and Deng (2016), Perez et al. in 2009, Pinzone et al. in 2016, Ren et al. in 2018 and Harvey, Williams and Probert in 2013 (Pham et al. 2019).

5. There is a significant positive relationship between GHRM and green work behavior of the total sample and the executives (Total sample = R value is 0.286, Sig is 0.010, Executives = R Value is 0.469, Sig is 0.003). Dumont, Shen and Deng (2016), Ojo et al. (2018), Bangwal et al. (2017) and Saeed et al. (2018) found the same relationship from their studies.

6. There is a significant positive relationship between green attitude and green work behavior of employees (Total sample = R value is 0.511, Sig is 0.000, Executives = R Value is 0.775, Sig is 0.000). The found positive relationship is proved by the studies done by Hines et al. in 1986 and 1987, Axelrad and Lehman in 1993, Smith et al. in 1994, Aizen and Fishbein in 1980, Ellen et al. in 1991, Mohai in 1992, Weaver in 1996 and Pooley and O'connor in 2000 (Safari et al. 2018).

7. There is positive impact of GHRM on green attitudes in the total sample as well as in executives (Total sample = R^2 is 0.082, Sig is 0.009, Executives = R^2 is 0.339, Sig is 0.000)

8. There is positive impact of GHRM on green work behavior in the total sample as well as in executives (Total sample = R^2 is 0.082, Sig is 0.010, Executives = R^2 is 0.220, Sig is 0.003).

9. There is positive impact of green attitudes on green work behavior in the total sample as well as in executives (Total sample = R^2 is 0.261, Sig is 0.000, Executives = R^2 is 0.541, Sig is 0.000).

The major finding of the study reveals that there is an impact of GHRM on green attitudes and GHRM on green work behavior in the organizational context. Therefore, new agenda of introducing, implementing and maintaining GHRM practices becomes vital to the organizations in developing countries like Sri Lanka. One of the most important area of GHRM is to develop employee green attitude through training. Therefore, lacking knowledge, skills and attitudes towards the environmental management among employees can be developed through training and development (Zoogah 2011). Carter and Dresner (2001) pointed out that positive attitudes relating to environmental issues can be developed through environmental training. In addition, Renwick, Redman and Maguire (2013), Opatha and Arulrajha (2014), Ahmad (2015) and Das and Singh (2016) explained the importance of training function to develop the environmental attitudes of employees. Bombick and Marconiuk-Kluska (2018) stresses that importance of informing the protecting practices of environment to the candidate at the recruitment and selection and using ecological attitudes as criteria for evaluating candidates. Jabbour and Santos (2008) illustrated that performance appraisal and rewards are to be developed by the top management of the company to cultivate green culture. Incorporating

environmental aspects of the job needs in the job specification and job duties are highlighted by Renwick, Redman and Maguire (2008). Ensuring green workplace for all is explained by Ditz et al. (1995).

In other way, there are two types of green work behavior, namely in-role green workplace behavior and extra-role green workplace behavior (Zhang et al. 2019). Usually job's responsibility, rewards and punishment requisite of in-role green workplace behavior (Zhang et al. 2019) and companies have to cultivate the green behavior through this approach. However, as Bissing-Olson et al. (2013), Norton, Zacher and Ashkanasy (2014) and Dumont, Shen and Deng (2017), extra-role green workplace behavior is usually initiated by the employee than the formal organizational norms. Then, this can be done through the GHRM practices of the organizations. As Nishii, Lepak and Schneider (2008) work attitudes and behavior of employees are determined by the perception of HRM practices in the organization. Then, it is an obvious that the companies must consider the GHRM practices for sustainable development of the company and gaining competitive advantages from the competitors in the industry. The researchers recommend that the companies have to incorporate the GHRM practices into their management functions as a new agenda.

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