

# Impact of Green Attitude on Green Work Behavior: An Empirical Study of Employees in a Sri Lankan Tiles Manufacturing Company

**Opatha, H.H.D.P.J.<sup>1</sup>, Kottawatta, H<sup>2</sup>**

<sup>1,2</sup> *Department of Human Resource Management, University of Sri Jayewardenepura, Sri Lanka*

**ABSTRACT :** As interesting and important areas, Green Attitude (GA) and Green Work Behavior (GWB) are examined considering the employees in a Sri Lankan tiles manufacturing company. The main objective of the study is to explore the impact of GA on employees' GWB. Using simple random sampling, 81 employees were selected as the sample and primary data were gathered using two self-developed instruments regarding to GA and GWB. Univariate and bivariate analyses were conducted to analyze the data and the main finding of the study is that there is a positive and significant impact from GA on GWB of the employees in the selected tiles manufacturing company. As the recommendation of the study authors instruct the companies in the tiles manufacturing industry to develop employees' green attitude for the better work behavior in greening.

**Keywords:** Green Attitude, Green Work Behavior, Tiles Manufacturing Industry, Employees, Sri Lanka

---

## 1. INTRODUCTION

Worldwide organizations attempt to promote the environment-friendly systems or practices that require both micro-level and macro-level sustainable growth. Regardless of its tremendous importance, companies are also involved with environmental protection and management because of the natural environment is important to the community as well as to the organizations (Zoogah 2011). As Ahmad et al. (2009), severe weather conditions, increasing world temperature, melting glaciers, growing greenhouse gasses, invading oceans, inundated coastlines and much more are induced by inadequate environmental management. Most of the times, organizations consider environmental awareness to appease corporate stakeholders such as policymakers, company members, community representatives and the media (Banerjee et al. 2003). In turn, the fields which are being identified by the organizations as sustainable strategies to minimize the carbon impact are known as green HRM (Ahmad 2015), green marketing, green accounting (Owen 1992) and green management (McDonagh & Prothero 1997). Environmental attitude as one of the major human oriented areas represents the 'collection of beliefs, affects and behavioral motives that a person has toward the ecologically related activities and issues (Schultz et al. 2007) and as Milfont et al. (2010), environmental attitude is "psychological tendencies expressed by assessing natural environment perceptions or beliefs, including factors affecting their quality, with some extent of favor or disadvantage".

Opatha and Arulrajah (2014), Ones and Dilchert (2012) and Kim et al. (2016) pointed out that environmental attitudes and behavior of workers are critical considerations for enhancing the organization's environmental efficiency. As Singh and Gupta (2013), some findings show that an employee's positive environmental attitude has a significant impact on the employee's environmental actions. In other words, an employee's

environmental attitude is one of the significant and successful variables that contributes to a better environmental orientation. Thondhlana and Hlatshwayo (2018) suggest that, regardless of uncontrollable external influences, the positive attitude of leaders will not often affect pro-environmental actions of employees.

Recent results on the topic of effects of GA on GWB are uncommon and need to be studied. However, Manika et al. (2015) pointed out that better environmental practices can be identified when workers have good pro-environmental attitudes and general environmental-friendly attitudes are strongly associated with activities such as energy conservation, recycling and decrease in printing. Nonetheless, the effect of GA on the GWB in the organizational sense remains to be examined and the current literature tends to be lacking in the field. There is a contextual gap in Sri Lanka regarding to the researches on finding the impact of GA on GWB of employees. Hence, this research is aimed at exploring the effect of GA on employees' GWB in a selected Sri Lankan tiles manufacturing company.

## **2. RESEARCH FRAMEWORK**

### **2.1 Green Attitude**

Robbins and Judge (2008) describe attitude as an evaluative statement or a judgment about objects, persons and events. The attitude includes three elements that are cognitive (the belief towards an object), affective (the emotions or feelings occurred towards an object) and intention to behavior (the intention to behave towards something). GA is defined as attitudes towards the environment and also known as ecological attitudes, environmental-friendly attitudes and environmentally sustainable attitudes (Coskun 2018). Opatha and Arulrajah (2014) interpret the green attitude as reasonable beliefs (cognitive), feelings (affective) and intentions to behavior (behavioral) with respect to greening.

### **2.2 Green Work Behavior**

GWB is described by Steg and Vlek (2009) as an individual activity which minimizes harm to or benefits the natural environment. Ones and Dilchert (2012) describe GWB as “scalable activities and behaviors that workers are engaged in which environmental sustainability is connected and contributes or detracts from”. The GWB involves practices such as energy efficiency, productive usage of materials, pollution prevention, recycling and water management (Norton et al., 2015; Ones & Dilchert, 2012). As Opatha (2019) GWB is consisted of three main components i.e. green organizational citizenship behavior, green interpersonal citizenship behavior and green official behavior.

Green organizational citizenship behavior is the degree to which employees voluntarily engage in positive behaviors with the intention of helping in achieving the green organizational objectives and goals (Opatha 2019). Here, employees willingly practice the four roles of a green employee i.e. conservationist, preservationist, non-polluter and maker. Green interpersonal citizenship behavior is the degree to which employees engage in positive behaviors with the intention of helping and advising their co-workers to do their green works and to achieve organizational green objectives and goals (Opatha 2019). Green official behavior is the degree to which employees engage in official duties which are assigned by their superior towards becoming green and these behaviors are not voluntarily done (Opatha 2019).

### **2.3 Green Attitude on Green Work Behavior**

According to Kautish and Sharma (2019) green attitude has a significant impact on behavioral intentions. Oskamp et al. (1991) found that there was no common factor behind different environmental attitudes and different environmental behaviors, both of which may seem to be a priori related. Smith et al. (1994) pointed out that the usual results show a moderate relationship between environmental attitudes and ecological behavior while a weak relationship was recorded by Diekmann and Franzen (1995) and Grob (1995). Gamba and Oskamp (1994) have reported that there was no such a relationship between the two variables and Lynne and Rola (1988) have reported that there is a strong relationship between the two phenomena.

As Authagen and Neuberger (1994), ecological behavior intention was strongly related with ecological behavior while a moderate relationship was reported by Diekmann and Franzen (1995). A small relationship between two variables was found by Van Liere and Dunlap (1981).

### 2.4 Hypotheses of the Study

The study has several hypotheses which are based on the research model and the available literature.

H1: There is a positive impact from cognitive GA on GWB

H2: There is a positive impact from affective GA on GWB

H3: There is a positive impact from intention to behavior on GWB

H4: There is a positive impact from GA on GWB

The conceptual framework (Figure 1) is developed based on the above hypotheses.

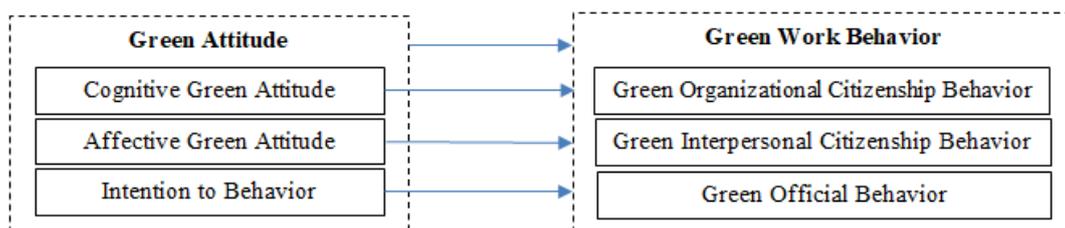


Figure 1: Conceptual Framework

## 3. METHOD

### 3.1 Sampling

The unit of analysis was individual employees in the selected tiles manufacturing company including both executives and non-executives. 100 executive and non-executive employees of a tiles manufacturing company in Sri Lanka were randomly chosen as the sample. Questionnaire was distributed among the 100 sample and 81 questionnaires were returned (38 executives and 43 non-executives).

### 3.2 Measures

Structured self-developed questionnaire was the main instrument which was used to gather the primary data and it was consisted of 77 questions with five-point Likert scale and covered all the areas that need to be measured. Reliability and validity of the questionnaire are assured.

#### 3.2.1 Green Attitude

Blending the 12 scales of Environmental Attitude Inventory developed by Milfont and Duckitt (2010) and three-dimensional aspects of GA explained by Opatha and Arulrajha (2014), Opatha (2013), Arulrajah et al. (2015), a new instrument consisting of 45 questions was developed by the researchers to measure environmental (green) attitude of the employees. The inter item reliability of the instrument of environmental (green) attitude was examined with Cronbach's Alpha test and it was 0.808. The Cronbach's Alpha coefficient of the instrument is greater than 0.7 which means that internal reliability of the instrument is satisfactory (Kottawatta 2018). 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 instrument as denoted by Alpha (Kottawatta 2018). As there were 45 items to test the green attitude of the employees, it ensures that the measure includes an adequate and representative set of items that would tap the concept.

### 3.2.2 Green Work Behavior

GWB can be conceptualized as a collection of green organizational citizenship behavior, green interpersonal citizenship behavior and green official behavior (Opatha 2019). Green organizational citizenship behavior was measured using three indicators i.e. conscientiousness, sportsmanship and civic virtue. Altruism and courtesy were the indicators of green interpersonal citizenship behavior. Green official behavior was measured using seven indicators which are duty/duties, responsibilities, tools and equipment used, physical surrounding, job process, decision making, and adherence to policies and rules.

The inter item reliability of the instrument of green work behaviour was examined with Cronbach’s Alpha test and it was 0.883. The Cronbach’s Alpha coefficient of the instrument is greater than 0.7 which means that internal reliability of the instrument is satisfactory (Kottawatta 2018). Content validity of the instrument was ensured by the conceptualization and operationalization of the variables through literature and indirectly by the high internal consistency reliability of the instrument as denoted by Alphas (Kottawatta 2018). As there were 32 items to test the GWB, it ensures that the measure includes an adequate and representative set of items that would tap the concept.

### 3.3 Techniques of Data Analysis

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.

## 4. RESULTS

Table 1 represents the Pearson correlation values between GA and GWB of the sample respondents.

Table 1: Pearson Correlation Analysis

		Pearson Correlation	Sig.
GA and GWB	<i>Executive</i>	.735	.000
	<i>Non-executive</i>	.190	.223
	<b>Total Sample</b>	<b>.511</b>	<b>.000</b>
Cognitive Green Attitude and GWB	<i>Executive</i>	.633	.000
	<i>Non-executive</i>	-.104	.508
	<b>Total Sample</b>	<b>.325</b>	<b>.003</b>
Affective Green Attitude and GWB	<i>Executive</i>	.589	.000
	<i>Non-executive</i>	.348	.022
	<b>Total Sample</b>	<b>.490</b>	<b>.000</b>
Intention to Behavior and GWB	<i>Executive</i>	.735	.000
	<i>Non-executive</i>	.236	.128
	<b>Total Sample</b>	<b>.495</b>	<b>.000</b>

The Pearson correlations for the positive relationship between green attitude and GWB of executives and the total sample are significant at 0.01 level (2-tailed) while it is not significant for non-executives. Further, as per the total sample, it indicates that the components of green attitude and GWB are significantly and positively related. The Pearson correlations for the three types of relationships except for the relationship between affective green attitude and GWB are not significant for the non-executives.

Linear regression analysis was carried out to check the validity of the conceptual framework. According to Table 2 considering the R Square of the total sample which implies the proportion of variation of the dependent variable that is explained by the independent variable. It can be identified that only 26.1% of

variation in GWB is explained by green attitude and this is significant. It is 54.1% for executives which is highly significant and statistical significance is absence for non-executives. According to the total sample, 10.6%, 24% and 24.5% of variations of GWB are explained by cognitive green attitude, affective green attitude and intention to behavior respectively. The impact of these three variables on GWB is significant. The highest impact on GWB is given by the intention to behavior.

Table 2: Linear Regression Analysis

		R Square	F	Sig.
GA on GWB	<i>Executive</i>	.541	42.361	.000
	<i>Non-executive</i>	.036	1.530	.223
	<b>Total Sample</b>	<b>.261</b>	<b>27.883</b>	<b>.000</b>
Cognitive Green Attitude on GWB	<i>Executive</i>	.400	24.012	.000
	<i>Non-executive</i>	.011	.446	.508
	<b>Total Sample</b>	<b>.106</b>	<b>9.335</b>	<b>.003</b>
Affective Green Attitude on GWB	<i>Executive</i>	.347	19.113	.000
	<i>Non-executive</i>	.121	5.633	.022
	<b>Total Sample</b>	<b>.240</b>	<b>24.969</b>	<b>.000</b>
Intention to Behavior on GWB	<i>Executive</i>	.541	42.359	.000
	<i>Non-executive</i>	.056	2.417	.128
	<b>Total Sample</b>	<b>.245</b>	<b>25.585</b>	<b>.000</b>

## 5. FINDINGS OF THE STUDY

The summary of the main findings is given below.

*H1: There is a positive and significant impact from GA on GWB (R is 0.735 at sig: .000 and R2 is 0.541 at sig: .000). The hypothesis is accepted.*

*H2: There is a positive and significant impact from cognitive GA on GWB (R is 0.325 at sig: .003 and R2 is 0.106 at sig: .003). The hypothesis is accepted.*

*H3: There is a positive and significant impact from affective GA on GWB (R is 0.490 at sig: .000 and R2 is 0.240 at sig: .000). The hypothesis is accepted.*

*H4: There is a positive and significant impact from intention to behavior on GWB (R is 0.495 at sig: .000 and R2 is 0.245 at sig: .000). The hypothesis is accepted.*

## 6. DISCUSSION AND CONCLUSION

The focus of the study is to find out the impact of GA of employees in the selected tiles manufacturing company of Sri Lanka on GWB. As study findings, there is a positive and significant impact from green attitude on GWB. Smith et al. (1994) have also found a positive relationship between GA and GWB.

In addition, the study focuses to find the impact of cognitive green attitude on GWB and the result was that there is a positive and significant impact from cognitive GA on GWB. As Norton et al. (2015), the intention of beliefs toward the organizational environmental policies and transactional leadership to establish a regulated condition whereby an employee may believe that they have to do something for the community, result necessary employee green behavior outputs. Carrico and Reimer (2011) suggest that common beliefs about the performance and intervention capacity of the group and the attainment of a desirable goal have a significant impact on voluntary employee green behavior of the members. Graves et al. (2013) noticed that employee green behaviors are promoted by external motivation, in particular with beliefs toward incentives and pay. The findings of the study confirmed that employee beliefs towards the environment lead to play the roles of preservationist, conservationist, non-polluter and maker.

The study revealed that there is a positive and significant impact from affective GA on GWB. Boiral (2009) explained that employees prefer to be with environmentally friendly actions through their own self-interest and feelings of concern for the environment, without any control from certain citizens or management compensation. The study also confirmed that employee feelings toward environmental protection and development lead to present the behaviors of preservationist, conservationist, non-polluter and maker.

The impact of intention to behavior on GWB is another area that was considered under this study. The result of the study indicated that there is a positive and significant impact from intention to behavior on GWB. Tudor et al. (2007) noted a significant impact of intention to behavior on recycling behavior in a hospital.

As the conclusion and the major implication of the study, it can be said that any organization that wants to promote the green work behavior of the employees needs to promote the green attitude of the employees.

## 7. REFERENCES

1. Ahmad, S, 2015, Green human resource management: policies and practices, Cogent Business & Management, Vol. 2, No. 1, pp. 1-13. <http://dx.doi.org/10.1080/23311975.2015.1030817>.
2. Ahmad, S, Saha, P, Abbasi, A & Khan, M 2009, Environmental Management Systems and Sustainability: Integrating Sustainability in Environmental Management Systems, Master of Strategic Leadership towards Sustainability, Blekinge Institute of Technology, Karlskrona, Sweden, (Access: 28/03/2020) <https://www.diva-portal.org/smash/get/diva2:830529/FULLTEXT01.pdf>
3. Arulrajah, AA, Opatha, HHDNP & Nawaratne, NNJ 2015, Green human resource management practices, Sri Lankan Journal of human resource management, vol 5, No. 1, pp. 1-16.
4. Authagen, AE & Neuberger, K 1994, Verantwortung gegenüber der Umwelt: Eine Studie fiber umweltbewusstes Handeln [Responsibility toward environment: A study of ecological concerned behavior], Gruppendynamik, Vol. 26, pp. 319-332.
5. Banerjee, SB, Iyer, ES & Kashyap, RK 2003, corporate environmentalism: Antecedents and influence of industry type, Journal of Marketing, Vol. 67, No. 2, pp.106-122.
6. Boiral, O 2009, Greening the corporation through organizational citizenship behaviors, Journal of Business Ethics, Vol. 87, No. 2, pp. 221-236.
7. Carrico, AR & Riemer, M 2011, Motivating energy conservation in the workplace: An evaluation of the use of group-level feedback and peer education, Journal of Environmental Psychology, Vol. 31, pp. 1-13.
8. Coskun, A 2018, Understanding green attitudes, F. Quoquah, R. Thurasamy, J. Mohammad (eds), Driving green consumerism through strategic sustainability marketing, A Value in the Practice, Progress and Profitability in Sustainability (PPPS) Book Series, USA, IGI Global.
9. Diekmann, A & Franzen, A 1995, Umwelthandeln zwischen Moral and Okonomie [Ecological behavior among moral and economy], Report No. 85, pp. 7-10, Bern, Switzerland: University of Bern (UNI PRESS 85. Reports from Science, and Research)
10. Gamba, RJ & Oskamp, S 1994, Factors influencing community residents' participation in commingled curbside recycling programs, Environment and Behavior, Vol. 26, pp. 587-612.
11. Graves, LM, Sarkis, J & Zhu, Q 2013, How transformational leadership and employee motivation combine to predict employee pro-environmental behaviors in China, Journal of Environmental Psychology, Vol. 35, pp. 81-91.
12. Grob, A 1995, A structural model of environmental attitudes and behavior, Journal of Environmental Psycholoav, Vol. 15, pp. 209- 220.
13. Kautish, P & Sharma, R 2019, Value orientation, green attitude and green behavioral intentions: An empirical investigation among young consumers, Young Consumers Insight and Ideas for Responsible Marketers, vol 20, No. 4, pp. 338-358.
14. Kim, SH, Kim, M, Han, HS & Holland, S 2016, the determinants of hospitality employees' proenvironmental behaviors: The moderating role of generational differences, International Journal of Hospitality Management, Vol. 52, pp.56-67.
15. Kottawatta, H. (2018), Research Guide Book, Department of Human Resource Management, University of Sri Jayewardenepura.

16. Lynne, GD & Rola, LR 1988, Improving attitude behavior prediction models with economic variables: Farmer actions toward soil conservation, *Journal of Social Psychology*, Vol. 128, pp. 19-28.
17. Manika, D, Wells, V, Gregory-Smith, D & Gentry, M 2015, The Impact of Individual Attitudinal and Organisational Variables on Workplace Environmentally Friendly Behaviours, *Journal of Business Ethics*, Vol. 126, No. 4, pp.663-684.
18. McDonagh, P & Prothero, A 1997, *Green management: A reader*, London, UK: Dryden Press.
19. Milfont, TL & Duckit, J 2010, The environmental attitudes inventory: A valid and reliable measure to assess the structure of environmental attitudes, *Journal of Environmental Psychology*, vol 30, pp. 80-94.
20. Norton, TA, Parker, SL, Zacher, H & Ashkanasy, NM 2015, Employee green behavior: a theoretical framework, multilevel review, and future research agenda, *Organizational Environment*, Vol. 28, pp. 103–125.
21. Ones, DS & Dilchert, S 2012, Environmental sustainability at work: A call to action, *Industrial and Organizational Psychology: Perspectives on Science and Practice*, Vol. 5, pp. 444 - 466.
22. Opatha, HHDNP & Arulrajah, A 2014, Green Human Resource Management: Simplified Reflections, *International Business Research*, Vol 7, No. 8, pp. 101-112.
23. Opatha, HHDNP 2013, Green human resource management: A simplified introduction, *Proceedings of the HR Dialogue*, vol 1, No. 1, pp. 12-21.
24. Opatha, HHDNP 2019, *Sustainable Human Resource Management*. Sri Lanka: Department of HRM, University of Sri Jayewardenepura.
25. Oskamp, S, Harrington, MJ, Edwards, TC, Sherwood, DL, Okuda, SM & Swanson, DC 1991, Factors influencing household recycling behavior, *Environment and Behavior*, Vol. 23, pp. 494-519.
26. Owen, D 1992, *Green reporting: Accountancy and the challenge of the nineties*, London, UK: Chapman Hall.
27. Robbins, SP & Judge, TA 2008, *Organizational Behavior*. New Delhi: Prentice-Hall of India.
28. Schultz, PW, Nolan, JM, Cialdini, RB, Goldstein, NJ & Griskevicius, V 2007, The Constructive, Destructive, and Reconstructive Power of Social Norms, *Psychological Science*, Vol. 18, No. 5, pp. 429-434.
29. Singh, N and Gupta, K (2013), Environmental attitude and ecological behavior of Indian consumers, *Social Responsibility Journal*, Vol. 9, No. 1, pp. 4-18.
30. Smith, SM, Haugtvedt, CP & Petty, RE 1994, Attitudes and recycling: Does the measurement of affect enhance behavioral prediction?, *Psychology & Marketing*, Vol. 11, pp. 359-374.
31. Steg, L & Vlek, C 2009, Encouraging pro-environmental behavior: an integrative review and research agenda, *Journal of Environmental Psychology*, Vol. 29, pp. 309–317. <https://doi.org/10.1016/j.jenvp.2008.10.004>
32. Thondhlana, G & Hlatshwayo, T 2018, Pro-Environmental Behaviour in Student Residences at Rhodes University, South Africa. *Sustainability*, Vol. 10, p. 2746.
33. Tudor, TL, Barr, SW & Gilg, AW 2007, linking intended behaviour and actions: A case study of healthcare waste management in the Cornwall NHS, *Resources, Conservation and Recycling*, Vol. 51, pp. 1-23.
34. Van Liere, KD & Dunlap, RE 1981, Environmental concern: Does it make a difference how it's measured?, *Environment and Behavior*, Vol. 13, pp. 651-676.
35. Zoogah, DB 2011, the dynamics of Green HRM behaviors: A cognitive social information processing approach, *German Journal of Human Resource Management*, Vol. 25, No. 2, pp. 117-139.

### **INFO:-**

**Corresponding Author:** *Opatha, H.H.D.P.J, Department of Human Resource Management, University of Sri Jayewardenepura, Sri Lanka.*

**How to cite this article:** *Opatha, H.H.D.P.J and Kottawatta, H., Impact of Green Attitude on Green Work Behavior: An Empirical Study of Employees in a Sri Lankan Tiles Manufacturing Company, Asian. Jour. Social. Scie. Mgmt. Tech. 2(4): 01-07, 2020.*