

Influence of Environmental Knowledge and Attitude on Employee Green Behaviour

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Abstract

Environmental issues often get global attention due to increasing environmental damages as seen in global warming, environmental degradation and ozone depletion. By encouraging pro-environmental or green behaviour at workplace, it can encourage the employees to be more responsible in reducing environmental problems. Thus, the issue of employee green behaviour (EGB) has been a topic of interest among scholars in management. The aim of this study is to examine the relationship between employee environmental knowledge and environmental attitude towards employee green behaviour at workplace. The data comprised responses from 108 employees that indicated a moderate level of green practices at work. The study found that there is no relationship exists between environmental knowledge (EK) and environmental attitude (EA) on employee green behaviour (EGB). Future recommendations on the practical implication to help encourage employee to be engaged with green behaviour at work were later discussed.

Keywords: Employee Green Behaviour, Environmental Knowledge, Environmental Attitude, Pro-Environmental Behaviour, Environmental Sustainability.

Introduction

Environmental sustainability issues have become one of the debated and significant topics over the years. In fact, the trends that advocate the use of green product, green building, green technology, green ecotourism and sustainable consumption have become important agendas among organisations, society and the government. The changes in socio demographic and economic structures have influenced the green practices in industry directly and indirectly, and these changes are needed to fulfill the demand of the growing population. Therefore, companies start to make tremendous advances in applying green practices (Phuah,

2013) in their company. Subsequently, climate change has become the most prominent environmental health risk and it is also the most crucial issue in the 21st century (World Health Organization, 2015). Statistic from SWCorp Malaysia in 2017 highlighted that Malaysians generated about 37500 tons solid waste per day and that involved management cost of RM2.0 billion a year. This indicates a need for the community, particularly the young generation, to seriously look into this matter. Until now, government and Non-governmental Organisations (NGOs) in Malaysia are still actively promoting communication campaigns and strategies (e.g. Go Green Campaign, no plastic, no straw, etc.) in hope to disseminate knowledge that would enlighten citizen to lead a more positive behaviour.

To combating this issue, the responsibility cannot solely be put on the government, but with the organisations commitment as well. Hence, there is the essential to study pro-environmental behaviour (PEB), as organisations are the major contributors towards environmental problems (Hoffman & Georg, 2013). As employee in general spends one third in a day in the workplace, pro-environmental behaviour can be studied in workplace setting (Stern, 2000). A number of studies have found that the individual's employee green behaviour would significantly contribute to wider outcomes of environmental sustainability, mainly when it is combined with established environmental management systems (EMS) and innovations (Norton et al., 2014; Ones & Dilchert, 2012b). Previous scholars (Norton et al., 2014; Suganthi, 2019) stated the need to explore environmental friendly behaviour among employees as it is an important aspect to reach sustainability for the organization. Furthermore, practicing green behaviour is a good way in marketing and promoting good public image and strong ethics of corporate social Responsibility (CSR). As highlighted by Hens et al., (2018), practicing CSR that reflects environmental behaviour is one of the ways in achieving greener environment in organization.

This preliminary study had selected employees from a private organization because since green growth is one of the attentions in the Sustainability Development Goals (SDG) for sustainability in socio-economic development. To respond with this objective, one of the strategies to greening the organization is through changing employee behaviours as stated by Loverock, (2010), that believed that changing employees' behaviour at workplace may influence their behaviour outside work, and ultimately becomes an effective driver in achieving sustainable social change. Hence, the objectives of this study are:

1. To identify the level of employee's green behaviour at work.
2. To determine the relationship between employee environmental knowledge and green behaviour at work.
3. To determine the relationship between employee environmental attitude and green behaviour at work.

Literature Review

Employee Green Behaviour (EGB)

Organizational researchers and practitioners have taken an interest in pro-environmental behaviour or "green behaviour" at work due to the overwhelming issue on climate change and environmental sustainability. Stern, (2000) defines employee green behaviour (EGB) as behavioural intention that propel people to take action to reduce the negative impact on the environment. EGB is defined as a workplace-specific form of pro-environmental behaviour in employees, and it is categorised into required employee green behaviour, and voluntary employee green behaviour, defined as a workplace-specific form of pro

environmental behaviour (Norton et al., 2015). Bissing-Olson, Iyer, Fielding, and Zacher (2013) propose two different types of EGB, task-related (e.g. effort that is related to the core tasks of the employee) and proactive behaviour (e.g. the amount to which employees take initiative to engage in environmentally friendly behaviours). Steg and Vlek (2009) define "green" as the environmentally friendly behaviour of an individual, who seeks activities that minimised the effect of damage, and he or she will seek activities that benefit the natural environment. Examples of EGB in the workplace are numerous, such as turning off lights when leaving the office, using teleconference, printing draft on scrap paper, and spread the information regarding environmental behaviour among co-workers.

Ones and Dilchert (2013) classify green behaviours into five categories of "Green Taxonomy" to measure employee green behaviour at work. The five categories are (1) conserving; (2) work sustainably; (3) avoiding harm; (4) influencing others; and (5) taking initiative. Fostering employee green behaviour at work could be one of the factors that can help to deal with environmental issue (Lamm et al. 2013). When pro-environmental behaviour is carried out in relation to the individuals' jobs, employee is prone to engage in more pro-environmental behaviour at workplaces (Ones & Dilchert, 2012), and eventually, this would turn to an organizational culture that prioritised environmental awareness and encourage on pro-environmental behaviour at workplace (Sanyal, Bengal, & Bengal, 2017).

Recently, researchers have emphasised the need to examine employee green behaviour (EGB) and its individual and contextual predictors from a multilevel perspective (Kim, Han, Jackson, & Ployhart, 2014; Norton et al, 2015). Rezai (2013) states that people have positive perception towards green concept, and they agreed that going green could improve human health as the environment has a direct impact on the human life. EGB can also be undertaken outside of formal duties and responsibilities in work settings, and OCB are not a part of core task performance, but doing so can help the organizational operation (Organ, Podsakoff, & MacKenzie, 2006). The fast movement of the climate change offers a competitive advantage to the firm who are effective in managing their operations towards environmental sustainability agenda. Examples of green initiative activities including introducing business conducts that are aimed to conserving the environment and implementing 'green office concept' in its daily operations and this can lead employee to perform greener behaviours (e.g. recycling, energy conservation, etc.). Employees' green behaviour (EGB) is one of the strategies adopted by organisations to improve their environment sustainability performance (DuBois & Dubois, 2012).

Environmental Knowledge and Attitude

Environmental knowledge (EK) is an underlying variable that contributes to pro-environmental behaviour. The role of knowledge is important, given that controlling environmental impact is viewed as a responsibility for all employees (Florea, Cheung & Herndon 2013). (Kollmuss & Agyeman, 2002) categorised environmental knowledge and awareness are the internal factors that affect environmental behaviour. Awareness is considered as knowing the effect of people behaviour on the environment and this would likely affect an individual's self-consciousness as the person becomes interested in protecting the environment, to the extent that he or she may perceive it as a central component of his or her job. Levine and Strube (2012) found that knowledge is closely related to behaviour. Employees with environmental awareness would display more positive behaviour about their

environment and they would be inclined to behave in an environmentally friendly manner in both their work and personal lives. Corporate environmental strategy is one of the factors that influences pro-environmental behaviour, in which the organisation makes it a part of their employee's responsibility to engage in environmentally friendly behaviours. This between-persons variable refers to employees' awareness and knowledge about their organisation's strategy and approach regarding environmental sustainability (Ramus & Steger, 2000). Parallel with (Dumont et al., 2016; Norton et al., 2014), strengthening employees' awareness and knowledge towards the existence of the organisation's corporate environmental strategy would positively predicts EGB.

Hence, environmental knowledge can be embedded through organizational culture, policy, work description, or face-to-face interactions with others including the stakeholders.

Raising awareness and educating employees about the importance of EGB and the benefits of natural environment towards business outcomes are needed to boost employees' behavioural intentions to engage EGB at work (Holme & Watts, 2000). Supported by Chan et al., (2014), who performed a study in the context of the hotel industry, strengthening employees' environmental awareness would enhance employee's environmental concern, especially regarding implementing green practices in hotel industry. Lack of knowledge of green behaviours in the workplace is one of the personal barriers among employees to perform green behaviours at workplace (Saifulina & Carballo-Panela, 2017; Al-Shemmeri & Taylor, 2017; Chan et al, 2014). By enhancing this awareness, it might help employees to engage in green practices that would reduce the effects of environmental problems in organisation.

Milfont & Duckitt, (2010) describe environmental attitudes (EA) as the mental propensity that is expressed by people evaluative responses to the environment with some degree of favour or disfavour. Perlstring (1997) defines environmental attitude as learned tendencies in the form of consistent behaviours against environment, either positively or negatively. Previous studies found positive relationship in environmental attitude on EGB in the context of between-persons level (Bissing-Olson et al., 2013; Norton et al., 2014). Environmental attitude has been shown to give a significant impact on employee green behaviour (Scherbaum et al., 2008). While Murtagh et al. (2013), mentioned attitude is significantly related to energy saving behaviour. The conceptual framework for this study is shown in Figure 1, and this framework is based on environmental knowledge and attitude on employee green behaviour at work.

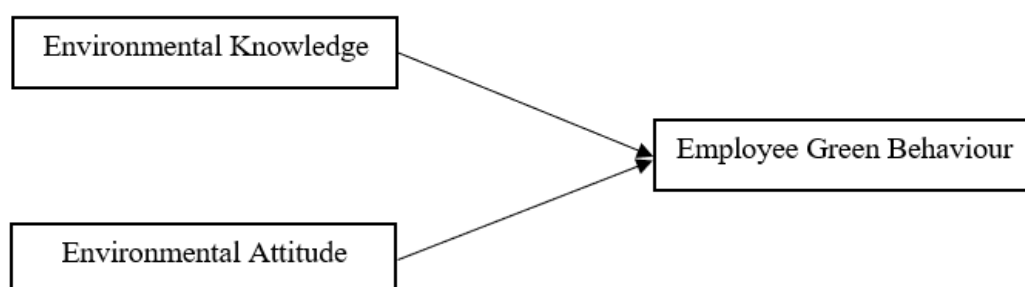


Figure 1: Conceptual Framework

Methods and Procedure

This is a descriptive study investigating environmental knowledge and attitudes of employee. This study was conducted among 108 employees from private organisation. Convenience sampling technique was used during data collection. Table 1 shows the characteristics of the samples for this study. The Statistical Package for Social Science (SPSS) version 23 was used to analyse and test the relationship in order to determine the relative association between the studied variables.

Table 1
Characteristics of the samples

	Frequency	(%)
Gender		
Male	62	57.40
Female	46	42.60
Age		
31 to 40 years old	35	32.40
41 to 50 years old	33	30.60
20 to 30 years old	30	27.80
51 years and above	10	9.30
Level of Study		
Bachelor Degree	52	48.10
Diploma	28	25.90
SPM	21	19.40
STPM	4	3.70
Master Degree	3	2.80
Department of Work		
Human Resource	29	26.90
Administration	26	24.10
Company Affairs	18	16.70
Finance	18	16.70
Account	17	15.70

Table 2
Reliability Statistics

Variables	Cronbach's Alpha	No of items	Level of Strength
Environmental knowledge	.788	10	Good
Environmental awareness	.913	18	Excellent
Green behaviour	.700	9	Acceptable

The reliability of a measure was established by testing for both consistency and stability. The consistency indicates how well items or variables hang together as a set. Cronbach's alpha is a reliability coefficient that indicates how well the items in the set are positively correlated to one another. A Cronbach's alpha that is valued above 0.7 indicates a good internal reliability (Sekaran, 2010). Table 2 shows that the value of Cronbach's alpha in this study is

0.7 after removing the items which is not applicable for this study (I join tree planting and I join the earth hour). Therefore, the constructs were considered to have acceptable reliability.

Results and Findings

As the dependent variable, employee green behaviour (EGB) has the mean score of 2.84 (s.d = 0.216), indicating the moderate level of practices, while the independent variable, employee environmental knowledge (EK) has the mean score of 4.06, and employee environmental awareness (EA) mean score was valued at 4.22. Table 3 shows the output that confirms that the correlation is not significant between EK and EGB ($r = -0.114$) with p-value 0.241. The mean score of EK on green was valued at 4.06, indicating that employee knowledge on green was at higher level, however it does not guarantee any establishment of a relationship. It was found that there was a negative correlation between EK and EGB, and this showed an inverse relationship between EK and EGB. Thus, the higher EK will be, the lower EGB will be with 11% correlation. Pearson r is negative, which means as one variable increases in value, the second variable would decrease in value and hence, and this would show negative correlation or inverse in relationship. The result of the correlation is not significant and there was no relationship between employee's awareness EA and EGB ($r = -0.042$) with p-value 0.670. This shows that the correlation is not significant since .241 was way over the usual cut off for statistically significant (0.05). The result also indicated negative correlation between EA and EGB with 4% correlation only.

Table 3

Means, Standard Deviations and Correlations Result

Variables	Pearson Correlation	Sig. (2 tailed)	Mean	Standard Deviation
Environmental Knowledge (EK)	-.114	.241	4.06	0.560
Environmental Attitude (EA)	-.042	.670	4.22	0.929
Employee Green Behaviour (EGB)	-	-	2.84	0.216

Discussion

It was expected that employees with environmental knowledge (EK) and environmental awareness (EA) will be more engage on green behaviour. However, results show moderate level of EGB and this are consistent with (Sadik & Sadik, 2014). Based on the results described in this study, contrary to expectations, this study did not find a significant correlation between environmental knowledge (EK) and environmental attitude (EA) towards employee green behaviour (EGB). Increases in knowledge and having positive thought is not sufficient to lead people pro-environment behaviour (Owens, 2009; Bamberg, 2003; Erten, 2005; Sadik & Çakan, 2010). This shows that changing behaviour is a monumental task. Human behaviour will take times to change and there are other factors that might influence these changes. Supported by Kollmuss and Agyeman, (2002), based on the Linear Model of pro-environmental behaviour argued that in most cases, any increase in knowledge would not lead to pro-environmental behaviour. Any attempt to change a habit, even a minor change, would require experiencing difficulties, even though the new behaviour would have distinct advantages over the old one. As Young et al, (2013) said, attitude change would not directly influence behaviour change in the workplace. The reason could be that the fact that people might be affected by other factors such as social, cultural, and economic that would

determine how they choose to behave and perform in supporting the environmentally friendly behaviour.

The findings of the current study are consistent with those of Lo, Peters, van Breukelen, and Kok (2014) who found that attitude is not always the strongest predictor of intention for office energy-saving behaviours. Another study from Schaper (2002) showed that no relationship on personal environmental attitudes towards the environmental performance. Therefore, the reason why there was no correlation found between environmental knowledge and attitudes of EGB in this study is because their workplace environment is not effective and influential enough to encourage the attitudes. Environmental attitude and behaviour do not seem to be positively correlated in this study. This result represents that a strong environmental attitude level would not indicate greater environmental behaviour level (Mei, Wai, & Ahamad, 2016).

Two other factors that influenced environmental attitude are age and the years of education (Kollmuss and Agyeman, 2002). Other scholars mentioned environmental attitudes are also influenced by the external or contextual factors such as laws and regulations, available technology or advertising (see example Norton, 2015). Hence, to enhance green practices, the firm should educate employees through training activities to cultivate the green behaviour at work. Abdullah, MA et al (2017), in his findings has shown that organisation must form an awareness program among employees to educate them about the importance of environmental sustainability to the firm's performance. Similar with E. S. W. Chan and Hawkins (2010), environmental awareness can be developed through environmental education or training given by the organisation to their employee. This would definitely play a role in shaping employees to become more environmentally friendly at work. Organisation must acknowledge their employee green practices by rewarding them through strong performance evaluation. According to Norton et al (2016), by enhancing the moderating effect of green psychological climate between employee's environmental knowledge and awareness, it could enhance their company's corporate environmental strategy, and this would indirectly affect their behavioural intention on EGB. In line with (Id, Hine, & Id, 2019) that green work climates support the EGB at workplace.

Studies on employee green behaviour and environmentally friendly is mainly based on the Western perspective. Therefore, any differences in culture and regulatory might affect companies in different countries, as research indicates that environmental beliefs, knowledge, and attitudes are varied around the world (e.g., see Aoyagi-Usui, Vinken, & Kuribayashi, 2003). To sum up, the results of this study show that environmental knowledge and positive attitude of employee are not sufficient to influence the employee to put them to practice.

Conclusions

Several limitations to this preliminary study need to be acknowledged. Employees from a wider range and in different sectors may present different perspective of the findings. Therefore, in future research, the respondents from different industries or sectors should be explored. With the purpose to ensure the result to become more reliable, it is suggested that future study should link the existing variable with mediating variables that could enhance the relationship on employee green behaviour. To date, there is a paucity on studies regarding the antecedents of pro-environmental behaviour at work (Boiral & Paille 2013, Norton,

Zacher, & Ashkanasy, 2012), and this research will serve as a base for future studies on EGB in Malaysia, either in public or private organisation. The current findings would add substantially to our understanding and to fill the gap between EK and EA towards EGB. Finally, this study will extend our understanding on employees' perception towards green behaviour and its practices.

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